

The ethical investor: Exploring dimensions of investment behaviour *

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Finance theory conventionally focuses on risk and return as the factors relevant to the construction of investment portfolios. But there is evidence of a growing number of investors who wish to incorporate moral or social concerns in their decision-making. Using principal components analysis, this paper attempts to infer possible 'non-financial' dimensions of utility functions by considering the preferences of 125 'ethical investors'.

There is growing evidence of systematic attempts to add moral or social factors to traditional financial criteria in the construction of share (stock) portfolios. Social investment is well established in the United States (Bruyn 1987) and has been growing steadily in the United Kingdom since the establishment of a specialist information service (EIRIS) in 1983 and the launch of the first ethical unit trust (Friends Provident Stewardship Trust) in 1984.

Clearly there is more involved in such investment decisions than is depicted in conventional modern portfolio theory. Founded on Markowitz's (1952) classic analysis of risk and return, this is just a special case of expected utility theory. Ideally we would like an analysis of ethical investment that conserves what we already know about the motives of investors, a requirement which suggests that a

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generalization of utility theory might be appropriate (Anand 1993). We might therefore view it as a multiple objective problem amenable to analysis via multi-attribute extensions of utility theory (MAUT) (see von Winterfeldt and Edwards 1986: 259–313).

In multivariate analyses, it is crucial to know what criteria influence decisions, and it is this descriptive problem that we seek to address here. We add to the growing picture of the ethical investor by presenting and interpreting a multi-attribute description of analysis of the ethical investor in which the underlying dimensions themselves are inferred from empirical data.

Method

The empirical data used relate to clients of EIRIS Services Limited, an ethical investment information service based in London. One of its major assets is a database which contains information on all the companies which are members of the Financial Times All-Share Index. The database, which has been developed over the years since EIRIS was founded in 1983, contains a number of dimensions of potential interest to ethically motivated investors. From it, clients can be supplied with a list of British companies that meet their ethical criteria (to the extent that the database contains the relevant information). EIRIS, through its expertise and economies of scale, thus helps ethical investors to reduce informational transactions costs which, given the complexity of many of the issues, could otherwise be substantial.

The 125 EIRIS clients who are the focus of this study specified the grounds on which they wished to avoid investing in companies by completing an 'Acceptable List Questionnaire' (ALQ). EIRIS then used their replies to compile a list of companies that met the criteria of the particular client concerned. These ALQs were later retrieved from the EIRIS filing cabinets and summarized by one of the authors. The questionnaires therefore represent primary data and there is every reason to believe that the clients took the process of completing them seriously, since they paid a fee for the privilege of doing so. However, there were concomitant disadvantages in that the questionnaire design was given and it was not possible to collect further information on the clients.

Table 1

Bases for exclusions of companies from clients' lists of acceptable investments.

Issue	Frequency	Rank
Advertising	50	9
Alcohol	49	10
Animals	57	7 =
Sales to Military Purchasers	111	2
Gambling	59	6
Newspaper Production & Television	6	14
Nuclear Power	82	4
Spread of Overseas Interests	24	11 =
Proportion of Business Overseas	24	11 =
Political Contributions	57	7 =
Size of Company	16	13
South Africa	120	1
Tobacco	87	3
Financial Institutions	70	5

The ALQ contained questions on the lines of 'Do you want to exclude ...?' under fourteen headings. Under many of those headings a number of alternative or complementary criteria were offered. A full list of the question categories and detailed criteria is provided in the Appendix, and the responses are described in some detail in Cowton (1989), but for the analysis in this paper it was simply noted whether a client registered any concern under a particular heading. Table 1 summarizes the results.

The issue that concerns us is the more general attributes of which these choices are particular manifestations. Because the data were elicited under conditions which were both strongly incentive compatible (i.e. encouraged revelation of true preferences) and because there was little reason to suppose that any other sources of noise had influenced the data, a principal components analysis (PCA) was chosen in preference to other factor analytic techniques. Readers unfamiliar with this technique should refer to accounts of multivariate analysis such as Hair et al. (1987) or Mardia et al. (1979).

Data analysis and interpretation

The results shed light on the dimensions (components) underlying the observed restrictions on investment. Kaiser's (1958) rule (select

Table 2

Factors predicting clients' exclusions of companies from their lists of acceptable investments: eigenvalues and factor loadings.

	Factor				
	1	2	3	4	5
Eigenvalue:	3.3075	1.9398	1.3611	1.1461	1.0038
<i>Issue</i>					
Advertising	0.141	0.388	0.658	-0.038	0.132
Alcohol	0.028	0.826	-0.126	-0.021	0.032
Animals	0.662	0.072	0.151	0.249	-0.064
Sales to Military Purchasers	0.506	0.002	-0.041	0.082	0.500
Gambling	-0.011	0.788	0.178	0.112	-0.095
Newspaper Production & T.V.	0.210	0.029	-0.018	0.715	0.122
Nuclear Power	0.809	0.026	0.071	-0.021	-0.192
Spread of Overseas Interests	0.113	-0.098	0.859	0.049	0.009
Proportion of Business Overseas	0.173	0.089	0.707	0.437	0.036
Political Contributions	0.505	-0.149	0.331	0.081	0.325
Size of Company	0.049	-0.005	0.195	0.788	-0.075
South Africa	-0.126	0.163	0.109	0.005	0.838
Tobacco	0.083	0.648	0.097	-0.038	0.307
Financial Institutions	0.678	0.083	0.095	0.107	0.102

components with eigenvalues greater than one) yields five dimensions to be examined. After varimax rotation, the contributions of the variables to these five inferred components are as shown in Table 2. Together the five components explain more than 60% of the variation in the data, with the first one alone accounting for more than 23%.

The interpretation of components is inevitably a subjective process but we suggest that the following remarks provide a plausible account of the results. Readers can, if desired, attempt to develop their own interpretations.

Component 1 depends heavily on NUCLEAR POWER, ANIMALS, SALES TO MILITARY PURCHASERS, POLITICAL CONTRIBUTIONS and FINANCIAL INSTITUTIONS. A plausible interpretation of this rather large grouping is to discern the influence of a left-of-centre, 'post-industrial' orientation. We shall refer to it as the 'post-industrial' factor, and its identification perhaps provides a tentative, affirmative reply to the question posed by Lewis and Cullis (1990: 403): 'Have the greens come of age?' However, systematic information was not available on the age and other characteristics of the clients, so it is not possible to

state categorically that we have evidence for their idea of 'vintage determinism', whereby the affluent new middle-aged investors, whose values were formed during the 1960s, are now making their preferences felt.

The second dimension combines exclusions based on ALCOHOL, GAMBLING and TOBACCO. All three criteria share an association with consumption activities which, for moral or social cost reasons, might be considered undesirable. Following Miller (1991: 24) we might call this the 'sin stock' factor. These three product areas are often grouped together for avoidance purposes in ethical unit trust brochures.

Component 3 includes SPREAD OF OVERSEAS INTERESTS, PROPORTION OF BUSINESS OVERSEAS and ADVERTISING. The questions on which the first two of these criteria were based are in effect measures of multinationality, and it is reassuring, given their similarity, that they feature significantly in the same factor. It is less obvious why advertising should be related to such a measure, but the advertising variable can be accounted for solely by reference to responses to a question which offered exclusion on the basis of successful public complaints to the Advertising Standards Authority (Cowton 1992). Given the power that is often attributed to multi-national companies and their alleged ability to exploit domestic economies through their international flexibility, we are inclined to see this as a 'mistrust' factor.

The fourth component combines the two lowest ranked categories; SIZE OF COMPANY, which reflects concerns about size itself or the existence of monopolistic powers (Cowton 1991), and NEWSPAPER PRODUCTION AND TELEVISION. Their linking might seem surprising, but they could both be viewed as reflecting a concern for what we might call 'undue influence'.

The fifth and final component to be analysed comprises the two highest ranked categories, SALES TO MILITARY PURCHASERS and SOUTH AFRICA, suggesting perhaps a human rights/pacifist dimension.

Discussion

Five components have been highlighted and an attempt made to interpret them. Our analysis responds to Lewis and Cullis's recommendation for research into individual ethical investors. They suggested offering a variety of experimental participants hypothetical choices between portfolios of shares with varying ethical characteris-

tics in combination, but in a sense our research goes beyond that, since the choices were not hypothetical in character. While unintentionally creating the research data, the 'participants' were paying a fee in order to obtain information for their own purposes. This gives the data more external validity than under an experimental approach. It seems reasonable to assume that the clients completed the ALQ with care, since the list of companies they were to receive depended crucially on their participation – and they had requested and paid for it, in contrast to the questionnaires used in a number of postal surveys (e.g. Buzby and Falk 1978, 1979; Cowton 1990; Wokutch 1984). Furthermore, the statistical procedures effectively remove isolated, random 'aberrations'. Whether the clients acted on the lists they received is, however, not something that we were able to investigate.

While the 'real' nature of the data increases confidence in its external validity, it also involves the researchers in a loss of control. For example, we do not know any demographic details about the investors, which would clearly be of great interest. Furthermore, we were not able to define the ethical categories or specify the detailed definitions offered. In particular, the ALQ offered the potential only for exclusion. In utility terms, any company which possessed one or more of the attributes specified as being undesirable can therefore be viewed as yielding a very large negative utility if it were to be included in the investor's portfolio. It effectively means that the universe of potential investments is being constrained and, conceptually at least, a portfolio could be constructed from the remaining investment universe on normal Markowitzian principles (Westerfield 1984).

What we have not considered, since this was not then part of the commercial service from which the data were derived, is the possibility of companies possessing positive non-financial characteristics. This would imply the use of a much more complex utility function in which, with regard to individual companies, there could effectively be trade-offs between desirable financial and social characteristics. Such complications do not arise under a 'pure' avoidance strategy, implicitly assumed in the situation we studied.

Conclusion

This report is only a snapshot of the concerns which drive a growing group of investors, but we believe that it offers a useful input to a

growing literature on ethical investment. The picture which emerges is that of investors whose cognitive hyperspace is constituted of a variety of concerns, some of which are less predictable than others. In future research, samples from different populations (with suitable demographic details), based on a greater number of initial categories (including positive ones) would help expand and refine the picture.

Appendix

Acceptable List Questionnaire exclusion definitions

1. *Advertising*
Public complaints upheld by Advertising Standards Authority
Top 250 advertisers
2. *Alcohol*
Production
Sales through pubs or stores, or involved in advertising or distribution
Runs hotels or restaurants (alcohol sales)
3. *Animals*
Meat, fur or leather production
Sells, meat through restaurants or stores, or involved in advertising or distribution
Runs hotels or pubs (meat sales)
Involved in retail sale, advertising or distribution of fur or leather goods
Production of animal-tested cosmetics or pharmaceuticals
Sales of animal-tested cosmetics or pharmaceuticals
4. *Sales to Military Purchasers*
Civilian products or services
Non-civilian products or services
5. *Gambling*
6. *Newspaper Production and Television*
7. *Nuclear Power*
8. *Spread of Overseas Interests*
Operates in more than 10 countries
9. *Proportion of Business Overseas*
More than 33% of business overseas

10. *Political Contributions*
11. *Size of Company*
Top 100 as measured by market value, turnover or capital employed
Market value and turnover more than 33% of a Stock Exchange sector
12. *South Africa*
Any operations in South Africa, including bank loans
Any operations in Namibia
Operates in sectors of the South African or Namibian economies that the UN has defined as strategic, or makes bank loans to the government or state bodies
Operates in South Africa on a significant scale (workforce of more than 500)
13. *Tobacco*
Production
Sales through pubs or stores, or involved in advertising or distribution
Runs hotels or restaurants (tobacco sales)
14. *Financial Institutions*
Banks
Insurance companies
Other financial institutions

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