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CSR, rationality and the ethical preferences of investors in a laboratory experiment

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ABSTRACT

This experimental study aims to clarify to what extent and in which direction investors react to CSR (Corporate Social Responsibility) initiatives meant to upgrade the ethical standards of firms beyond the minimal requirements of law. Subjects in the laboratory were invited to invest their endowment in a portfolio of financial assets. We provided information on the expected returns of each stock and on its inclusion in an ethical index, or exclusion from it. Our findings show that subjects' behavior appears to be a function not only of their individual pay-offs but also of the information on the ethical standards of the firms issuing stocks. Most of them, however, did not show a fully irrational behavior as they consistently correlated the share of stocks with their expected returns. We may conclude that the sizeable reaction of our investors to the inclusion of a stock in the ethical index, or its exclusion from it, is the fruit of a deliberate choice.

1. Introduction

This experimental study aims to clarify to what extent and in which direction investors react to new information on the ethical standards of firms. In recent years there has been a sharp growth of CSR (Corporate Social Responsibility) initiatives meant to upgrade the ethical standards of firms beyond the minimal requirements of law. The extensive literature on this issue is not unanimous. The demand of stocks is considered as uncorrelated, positively correlated, or negatively correlated with information on ethical excellence according to the theory embraced and/or the evidence examined (Orlitzky et al., 2003). In a perfect-competition market it is claimed by orthodox economists that maximization of returns by all firms also maximizes social welfare and satisfies at best the legitimate claims of the stakeholders (see, e.g., Friedman, 1970). In addition, the information efficiency attributed to competitive markets implies that specific information on the ethical standards of firms would be redundant, and thus unsubstantial. Real markets, however, are imperfectly competitive so, in principle, CSR initiatives may affect social welfare for the better or for the worse (Borghesi and Vercelli, 2008, Ch. 7). A positive correlation is expected mainly because high CSR standards are believed to signal a high quality of management and/or to improve long-term returns (Derwall et al., 2005; Garz et al., 2002; Porter and Kramer, 2006). In contrast, a negative correlation is expected mainly because the inclusion of all the stakeholders (not only shareholders) in the objective function of the firm may distort managerial choices (Jensen, 2001), while higher CSR standards are believed to imply higher production and commercialization costs that could impinge on returns, at least in the short run (Geczy et al., 2005).

This literature maintains that CSR initiatives may have a sizeable and persistent impact on the ethical standards of firms to the extent to which stakeholders actively and pro-actively react to information on the CSR standards by selecting the

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most responsible firms. In particular, consumers are expected to shift their demand towards products and services of the most responsible firms. Extensive research on consumer behavior suggests that their reaction to information on the CSR standards of firms is widespread, although rather weak (see, e.g., Sen and Bhattacharya, 2001). Less explored so far has been the reaction to information about CSR standards by investors selecting the stocks to be included in their personal portfolios. In this case, the sign of the empirical correlation between information about CSR standards and stocks demand cannot be easily established by examining the empirical evidence. Investment strategies are affected by a host of factors whose separate effects are difficult to identify. In addition, investors are continuously hit by a flow of information about different issues concerning the firm that may include news relevant for the evaluation of the ethical standards of the firms. Thus, it is very difficult to identify the specific impact of CSR information on the investors' behavior.

A way out from this dilemma is offered by the so-called *ethical stock indexes*, which select a subset of shares belonging to a certain stock exchange index complying with a series of requirements that assure the excellence of their CSR standards in their sectors of activity (well-known examples are the Domini 400 Social Index, the Dow Jones Sustainability Index and the FTSE4Goods). The periodic announcement of the stocks included in the index (and excluded from it) provides an information set that is unambiguous, authoritative, and sufficiently isolated from the ordinary information flow, to permit an empirical study of the investors' reaction. Consolandi et al. (2009) explore the market reaction to such news in the case of the DJSI (Dow Jones Sustainability Index) through an "event study", showing that a sizeable positive reaction is detectable in the case of inclusion, and a slightly bigger negative reaction in the case of exclusion. However, these results are still ambiguous, in particular because it is not clear whether they derive from a very small reaction of many investors, or from a more sizeable reaction of a limited number of investors. In addition, it is not clear if this reaction comes from the fact that the inclusion of a stock signals managerial excellence, or because ethics is an independent goal of investors' behavior and, in this case, to what extent we may detect a trade-off between self-interest and ethics.

To answer these questions, we conducted a laboratory experiment to isolate the effects of information about the ethical standards of a firm from other information which may, in principle, affect its stock demand. Lab decision makers receive an endowment and are invited to allocate it across lotteries simulated by a computer. Subjects are told that their allocations are representative of a financial investment to generate a portfolio of financial assets chosen from a limited list of stocks of the same industrial sector. We provide information on the expected returns of each share and on its inclusion in an ethical index, or exclusion from it. We intend to check whether investors react to information about firms' ethical standards, as assessed by the ethical fund managers.

According to standard decision theory, self-interested decision makers are expected to be concerned only with the maximization of expected returns from their portfolio, so they are not assumed to react to information on the ethical standards of the firms, unless they believe that such information may reveal relevant information on expected returns. According to the theory of efficient markets, even this possibility is ruled out, since all relevant information is supposed to be conveyed by the price system. However, in the real world we cannot exclude that the utility function of decision makers also depends on the degree of compliance to the ethical values of the decision makers. This suggests that firms' ethical standards, at least those that have to do with the well-being of other persons, may play a role in economic decision making. More generally, in this paper we hypothesize that ethical judgment may influence the decision process. This role would be particularly significant in case we find evidence of a trade-off between expected returns and ethical standards. In this case, it would be in the interest of a profit-maximizing firm to invest in order to upgrade its own ethical standards, to the extent that this is justified by the revealed ethical preferences of its would-be investors.

The paper proceeds as follows. Section 2 describes the design of our experiment. Section 3 reports the main experimental findings. Section 4 discusses the relationship between revealed ethical preferences and choice rationality. We conclude in Section 5.

2. Experimental design

Although the economic literature, both theoretical and empirical, increasingly focuses on the principle of Socially Responsible Investment (SRI), we are not aware of laboratory tests that seek to investigate the impact of "ethical" stock indexes on investors' behavior. The purpose of our experiment is to provide laboratory evidence on this issue by testing if investors' decisions are affected by the disclosure of information on corporate environmental and social responsibility.

Previous empirical work (Hendricks, 1976; Belkaoui, 1980; Milne and Chan, 1999; Chan and Milne, 1999) addresses the issue by submitting questionnaires to professional investors (accountants, bankers, financial analysts). Holm and Rikhardsson (2008) test how the release of information on companies' environmental performance influences investors' behavior. To answer this question, they pose a series of hypothetical choices to experienced (pension portfolio managers) and novice (graduate students) investors. In contrast, we decided to conduct a laboratory experiment by submitting real choices to students and by paying them on the basis of their actual decisions. Also, in our laboratory experiment, strategic interaction between decision makers was excluded in order to identify *in vitro* the determinants of individual behavior. We may thus say that this was an experiment on individual financial behavior, rather than on financial market behavior. We believe, however, that the former is a necessary condition to study the latter.

The experiment was carried out between November 2007 and July 2008 and was conducted in two sessions with 25 subjects each. Participants were students of the University of Siena, recruited from Economics courses through billboards posted on the web and around the University campus. The experiment was computerized using a modified version of the