INVESTORS DECISION MAKING: THE INTERACTION OF ENVIRONMENTAL AND INDIVIDUAL FACTORS

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Keywords: clarity of information, reliability of source, ambiguity, cognitive profile, decision, takeover bid.

JEL: D83, G14, G34

Extended abstract

New information becomes the cause of fluctuations in stock market prices (Mahmood et al, 2011). Warneryd (2001) suggests that investors make their decisions on the basis of their expectations regarding new information. The literature considers that the black box of the market is the investors’ information processing, since it contains the key factors of the decisions they make. Behavioural finance emphasize that opening that black box will allow to explain the inefficiencies observed in financial markets but not predicted by the Theory of Efficient Markets. This knowledge will allow to define strategies or behaviours for reducing the gap between real markets and efficient markets. For example, Ahmed et al. (2009) analyze the impact of information quality on the efficiency of capital markets. However, the study of the decision making process is considered relevant not only to explain the dynamics of financial markets but also to help financial advisors to develop their prescriptive activity of advising in a more effective way.

Our study extends prior research on the investment decision making process when new information floods the market. To do that, we develop an investor cognitive model with three stages to investigate the driving factors of investors’ decisions. We provide empirical evidence on the interaction between some environmental and individual factors having and impact on decision making. To our knowledge, the interaction of the particular factors we consider has not been previously studied in the financial literature as a determinant of investor’s decisions. The environmental variables considered are reliability of the source of information, clarity of the informative stimulus and ambiguity. The individual cognitive profile is depicted by the cognitive style, ambiguity tolerance and proactivity.
Processes such as perception and action are commonly included in cognitive models (Lovric et al., 2008). Starbuck and Milliken (1988) divide perception into noticing and sensemaking. To our knowledge, no other study on investors’ decision-making has used this cognitive model: noticing-sensemaking-action. We identify the variables that explain an investor notice some news but ignore others, interpret the news they notice in a particular way, and finally make a certain decision.

Financial decisions are compelled and constrained by non-financial factors. These include personality characteristics of individuals as well as the environments in which decisions are made (Holden, 2010). Among the environmental factors that influence investors decisions, information plays an essential role. Investors make up their mind regarding risk factor involved in any investment based on the financial information they receive from different sources (Mahmood et al., 2011). Moreover, DeBondt and Thaler (1994) declare it is indispensable to consider psychological variables and processes when approaching the market. Statman (1999) denies that behaviourial finance introduced psychology into finance, since psychology was never out of finance due to all behavior is based on psychology. Oberlechner and Hocking (2004) state affirm that psychologically informed empirical research may contribute to a better understanding of actual information processing in markets by considering attitudes of market participants ans examining the role of the sources of information and their influence on investors.

Although previous literature demonstrate the arousal of differential information processing among individuals, it reveals difficult to identify and to identify the individual characteristics driving this process. Maybe, this is the reason why, in the literature, the individual characteristics have often been represented by demographic variables such as –age, sex, qualifications and experience.¹ Nevertheless, the impact of these demographic variables is usually explained by appealing to cognitive aspects and different attitudes. Therefore, we consider more appropriate to introduce in the model the cognitive variables and the individual attitudes directly and not by means of demographic variables (Santos et al., 2011).

In sum, in this paper we analyze how certain characteristics of the information –ambiguity, clarity and reliability of the source- and of the decisor –cognitive style, ambiguity tolerante and proactivity- interact in each one of the phases of the information process for investment decision making.

We develop an experiment to identify, in a controlled way, the environmental and individual factors driving differences in each one of the stages of the information processing model we propose. The experiment was administered through the use of three documents. The first one described the experimental design, the task and the payments. After being instructed, participants were encouraged to ask questions. Simple “yes” or “no” answers were enough to reply the questions that arose. The second document was a questionnaire to measure participants’ cognitive profile: their analyst/intuitive styles, ambiguity tolerance, and proactivity. The analyst/intuitive styles were measured using Allinson and Hayes (1996) Cognitive Style Index (CSI). This instrument consists of 38 items, each rated using a 3-point scale (true; uncertain; false). The range of scores runs from 0 to 76. Individuals with an analytical style obtain high scores on the CSI, while intuitive individuals get low scores. The Cronbach alpha for this scale is 0.857, so its internal consistency can be considered satisfactory. Four items initially proposed by Losch and Morse (1974) and adapted by Westerberg et al. (1997) were used to test tolerance for ambiguity. Acedo and Jones (2007) report a 0.76 composite reliability for the measure. Finally, proactivity was assessed with a 10-item scale developed by Seibert et al. (1999) with alpha reliability 0.88. All items of the ambiguity tolerance and proactivity scales were measured on a 5-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree".

After the questionnaire, participants were given the third document with the task setting. The decision task was to evaluate, in 12 different situations, the future evolution (in the short time) of the share price of the companies involved in a possible takeover announcement (rise, fall or remain unchanged) and make a decision on these shares (buy, sell or do nothing). Participants were told that they were going to be rewarded on the basis of the rationality of their decisions. The 12 scenarios can be classified in four types generated by manipulating reliability of the source and clarity of the information into two levels (high and low). As the participants have to decide whether invest on the target firm shares and on the bidder, two different levels of ambiguity are also considered.

Widespread consensus is found in financial literature that target firms' shareholders were found to have made large gains from takeovers (Firth, 1980). In contrast, some studies have found that the acquiring companies suffered falls in their share prices on the announcement of the TOB (Meeks, 1977; Utton, 1974, among others), while others found either positive gains or zero gains for the shareholders of acquiring companies (Kummer and Hoffmeister, 1978; Langetieg, 1978, among others). This wider range of possible evolutions for the share price of
the bidding firms allows us to operationalize the variable ambiguity in each one of the scenarios. Yet, for the same informative stimulus, participants face a less ambiguous situation when they have to answer the questions on the target firm shares that when they have to do it on the bidding firm ones.

REFERENCES


