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Consumers As Investors: Investor Psychology and The Case of the Internet Industry

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Introduction

This paper focuses on the issues of consumers behaving as investors in the context of electronic commerce. The notion of consumers as investors carries a significance in that it is probably a part of the web surfing ecommerce consumers that have turned out to be savvy (at least for now), active day traders (individual investors) that are largely responsible for the incredible (fundamentals defying) stock prices of pure Internet companies. Pure Internet companies are defined as those companies that solely depend upon the Internet for their revenue and do not have parent companies such as IBM, Microsoft etc. to subsidize their financial resources. Yahoo, Amazon.com, eBay etc. are prime examples. This paper is one of the earliest attempts (according authors' knowledge) at developing a theoretical model to explain the incredible stock performance of Internet companies.

The Research Issue

Nonetheless, the critical question remains: given that most of the Internet companies have turned nothing but loss since their Initial Public Offering (IPO) date, why have individual investors invested enormous capital that cannot be justified by the available business performance data from most of these companies. The purpose of this paper is to develop a theoretical model based on the

literature on microfoundations of behavioral finance (DeBondt and Thaler, 1995; Griffin and Tversky, 1992; Einhorn 1980; Odean 1998; Greenwald, 1980; Svenson, 1981; Cooper et al. 1988; Taylor and Brown 1988; Keim, 1983) to develop some insight into this incredible stock market phenomenon.

Fundamentals of Internet Stocks and the Pure Internet Companies in the Internet Industry

The stocks of Internet companies have skyrocketed as more and more investors continually invested in these companies ignoring the basic fundamentals such as relative youth of the companies, net income (loss) and huge market capitalization, negative cash flow, etc. Investors are investing in these companies with the expectation that future cash flows will provide a significant return on their investments. Table 1 shows only a sample of these Internet companies and except for eBay all of them have shown nothing but loss since the date of their initial public offering. But the market capitalization of these companies defy any logical explanation that can be offered based on fundamentals of business performance.

Table 1: Sample Internet Companies and their Net Income (Loss) and Market Cap.

Company Name	Date of IPO	Net Income	Net Income as of Feb, 1999	Market Capitalization Feb 99
Lycos	April 1, 96	-\$1.3 M	-\$14.7	\$3.75 B
Yahoo	April 12, 96	-\$0.6 M	-\$25.5 M	\$ 29.9 B
Excite	April 3, 96	-\$3.3 M	-\$37 M	\$5.74 B
Amazon.co	may 15, 97	-\$8.5 M	-\$78.1 M	\$19 B
Geocities	Aug 10, 98	-\$12.6 M	-\$11.3 M	\$3.05 B
eBay	Sept. 24, 98	\$0.6M	\$878,000	\$15.8 B

In this paper, we intend to develop a theoretical model that may shed insight into this incredible Internet stock performance. The model is based not on business fundamentals, but on the theory of investor psychology in the context of electronic commerce.

Conceptual Model of Internet Investor Behavior

The microfoundations of behavioral finance identifies among other constructs two psychological regularities: overconfidence and attribution bias (Daniel et al., 1998). DeBont and Thaler (1995) state that "perhaps the most robust finding in the psychology of judgement is that people are overconfident."

The Case of Investor Overconfidence

Evidence of overconfidence has been found in several contexts. Examples include psychologists, physicians and nurses, engineers, attorneys, negotiators, entrepreneurs, managers, investment bankers, security analysts and economic forecasters (Oskamp, 1965; Baumann et al., 1991; Kidd, 1970; Wagenaar and Keren, 1986; DeBontd and Thaler, 1990; DeBontd, 1991; Odean 1998, Howe, 1986). Psychological evidence also indicates overconfidence is more severe for people in the context of diffuse tasks, which require judgement, than for mechanical tasks (solving arithmetic problems); and more severe for tasks with delayed feedback as opposed to tasks that

provide immediate and conclusive outcome feedback (Einhorn, 1980). Fundamental valuation of stocks (securities) (forecasting long-term cash flows) requires judgement about open-ended issues, and feedback is noisy and deferred. This has implications for overconfidence on the part of investors in financial markets (Bernardo and Welch, 1998). Hence, it is reasonable to argue that individual investors investing in Internet stocks are overconfident as they keep on investing with a frenzy that keeps driving the price of these stocks at a level that cannot reasonably be explained using business performance fundamentals.

Daniel et al. (1998) contend that investors view themselves as more able to value securities than they actually are, so they underestimate their forecast error variance.

Given that it is difficult to predict or forecast anything about the future of the Internet either on the technological end or the business end, it is reasonable to assume that many Internet stock investors are underestimating their forecast error variance. This is consistent with evidence that people overestimate their own abilities, and perceive themselves more favorably than they are viewed by others (Greenwald, 1980; Taylor and Brown, 1988). Several experimental studies find that individuals underestimate their error variance in making predictions, and overweight their own forecasts relative to those of others (Alpert and Raiffa, 1982; Yates, 1990).

The Case of Biased Self-Attribution

The second part focuses on the theory of biased self-attribution: The confidence of the investor grows when public information is in agreement with the individual investor's information, but it does not fall commensurately when public information contradicts the investor's private information. This implies that as Internet stock investors obtain rapid public information either over the Internet or through other media, this public information reinforces the private information of the investor and his/her expectation about the ecommerce frontier in general. This leads to higher confidence on the part of the investor.

The psychological evidence indicates that people tend to credit themselves for past success, and blame external factors for failure (Fischhoff, 1982; Langer and Roth, 1975; Miller and Ross, 1975). Biased self-attribution leads investors who acquire wealth through successful investment to become more overconfident (Gervais and Odean, 1998). Another offshoot of overconfidence is that it can act like a commitment to trade more aggressively. When an investor receives confirming public information, his/her confidence rises, but disconfirming information causes confidence to fall only modestly, if at all.

Biased self-attribution can be observed in the behavior of Internet stock investors. As stock price of the Internet companies increase, it increases the wealth of these stock holders making them wealthier through (seemingly) successful investment. This success leads these investors to become more overconfident. This overconfidence leads them to trade more aggressively which may lead them to invest in IPOs of new Internet companies. On the other hand, disconfirming public news such as weak fundamentals such as continuing loss incurred by most Internet companies, negative cash flows, etc. have caused confidence of these investors to fall only modestly or if at all.

Thus if an individual begins with unbiased beliefs about his ability, new public signals on average is viewed as confirming the validity of his private signal. This suggests that public information can trigger further overreaction to a preceding private signal. Continuing overreaction causes momentum in securities prices, but that such momentum is eventually reversed as further public information gradually draws the price back toward fundamentals. Thus, biased self-attribution on the part of the individual investor implies short-term momentum and long-term reversals.

Ecommerce Consumer Turned Ecommerce Investor

In this paper, we focus only on the individual investors as only a few institutional investors are beginning to invest in the Internet companies. It is safe to assume that a significant portion of individual investors that have invested billions of dollars in the stocks of these Internet companies, over the last few years, have considerable knowledge not only about the potential of these companies but also about the potential of the entire electronic commerce frontier. After all, it is the promise and possibility of electronic commerce that drives the much anticipated expectation of the investors in the Internet companies that make up the Internet Industry. It is also safe to assume that much of the information used by these individual ecommerce consumers turned investors are derived and disseminated over the Internet through various web sites, chat groups, investor communities focused on Internet stocks. Hence, we observe a dual reciprocating and reinforcing role of the Internet as an information medium at least for these individual investors. It is simultaneously the reason to invest and the conduit of experience (flow) through which information is channeled.

Conclusion

The dual role of the Internet both as the reason to invest and the conduit for rapid information readily impacts on the overconfidence and biased self-attribution of the Internet investors. This paper has developed a model, based on the microfoundation of behavioral finance, to explain the phenomenal stock performance of the Internet companies. We have identified that overconfidence and biased self-attribution reinforces each other and are further positively

reinforced with confirming public information and fall only modestly or at all with disconfirming public information. This is only a theoretical model and has to be empirically tested. Authors are in the process of developing testable propositions and experimental designs to test this model of Internet stock investors.

References

De Bondt, W. and R. Thaler, "Further Evidence On Investor Overreaction and Stock Market Seasonality," *The Journal of Finance*, Vol. XLII, No. 3, July 1987.

Keim, D. and R. Stambaugh, "Predicting Returns in the Stock and Bond Markets," *Journal of Financial Economics*, 1986, pp. 357-390.

Keim, D. "Size Related Anomalies and Stock Return Seasonality," *Journal of Financial Economics*, June 1983, pp. 13-32.

Howe, J. "Evidence on Stock Market Overreaction," *Financial Analysts Journal*, July/August 1986, pp. 74-77.