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Full Length Article

Heuristics and stock buying decision: Evidence from Malaysian and Pakistani stock markets

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Abstract

Applying both qualitative and quantitative approaches, we examine whether or not investors fall prey to three heuristics; namely, anchoring and adjustment, representativeness, and availability, while investing in stocks. We also compare investors' vulnerability to these heuristics based on their economic association, their type and demographic factors such as income, education and experience. For the data collection, a self-constructed questionnaire was administered to investors in the Malaysian and Pakistani stock exchanges. Data has been analyzed through description, correlation and regression analysis. The results indicate that all three heuristics are likely to affect the investors' stock buying decisions. The effect of heuristics is similar across the sample countries, the type of investors, and the income groups. However, the investors with a higher level of education and more experience are less likely to be affected by the heuristics.

JEL classification: G02; G11; G19

Keywords: Heuristics; Anchoring and adjustment; Availability; Representativeness; Stock buying decisions; Malaysia; Pakistan

1. Introduction

The mental shortcuts in the "decision making" process, as opposed to a thorough information gathering and analysis, are referred to as "heuristics". Although heuristics can be helpful in many situations, they often lead to biased decisions (Tversky & Kahneman, 1974). The use of heuristics and their effects on financial decision making is well recognized in behavioral economics/finance literature [see for example (Bernard & Thomas, 1989; De Bondt & Thaler, 1985; De Bondt & Thaler, 1990)]. The literature provides many examples of poor decision making, such as selling the winners too early and holding the losers for too long, excessive trading (Odean, 1998), and under-diversification (Goetzmann & Kumar, 2008). These behaviors (anomalies) are considered to be against the assumptions of the traditional finance theory. However, no satisfactory explanation of why such behaviors exist in the markets is given by the traditional theories. The theory of behavioral finance, on the other hand, attempts to provide an understanding of the fundamental motivations behind such irregular market patterns (Subrahmanyam, 2008).

The studies in the context of the stock market and behavioral biases show that investors are greatly influenced by their behavioral characteristics. Ariely, Loewenstein, and Prelec (2006), for instance, argue that the judgment of the fundamental values of assets is a tough task, so investors are likely to value their assets in relative terms, and mostly they become anchored to the previous buying prices. Similarly, Barber,

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Odean, and Zhu (2009) find that the investors are likely to buy "attention grabbing" or "in news" stocks because these stocks are easy to recall. Moreover, the investors tend to buy previously owned stocks because they can easily recall them and also have some information about them.

Although the literature recognizes the role of heuristics in buy/sell decisions, the focus of the studies has mostly been on the developed markets. A direct linkage between heuristics and stock buying decisions has not been established so distinctively in the developing countries. The economies in the developing countries differ from those in the developed countries in many aspects, such as political stability, and law and order situations, technological developments, the use of information technology, the financial structure, the income level and education. Similarly, stock markets and investors are likely to differ between the developing and developed countries. Investors' attitudes and behaviors are shaped by environmental factors and it is likely that such behaviors are reflected in their decision making: for instance, Pompian (2006) suggests that the education is an important tool to overcome heuristics and biases. Thus, the behavioral biases may work differently due to differences in education levels between developed and developing countries. Moreover, the earlier studies in behavioral finance have mostly focused on a single heuristic and considered it to be operating independently. Yet developments in the behavioral decision theory specify that different heuristics often operate collectively and influence decisions and predictions (Czaczkes & Ganzach, 1996; Ganzach & Krantz, 1990, 1991). In terms of the methodology, most of the studies in behavioral finance use a qualitative approach to examine the influence of heuristics or biases on financial decisions; however, such findings have not been tested using statistical methods.

In this study, we examine three heuristics (anchoring and adjustment, representativeness and availability) in the context of Malaysian and Pakistani stock markets. We use both qualitative and quantitative approaches to study (i) the influence of these heuristics on investors' stock buying decisions, (ii) the differences between Malaysian and Pakistani investors in their susceptibility to these biases, (iii), whether the heuristics affect investors differently when they make buying decisions for themselves and/or for their clients, and (iv) the role of demographic factors such as education, experience and income level on investors' vulnerability to these heuristics.

Based on a mixed approach (qualitative and quantitative), this study contributes towards the literature on behavioral finance in terms of its context (developing countries) and methodological approach. The study has implications for financial decision makers in Malaysia and Pakistan (such as private investors, financial brokers, fund managers, and financial consultants) because the knowledge of relevant biases can prevent decision makers from falling prey to these biases. To collect the data, a self-constructed questionnaire is administered to the investors in the Malaysian and Pakistani stock exchanges. The results show that all three heuristics are likely to influence the investors' stock buying decisions, and this influence is similar across the sample countries, the type of investors, and the income groups. However, investors with more experience and more education are less affected. In the following section we briefly discuss these heuristics and their effect on investors' decisions.

1.1. Anchoring and adjustment

Anchoring and adjustment is a cognitive heuristic that arises out of people's tendency to estimate by starting from an initial guess and then making adjustments to the initial guess in order to arrive at the final estimate. The initial guess "anchor" may come from a variety of sources, such as the computation, a given value, the current value or the historical averages. Regardless of the source of the anchor, the adjustments up or down to reach the final estimates are insufficient. Use of such estimates in financial decision making therefore leads the investors to deviate from neo-classically prescribed "rational" norms. Anchoring and adjustment can thus lead the investors to the following consequences. Firstly, while making general market forecasts, the investors are likely stay "anchored" to the current market values and stay too close to them. Secondly, the "anchor" does not allow the investors or the security analysts to adjust to the new information, and they continue adhering closely to the original estimates. Thirdly, the current levels of the returns are used as "anchors" to forecast the rise or fall in the percentage values of an asset class. Fourthly, the current economic state of certain countries or companies may serve as the "anchor" for future prospects. Anchoring is a very common bias, applying to many areas of finance and business decision making, so investors and wealth management practitioners need to be keenly aware of this behavior and its effects.

1.2. Representativeness

Representativeness is a cognitive heuristic that refers to people's tendency to consider a characteristic to be the representative of the whole of the phenomenon regardless of whether the said characteristic relates to the phenomenon or not. Two primary interpretations of representativeness bias apply especially to individual investors: first, base rate neglect and second, sample size neglect. Base rate neglect refers to investors' tendency to contextualize the venture in a way that is easy to understand, when they are judging the soundness of a company for investment purposes. However, while making the judgment they are likely to ignore other related factors which may affect the value of the investment. The reason for relying on such stereotypes is that investors consider it as an alternative to the required research to evaluate the investment.

Sample size neglect refers to investors' tendency to base their judgment on an inadequate sample of data while analyzing a particular investment. They incorrectly consider the small sample size as being representative of the population. This phenomenon is called the law of small numbers. Although such numbers may reflect the current trend they cannot describe the properties of the whole population. Thus both base rate neglect and sample size neglect can lead investors to make erroneous investment or disinvestment decisions.

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