Literature Review: The Impact Of Behavioral Factors On Investment Decision-making

Abstract:

Making decisions in business is a challenging and most important activity to investors. According to traditional theories of finance assume that investors are expected to act rationally when making investment decisions. However, based on the psychological perspective, psychologists brought a new branch of financial economics known as behavioural finance, rejects that assumption. Behavioural finance argues that people are subject to act irrationally and psychologically biased. Researchers have undertaken many studies to show what affects the rationality of investor's decision-making as well as to understand the behaviour of investors. They have shown that multiple behavioural factors affect the investment's decision-making such as overconfidence, disposition effect,..etc. This study will attempt to review the literature related to those listed behavioural factors above based on the different studies on different journal articles.

Introduction

For a long time, numbers of various researchers in judgement and decision making have undertaken many studies about the behaviour of rational choice theory. The process of rational decision-making is comprised of structured and logical thought in order to acquire an efficient and optimal result. According to Thaler and Barberis in their survey of behavioural finance (2002), rationality means two things: First, when they receive new information, agents update their beliefs correctly, in the manner described by Bayes's Law; Second, given their beliefs, agents make choices that are normatively acceptable, in the sense that they are consistent with Salvage's notion of Subjective Expected Utility (SEU).

There is a debate existed for decades between traditional finance theory and behavioural finance as to whether investors act rationally or irrationally when making investment decisions.

I. Traditional Finance Theory vs Behavioural Finance

Traditional finance sometimes refers to standard finance or modern portfolio theory, theory assumes that people act rationally and unemotionally in making a good investment decision. It is based on the two assumptions: People make rational decisions; People are unbiased in their predictions about the future (Nofsinger 2005, p.1). It is also known with arbitrage principles of Miller and Modigliani; the portfolio principles of Markowitz; the capital asset pricing theory of Sharpe, Lintner and Black; and the option-pricing theory of Black, Scholes and Merton. However, psychologists realised investment decision-making process relies heavily on the human mind and human emotions. That means the psychological factors have a big impact on the investor's decision more than traditional finance theory.

As time goes by and after a number of an investigation by psychologists as well as real-life experience, the financial economists have slowly accepted that investors can be irrational when

making financial decisions. That brought up a new discipline during the 1990s (after the psychologists have undertaken certain studies and gathered enough information to confirm that investor's decisions have affected by the psychological biases leading to poor decisions. It took more than a decade to gain the attention of financial economists. Shefrin and Statman were the first two economists to publish work in behavioural finance in 1984. Statman (1999) has argued that behavioural finance actually did not bring psychology to finance, but 'psychology was never out of finance'.

Pompeian has stated in his book published in 2012 that psychological biases result in irrational financial decisions caused by faulty of cognitive reasoning or reasoning influenced by emotions. Psychologists believed that investors absolutely can not be rationally in their decisions and make predictable errors in future decisions. That is how behavioural finance came to the financial industry and against the traditional finance theory. Behavioural finance has shown more realistically the way people making decisions as well as financial decisions. It helps to understand more about the decisions of investors such as why they buy, hold or sell their stock without any fundamental analysis according to Kisaka after taking the research about decisions of NSE investors in Kenya.

According to Sewell (2007), behavioural finance is the study of the influence of psychology on the behaviour of financial practitioners and the subsequent effect on the market. "Behavioural finance is the application of how psychology affects financial decision making and financial markets" (Shefrin, 2001, p.2).

II. Investment Decision Making

Investment is an act of putting money in order to generate wealth, additional income or more benefit in the future after carefully gathered all information and analysed the information. It is a difficult task for all investors that they have to make good decisions and also avoid the impact of psychological factors. "Investment decision making is influenced by either modern or traditional finance" (Kimeu, Anyango and Rotich, 2016).

Literature Review

This literature review is focused on published literature or journals that related to some listed psychological factors: Overconfidence, Disposition Effect. These are the most common biases in the investment decision-making process and have documented by different researchers.

1. Overconfidence

It is a common bias when people feel too confident about their knowledge, their skills and ignores all the risks related to their decisions. Overconfidence partly results from the illusion of knowledge and the illusion of control. Psychologists have determined that overconfidence causes people to overestimate their knowledge, underestimate risks, and exaggerate their ability to control events (Nofsinger, 2005). Odean (1998) states that overconfident investors trade more than rational behaviour. Investors are liable to overestimate the accuracy of their collected information and too confident in their interpretation skills. Psychologists also found that men are more overconfident than women in tasks perceived into the masculine domain, such as managing finances, based on the research of Beyer, Bowden and Prince (Nofsinger, 2005).

They pointed out that men are more confident about their ability to make financial decisions than women are. To illustrate the relationship between demographic variables and overconfidence in finance, Barber and Terrance - financial economists (2001) have undertaken research to investigate nearly 38,000 households through a large discount brokerage firm between 1991 and 1997. The results have shown that men tend to trade more than women and the performance of men will be hurt by excessive trading than the performance of women (Figure 1). In Figure 1 shows that single men trade the most with the highest percentage - 85 per cent annual turnover1 and the following 73 per cent for married men. The annual turnover percentage for women is 53 per cent (married women) and 51 per cent (single women). It is shown clearly that more overconfident leading to higher trading levels and lower expected utility. The findings by Odean and Barber also show that overconfident investors take more risk than rational investors because they tend to purchase higher-risk stocks and underestimate their portfolios (Nofsinger, 2005).

The other research undertaken by Bhandari and Deave (2006) shows that highly educated males who are nearing retirement, who have received investment advice and who have experience investing for themselves tend to have a higher certainty level. They are too confident about their knowledge and their experiences are enough to avoid making any mistakes.

2. Disposition Effect

The disposition effect is the tendency of investors to hold losing investments too long and sell winning investments too soon (Shefrin and Statman, 1985). This behaviour will hurt the investor’s wealth. Odean stated (1998) that disposition effects is one implication of extending Prospect Theory developed by Kahneman and Tversky in 1979. According to prospect theory value functions (Figure 2) in order to process gains and losses, that is concave for gains and convex for losses. The stock market keeps changing every day in unpredictable ways. The act of selling winning investments too soon is when the investors think they will receive high returns from these stocks at that time and keep the ones with low returns. However, the winning stocks suggest continue to perform well after sold and the losing stocks will keep performing poorly afterwards. That means the investors will avoid the regret and feel more pride.

To support this hypothesis, there are several studies carried out by various researchers. Odean (1998) has examined the disposition effect by analysing 10,000 accounts are randomly selected from the nationwide discount brokerage from 1987 to 1993. He carefully calculated the proportion of gains realized (PGR) and the proportion of losses realized (PLR). He got the result that PGR is greater than PLR. He found that investors would sell their stocks that have risen in value since purchased rather than the stocks that have fallen in value. He also states that investors tend to hold losing stocks because they believe these stocks will soon outperform in the future. Another study taken in Vietnam’s Stock Market by Hien and associates that examined the length of time of individual investors will sell the stock for gain and hold the stock for loss by using the ‘duration method’ approach followed the previous study by Shapira and Venezia in 2001. They will calculate and compare the duration of each winning and losing roundtrip2. The result showed that the investors in Vietnam hold losing stocks for too long - almost double the time of holding winning stocks.

Conclusion

This paper aims to review the published literature related to selected psychological factors affecting investment decision-making such as overconfidence, disposition effect. They have been developed and studied over the years by various researchers. This review will give insight into investment decision-making, understand more about the impact of behaviour factors to investor's decisions as well as behavioural finance. These researches have gradually asserted the appearance of psychological factors in the financial decisions. From there, the investors can take in consideration and make improve their investment decision-making process.

Notes

1. Turnover is a common measure for the level of trading. It is the percentage of stocks in the portfolio that changed during the year.

2. Round-trip is a stock purchase followed later by the sale of the stock.

Figure 1 [image:]

Brad Barber and Terrance Odean Study. Adapted from 'Investing Mindset Part 3: Creating A Mindset Solution', by Sarri, L. (2016), Collins Sarri Statham Investment, https://www.css-investments.com/market-psychology/investing-mindset-part-3/.

Figure 2: Prospect Theory Value Function. Retrieved from: http://www.paulcohen.com/the-key-implications-of-prospect-theory/[image:]

References

1. Pompian, M. (2012). Behavioural Finance and Investor Types: Managing Behaviour to Make Better Investment Decisions. New York: John Willey & Sons. https://doi.org/10.1002/9781119202417.ch3
2. Sewell, M. (2007). Behavioural Finance. Retrieved 5 Sep. 2019, from http://www.behaviouralfinance.net/behavioural-finance.pdf
3. Kumar, S. and Goyal, N. (2016). Evidence on rationality and behavioural biases in investment decision making, Qualitative Research in Financial Markets, Vol. 8 No. 4, pp. 270-287. https://doi.org/10.1108/QRFM-05-2016-0016
4. Kimeu, C., Anyango, W. and Rotich, G. (2016). Behavioural factors influencing investment decisions among individual investors in Nairobi Securities Exchange. The Strategic Journal of Business & Change, 3(4), 1243-1258. Retrieved from http://www.strategicjournals.com/index.php/journal ISSN 2312-9492
5. Barberis, N., & Thaler, R. (2003). A Survey of Behavioral Finance, Handbook of the Economics of Finance (pp. 1053-1128). Retrieved from https://doi.org/10.1016/S1574-0102(03)01027-6
6. Thaler, R. (1999). The End of Behavioral Finance. Financial Analysts Journal, 55(6), 12-17. https://doi.org/10.2469/faj.v55.n6.2310
7. Statman, M. (2005). Normal Investors, Then and Now. Financial Analysts Journal, 61(2), 31-37. https://doi.org/10.2469/faj.v61.n2.2713
8. Statman, M. (1999). Behaviorial Finance: Past Battles and Future Engagements.

Financial Analysts Journal, 55(6), 18-22. https://doi.org/10.2469/faj.v55.n6.2311
9. Barber, B., & Odean, T. (2001). Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. The Quarterly Journal of Economics, 116(1), 261-292. https://doi.org/10.1162/003355301556400
10. Bhandari, G., & Deaves, R. (2006). The Demographics of Overconfidence. The Journal of Behavioral Finance, 7(1), 5-11. https://doi.org/10.1207/s15427579jpfm0701_2
11. Odean, T. (1998). Are Investors Reluctant to Realize Their Losses?. Journal of Finance, 53(5), 1775-1798. https://doi.org/10.1111/0022-1082.00072
12. Shefrin, H., & Statman, M. (1985). The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence. Journal of Finance, 40(3), 777-790. Retrieved from https://www.jstor.org/stable/2327802
13. Hien, N. D., Duy, N., Vu, L., & Tram, N. N. (2012). Empirical Research of Disposition Effects in Vietnam's Stock Market. Journal of Economics & Development, 14(2), 52-71. Retrieved from http://jed.neu.edu.vn/Uploads/JED%20Issue/Article%203_JED%20Vol%2014_%20No.2_%202012.pdf
14. Shefrin, H. (2010). Behavioralizing Finance. Foundation and Trends in Finance, 4(1-2), 1-184. Retrieved from SCU Leavey School of Business Research Paper No. 10-01 http://dx.doi.org/10.1561/0500000030
15. Nofsinger, J. (2005). The Psychology of Investing (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.