Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia Economics and Finance 2 (2012) 237 – 246

Procedia Economics and Finance

www.elsevier.com/locate/procedia

2nd Annual International Conference on Accounting and Finance (AF 2012)

Impact of Social Factors on Individual Investors' Trading Behaviour

Dr. R. Shanmugham[a], K. Ramya[b]

[a]Professor of Management, Bharathiar School of Management and Entrepreneurial Development, Bharathiar University,Coimbatore, India

[b]Assistant Professor, Avinashilingam School of Management Technology,Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore,India

Abstract

Individual investors' trading behaviour has drawn the attention of academicians and investment practitioners globally. The emergence of behavioural finance as a new domain in the capital market research is a case in point. Studies indicate that individual investors are characterized by excessive trading and often to their detriment (Barber and Odean, 2000).In this study, we apply the theory of reasoned action (TRA) and the theory of planned behaviour (TPB) to explain individual investor behaviour. Further, an attempt has also been made to study the influence of social factors such as social interactions, media and internet.

Keywords- Individual Investor; Trading Behavaiour; TRA; TPB; Social factors

1. Main text

The stock market can be viewed as a system of human interactions (Hirschey and Nofsinger, 2008). Investors usually interact with neighbours, relatives, friends and colleagues for exchange of information and discuss stocks. Advice is sought from advisors, analysts, bankers and planners. Hence, investment decision-making of individual investors can be conceptualized as a complex decision-making behaviour which is influenced by rational and irrational factors which contribute to inefficiency of security markets. The inefficiency is generally attributed to behavioural biases of investors. Individual investor behaviour is documented in Odean (1998, 1999), Barber and Odean (2000, 2001) amongst others. All these studies show that individual investors are characterised by excessive trading.

 doi:10.1016/S2212-5671(12)00084-6

Determinants of trading behaviour of individual investors had been the main focus of the growing area of finance known as 'behavioural finance'. Behavioural finance focuses on the individual attributes, psychological or otherwise, that shape common financial and investment practices (Ritter, 2003). Social influence and interactions with other people will cause investors to behave irrationally. Investors may make common mistakes in a herd manner because of social influences and the force of media news. The media plays two roles; they set the stage for market moves and they also instigate the moves themselves (Shiller, 2000). Also the internet has shaped the way of trading by investors. Internet-based trading was found to increase the trading frequency of individual investors (Barber and Odean, 2000).

The primary aim of this study is to better understand the underlying factors that affect the trading behaviour of individual investors. Though a number of research studies have been carried out in understanding individual investor behaviour and the nature of investment portfolio, application of behavioural models in studying the trading behaviour has not been attempted seriously. Social attitude, personality trait and other concepts relating to behavioural dispositions are important to predict and explain human behaviour and have been emphasized by early scholars (Campbell, 1963; Sherman and Fazio, 1983; Ajzen, 1988) in their research. Of all the theoretical frameworks that explain the decision-making processes of investors, the Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975) and the Theory of Planned Behaviour (TPB) (Ajzen, 1985; 1991) have been found to be the popular behavioural models. Hence an attempt is made in this study to explain the trading behaviour of individual investors by using the TRA and TPB.

Recently, individual investors have started trading too often and to their detriment. Though frequent trading may be profitable for brokerage firms, it is not profitable for most individual investors. The more actively investors trade, the less they earn. It is reported that 20 percent of investors who traded most actively earned an average net annual return which is 7.2 percentage points lower than that of the least active investors (Barber and Odean, 2000).

Despite interest shown by researchers in the behavioural finance area in the late 1980's, the number of empirical research studies which identify the underlying factors of trading behaviour of individual investors are not adequate. Also, research pertaining to the application of behavioural model to explain trading behaviour of individual investors is also found to be small in number. Hence, an attempt is been made to study specifically the social factors that influence the individual investors trading behaviour.

2. Objectives

The specific objectives of the study are as follows:

- To study the impact of social factors on attitude towards trading.
- To study the impact of attitude, perceived behavioural control and subjective norms on intention towards trading.
- To study the impact of intention towards trading on trading behaviour of individual investors.

3. Table Review of Literature

Individual investors' trading behaviour has grown over time and has attracted the attention of academicians. Financial advisors have long been recommending individual investors to refrain from frequent trading, as individual investors pay an exorbitant price for trading actively, which may erode their profits or even result in systematic and economically large losses. Braber, Lee, Liu and Odean (2005) documented that the aggregate portfolio of individuals suffered an annual performance penalty of 3.8 percentage points by using the complete transaction records of all traders on the Taiwan Stock Exchange from January 1, 1995 to December 31, 1999. Individual investor losses are equivalent to 2.2% of Taiwan's gross domestic product

(GDP) or 2.8% of the total personal income. They concluded that 'virtually all individual trading losses can be traced to their aggressive orders'. However, compared to huge losses by aggressive trading, trading volume and trading frequency have always been ascending. Further, Barber and Odean (2000) studied trading patterns and returns of over 66,000 accounts held by private investors with stockbrokers during the period 1991-96 and concluded that the average individual investor trades excessively.

Economists, sociologists and psychologists have all attempted to explain investor behaviour in various ways. Economists' enquiries into investor behaviour have focused largely on the "rationality" or "irrationality" of investor decision-making processes. Sociologists explain investor behaviour by focusing on investors' social environments. Psychologists explain investor behaviour by focusing on individual characteristics. The operational definition of individual investors runs as the people, who earn or receive money from spouse or parents on a monthly basis or occasional basis and invest in different investment avenues such as shares, mutual funds, deposits, etc in order to save for future requirements.

In the 1970s, Icek Ajzen and Martin Fishbein developed the Theory of Reasoned Action, which depicted 'attitude' and 'subjective norms' to be two determinants of behavioural intention (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). Fishbein and Ajzen (1975) claimed attitude as 'an individual's positive or negative feelings about performing the target behaviour'. Subjective norms refer to 'the person's perception that most people who are important to him think he should not perform the behaviour in question' (Fishbein and Ajzen, 1975). In other words, social norms, opinion leaders, family members, and friends may play an important role in affecting people's intention. As an extension of TRA, The Theory of Planned Behaviour (TPB) addresses TRA model's limitation in dealing with behaviour over which people had incomplete volitional control (Ajzen, 1991) and thus has been found to be more valid to predict behaviour. Same as TRA, intention in TPB was depicted as a central factor to influence a behaviour, which indicated 'how hard people are willing to try or how much of an effort they are planning to exert, in order to perform the behaviour' (Ajzen, 1991). However, not all behaviours could in fact be performed under people's volitional control, and most of the time, performance of behaviour depended on non-motivational factors, such as time, money, skills and cooperation of others (Ajzen, 1985). The availability of requisite opportunities and resources represented people's actual control over the behaviour, namely 'perceived behavioural control' (PBC). TPB has been largely used and successfully applied to predict people's intention and behaviour (Ajzen, 1991). According to Ghen and Liu (2004), attitude is a main factor influencing behavioural intention. Ajzen and Driver (1992) stated that perceived control behaviour and subjective norms (SN) can predict behavioural intention.

This study aims to analyse the influence of social factors on the attitude and intention of individuals trading behaviour. Social factors are the external forces that interrupt the individual decision making. Media, social interactions with friend and relatives and internet have become essential vehicles for spreading and sharing information and ideas. Individual investors discuss with, and are affected by their family members, neighbours and friends, as far as their investment decisions are concerned (Nofsinger, 2005).

The media is a key factor in influencing decisions of individuals. The media actually plays two roles; they not only set the stage for market moves but they also instigate the moves themselves (Shiller, 2000). Nofsinger (2002a) documented that media influences individuals towards storytelling and keep them away from formal investment analysis. Also Shiller (2000) had documented that the media had a tendency to keep investors focused on specific stories for long periods of time called as an 'attention cascade'. In some cases, the attention cascade had contributed to speculative bubbles in stock markets. Davis (2006) confirmed the role of the media in the development of extreme market movements. The media were found to magnify market responses to news. At times of market crisis, the media had pushed trading activity to extremes. The media had triggered and reinforced opinions.

Social interactions are the acts, actions, or practices of two or more people mutually oriented towards each

other's selves, that is, any behaviour that tries to affect or take account of each other's subjective experiences or intentions (Rummel, 1976). Shive (2010) examined whether social influence affects individual investors' trading and stock returns. The researcher found significant social effects on individual investor trading using data on all individual investor trades in the twenty most frequently-traded Finnish stocks between 1995 and 2003. The effects of social trading were economically significant. Socially motivated traders predicted stock returns and the effects are not reversed, suggesting that individuals share useful information. Individuals themselves over time have become less susceptible to social influence but they are more subject to it, and thus the number of trades caused by social influence increased slightly over the sample period.

Internet has not only provided means for electronic commerce but has also facilitated sharing of information and knowledge with others. These are found in the form of chat rooms and discussion rooms where individuals can share their opinion on their subject of interest. Barber and Odean (2001b) had documented that technological developments associated with the Internet had affected investors and financial markets. Singh, Sandhu, Kundu (2010) conducted a study to examine whether investors who adopted Internet stock trading perceived differently from those of non-adopters. Results indicated that demographic variables contributed significantly in classifying investors as adopters or non-adopters of Internet trading. It was found that the mature, older, experienced, and businessmen investors were less likely to use Internet stock trading as compared to young, inexperienced, and non-businessmen investors.

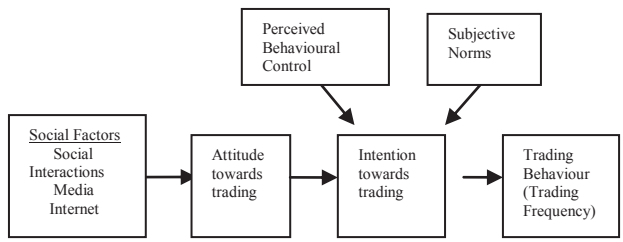

Fig. 1 Conceptual Model

H1: There is no relationship between social interactions and attitude towards trading.
H2: There is no relationship between media and attitude towards trading.
H3: There is no relationship between internet and attitude towards trading.
H4: There is no relationship between attitude and intention towards trading.
H5: There is no relationship between perceived behavioural control intention towards trading.
H6: There is no relationship between subjective norms and intention towards trading.
H7: There is no relationship between intention towards trading and trading behaviour.

4. Methodology

In order to analyse the relationship between variables undertaken for the study, a descriptive study using primary data was considered appropriate. For the purpose of studying the objectives and testing the hypotheses, a questionnaire was used as an instrument to collect the data. The questionnaire has been divided into three parts so as to fulfill the objectives of the study. The first part captures the demographic and trading characteristics of the respondents whereas the second part captured the social factors such as media, social interactions and internet. Finally the attitude, perceived behavioral control, subjective norms and intention are

captured separately in the final part of the questionnaire. The dependent variables trading behaviour measured in terms of trading frequency per week is captured using a open ended question: 'How many times do you trade in a week?' The items that capture other factors like media, social interactions, internet, attitude towards trading, perceived behavioural control, subjective norms and intention towards trading were developed based on concepts in behavioural finance and other related disciplines. However, they were subjected to validity and reliability tests. Thus, the items and factors under study were finalised by the researcher. The sampling chosen for the study is based on the geographical area of Coimbatore city of Tamil Nadu state in India. The investigator distributed questionnaires to 500 respondents based on the snowball sampling technique. The researcher prepared a list of friends, relatives and colleagues who are active traders in stock market. These members on the list were contacted first and were asked to identify the respondents for the study. Finally the researcher would collect 455 completely filled questionnaires and were subject to further analysis.

5. Analysis and Findings

The demographic and trading profile of the respondents considered for the study is presented in Table 1.

Table.1 Demographic And Trading Profile Of The Respondents

Variables	Categories	Mean Value	Frequency	Percentage
1. Gender	Male		288	63.3
	Female		167	36.7
2. Age in Years	Below 30	53.5 years	63	13.8
	31-40		93	20.4
	41-50		103	22.6
	Above 50		196	43.2
3. Marital Status	Married		385	84.6
	Unmarried		70	15.4
4. Annual Income (In Rs.)	< 3,00,000		58	12.7
	3,00,001– 6,00,000		35	7.7
	> 6,00,000		362	79.6
5. Education	Upto School level		98	21.5
	Diploma		18	4.0
	Under Graduate		100	22.0
	Post Graduate		211	46.3
	Professional Course		28	6.2
6. Occupation	Salaried		265	58.2
	Business		22	4.8
	Professional		9	2.0
	Not Employed		159	35.0
7. Mode of trading	Offline		198	43.5
	Online		257	56.5
8. Place of trading	Home		320	70.3
	Workplace		69	15.2
	Brokers Office		51	11.2
	Others		15	3.3
9.Trading Capital (in Rs.)	< 1 lakh	5.75 lakhs	62	13.6
	1-3 lakhs		62	13.6
	3-5 lakhs		75	16.5
	> 5 lakhs		256	56.3
10.Trading Experience	< 2		121	26.6
	2 – 4	1.91 years	252	55.4
	> 4		82	18.

5.1. Social factors and Attitude towards Trading

The relationship between social factors and attitude towards trading has been examined in the study and the results are shown in Table-2. A highly positive relationship (r=0.883) is found between social interactions and attitude towards trading. Hence, hypothesis H1 is rejected. As the respondents' social interactions increases, it develops a favourable attitude towards trading. This is because, social interactions partly induce trading and a highly 'social' investor finds the market more attractive when more of his peers participate (Hong, Kurbik, and Stein, 2004) in trading. On the other hand, the influence of media over the attitude is found to be relatively low as indicated by low positive correlation coefficient. This is due to the fact that during a market crisis, the media can push trading activity to extremes and can trigger positive attitude towards trading (Davis, 2006). Hence hypothesis H2 is also rejected. Finally, internet seems to exert no influence on the respondents' attitude towards trading as the correlation co-efficient is found to be insignificant (r=-0.232) at 1% level of significance. Hence hypothesis H3 is accepted. The result is in contrast to the findings of Barber and Odean (2001b) who demonstrated that the rise of the internet dramatically changed the way people make investment decisions.

Table 2. Relationship between Social factors and Attitude towards Trading

Sl No.	Social Factors	Attitude towards trading	
		Pearson Correlation Coefficient 'r'	Sig. (2-tailed)
1	Media	0.377**	0.001
2	Social Interactions	0.883**	0.000
3	Internet	-0.232	0.114

** Correlation is significant at the 0.01 level (2-tailed).

5.2. Social factors and Attitude towards Trading: Regression Results

Correlation analysis established a positive correlation between the social factors and attitude towards trading. However, the extent of relationship has to be measured. For this purpose, multiple regression analysis was performed. Social factors such as media, social interactions and internet are considered as independent variables and attitude towards trading is considered as dependent variable.

From Table 3, it can be inferred that the social factors account for 79.8% of variance in attitude towards trading. Among the social factors, social interaction is found to have major impact on attitude towards trading followed by media. Internet is found to have significant negative impact on attitude towards trading. The result of the regression model has been tested using ANOVA. The value of F – ratio is equal to 3245.666 ($p < 0.05$) which shows that the model is a good fit. It also shows that adjusted R^2 is equal to 0.797 which means that any time another independent variable is added to this model, the R^2 would change marginally.

Table 3. Social Factors And Attitude Towards Trading: Regression Results

Model	Unstandard Coefficients		Standard Coefficients	t value	Sig at 5% level
	B	Std error			
Constant	13.586	0.103		132.469	0.000
Media	0.144	0.003	0.424	42.113	0.000
Social Interactions	0.321	0.004	0.892	85.654	0.000
Internet	-7.485	0.002	-0.036	-3.420	0.001

R Square : 0.798 Adjusted R^2 : 0.797
F Value : 3245.666 Sig at 5% level : 0.000

5.3. Attitude, Perceived Behavioural Control, Subjective Norms and Intention towards Trading

In mapping the TPB to the context of the current study, individual investors attitudes towards trading may be strong as they are making decisions to achieve a desired level of financial stability, whereas family and peers recommendations and behaviour in stock trading may form the 'subjective norm' variable. In addition, the 'perceived behavioural control' conceptualized as an antecedent to 'intention' within the TPB is defined as an individual's perception of the easiness of performing a particular behaviour.

It can be interpreted from Table 4 that there exists a strong positive relationship between attitude and intention towards trading as indicated by the high positive correlation coefficient of 0.885 at 1% level of significance. Hence the hypothesis H4 is rejected. This is due to the fact that attitude is a major predictive factor of behavioural intention (Ajzen and Driver, 1992; Ghen and Liu, 2004). This result is in consensus with the findings of Ramayah et al., (2003) who found that attitude positively influenced intention to use internet banking. In addition, a moderate positive correlation exists between perceived behavioural control and intention towards trading. Therefore, hypothesis H5 is rejected. Thus, there is significant relationship between perceived behavioural control and intention towards trading. This conclusion is in accordance with the social-psychology research which has identified perceived behavioural control to be a significant factor influencing the behavioural intention, especially in a situation beyond the individual's control (Schifter, D. and Ajzen 1985; Ajzen, 1985). Contrary to the above, subjective norms is found to show negative and insignificant relationship with intention towards trading. This is contradictory with the findings of Titah and Barki (2009) that identified a substitution relationship or negative synergy between intention and subjective norms. Hence hypothesis H6 is accepted which states that there is no significant relationship between subjective norms and intention towards trading.

Dr. R. Shanmugham[a], K. Ramya[b]/ Procedia Economics and Finance 00 (2012) 000–000

Table 4. Relationship between Attitude, Perceived Behavioural Control, Subjective Norms and Intention towards Trading

Sl No.	Factors	Intention towards trading	
		Pearson Correlation Coefficient 'r'	Sig. (2-tailed
1	Attitude	0.885**	0.000
2	Perceived Behavioural Control	0.650**	0.000
3	Subjective Norms	-0.116	0.062

** Correlation is significant at the 0.01 level (2-tailed).

5.4. Intention towards Trading and Trading Behaviour

Ajzen and Fishbein (1980) documented that behavioural intentions are cognitive in nature and act as a representation of a person's readiness to engage in a specific behaviour.

Table 5. Relationship between Intention towards Trading and Trading Behaviour

Sl No.	Factor	Trading Behaviour	
		Pearson CorrelationCoefficient 'r'	Sig. (2-tailed)
1	Intention towards trading	0.733**	.000

** Correlation is significant at the 0.01 level (2-tailed).

Table 5 demonstrates the relationship between intention towards trading and trading behaviour. It is found that the correlation coefficient between intention towards trading and trading behaviour is highly positive. Hence, hypothesis H7 is rejected. This result can be substantiated by the theory of planned behaviour, which states that the more favourable the attitude and the subjective norms, the greater the perceived behavioural control and the behavioural intentions. As a general rule, the stronger the intention to engage in behaviour, the more likely is its performance (Ajzen,1991). Thus, the theory supports that behavioural intentions are highly related to trading behaviours. The result of this study is in consensus with the findings of Bock and Kim (2002) who found that intention has positive influence on investor behaviour.

6. Conclusion

Social interactions and media were found to have positive relationship with attitude towards trading whereas the factor 'internet' does not seem to influence the respondents' attitude towards trading. Further, among the social factors, social interaction is found to have major impact on attitude towards trading followed by media. There also exists a strong positive correlation between attitude, perceived behavioural control and intention towards trading whereas subjective norms is found to be negatively related with intention towards trading. A very high positive correlation is found between intention towards trading and trading behaviour. Hence, it can be concluded that social factors namely social interactions and media influence the trading behaviour (trading frequency) of individual investors.

References

Hirshey, Mark and Nofsinger, John.,(2008), '*Investments: Analysis and Behaviour'*, Tata McGraw Hill Publishing Company Limited, New Delhi, 14.

Odean, Terrance., (1998), *'Are Investors Reluctant to Realize Their Losses?'*, Journal of Finance, 53, 5, 1775-1798.

Odean,Terrance., (1999), *'Do Investors Trade Too Much?*', American Economic Review, 89,5, 1279-1298.

Barber, Brad and Odean ,Terrance., (2000), 'Trading is Hazardous to your wealth: The common stock investment performance of individual investors', Journal of Finance, 55,2, 773-806.

Barber, Brad M. and Odean, Terrance., (2001), *'Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment'*, The Quarterly Journal of Economics, 116, 1, 261-292.

Ritter, J., (2003), 'Behavioural finance.' Pacific-Basin Finance Journal 11, 4, 429-437.

Shiller, Robert., (2000), '*Irrational Exuberance'*, Princeton, N J: Princeton University Press , pp. 149-153.

Campbell, D.T., (1963), *'Social attitudes and other acquired behavioural dispositions'* In S.Kochi (Ed.), Psychology: A study of science, Mc. Graw Hill, New York, 6, 94-172.

Sherman, S.J. and Fazio, R.H., (1983), '*Parallels between attitudes and traits as predictors of behaviour*', Journal of consumer research, 51,3, 308-345

Ajzen, I., (1988), '*Attitudes, traits and behaviour'*, Dorsy Press, Chicago.

Fishbein, M. and Ajzen, I., (1975), 'Belief, Attitude, Intention and behaviour: An introduction to theory and research', Reading, Addison-Wesley, MA

Ajzen, I., (1985), '*From intentions to actions: A theory of planned behaviour'*, In J.Kuhl and J. Bechmann (Eds.), Action-Control: From Cognition to Behaviour, Springer, Heidelberg, 11-39.

Ajzen, I., (1991), '*The theory of planned behaviour'*, Organisational Behaviour and Human Decision Processes, 50, 1, 179-211.

Barber, Brad M., Lee, Yi-Tsung , Liu, Yu-Jane , and Odean,Terrance., (2005), *'Who gains from trade?*', Evidence from Taiwan, Working Paper, University of California.

Ajzen, I., and Fishbein, M., (1980), '*Understanding attitudes and predicting social behaviour',* Englewood Cliffs, NJ: Prentice.Hall.

Ghen K.J and Liu G.M., (2004), '*Positive brand extension trial and choice of parent brand'*, Journal of Production Brand Management, 13,1, 25-36.

Ajzen I, and Driver BL., (1992), *'Application of the theory of planned behaviour to leisure choice'*, Journal of Leisure Research, 24, 3, 207-224.

Nofsinger, John R., (2005), '*Social Mood and Financial Economics',* The Journal of Behavioural Finance, 6,3, 144-60.

Nofsinger, John R., (2002a), 'Investment blunders', Upper Saddle River,NJ: Financial Times Prentice. Hall.

Davis, A., (2006), "The Role of the Mass Media in Investor Relations", Journal of Communication Management , 10, 1,7 - 17.

Rummel, R.J., (1976), '*Social behavior and interaction*', In Rummel, R.J., Conflict and War vol.2. Beverly Hills, CA: Sage Publications.

Shive, Sophie (2010),'*An Epidemic Model of Investor Behaviour*' Journal of Financial and Quantitative Analysis, 45, 01, 169-198.

Barber, Brad. M. and Odean, Terrance., (2001b), '*The Internet and the Investor'*, Journal of economic perspectives, 15, 1, 41-54.

Singh, Arwinder, Sandhu, H.S. and Kundu, S.C., (2010), *'Investors' Adoption of Internet Stock Trading: A Study.',* Journal of Internet Banking and Commerce,*15,1.An open access Internet journal (*http://www.arraydev.com/commerce/jibc/*)*

Hong, Harrison,. Kubik, Jeffrey D and Stein, Jeremy C., (2004), '*Social Interaction and Stock-Market Participation',* The Journal of Finance, 59, 1, 137-163

Ramayah T, Jantan, M., Noor M.N.M. and Ling, K.P., (2003), *'Receptiveness Of Internet Banking By Malaysian Consumers'*, Asian Academy of Management Journal, 8, 2, 1-29.

Schifter, D. B., and Ajzen,I., (1985), *'Intention, perceived control, and weight loss: An application of the theory of planned behaviour'*. Journal of Personality and Social Psychology, 49, 843-851.

Titah, Ryad and Barki, Henri., (2009), 'Nonlinearities Between Attitude and Subjective Norms in Information Technology Acceptance: A Negative Synergy?', Management Information System Quarterly, 33, 4,827-844.

Bock G.W.,and Kim Y.G., (2002), '*Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing'*, Information Resources Management Journal ,15, 2, 14-21.