FACTORS INFLUENCING STOCK SELECTION DECISION: THE CASE OF RETAIL INVESTORS IN COLOMBO STOCK EXCHANGE

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ABSTRACT

The study examines the equity investment decision process of retail investors in Sri Lanka. Opinions are solicited using a five-point Likert scale survey questionnaire. The analysis of 168 responses indicates that the firm's perceived value is the most influencing factor in equity selection. The study identifies Accounting Information, Advocates' Recommendations and Self-Image/Firm-Image to be significant homogeneous groups of the factors influencing stock selection. The risk and historical prices are the second order factors in the process. Decision is also influenced by investors' expectations on political stability, economic condition and good governance. Goodwill of the firm, stock's liquidity, dividend payout and publicly available news are marginal factors. The religious beliefs, the family background and advocates' opinion do not influence while the content of the annual financial statements is less confident. Investors do not aim abnormal returns. The main influencing factors do not show gender, age and education differences. The paper provides insights in to behavioral explanations to many market anomalies; that the investor sentiment is of immense importance.

Keywords: *Investor, Behavior, Stock, Selection, Sri Lanka*

INTRODUCTION

Behavioral finance has gained much attention during the past two decades and investor heterogeneity is one of the potential reasons claimed by recent literature in support of the argument that the traditional pricing models do not fully explain the average stock returns in cross section. Research evidence including that of Brown and Cliff (2004), Baker and Wurgler (2006), Mahakud (2012) confirm the impact of investor heterogeneity in capital markets. These studies bring forward an old, but relatively ignored phenomenon in traditional finance theory, the impact of market participants' behavior. The optimistic (pessimistic) behavior leads to over (under) reactions in the market. Market participant's behavior is dependent upon own psychology, for instance Hede (2012) suggests that 'herd behavior' is the most observed in financial markets. Yet many other factors also influence the individual behavior. Equity selection by an individual investor might reflect perceptual beliefs, than rational expectations of Efficient Market Hypothesis.

Research document that market behavior is affected by the psychological principles of decision making (Hodge, 2003). It also focuses on how investors interpret and act on information to make investment decisions. However, less attention has been given to the individual investor behavior (Al-Tamimi, 2005). Therefore the interest of this study is positioned on empirical evidence, whether there are common factors that can influence the stock selection decision of individual investors. Furthermore, the study aims at finding empirical evidence on validity of traditional assumptions in financial economics; it essentially surveys the rationality of the investors' market behavior. A similarly important motive is that whether demographic characteristics make differences in buying behavior. More specifically, the objectives of the study are:

- Identify the factors influencing the equity selection decision, and;

- Examine the influence of emotions, cognitive and demographics differences on the decision making process of the Sri Lankan individual investors.

The study contributes the limited literature in Sri Lanka on behavioral aspects of financial and capital markets. This study is a cross sectional, time variation of the influencing factors and investors' perceptions is necessary to be continuously tracked in Sri Lanka, perhaps by a financial agency. The present study provides an insight of investor heterogeneity, for informed judgments of investors, brokerage and policy makers. This paper proceeds as; related literature in section 2, methodology in section 3, results in section 4, and conclusions in section 5.

RELATED LITERATURE

Prior evidence shows that equity investment of the retail investors, individuals who buy and sell securities for their personal account, is influenced by many factors including firm related, macro environment and investor psychology related. However, evidence on performance has some contradictory conclusions. For instance, Phansatan et al, (2012) find that retail traders are generally found to have relatively poorer trading performance while institutional investors are found to have informational advantages over other investor types, thus augmenting their trade performance. In contrast, recent evidence (Chen et al, 2014) suggests that the individual investors are successful at picking stocks. Two psychologists, Kahnemann & Tversky in the 1970s suggested. Prospect theory which focuses on subjective decision-making influenced by the investors' value system. It describes some states of mind affecting an individual's decision-making processes including regret aversion, loss aversion, and mental accounting. Utility theory in economics, explain that the individual's investment decision tradeoffs between immediate consumption and deferred consumption. Deferred consumption complies with investments with long term objectives, and it assumes that investors are (1) completely rational, (2) able to deal with complex choices, (3) risk-averse and (4) wealth-maximizing. Based on the 1st, investor rationality, research attention has been on identifying better explanatory factors. The factors include macro-economic factors (AlTamimi, 2005; Das, 2012), firm specific accounting related variables (Das, 2012) and historical market. The dividends, growth and professional investment management are determinant factors of selection of the equity investment (Eiving, 1970). Some studies argue good governance of a firm to be a significant factor in equity selection. Hodge (2003) identifies auditor independence to influence investors' behavior. Past returns can also be an appropriate influencing factor on investors' decisions (Kadiyala & Rau, 2004).The immediate consumption needs of investor is also evidenced by past studies, for instance, Hussein and Hassan (2006) identify that investors' motive in getting extra-ordinary gains as quick as possible is one of the most influencing factors in equity selections. Dividend and price earnings ratios are relevant, however, they are less concerns than the company's management or recent movements in the share's price (Clark & Soutar, 2004). AlTamimi, (2005) identifies factors influencing the investors' behavior in United Arabic Emirates; the most important factors are earnings, motive of big-quick profits and stock's liquidity. Minimizing risk, friends' or family members' opinions are not real concerns for investors.

Izah and Chandler, (2005) examined the perceptions of timeliness, the usefulness of quarterly reports and annual reports by professional Malaysian investors. They find that annual reports are more useful than quarterly reports, even though quarterly reports are aimed at provision of timely financial information. Hodge (2003) find that accounting information has highest significance when making investment decisions. Hossain & Nasrin (2012) suggest few principal factors influencing retail investors; they are company specific attributes/reputation, net asset value, and accounting information. They also find trading opportunity, publicity, ownership structure, influence of people, and personal financial needs are the second order factors. One of the interesting finding of them is that the extent of importance given to each of the factors significantly differ with at least one demographic characteristics of sample respondents; gender, age, occupation, income, education, and experience. More recently, Obamuyi (2013) supports this finding, concluding that the socio-economic characteristics of investors (age, gender, marital status and educational qualifications) are significant influencing factors in investment decisions of investors. Some authors suggest that concerns such as local or international operations, environmental track record and the firm's ethical posture appear to be given only cursory consideration(Nagy & Obenberger, 1994). Instead, the recommendations of brokerage houses, individual stock brokers, family members and coworkers are the real factors influencing stock selection. Many individual investors discount the benefits of valuation models when evaluating stocks. Sultana and Pardhasaradhi, (2012) identify individual eccentric, wealth maximization, risk aversion, financial expectation and accounting information to be related factors in equity investment. Al-Razeen & Karbhari, (2004) find that the report of the Board of Directors show a least popularity compared to financial reports. According to Das (2012)the highly influential factors are, Financial statements of companies; Referral (i.e. advises of colleagues and family members); public information; and Profitability of firm. The lowest priority on the stock selection decisions are the government policies, risk concerns, economic variables and application of discounted cash flow tools. Phansatan, et al. (2012) argue that individuals display herding behavior and have fairly good security selection performance, but appear to be fail at timing. Hence individuals' security selection gains are canceled out by market timing losses.

Evidence also suggest that there has been increasing interdependence between most of the developed and emerging markets (Wong, Penm, Terrell, & Ching, 2004). There is co-movement between some of the developed and emerging markets, but some emerging markets do differ from the developed markets with which they share a long-run equilibrium relationship. Generally speaking, the emerging markets suffer from technology and informational inefficiency, and thus, the stock selection process, perhaps, would show significant differences.

METHODOLOGY

The present study surveys shareholder views by employing a five point Likert scale survey questionnaire. It collected the demographic data, gender, age and level of education. The statements offered some of the salient features based on literature discussed above, similar reasons have been surveyed by number of studies including Obamuyi (2013); Nagy & Obenberger (1994); Bennet et al. (2011); Das (2012). The present study uses a similar design with minor modifications and maintains its external validity and the comparability of evidence across countries. The questionnaire examined behavioral factors which determine the decision making of the individual investors such as ('Labels' used by Nagy et al., 1994) Accounting information, Advocates' recommendations, Self-image/firm image, Concern on economic trends, Classic rational factors like liquidity and risk, and Personal financial needs. Nagy et al (1994) suggest these labels based on a factor analysis of behavioral factors, and these are also used by AlTamimi, (2005) & Das (2012). Questionnaire included 21 questions using five point Likert type rating scale, with responses ranging from (5) always to never (1). The study hypothesized that 1) published information has an impact on individual investors in equity selection; 2) Consultation has an impact on individual investors in equity selection; 3) Perception has an impact on individual investors in equity selection; and 4) Demographic information affects individual investors in equity selection. A second focus is on whether the variables most important to investors form homogenous groups as suggested by Nagy et al (1994). A factor analysis is conducted to determine whether there are underlying constructs that represent a synthesis of investor concerns.

Sample: The questionnaire was distributed among 200 shareholders, 32 have not been turned up. The target group chosen for this study consists of retail investors who regularly invest in the share market. The instrument was distributed to 200 shareholders whose names were obtained from client listings of two brokers, selected at the researcher's convenience. The sample comprised of individual investors who are employed in either in public sector or private sector. They all are retail investors in the Colombo Stock Exchange. The sample data collected during the first quarter of 2014. There were 168 usable responses, a response rate of 84%.The analysis was carried out using t-tests for variance comparisons (independent-sample *t* tests), factor analysis using principal components, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's Test of Sphericity in determining the validity thereon. Studies using similar survey instruments have found that there is no significant difference in outcomes regardless of whether parametric or nonparametric tests are employed (McGee &Maranjyan, 2006). The assumptions on equality of variances of the groups has been controlled with the significance of Levene's Test statistic.

RESULTS

The study analyzes 168 responses which consist of 136 bachelor degree holders, 86 employed in the government and 82 private sector employees. A three-fourth of respondents is male, and 137 (81%) of the sample are Buddhists. The table (01) gives the sample demographics. Additionally, 115 respondents were below 40 years of age. In establishing reliability, the sample's Alpha stood at 0.877.

Table 1 Sample demographics, groups surveyed

	Response Received	Gender	
		Male	Female
Government Employees	86	64	22
Private Sector Employees	82	64	18
Total	168	128	40
Graduates	136	106	30
School education	32	22	10
Total	168	128	40

Table 2 Survey results

Attribute	Mean	Rank	Std. D.	Independent sample t tests		
				Gender Mean Diff. (Prob.)	Occupation Mean Diff. (Prob.)	Education Mean Diff. (Prob.)
Market awareness	3.726	1	1.1617	.5265 *(0.012)	-.0822 (0.648)	-.2794 (0.222)
Company stability	3.720	2	1.1680	.1250 (0.556)	.2872 (0.112)	-.5808 (0.011)
Performance	3.702	3	1.1402	.1343 (0.517)	-.0096 (0.957)	-.2886 (0.199)
Riskiness	3.642	4	1.2491	-.0421	.0170	-.4080

				(0.853)	(0.930)	(0.096)
Economic impact	3.625	5	1.1617	.2620 (0.220)	-.1846 (0.304)	-.3474 (0.128)
Political stability	3.571	6	1.2928	.4870 *(0.037)	.0918 (0.647)	-.8602 **(0.001)
Historical prices	3.571	7	1.1916	.1265 (0.559)	.2586 (0.161)	-.4742 (0.042)
Financial reports	3.434	8	1.2460	.0453 (0.842)	-.0564 (0.770)	-.1893 (0.441)
Goodwill	3.291	9	1.1855	.1530 (0.487)	.8050 (0.045)	-.7463 **(0.001)
Liquidity	3.214	10	1.2674	.1828 (0.428)	.1803 (0.358)	-.3419 (0.170)
Payout	3.202	11	1.2504	.3640 (0.108)	.1094 (0.572)	-.4430 (0.071)
Public News	3.178	12	1.2348	.0040 (0.983)	-.0561 (0.770)	-.3750 (0.123)
Earnings Expected	3.178	13	1.2152	.1687 (0.445)	-.0323 (0.864)	-.7224 **(0.002)
Broker advise	3.101	14	1.2978	.2640 (0.263)	-.0882 (0.661)	-.2408 (0.346)
Advise of colleagues	2.732	15	1.1861	.2060 (0.339)	.3343 (0.068)	-.7114 **(0.002)
Big-quick profits	2.577	16	1.4120	-.6203 *(0.015)	.5085 *(0.019)	.0974 (0.727)
Social status	1.690	17	1.0940	-.4062 *(0.040)	.1338 (0.429)	.4209 (0.050)
Religious beliefs	1.642	18	1.1282	.3700 (0.096)	.0408 (0.816)	.0937 (0.674)
Trading experience	1.351	19	0.4787	.2310 **(0.003)	-.0286 (0.700)	.0294 (0.756)

The table shows the mean scores ($\bar{x}$), rankings of the statementsbased on $\bar{x}$, the mean differences and significance of independent sample t tests of theLikert scale data (5=Strongly positive; 1=Strongly negative)

Accordingly, the market awareness of the investor (Mean (M)score 3.726) is the highest influencing in equity selection. The investor is conservative due to lack of knowledge about the market and the stock. The company stability has a similar importance in equity selection; this suggests that the investor avoid risk of 'market awareness' by selecting more stable firms. Hence the recent performance of the share is highly considered, (M= 3.702) and historical prices are also considered, suggesting that investor has rational expectations about the market. This evidence is consistent with prior findings; Pathirawasam & Weerakoon (2008) find that momentum strategies are highly profitable in Sri Lanka. Past information is an important factor for the individual investor. The risk factors (M = 3.642) have paid substantial attention when making decisions regarding investing in share market. Hence, the risk premium in the traditional pricing models which reflect market wide risk factors might require adjustments to include investor heterogeneity. Economic events and political trend are considered significant by the retail investors. This is consistent with past studies in Sri Lanka; the market is sensitive to economic and political events (Dayaratne & Lakshman, 2010). The access to and availability of financial reports seems sensitive in stock selection, even though the profitability is less concerned. This suggests that the investor seeks better governance than absolute profitability. Goodwill of the firm, stock's liquidity, dividend payout, publicly available news and broker advises are marginal factors in stock selection. The investor does not agree with friends or family advises, and getting big out of trading is not a motive for retail investor. According to the table above, the least considered factors are; social status, religious beliefs and share trading experience. However, the factors not presented in the above table (due to insignificance), but tested using solicited views in the questionnaire and found to be least concerns are nature and industry of business. In testing the demographic differences using t tests, the market awareness, political stability, Big gains expectations, and trading experience (least concerned by F) show gender differences. Occupation and religion show no differences in stocks selection. Education, whether graduates or school education, show a difference in consulting, political stability and reputation of the firm.

Table 3 KMO and Bartlett's Reliability Test

	Kaiser- Meyer-Olkin Measure: Sampling Adequacy	Bartlett's Test of Sphericity		
		Chi- Sq.	Df	Sig.
Factors influencing stock selection	0.8369	133.9725	300	0.0000

Table 4 Results of factor analysis for factors influencing stock selection

Components and Variables	Loadings	Var. Explained%	Eigen
1: Accounting Information			
Financial reports/ other published info.	0.792	26.637	6.659
Expected earnings	0.786		
Annual reports	0.662		
Expected dividends	0.636		
Firm performance	0.513		
2: Advocates' recommendations			
Broker advise	0.626	11.466	3.118
Advise of colleagues	0.612		
Factor3: Self Image/Firm Image			
Company stability	0.690	8.323	2.120
Firm image/ Goodwill	0.600		
Religious beliefs	0.586		
Social status	0.453		
4:Economy and exposure			
Individual's Market awareness	0.735	5.964	1.903
Economic condition	0.720		
Political stability	0.711		
Trading experience	0.512		
Public news	0.495		
5: Classic fundamentals			
Liquidity concerns	0.611	4.984	1.218
Firm's risk	0.488		
Stock's past performance	0.523		
6: Financial needs			
Big-quick profits	0.668	3.324	1.056

Kaiser-Meyer-Olkin Measure of Sampling Adequacy in the table 3 indicates that a factor analysis is quite useful, while Bartlett's Test of Sphericity gives a significant chi -square statistic, indicating that there exist relationships among variables. Table 4 presents the results of factor analysis of the different attributes included in the questionnaire. Six factors with Eigen values more than 1.0 are extracted which accounted for 61% of the total variability. The six factors and the attributes of each with factor loadings, variance explained by the factor and Eigen values are presented in the table. The first component extracted shows that sample individual investors while making investment decisions are relying on inference from financial information available in the public domain. The next important component derived is related to informational asymmetry, importance of recommendations of brokers, advisors, family and friends. The third component reflects perceived values of individual regarding firm's stability in the industry, its image in the market, and the impact of religion. The next is the concern on economy in general, and individuals' past exposure for equity trading, which is a least concern attribute (see table 2). The 5th component reflects the rational expectations on liquidity, risk and historical prices.

CONCLUSION

This study examines equity selection criteria of retail investors, in Colombo. It attempts to understand the main factors that could influence stock selection decision. it finds that there appear at least three significant homogeneous variable groups; Accounting information, Advocates' recommendations and self/firm image. Selection of equity depends on investor's market awareness; they seek stability of investment and capital preservation, use performance of the stock during the recent past and are risk concerned. Time series of average returns (i.e. past prices of the share) are the second order factors in the process of equity selection. Stock selection decision is also influenced by investors' expectations on political stability, economic condition and firm's stability. It also suggests that the asset prices are closely determined by the investors' expectation of both the firm related factors (i.e. returns, size, dividend policy etc) and market wide factors. The religious beliefs, the family background and advocates' opinion do not influence the decision while the investors display a less confidence on the content of the annual financial statements published by the firms. Investors do not aim abnormal returns by investing in equity market. Social status of the investor is not associated with stock selection decision. The main influencing factors do not show demographic differences: Gender, Age, Education, and Employment.

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