# The Effect Of Financial Information On Investment In Shares - A Survey Of Retail Investors In Kenya

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## Abstract

*The main objective of this study was to examine the effect of financial information on investment in shares for Kenyan retail investors, applying the behavioral finance theory. The traditional Efficient Market Hypothesis is becoming deficient to explain investor behaviors in the capital markets. Hence behavioral factors are being considered as possibly playing a role in the securities market activity. Primary data was collected from 311respondents randomly sampled form the population of 836.250 investors participating at the Nairobi Securities Exchange as at March, 2013. Data analysis was done applying descriptive andlinear regression statistical data analysis. The results revealed that financial information variable had significant influence on decisions to invest in shares with p-value .000 (p<0.05).Acquiring financial information therefore has the potential to improve investors' decision making resulting on improved overall portfolio performance. On formulating policy, both the stock market regulators and financial advisers should make strategic frameworks toeducate investors to improve their financial analysis knowledge, economic, and commercial skills as a means to encourage more participation in the securities markets.*

***Key Words:*** *Behavioral Finance, Financial information, Securities Market, Retail Investors*

## 1. Introduction

A number of theories have been proposed to explain why and how individuals make decisions when investing, saving and even borrowing money.  Schmidt (2010) explains that it is important to understand the investment participation decision of investors, what motivates them, even before considering the selection criterion and ability. Economic considerations exert influence on individual's keen to make capital gains or receive dividend payments from the investment they make. In the investment market an investor faced with options to invest in will logically choose the investment that guarantees protection of wealth, and comparatively provides higher returns in the market (Cole &Shastry, 2009).The Rationality and Efficient Market Hypothesis (EMH) predominated theory and practice in the financial markets starting 1960's to 1980's.  Fama(1970) explains that in an efficient market stocks will always trade at their fair market value in the securities exchange reflecting all available information, making it almost impossible for investors to purchase undervalued shares or sell shares at inflated prices.

In reality individuals do not think rationally, are instead led by emotions, subjective thinking, and at times by the herd mentality (Shah & Oppenheimer, 2008). The EMH has steadily become deficient to explain market behavior, subsequently leading to a shift in thinking, with the understanding that the market consists of human beings whose behavior cannot be understood solely through mathematical or economic studies (Ozerol*et al.,* 2011).  In making decisions to invest individuals behaviors will therefore be driven by personal frames, including availability of financial information to guide their selection decision.  Behavioral theorists' postulate that investment decisions are to some extent influenced by personal prejudices and perceptions that fall short of the criteria of rationality as proposed in the EMH. The contemporary capital markets are therefore being analyzed from a new perspective of behavioral finance, a theoretical model applying the principles of psychology and sociology to finance (Pompion, 2008).

*1.1 The Kenyan Capital Market – An Overview*

The capital market plays a fundamental role in stimulating economic growth and development through mobilization of resources in an economy (Yartey&Adjasi, 2007). The markets provide a platform for exchange of financial assets (stocks and bonds), following established regulations to provide continuous liquidity in the market. The Kenyan capital market is formalized by existence of a Securities Exchange, the Nairobi Securities Exchange (NSE), consisting of the primary and secondary segments where investors participate.  Trading in shares in Kenya started in 1920's when the country was still a British colony and Africans were not allowed to trade.  At the initial formative stages, the market was mainly characterized with informal rules and regulations and dominated by foreign investors.Trading took place on gentleman's agreement arrangement in which standard commissions were charged with clients being obligated to honor their contractual commitments making good delivery, and settling relevant costs (NSE, 2010).

The Kenya Vision 2030 development blueprint covering the period 2008-2030 aims to achieve an economic growth rate of 10 per cent per annually with 30 per cent of the resources to be financed from mobilization of domestic resources (GoK, 2007).  The strategy aims to realize the objective through creating a vibrant and globally competitive financial sector promoting high-levels of savings and financing for Kenya's investment needs. The GoK Annual Progress Report indicates below target

achievement for the country with annual average growth rate of below 5 per cent, and gross national savings of 13.4 per cent as a percentage of GDP (GoK, 2011).

The Nairobi Securities Exchange(NSE)was informally established in (1954) as a voluntary association of stock brokers registered under the societies act with the objective to facilitate mobilization of resources to provide long term capital for financing investments(NSE, 2010).   In this formalization stage, a self-regulatory system is adopted while attempts are made to increase the participation of local investors by the post independent government. In the late 1980s liberalization and privatization took Centre stage as development strategies in the Kenyan economy following poor performance of the public sector, characterized with misallocation of resources, market distortions, and negative low economic growth(Kibuthu, 2005).

To strengthen the market, various institutional and policy reforms were implemented to enhance the growth of the market through stringent listing requirements to promote higher standards of accounting, resource management and transparency in the management of business (Ngugi, 2003).  An important development was a study conducted by International Finance Corporation (IFC) collaborating with the Central Bank of Kenya (CBK) which recommended structural reforms in the financial markets leading to the formation of the regulatory body, the Capital Markets Authority (CMA) in 1989(IFC/CBK, 1984). The overall objective of CMA was set to support creation of an environment conducive for growth and development of the country's capital markets (CMA, 2010). The exchange has continuously lobbied the government to create an enabling policy framework to facilitate growth of the economy and the private sector to enhance growth of the stock market(Ngugi& Njiru, 2005).

The NSE is supported by the Central Depository and Settlement Corporation (CDSC) which provides clearing, delivery and settlement services for securities traded at the Exchange. It oversees the conduct of Central Depository Agents comprised of stockbrokers and investments banks which are members of NSE and Custodians (CDSC, 2004). These regulatory frameworks are aimed to sustain a robust stock market exchange that supports efficient allocation of capital allowing price discovery to take place freely based on the market forces.

The NSE as at 2013 had 59 companies with equity listings in the Main Investment Market Segment, Alternative Investment Market Segment, Fixed Income Market segmentand Growth Enterprise Segment (NSE, 2014).The frameworks for other segments in the derivatives market and Real Estate Investment Trusts are being streamlined by the CMA.NSE currently uses an Automated Trading System (ATS) which is a fully automated screen-based system.  The ATS adopts the principles of order- driven market in which the best-buy order is matched with the best-sell order.In July, 2011, the NSE adopted a T+3 settlement system with the expectation that efficiency gains from the shorter settlement cycle will improve liquidity in the market(NSE, 2011).

Olweny and Kimani (2011) in their study of the relationship between the stock market and economic growth in Kenya find that an increase in the NSE 20 share index potentially signals the markets expectation of higher dividends, corporate profits and in turn a higher economic growth.  The study concludes that the stock market had a positive effect on economic growth.  Aduda*et al*., (2012) findings show that there were varied behaviors and financial performance of individual investors in Kenya with some investors exhibiting rational behavior while making investment decisions.  Olweny*et al.,* (2012) investigates the effect of stock market experience on risk tolerance and in their finding investors with previous experience in the market were found to be more tolerant to risk compared to those without

experience, probably due to previous exposure to market volatility to which newcomers may be reluctant to risk.   Ndiege (2012) examines the factors influencing investment decision in equity stocks at the Nairobi stock exchange among teachers in Kisumu Municipality. The study noted that majority of the investors preferred to invest in real estate as opposed to investment stocks in which only small proportion of 28 per cent of the respondents invested.  The study findings also show that decisions to invest in equity stocks were influenced by expected dividends, capital appreciation and affordability of shares. The herd mentality was also found to play a role as explained by investment decisions based on shares in high demand and friends and co-workers recommendation

Although the NSE provides avenues for investment opportunities that encourage thrift culture, critical in increasing domestic savings and investment ratios that are essential for rapid industrialization, the savings and investment ratios in Kenya are too low, below 10 per cent of GDP (CMA, 2011).Although the Kenyan capital market has continued to record a gloomy performance as a financing source, the Nairobi Securities Exchange reported remarkable improvement in turnover performance in 2011, the best since inception (NSE, 2011). However, the annual reports indicate a significant drop in equities turnover from Kshs 107 billion in 2011 to 67.1 billion in 2012 (CMA,2013) representing approximately 4.4 percent of GDP.  This figure is quite low as compared to 40.8 percent in Malaysia 70.8 percentin China 37.0 percentin Brazil 37.8 percent in India and 81.1 per cent in South Africa (World Bank, 2013).  As savings increase, capital accumulation is expected to be stimulated eventually leading to higher output levels in an economy.The Kenya capital market has been described as narrow and shallow only able to raise less than one per cent of growth finance from the stock and bond market (Ngugiet al., 2007).Inspite of the NSE providing avenues for investment opportunities that should encourage a thrift culture, which is critical to increasing domestic savings and investment ratios essential for rapid industrialization, the savings and investment ratios are still too low, below 10 per cent of GDP (CMA, 2011).An understanding of the how financial information the stock investment decision process is important as will provide an insight into how investors react to these variable as well as to what extent these factor affects their investment decision making.

The rest of the paper is organized as follows: The next section provides that literature review. The methodology is developed in section three while section four provides analysis of the results. The last section provides conclusions, policy and management implications.

## 2. Literature Review

The Rationality and Efficient Market Hypothesis (EMH) predominated theory and practice in the financial markets starting 1960's to 1980's.Fama (1970) describes an efficient market as one where a large number of rational investors intent to maximize profit, compete with each other intrying to predict future values of individual securities,and one where current information is almost available to all participants. In an efficient market, the security prices are presumed to reflect the effects of information based on past, current and future events.  However in a study conducted by Lee *et al.,*(2010) investigating the inertia of real stock prices for 32 developed and 26 developing countries, the researchers in their finding report that stock markets may not be efficient after all.Mlambo & Biekpe (2007) examine the weak form of market efficiency of ten Africa stock exchanges using daily data for the period between January, 1997 to May, 2002, and the result showsthat all the markets rejected the random walk proposition.  Enowbi *et al*, (2009) also examine weak form efficiency of four African Stock Exchanges

namely, Egypt, Morocco, South Africa, and Tunisia using daily data collected and the findings indicated that none of the markets followed the random walk hypothesis with the exception of South Africa.

Tenai*et al.,* (2011) investigate determinants of initial public offer pricing in Kenya and their findings conclude that public information disclosed in the prospectus was not significantly reflected in IPO prices and the rational theory therefore cannot explain the effect of investor sentiment in IPO market in Kenya.  The IPO pricing in Kenya is inconsistent with the EMH, as evidenced by the under and overpricing phenomenon observed in Kenya.  Kiplanga*et al.,* (2010) examine determinants of investor confidence in Kenya and find that daily price movements in the NSE are significantly related to investor sentiment since the Equity Market Sentiment Index (EMSI) captured capital market related news and events. It is therefore probable that investors' psychology is a potential explanation for stock activity movements. EMH has steadily become deficient to provide explanation for the market behavior, more dramatically perhaps, the drastic drop in United States share prices by over 30 per cent during a two month period that preceded the crash of October 1987 (Mosomi & Ghayekhloo, 2011).  Subsequently, there has been a shift in thinking, with the understanding that markets consists of human beings whose behavior cannot be understood solely through mathematical or economic studies (Ozerol*et al.,*2011).The stock markets are therefore being analyzed from a new perspective of behavioral finance, a theoretical model applying the principle of psychology and sociology to finance (Pompion, 2008)

The availability of financial information has been postulated as one of the variables that could influence investor behavior while making investment decisions on the investment option to select. Financial information refers to accounting reports, general information relating to price movements, reputation of the firm, firm status in industry, past performance of the firm stock, and expected performance (Chong &Lal, 2011).   Financial information is considered to influence an investor in making a decision to invest in stocks as an individual would evaluate the underlying movements of the key indicators of interest.  Merika(2008) and Easley *et al*., (2010) find that financial information and expected corporate returns do have a significant effect on the decision to invest in shares.

According to Easley *et al.,* (2010), when forming an intention to invest, individual investors will normally begin with assessment of companies 'financial positions' based on some objective measures such as return on equity or earning per share.  Subsequently, their emotional perceptions of such evaluations may come into effect as they try to justify their investing decisions in a given company's stocks.  Chong and Lai (2011) explains that in making an investment decision, rational individuals are likely to seek information on performance as well as the behavior of other investors. The timing and delivery of the information about the market had substantial effect on how investors made their decisions (Hughes, 2008).

(Chong &Lal, 2011) assert that analysis of the available financial information provides a technical basis to evaluate the past and projected performance of a firm.  In this respect various criteria can be used, including financial ratios which can then be compared across the industry to support making an informed investment decision.  The selected statistical indicators including (EPS, DPS, D/E) are used to measure current conditions of a stock as well as forecast financial or economic trends.  These indicators are used extensively in technical analysis to predict changes in stock trends or price patterns.   In fundamental analysis, economic indicators that quantify current economic and industry conditions are used to provide perception on the future profitability potential of selected stocks.

Gentry and Fernandez (2008) also find that Annual Reports and interviews with company officials were the most important sources of information in assessing the firm value and therefore informing the equity selection process. Investment decision makers use financial statements of different firms for financial decision making purposes.  In this instance, financial analysts become useful in gathering, analyzing and interpreting the accounting numbers the results of which is then circulated to potential investors for use to make decisions. Kiplanga*et al.,* (2010) examine determinants of investor confidence in Kenya and their findings show that daily price movements in the NSE are significantly related to investor sentiment, implying therefore that investors will be guided by the available information to make a decision to invest in shares.

Totok*et al.,* (2007) investigated the nature of indicators having influence on investor's needs and motivation to invest in equity shares using data for firms trading in the Jakarta Stock exchange and the findings show that investors in emerging markets require certain metrics as tools to analyze and predict the value of shares.   The researchers argue that the metric provides a basis to ascertain the interrelationships among fundamentals, external risks, and value of the shares influencing the quality of fundamental decisions.

Research Question: Does access to financial information influence retail investors to invest in shares of firms listed in the NSE?

Research Hypothesis: $H_0 1$.Financial information is positively related to an individuals' investment in shares.

## 3. Methodology

The main purpose of the study was to access the influence of financial information decisions to invest in shares.  The research made use of the existing literature to derive the selected behavioral variable to the test the hypotheses posit. A survey research design was used to collect data, and then a quantitative approach was applied to analyze the behavioral influence of financial information on retail investor's decisions to invest in shares.  The research utilizes both descriptive and explanatory research methods in the conduct of the study focusing on the target population of 836,250 retail investors participating in NSE as at 31[st]March 2013 (CMA, 2013).  The respondents were sampled from investors within City of Nairobi who were presumed to be representative of retail investors participating in the NSE.  This is because Nairobi is the commercial centre of Kenya, and the NSE is situated in Nairobi as are the reputable stock brokerage firms.  The city being a metropolis has mix of all the ethnic groups in Kenya, hence a good representation of the population. The data for analysis was obtained by means of a research questionnaire distributed through five various sized brokerage firms which are authorized to trade in the NSE. Purposeful random sampling approach was adopted to collect data from the respondents.  Purposeful in the sense that five major stock brokerage firms with offices located at the Central Business District (CBD) had 77 questionnaires each dropped in their offices for completion by retail customers transacting through their offices.  The questionnaires were randomly administered on customers that visited their offices over a period of 15 days to attain the calculated sample size of 384 respondents.

*3.1 Model and Data Description*

The variables under study was analyzed applying the following econometric model adopted from Chong& Lal, (2011)given as;

IS= $\beta_0 + \beta_1$, FIN +$\in$

Where: IS = Investment in Stock

$\beta_o$= constant term

$\beta_1$, FIN = sensitivity of investment in shares to financial information

$\in$= disturbance term with an expected value of zero.

  The sensitivity of investment in shares to changes in selected factors was computed by ordinary least squares (OLS) in the framework of the model applied by Chong &Lal, (2011). This factor model was based on the assumption that the disturbance terms are uncorrelated across stocks, meaning that decisions to invest in shares change only as a reaction to a specific factor.

*3.2 Variable Definition and Measurement*

  The researcher investigated stock activities of investors using a response index scale of 1 to 5 to determine the influence of the selected independent variable (Financial Information) on the dependent variable (Investment in stock) using a structured questionnaire. The degree of sensitivity of the dependent variable was measured by asking the respondent to assign a weight on equities in their portfolio of financial assets adopting Amromin & Sharpe (2008).  The selected weights were less than 10 percent, between 10 to 25 percent, between 25 and 50 percent, between 50 and 75 percent and more than 75 percent. These parameters were used to carry out data analysis using statistical tools selected.

## 4. Result and Analysis

The initial target sample size was 384 respondents but a response rate of 81% was achieved as 311 respondents completed the questionnaires that were administered.  Table 1 reports the results of the regression coefficient.

Table 1. Coefficient of Regression

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.411 | .143 | | 16.895 | .000 |
| | DIV | .331 | .038 | .443 | 8.620 | .000 |

a. Dependent Variable: IS

  The results presented in Table 1 shows that the regression coefficient statistic generated p-value 0.000 at significant level of 5%.  The directional alternative hypothesis is therefore accepted implying that financial information significantly influenced decisions to invest in shares.  The relationship between financial information and investment in shares followed a Linear Regression model of the nature IS =

2.411 + 0.311 where IS is the estimated share investment performance, constant intercept term ($\beta_0$=2.411) 0.311is the slope coefficients ($\beta_1$) for financial information

Table 2. Correlation Matrix of the variables

**Correlations**

|  |  | IS | INFO |
|---|---|---|---|
| IS | Pearson Correlation | 1 | .540** |
|  | Sig. (2-tailed) |  | .000 |
|  | N | 306 | 306 |
| INFO | Pearson Correlation | .540** | 1 |
|  | Sig. (2-tailed) | .000 |  |
|  | N | 306 | 311 |

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

The correlation matrix presented in table 2 shows moderate correlations between the independent variable (proportion of money invested in shares) and independent variables (financial information).The degree of correlation was moderate indicating that although the variable influenced investment in shares other factors could also be playing a role in influencing investor decisions besides the factor of financial information.

Table 3 Analysis of Variance

**ANOVAa**

| Model |  | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 75.439 | 1 | 75.439 | 74.299 | .000b |
|  | Residual | 308.665 | 304 | 1.015 |  |  |
|  | Total | 384.105 | 305 |  |  |  |

a. Dependent Variable: IS

b. Predictors: (Constant), DIV

The analysis of variance presented in Table 3 shows the F Value of the regression model was 74.299df (1, 304) p< .05.  The sig. value generated by the model was .000 indicating that the financial information variable had a significant influence on investors' decisions to invest in shares of firm listed in the NSE.

## 5. Discussion of Key Findings

The key objective of the study was to assess whether financial information had a behavioral effect of influencing investment decisions to invest in shares as compared to other available competing avenues of investment. The study sought to examine whether when an investor wanted to invest would generally be influenced by the available financial information as a basis of making a selection on which companies' shares to invest in. The correlation coefficient shows that financial information was positively related to an individual's decision to invest in shares of firms listed in NSE (p-value .000) where p <.05. A significant correlation was therefore established, and the hypothesis "H$_0$1 - Financial information is positively related to an individual' investment decisions in shares" was therefore accepted. This result is

congruent to the findings of Merika, (2008) and Easley *et al*., (2010) where the researchers' findings reveal that financial information and expected corporate returns had a significant effect on the decision to invest in shares.  It is premised that the an investors intention to invest will normally begin with assessment of companies 'financial positions' resulting in emotional perceptions, subsequently culminating in justification of the investment decision in a given company's stocks based on the evaluations made. A business health can be ascertained through thorough analysis of the financial statements which often will include review of key ratios.

The case for investors in the NSE, as per the study findings, also shows a significant influence by financial information while making decisions to invest in shares.  Notably, individual investors dealing in the stock market place high premium on financial information. Despite the experience of low financial literacy levels in the Kenyan capital market, nevertheless investors still appreciate the significance of the financial reports.  Kiplanga*et al*., (2010) pose that investors are guided by the available information to make a decision to invest in shares, and the current finding supports the proposition.

## 5. Summary, Conclusions and Recommendations

In the second objective, the study postulated that "financial information is positively correlated to an individuals' investment in shares". The study result found a significant influence and therefore the postulated hypothesis isaccepted.  The finding implies that investors did appreciate the importance of financial information while considering investment decisions.  Given the premium attached to financial information, market participants should proactively inculcate knowledge on use of financial reports.  It is premised that where financial literacy is high, generally the financial reports will be of substantive value in terms of supporting as an evaluating guide to investment decisions.  Investors are expected to analyze financial reports to appreciate them and on that basis consider if the indicators are favorable (positive), and therefore make the decision to place more meaning; higher investments in shares of those companies they perceive more value.

This thesis concludes that financial information acquisition has the potential to improve investors' decisions resulting on improved overall portfolio performance.  Both the stock market regulators and financial advisers should therefore educate investors to improve their financial analysis knowledge, economic, and commercial skills as a means to encourage more. To this end it is recommended that Brokerage firms should establish capacities in their respective institution to be able to continuously train investors and whenever necessary assist them to interpret key financial indicators to support in informed decision making.  The Managers of listed companies should deliberately endeavor to avail financial information to the public in a timely manner, preferably by posting the annual reports on the website as announcement updates.   This will avoid information asymmetry and ensure the market operates in near perfect competition which will enhance confidence, and make market participants to fully appreciate the role of financial information in investment decision making.

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