Disposition Effect on Equity Shares in Nigeria
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Abstract
This study examined the disposition effect on equity shares in Nigeria based on the prospect theory and mental accounting. Specifically, this study was designed to assess the extent to which rising stock prices increase the sales of shares, as well as determining whether accounting information interaction with disposition effect has any relationship with the sale of stocks. To attain these objectives, research questions and hypotheses were formulated and tested. The study used Ex post-facto research design. Data were sourced from Nigerian Stock Exchange (NSE) official publication on daily volume of shares traded, Securities and Exchange Commission (SEC), and the Nigerian Bureau of Statistics (NBS). The population of this study comprised all listed companies in Nigerian Stock Exchange as at December 31, 2014 which have finished its obligation in delivering annual report for the year ended 2007 to 2014. The data collected were analysed using panel data regression analysis. To this end, we conducted descriptive statistics, correlation matrix and variance inflation test. Panel data regression corrected for Heteroscedasticity was also conducted to determine the effect of the independent variables in the models. It was empirically determined that, positive share price Returns have a negative influence on share prices in the Nigerian stock market in the period under review. 

Keywords: stock prices, sales of shares, disposition effect, Value Relevance, prospect theory

1. Introduction
The way of pricing securities traded is one of the most important issues in exploring and discovering patterns and rules governing market. Most studies on financial issues emphasize on actively economic rationality and market efficiency. Some recent empirical researches have shown that some of the behaviours of investors are in contrast with the above paradigms; therefore, researchers were faced with a lot of exceptions that were not explainable in terms of theoretical models in the form of modern financial theory. Therefore, a new paradigm called behavioural was presented to explain the investors’ behaviour (Somayeh, Vahideh, Mahdieh, & Mohammad, 2013). This was also supported by Schütte &Gregory-Smith (2015) who stated that there are an increasing number of ethically minded investors, and that, a broader shift in investment behaviour is mitigated by the attitude-behaviour gap or due to inconsistency in behaviours (Schütte & Gregory-Smith, 2015). These tendencies can be noticed in some investors holding on to their losing stocks, which is driven by prospect theory and mental accounting, and creates a spread between a stock’s fundamental value and its equilibrium price, as well as price under-reaction to information. However, Selling decisions on stock should chiefly depend on the perceived future value of a security, but not the purchase price. This concept was captured by Disposition Effect (DE) which presents a case considered an irrational behaviour; the tendency of investors to hold losers too long and sell winners too soon, that is, investors willing to realise gains but are reluctant to realise losses. It is based directly on prospect theory (kahneman &Tversky 1979) and mental accounting (Thaler 1985). In their model, Shefrin & Stateman (1985) posit that investors maintain a separate mental account for each stock position, and are keen to maximize an S-shaped value function that is convex for losses and concave for gains. The implication of this is that investors seem to be risk-averse in the domain of gains, whereas, in the domain of losses, they tend to be risk-seeking.

Grinblatt & Han (2002, 2005), developed a theoretical model of equilibrium prices where a group of investors have preference that combine the prospect theory with mental accounting. That is, the demand for a stock by a prospect theory/mental accounting agent deviates from that of a fully rational investor, with the distortions being inversely related to the unrealized profit experienced on the stock.

The existence of the disposition effect seems undisputed; however there has not been an agreement among investment professionals on an explanation for this phenomenon. Some empirical literatures favours a behavioural explanation offered by Shefrin & Statman (1985), which combines the ideas of mental accounting (Thaler 1985) and prospect theory (Kahneman &Tversky 1979). Shefrin & Statman (1985) argue that investors keep a separate mental account for each stock. Within that account, investors maximize an “S”-shaped valuation function. This valuation function is concave in the gains region and convex in the loss region. Thus, if a stock appreciates in price, the investor’s wealth will be in a more risk-averse part of her valuation function, this makes a sale more likely. In contrast, if the stock is trading below its purchase price, the investor becomes risk-loving, and will hold on to the stock for a chance to break even.

An investor who purchased a stock on favourable information may sell it when the price goes up because she rationally believes that the stock price now reflects this information. On the other hand, if the price goes down, the investor may continue to hold it, rationally believing that her information has not yet been
incorporated into the price (Lakonishok & Smidt 1986). These alternative rational explanations have been challenged by recent empirical studies. Odean (1998) argued that investors who sell their entire holdings of a stock — and who are thus unlikely to be motivated by diversification — continue to prefer selling winners. In addition, he provides evidence against the hypothesis that higher trading costs for lower priced stocks are responsible for the disposition effect. Even when differences in transaction costs are controlled, investors appear to be reluctant to realize their losses. Moreover, Odean (1998) & Brown et al. (2002) further argued that the investors’ preference for realizing winners rather than losers does not appear to be justified by the subsequent stock performance. Both studies find that, on average, winners that are sold out perform, over the subsequent six (6) to twenty four (24) months, losers that are not sold, which leads them to reject the information-based explanation suggested by Lakonishok & Smidt (1986).

Evidently, large majority of investors exhibit the disposition effect and they also suggest that disposition does indeed drive momentum, however, their study is based on a relatively small sample with a short time frame. (Shumway & Wu: 2006). It seems that they have not enough statistical power to estimate the relation between the disposition effect very precisely.

Moreover, most of the studies reviewed, followed Odean’s (1998) methodology based on individual trading data and this was supported by classical researchers (Feng & Seashole 2003; Chen et al 2004; Ng & Wu 2007). Brown, Chappel Rosa, and Walter (2002), further argued that Odean methodology did not use aggregate market data to examine disposition effect matters. It sets reference price as the average of the purchase price and the approach does not consider the mental accounting theory.

More so, most work on disposition effect have not incorporated sufficient vital accounting information in their studies, hence behavioural reaction in stock prices due to changes in accounting numbers is lacking disposition effect literatures.

The main objective of this study is to examine the relationship between the disposition effect on equity shares in Nigerian based on the prospect theory and mental accounting. This objective is pursued through the following specific objectives:
1. To determine the extent to which rising stock prices increase the sales of shares
2. To ascertain if accounting information interaction with disposition effect has any relationship with the sale of stocks

1.2 Statement Research Hypotheses
In light of the research questions formulated in this study, the following hypotheses have been formulated and stated in their null form as follows:
H1: Rising stock prices are not significant related to increase in the sales of shares.
H2: Accounting information interacting with disposition effect has no significant effect on the selling of shares in the Nigeria stock market

1.3 Scope of Study
This study is entirely centred on identifying the reasons for the anomaly discovered in behavioural Accounting/finance; the tendency of investors to sell shares whose price has increased, while keeping assets that have dropped in value. To this end, panel data covering the period from 2007-2014 was adopted. The data consist of the Nigerian Stock Exchange (NSE) official publication on daily volume of shares traded, data from the Securities and Exchange Commission (SEC), Nigerian Stock Exchange (NSE) and the Nigerian Bureau of Statistics (NBS).

2. Review of Related Literature
2.1.1 Disposition Effect
The ‘Disposition Effect’ is the tendency to sell assets that have gained value (‘winners’) and keep assets that have lost value (‘losers’). (Weber & Camererb 1998). It is an anomaly discovered in behavioural Accounting/finance. It can be explained by the idea that people value gains and losses relative to a reference point and the tendency to seek risk when faced with possible losses, and avoid risk when a certain gain is possible, this is an aspect of prospect theory.

Investors are willing to realise gains but are reluctant to realise losses. This is irrational behaviour, as the future performance of equity is unrelated to its purchase price,(Camerer 2000). It is considered an irrational behaviour, because selling and holding decisions should depend on the perceived future value of a security, but not the purchase price.

Investors are less willing to recognize losses (which they would be forced to do if they sold assets which had fallen in value), but are more willing to recognize gains. If anything, investors should be more likely to sell “losers” in order to exploit tax reductions on capital gains. (Barberis & Xiong 2009). In a study by Odean (1998), this tax-motivated selling is only observed in December, the final opportunity to claim tax cuts by unloading
losing stocks; in other months, the disposition effect is typically observed. (Odean 1998). The disposition effect can be partially explained using loss aversion as in the work of Weber & Camerer (1998). More comprehensive explanations like Shefrin & Statman (1985) Frazzini (2006) also use other aspects of prospect theory, such as reflection effect.

2.1.2 Review of Accounting Information
Nilsson (2003) mentioned that there is a large body of literature studying the relationship between accounting information and the stock market because of the importance of accounting information to equity investors. Ball & Brown (1968) were among the first who brought to light the relationship between stock prices and information disclosed in the financial statements. They were the pioneers for studying the relationship between earnings and returns and showed a significant relationship between them. This study was path breaking and since then various studies were undertaken in various aspects of value relevance. Following this study various studies were done in the developed countries and the results confirmed the positive association between stock returns and earnings.

The other breakthrough study was done by Ohlson (1995) who depicted in his work that the value of a firm can be expressed as a linear function of book value, earnings and other value relevant information. Ohlson (1995) models became the focal point of most accounting based research.

Amir, Harris, & Venuti (1993) were among the first who used the term “value relevance” in the context of information content of accounting figures. An accounting figure or accounting ratio is value relevant if it has the significant strong predicted association with the stock prices and stock market indicators such, price-earnings (P/E) or price to book (P/B) ratios.

According to Swati (2015) in his study on “A Review on the Literature of Value Relevance of Financial and Accounting Variables”, stated that different stock markets have different value relevance and association between accounting numbers and stock prices is declining over time but at the same time there are contradictory views declaring and affirming the claim that accounting information is losing its value relevance is precipitate and early. He further stated that the inclusion of intangible assets as non-reporting of such assets in the financial statements is becoming the major cause of declining relevance. (Swati 2015).

Studies by Kothari (2001), Haley & Palepu (2001) have extensively reviewed studies examining the relation between accounting information and security prices. These studies concluded that financial reports provide new and relevant information to investors although the relevance has considerably come down.

Value relevance of book value, earnings and cash flows has also been studied by Gee Jung & Kwon (2009) in Korean stock market, and he stated that book value is the most value relevant variable and cash flow is more value relevant than earnings. Lev (1989) found that the correlation between earnings and stock returns is very low and instable over time. The value relevance research for earnings also affected by the quality of earnings and Persistence in earnings determines the quality of it. It is a fact that higher the persistence and consistency in earnings higher would be the quality of earnings. A firm’s earnings are more value relevant if they are permanent and less volatile.

2.1.3 Accounting Regulations and Value Relevance
According to Beaver (2002) as referenced in Lawani, at al (2015), value relevance research requires an in-depth knowledge of accounting institutions and accounting standards. He argues that differences in accounting regulations between countries favour research based on case country studies rather than comparative studies where the researcher has limited possibilities to understand the accounting institutions and standards of all countries researched.

2.2 Theoretical framework
There have been four major theories employed to elucidate the disposition effect in conjunction with theories borrowed from psychology (Shefrin & Statman, 1985). A discussion on these theories is briefly clarified below as follows:

2.2.1 The prospect theory
The most widely accepted among the theories as regard disposition effect is the prospect theory (Kahneman & Tversky, 1979). It is a descriptive model trying to describe how investors evaluate potential gains and losses with uncertain outcomes. It states that there are two stages in the decision-making process for investors. One is called the “editing stage”. That is, investors distinguish losses from gains based on the notion of reference point, which commonly refers to the purchase price. The second phase is labelled the “evaluation stage”. Investors employ an S-shaped value function to calculate and maximize their utility. The S-shaped value function is concave in the gains region, but convex in the losses region, implying risk aversion for winning stock and risk seeking for losing stocks, relative to a reference point which is usually the price at which the stocks have been bought. Risk aversion causes the trader to realize any profit quickly to avoid them turning into losses while risk seeking causes the trader to have a greater appetite for large losers than for small losers and to let losses run in hope of a recovery, thus inducing the observed disposition effect (Shefrin & Statman 1985; Weber & Camerer 1998;
phenomenon known as ‘mental accounting’. According to Thelar (1980) Mental Accounting is the process that investors set reference points for their accounts to determine gains and losses. Then, they keep track of gains and losses in their mind on (each) individual stock they invested rather than at the portfolio level. According to Thaler (1985), the main idea of mental accounting is that when investor invests in stock, she/he opens a mental account. The framework of mental accounting was constructed by Thaler (1985) as a foundation for the way decision-makers frame decisions. Thaler (1985) developed the model using a hybrid of cognitive psychology and microeconomics, and suggests that a mental accounting system induces individuals to violate simple economic principles. Accordingly, decision-makers tend to segregate the different types of decisions into separate mental accounts, before applying prospect theoretic decision rules to each account separately, ignoring possible interactions. In the world of finance, a new mental account is opened when a stock is purchased, and the asset purchase price serves as a reference point for indicating gains and losses (Shefrin & Statman, 1985). In addition, the normative principle of fungibility, where money is not supposed to have labels attached, is relaxed in the mental accounting framework (Thaler, 1985). Consequently, even when an investor trades several stocks, he receives a separate component of utility from the trading profit of each stock (Barberis & Xiong, 2009). This sort of sequential analysis seems to be a good description of behaviour (Thaler, 1985). As shares are exchanged between investors, the reference point is updated (Grinblatt & Han, 2005). Thus, an investor’s behaviour is altered by his current position in wealth, not by either his lifetime winnings or losing nor by some event allocated to a different account altogether such as an increase in salary (Thaler, 1985). By using a reference point, the theory also capture ‘mere’ framing effects that affect choices, since choices often depend on the way a problem is posed as much as on the objective features of the problem (Thaler, 1985). In addition, the loss aversion feature can illustrate mental accounting, since one of the major obstacles standing in the way of loss realization of a particular investment is the reluctance to close a mental account at a loss (Shefrin & Statman, 1985).

Thaler (1985) investigated values of outcomes, and specifically whether jointly or separate valuation of gains and losses produces greater utility, referred to as integration or segregation of outcomes. He presents four principles: segregate gains, integrate losses, cancel losses against larger gains and segregate ‘silver linings’ (losses and gains of similar amounts). In the case of gains, it is desirable to have each gain evaluated separately, and in the case of losses the concavity of the loss function implies that adding a loss to an existing loss will have smaller impact. In fact, mental accounting can be regarded as part of an individual’s solution to self-control problems. Barberis & Xiong (2009) also suggests that mental accounting can explain why investors are reluctant to immediately transfer the proceeds from selling a stock to another similar stock (called ‘tax swaps’). In theory, loss aversion feature can illustrate mental accounting, since one of the major obstacles standing in the way of loss realization of a particular investment is the reluctance to close a mental account at a loss, which people are reluctant to do (Odean, 1998).

2.2.2 Mental Accounting Theory
The second theory trying to clarify the disposition effect is mental accounting. Grinblatt & Han (2005) suggest that the leading explanation for the disposition effect is prospect theory combined with a behavioural phenomenon known as ‘mental accounting’. According to Thelar (1980) Mental Accounting is the process that investors set reference points for their accounts to determine gains and losses. Then, they keep track of gains and losses in their mind on (each) individual stock they invested rather than at the portfolio level. According to Thaler (1985), the main idea of mental accounting is that when investor invests in stock, she/he opens a mental account. The framework of mental accounting was constructed by Thaler (1985) as a foundation for the way decision-makers frame decisions. Thaler (1985) developed the model using a hybrid of cognitive psychology and microeconomics, and suggests that a mental accounting system induces individuals to violate simple economic principles. Accordingly, decision-makers tend to segregate the different types of decisions into separate mental accounts, before applying prospect theoretic decision rules to each account separately, ignoring possible interactions. In the world of finance, a new mental account is opened when a stock is purchased, and the asset purchase price serves as a reference point for indicating gains and losses (Shefrin & Statman, 1985). In addition, the normative principle of fungibility, where money is not supposed to have labels attached, is relaxed in the mental accounting framework (Thaler, 1985). Consequently, even when an investor trades several stocks, he receives a separate component of utility from the trading profit of each stock (Barberis & Xiong, 2009). This sort of sequential analysis seems to be a good description of behaviour (Thaler, 1985). As shares are exchanged between investors, the reference point is updated (Grinblatt & Han, 2005). Thus, an investor’s behaviour is altered by his current position in wealth, not by either his lifetime winnings or losing nor by some event allocated to a different account altogether such as an increase in salary (Thaler, 1985). By using a reference point, the theory also capture ‘mere’ framing effects that affect choices, since choices often depend on the way a problem is posed as much as on the objective features of the problem (Thaler, 1985). In addition, the loss aversion feature can illustrate mental accounting, since one of the major obstacles standing in the way of loss realization of a particular investment is the reluctance to close a mental account at a loss (Shefrin & Statman, 1985).

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2.2.3 Seeking Pride and Avoiding Regret
Seeking pride and avoiding regret is the theory attempting to explicate the disposition effect, which has been demonstrated by Thaler (1985), Kahneman & Tversky (1979), Shefrin & Statman (1985) and further discussed by Shiller (1999). These works clearly verify that investors who are seeking pride and to avoid regret will generate a disposition to liquidate their successful investments quickly and hold on their losers to delay the feeling of regret.

2.2.4 Mean Reversion
The forth explanation theory of the disposition effect is mean revision. Mean revision states that investors believe poorer-performing stocks will rebound, and better-performing stock will decline in price. Andreassen (1988) states that investors are inclined to accelerate winners too soon because they are afraid of expected lower future returns. On the other hand, investors tend to hold to the losers too long because they believe that prices will increase up to the average level or even above that level. As discussed by Odean (1998) & Camerer (1998), an irrational belief in mean revision leads to the disposition effect.

2.2.5 The prospect theory / mental accounting Framework
As indicated by Grinblatt & Han (2002, 2005) in their report, combining the prospect theory with mental accounting (PT/MA) framework works the best in explaining and clarifying the disposition effect. Similarly,
Frazzini (2006) also confirms that the prospect theory and mental accounting framework can act as a most effective way in explaining the disposition effect and the cross-section of stock return. There are three reasons to support the PT/MA framework.

One is that prospect theory alone is insufficient to explain the disposition effect and a full explanation of the disposition effect should include mental accounting (Zuchel, 2001; Kaustia. 2004). Shefrin & Statman (1985) states that the discussion of prospect theory emphasizes the importance attached to the editing phase (framing) as well as to the location of the reference point. It only explains the reluctance to sell a stock and realize a loss. However, it does not explain which gains and losses investors pay attention to changes in their total wealth or changes in their individual stocks (Barberis & Huang, 2001). To solve these questions, mental accounting provides a process for investors to think about and evaluate their financial transactions. In particular, it shows investors how to set reference points for the accounts, how to determine gains and losses and how often to group and evaluate their stocks.

The second reason is that the PT/MA framework represents seeking pride and avoiding regret. As indicated by Thaler (1999), the mental accounting of paper gains and losses is tricky. That is, a realized loss is more painful than a paper loss. The author illustrates that one prediction of mental accounting is that it is very painful for investors to close a mental account at a loss as it is painful for them to accept their wrong judgements. They wish to avoid regret. Moreover, Hirshleifer (2001) illustrates that investors want their good decisions to be recognized immediately in their mental accounts so that they can feel good about themselves. On the other hand, they postpone acknowledging their unsuccessful decisions because they are not ready to acknowledge that they have made a mistake. It suggests that mental accounting represent seeking pride and avoiding regret.

The third reason is that the PT/MA framework reflects mean reversion. The PA/MA framework suggests that an S-shaped value function differs from a standard utility function. It implies that winners are less describing than losers and there is a greater appetite for large losers than for small losers. In particular, as investors are risk averse for winners, they will try to realize profits quickly to avoid decline in value. On the other hand, as investors are risk seeking for losers, they will take additional buying of losers in hope that prices will recover so they can break even in the future. As discussed earlier, mean revision states that investors believe poorer-performing stocks will rebound, and that better-performing stocks will decline in price. Thus, the PT/MA framework reflects mean reversion in explaining the disposition effect. This is also pointed out by Grinblatt & Han (2002), their findings show that disposition investors will sell their shares as prices rise when good news is revealed, while they will buy their shares as prices drop when bad news is exposed.

2.3 Empirical Review
2.3.1 Share price and disposition effect
Research in behavioural finance demonstrated early that investors are prone to judgmental biases (Gärling et al., 2009; Hirshleifer, 2001) that are potential threats to the efficiency of financial markets (Fama, 1970, 1998). This motivated additional research showing that judgmental biases are less frequent among professional investors than among lay people investing in stock markets or among non-investors (example, students) (Feng & Seaholes, 2005; Hon-Snir et al., 2012). Judgmental biases may then not be a threat to market efficiency unless the number of lay investors is large. This still remains to be determined, for instance in stock markets where judgmental biases may influence trading volume and price volatility (Coval & Shumway, 2005; Gärling, 2011).

In recent years the research by Gigerenzer and his collaborators (Gigerenzer & Gaissmaier, 2011; Todd et al., 2012) has clarified that judgmental biases are frequently the outcomes of fast and frugal heuristics that are adaptive under the circumstances they are applied. It may be argued that when full information is not available (as seldom is the case), investors applying such heuristics in financial markets would outperform investors using analytical methods (e.g. Bayesian updating, expected-value maximization). Also for this reason it is important to assess the influences lay investors have in financial markets.

Here we want to review why and how prices are influenced by one of the most well-documented judgmental biases in stock markets, the disposition effect referring to the common observation that winners are hold too short and losers too long (Shefrin & Statman, 1985). Here we see an affect account of the disposition effect followed by an individual-level analysis of the consequences the disposition effect may have for stock market prices.

In the prospect-theory explanation of the disposition effect, different definitions of the reference point have been evoked. The most common definition (e.g. Henderson, 2012; Odean, 1998; Shefrin & Statman, 1985) is the purchase price (selling at this price is referred to as the break-even price). This is an economic sound definition if the inflation is minimal during the holding period. Other definitions are still conceivable. If the purchase price is not remembered (not unlikely in an experimental setting), the reference point may be an average of previous prices (Weber & Camerer, 1998). Another possibility is that the highest or lowest previous price is the reference point. The reference point may also depend on the price trend, raising when it is upward and falling when it is downward. Baucells et al., (2011) developed and tested a model of reference point updating. Neugebauer &
Selten (2006) find support that feedback has an impact on investors’ decision. Kliger & Kudryavtsev (2008) showed empirically that updated reference points based on quarterly earnings announcements accounted for the disposition effect. In our proposed affect account, an accepted realized gain or unacceptable potential loss corresponding to an aspiration price that varies dynamically with stock-price movements over time is based on the difference between the current price and the purchase price.

In order to understand the consequences the disposition effect has for stock prices, both the availability of sellers and buyers and their interaction need to be considered. Since the disposition effect is observed for selling stocks, in the work of Tommy Gärling & Mary Blomman (2014) they distinguish between the role of seller (in which some are prone to the disposition effect) from the role of buyer in which some execute a momentum strategy of buying winners (Hong & Stein, 1999) and others, believing in price reversion, execute a contrarian strategy of buying losers (Grinblatt & Keloharju, 2000). Furthermore, investors similarly believe that prices follow an upward, downward or no trend (Andreasen, 1990; Barberis et al., 1996). In the case of a trend with increasing prices, the disposition effect implies that stock shares are sold to momentum buyers at a price which is higher than the purchase price. Shareholders prone to the disposition effect sell the stock earlier at a price below the highest price at which shareholders not prone to the disposition effect sell. In the case of a downward price trend, the disposition effect implies that stocks are either not sold or sold to contrarian buyers willing to buy at a lower price than the purchase price and lower than the price at which shareholders not prone to the disposition effect sell the stock. From the above as discussed by Tommy Gärling and Mary Blomman, they analyzed the interaction between sellers (prone to the disposition effect) and (momentum or contrarian) buyers when there is an upward or downward price trend. Their conjecture was that if there are enough buyers the prevalence of the disposition effect intensifies an upward price trend and attenuates a downward price trend. It seems to follow straight-forwardly from the definition of the disposition effect that if there is a sufficient number of (momentum) buyers when the prices go up, the prices would increase further. In contrast, when the trend is downward the prices will be upheld if the number of sellers is insufficient despite there are (contrarian) buyers willing to buy. The strength of the influence depends on the proportion of shareholders prone to the disposition effect. They also attempted to show how stock prices are affected by shareholders prone to the disposition effect. Positive or negative news (e.g. announcements of company earnings) start and maintain price trends in stock markets (Cutler et al., 1989). Thus, they do not claim that such price trends are caused by the disposition effect. Yet, they argue that there are conditions under which the disposition effect has consequences for the strength and duration of both upward and downward price trends. These consequences are most likely changing over time due to changes in relative demand, that is, the balance between the number of buyers and sellers.

A role of the disposition effect may also be observed in stock markets when price movements occur for other than fundamental reasons (e.g. war threats, bank crises). If such upward price movements are large enough to make shareholders prone to the disposition effect offer their stock shares for sale, then a sufficient number of momentum buyers would likely intensify the upward price movement. Conversely, shareholders prone to the disposition effect would attenuate a downward price movement by not offering their stock shares for sale. however if the whole market turns upwards, more investors prone to the disposition effect would likely be attracted to buy, thus increasing the influence of the disposition effect on stock prices. A herding tendency among these shareholders (Hirshleifer & Teoh, 2003; Sias, 2004) may further strengthen the influence of the disposition effect.

2.3.2 Mental Accounting and Fundamentals of Stock Return
(a) Earnings per Share and Change in Stock Price
According Ahmed, Muhammad, Muhammad, Sabih & Umer (2014) In their study Impact of Dividend Policy, Earning per Share, Return on Equity, Profit after Tax on Stock Prices, discovered that dividend yield and dividend pay-out ratio which are both measures of dividend policy have significant impact on stock price. Dividend yield is negatively related with stock price and dividend pay-out ratio is positively related with stock price which means that these results are against dividend irrelevance theory. Also Placido & Menage, (2012) in his study on the Impact of Selected Financial Variables on Share Price of Publicly Listed Firms, discovered a strong positive correlation of EPS with share price.

In the same vain, Bangladesh et al (2015) in their study on Stock Price Adjustment to Corporate Accounting Disclosure: A Quantitative Study on Dhaka Stock Exchange. The resulting output revealed that “Earning per share”, “Return on equity” and “Net asset value per share” (book value) positively influenced stock price movement. More so in the work of Etengu & Nasieku (2015), the study sought to empirically examine the relationship between earnings per share, return on equity, price earnings ratio and investment decisions as measured by market price per share. Generally, the findings of the study revealed a strong relationship between earnings per share, return on equity, price earnings ratio and share prices. Streising further, Adebisi & Lawal (2015) whose study reviewed the factors that determine the firms’ equity share price with special focus on the microeconomic factors. Dividend per share, earning per share, book value per share, dividend pay-out, price earnings ratio, and size of the firm have been identified as significant factors impacting the firm’s equity share
price. Also Anwar (2016) Results shows that net profit margin, return on assets has got significant positive impact on stock returns while earnings per share has got significant negative impact on stock returns.

Placido & Menaje, (2012) in their study on Impact of Selected Financial Variables on Share Price of Publicly Listed Firms in the Philippines, states that share investing is taking a risk and investors seek those financial measures that have significant impact on share price. Their paper aims to determine whether earnings per share (EPS) and return on assets (ROA) have significant influence on share price of publicly listed firms in the Philippines. Result disclosed strong positive correlation of EPS with share price. Also Ghosh (2015) in his study; Stock Price Adjustment to Corporate Accounting Disclosure: A Quantitative Study on Dhaka Stock Exchange (DSE) discovered that, the resulting output revealed that “Earning per share”, “Return on equity” and “Net asset value per share” (book value) positively influenced stock price movement but “Earning per share” and “Net asset value per share” jointly can explain highest variation in stock price movement in Dhaka Stock Exchange (DSE)

In line with the above, Margaretha &; Firzitya (2014) in their study, The Effect Of Cash Dividend, Retained Earnings, And Stock Price Of manufacturing Company, indicate that cash dividends per share, retained earnings per share, earnings per share, and leverage has significant effect on the stock price. It is therefore believed that higher stock price will attract investors to invest their money. Hence, companies and investors need to attend cash dividends per share, retained earnings per share, earnings per share, and leverage as factors that affect the increase or decrease of the stock price.

Inyiama &Ozouli (2014) in their study aimed at determining the direction and significance of the interactions between earnings per share and market price of ordinary shares in the Nigeria brewery industry from 2000 to 2013, discovered that Market Price of Shares has a short term positive and significant effect on Earnings Per Share while the long run coefficient shows a negative and insignificant influence. Also Iqbal, Ahmed & Zaidi (2015) which explored &examined the determinants of share price in Karachi Stock Exchange’s (KSE) oil & gas and cement sector, reveals that earning per share and book value per share are positive and significant determinants of share price in both sectors while dividend yield is negatively significant in cement sector. Also variables return on equity, book value per share, dividend per share, dividend yield, price earnings, and firm size are significant determinants of share prices in the Bahrain market. (Sharif, Purohit & Pillai 2015)

Kodithuwakku (2015) found a positive relationship between the selected firm specific factors of Dividend per Share (DPS), Earning per Share (EPS) and Net Assets Value per Share (NAVS) and stock price. In their study on Impact of Firm Specific Factors on the Stock Prices: A Case Study on Listed Manufacturing Companies in Colombo Stock Exchange.(Sujeewa 2015)

Also in the work of John (2015), on Stock Market Price and Its Determinants: A Case Study of Nigerian Banks, the results indicate that, net asset value per share and price-book value ratio are strongly correlated with stock market price, and are having significant influence on the stock price (John 2015). Also Inyiama (2015) result in the study -Does Earning per Share Determine Market Price of Ordinary Shares? Evidence from Nigeria Banking Sector (2000 – 2013), reveals that earnings per share significantly and positively influence the market price of ordinary shares; with a strong and positive association too. Earnings per share also granger causes market price of ordinary shares and these characteristics are sustainable in the long run in Nigerian banking sector. The implication of the findings is that an increase in earnings has the tendency of increasing significantly the market price of shares and earnings per share is one of the key factors responsible for fluctuations in market price of ordinary shares in Nigerian banking sector. In a related study by same author, it was found that only EPS, amongst the other variables has both positive and significant relationship with MPS. About 33% of the variations in market price of ordinary shares could be explained by changes in earnings per share, returns on assets and the age of the banks and there is a fairly strong relationship between MPS and earnings per share (55%). There is a unidirectional granger causality running from market price to earnings per share and a bidirectional granger causality running from return on assets to earnings per share and from earnings per share to return on assets. (Inyiama 2015)

Solomon, Memba, & Muturi (2016) investigated the influence of earnings per share on equity share investment decision makings. The findings of the study revealed that there is a significant relationship between accounting information and equity share investment in the listed companies in Nigeria. Specifically, the findings showed that accounting information variable, earnings per share, is positively correlated with equity share investment in the listed companies in Nigeria. Findings also suggest that earnings per share have a significant influence on equity share investment in the companies listed on Nigerian Stock Exchange. (Solomon, A. Z. Memba, F. S. & Muturi, W.2016). Furthermore in the study of Zeeshan A et al.(2015) on Determinants of Share Prices of listed Commercial Banks in Pakistan, the results indicate that earning per share has more influence on share prices and it has positive and significant relationship with share prices, book to market value ratio and interest rate have also significant but negative relation with share prices while other variables (gross domestic product, price earnings ratio, dividend per share, leverage) have no relationship with share prices. (Zeeshan Arshad1, Ali Raza Arshaad, Sohail Yousaf, Sulaman Jamil, Scholar 2015)
Mahmoud, Mohammadreza, & Pervaneh (2013) in their study on Accounting performance measures (Earning per Share ‘EPS’ and Cash Flow from Operating ‘CFO’) in Tehran Stock Exchange, indicated that, there is not significant relationship between Cash Flow from Operating and Shareholder Value Added (SVA) while there is a positive significant relationship between Earning per Share and SVA. It was found that an increase in EPS is a weak positively -to- impact on Shareholder Value Added. (Mahmoud Samadi Largani, Mohammadreza Lotfi, & Pervaneh Ghadiri2 2013)

In Ahmed, Muhammad, Muhammad, Umer (2014) results of their study Impact of Dividend Policy, Earning per Share, Return on Equity, Profit after Tax on Stock Prices, indicated that dividend yield and dividend payout ratio which are both measures of dividend policy have significant impact on stock price. Dividend yield is negatively related with stock price and dividend pay-out ratio is positively related with stock price which means that these results are against dividend irrelevance theory. (Ahmed, Muhammad, Muhammad, Umer 2014). Also Using the panel-data approach, the empirical result of the study on Effect of dividend decision on stock price changes: further Nigerian evidence by Sulaiman & MIGRO (2015) revealed that a linkage exists between dividend decision and the changes in the price of stock vis-à-vis earning per share, size of the companies, and the dividend per share. The dividend per share and earnings per share indicated a major positive connection with stock price. (Sulaiman & MIGRO 2015)

Umar & Musa (2013) in their study The relationship between stock prices and firm earning per share (EPS) appeared to be contestable like any other performance measures which examine the relationship between stock prices, they discovered that an insignificant relationship exists between stock prices and firm EPS in Nigeria. In fact, firm EPS has no predictive power on stock prices. It was suggested that firm EPS should not be relied upon for the prediction of the behaviour of stock prices in Nigeria. (Umar & Musa 2013). On the contrary according to Hidayat & Shahab (2015) observed that Dividend payout ratio significantly affect the stock price. (Hidayat & Shahab 2015). Also according to Pushpa & Sumangala (2012) EPS impacts the market value of an equity share in the Indian context. (Pushpa, & Sumangala 2012)

(b) Cash flow of operations and Share Price

According to Dechow & Watts (1998) in their work The Relation between Share Price and Cash Flows, they discovered that, there is a strong forecast implications and Correlation between them Share Price and Cash Flows. Also Chu (1997) who examined the influences of the market’s characteristics on the relationship between stock returns and fundamental accounting information, such as earnings, dividends and cash flows using Taiwan’s stock market from 1990 to 1994, observed that both operating income and non-operating income are positively related to stock returns.

Agana, Mireku & Appiah (2015) examined the comparative predictive ability of earnings and operating cash flows variables on future operating cash flows within a developing economy’s setting. Results from the regression analysis reveals earnings and operating cash flows are significant in predicting future operating cash flows but have different predictive powers with earnings providing a superior comparative predictive ability on future cash flows. The paper therefore concludes that earnings are a better predictor of future operating cash flows than historical operating cash flows itself. Furthermore, Jiang (2009) discovered that accounting earnings and cash flows all have relevant relations to stock prices; however, the relevance between cash flow and stock price is stronger, and cash flows have higher information quality. This was in their work on the comparative study of information content between accounting earnings and cash flows. The paper utilizes the financial data of Chinese listed company in manufacturing industry from 2003 to 2005.

Maksy & Chen (2015) whose study was to empirically identify which accounting definition of free cash flow (FCF) is the most value relevant for the energy industry. Using correlations and multiple regression analysis on a sample of 5,954 observations covering the 23-year period from 1988 to 2010, the study empirically shows that the FCF has the most significant association with stock price changes, after controlling for many factors that may affect stock prices, is the one defined as cash flow from operations less capital expenditures less cash outflow for preferred stock dividends.

Sloan (1996) in their study which investigates whether stock prices reflect information about future earnings contained in the accrual and cash flow components of current earnings. It was discovered that the extent to which current earnings performance persists into the future is shown to depend on the relative magnitudes of the cash and accrual components of current earnings. However, stock prices are found to act as if investors "fixate" on earnings, failing to reflect fully information contained in the accrual and cash flow components of current earnings until that information impacts future earnings.

Ruixue (2008) worked on The Relationship between Share Price and Operating Cash Flow under the Casual Theme Restaurant Setting. He discovered a strong relationship between the two variables; cash flow and share price.

(c) Book Value and Share Price

Ahmed (2015) in his paper that focused on identifying the relationship among the firms’ earnings, economic value added and the shareholders’ value of the selected Islamic Banks in Bangladesh from 2009 to 2013,
discovered that there is strong association among the firms’ earnings per share, Book Value. Also Malhotra & Tandon, (2013) discovered in their work on determining that firms’ book value, earning per share and price-earnings ratio are having a significant positive association with firm’s stock price while dividend yield is having a significant inverse association with the market price of the firm’s stock.

In a related study by Adebisi & Lawal (2015) they stated that, Dividend per share, earning per share, book value per share, dividend payout, price earnings ratio, and size of the firm have been identified as significant factors impacting the firm’s equity share price by the corporate finance scholars. Furthermore according to Sharif, Purohit & Pillai (2015) in their study which is aimed at identifying the main determinants affecting share prices in the Bahrain financial market, the results indicate that the variables return on equity, book value per share, dividend per share, dividend yield, price earnings, and firm size are significant determinants of share prices in the Bahrain market. Stressing further, Almumani (2014) in his study to identify the quantitative factors that influence share prices for the listed banks in Amman Stock Exchange over the period 2005-2011, discovered that, there is a positive correlation between Dividend per Share, Earning per Share and Book Value. Tahir, Sabir & Ismail (2013) also attempt to bridge the gap in the literature by offering empirical evidence about firm’s characteristics and their effect to stock returns. They discovered from his study of 307 Non-financial companies listed in Karachi Stock Exchange from 2000 to 2012, that Market Capitalization MC, Earnings per Share (EPS) and Book to Market value (BMV) had significant impact on stock market returns.

According to Ghosh & Ghosh (2015) in their study was designed to detect whether corporate accounting disclosures through annual report influence stock price movement in Dhaka Stock Exchange. Their data were gathered from 2010 through 2014 of 25 private commercial banks. The resulting output revealed that “Earning per share”, “Return on equity” and “Net asset value per share” (book value) positively influenced stock price movement but “Earning per share” and “Net asset value per share” jointly can explain highest variation in stock price movement in DSE.

Glezakos (2012) in his study examined the impact of earnings and book value in the formulation of stock prices on a sample of 38 companies listed in the Athens Stock Market during the 1996-2008 period. The resulting evidence suggests that the joint explanatory power of the above parameters in the formation of stock prices increases over time. However, the impact of earnings is diminishing, compared to the book value, while investors strive towards analysing the fundamental parameters of businesses

Egbunike, & Udeh, (2015) in their work The effect of earnings management on EPS and BVPS noticed that for firms with high discretionary accruals, earnings management positively affects earnings per share; and, book value per share of the firms. Nassar & Ismail (2016) who also investigated the factors affecting share liquidity of industrial companies in Turkey, shows that there is an insignificant relation with each of debt ratio, earning per share, and book to market ratio.

Menike & Prabath (2014) examined the impact of dividend per share, earnings per share and book value per share of stock price on a sample of 100 companies listed in the Colombo Stock Exchange from 2008 to 2012. The results reveals that EPS, DPS, BVPS were positive and had a significant impact on the stock price in the Colombo Stock Exchange.

According to Mgbame & Ikhatua (2013) whose broad objective was to ascertain if accounting information contributes to stock volatility in the Nigerian Capital Market. They further examines if Book value per share, Dividend per share and Earnings per share have a sign effect on stock volatility in Nigeria. Findings reveal that there are enough evidences to reject the assumptions of conditional normality in stock prices data series and accept the existence of stock volatility in Nigerian stock market. The study concludes that accounting information of which book value is prominent influences stock volatility and as such the regulation of disclosures may be an area for consideration by the relevant agencies alongside the need to address volatility issues in the Nigerian capital market.

More so Anita & Yadav (2014) who studied the influence of book value per share, earning per share, market capitalization, price to book value and dividend yield on stock price of Tata motors Ltd, discovered that stock price is significantly affected by the book value. Also Marangu&Jagongo (2014) in their study set out to establish the relationship between price to book value ratio and the following financial statement variables: dividend payout ratio, return on total assets, return on equity, return per share, dividend per share and growth rate of earnings after tax for companies quoted at the Nairobi Securities Exchange (NSE). They concluded that there was a statistically significant relationship between price to book value ratio and the following financial statement variables: return on total assets, return on equity, return per share and dividend per share at the NSE, Kenya. The study also concluded that return on total assets, return on equity and return per share all had a positive relationship (positively affected) the price to book value ratio while dividend per share had a negative relationship (negatively affected) the price to book value ratio.

Riyath&Jahfer (2015) in their own study which examined weather value effect is exist on stocks returns in the Colombo stock market as an emerging capital market. The sample of study includes all non-financial companies listed on main board of Colombo stock exchange during the period from 2000 to 2013. It was found...
that the highest decile portfolio of stocks earns higher return than lowest decile portfolio of stocks. Therefore, the study concludes that value effect exist in the Colombo stock market during the study period and the finding consistent with the previous studies.

3.1 Research Design
The research design for this study was Ex post-facto research design.

3.2 Population and Sample Size
The population of this study was all listed companies in Nigerian Stock Exchange as at December 31, 2014. There are 198 quoted active companies (NSE, Factbook 2014). The companies in this study were drawn from the following sectors: Agriculture Sector, Conglomerates, Construction/Real Estate, Consumer Goods, Health Care, Financial Services, ICT, Industrial Goods, Natural Resources, Oil and Gas, Services. These sectors were further regrouped into four major sectors, Financial, Services, Industry, and Consumer.

The sample of one hundred and thirteen companies were used for this study, these where the companies who have finished their obligation in delivering annual report for the year ended 2007 to 2014 which gave us a total of nine hundred and two (902) observations.

3.3 Source of Data
The nature of this study necessitated the use of secondary data only from NSE official publication on daily volume of shares traded.

3.4 Model specification
In the light of empirical literature regression models were developed on disposition effect,

\[ \Delta P_{it} = \alpha_0 + \beta_1 P_{it} + \beta_2 EPSG + \beta_3 BV_{it} + \beta_4 CFO_{it} + \beta_5 Fsize_{it} + \epsilon_{it} \]  

This model was further decomposed to read

\[ DECCP_{it} = \alpha_0 + \beta_1 RMINUS_{it} + \beta_2 EPERS + \beta_3 BVKPS_{it} + \beta_4 CASPS_{it} + \beta_5 FSIZE_{it} + \epsilon_{it} \]  

\[ \text{INTERACTION OF ACCOUNTING INFORMATION TO DISPOSITION EFFECT MODEL} \]

\[ DECCP_{it} = \alpha_0 + \beta_1 RMINUS_{it} + \beta_2 EPERS \times RMINUS + \beta_3 BVKPS \times RMINUS + \beta_4 CASPS \times RMINUS + \beta_5 FSIZE_{it} + \epsilon_{it} \]  

\[ \Delta P_{it} = \text{negative annual change in Stock price} \]

\[ P = \text{annual closing share prices}; \]

\[ EPSG = \text{earnings per share growth}; \]

\[ BV = \text{book value Per Share}; \]

\[ CFO = \text{Cash flow from operations Per Share}; \]

\[ \epsilon = \text{ERROR TERM} \]

Where; -

The models above with their variables were operationalized as follows:

FUNCTIONAL DEFINITIONS OF THE VARIABLES

DEPENDENT VARIABLES

\[ \Delta P = \text{negative annual change in Stock price – Proxy Selling of Stock} \]

INDEPENDENT VARIABLES

\[ P = \text{annual closing share prices} \]

\[ EPSG = \frac{EPS_{-1} - EPS_{-2}}{EPS_{-2}} \]

\[ BV = \frac{Networth}{Outstanding Shares} \]

\[ CFO = \frac{Cash flow from operations}{Outstanding Shares} \]

For the decomposed model,

\[ DECCP = \text{Share price} \]

\[ RMINUS = \text{Negative Share Price Return Dummy (Disposition effect), value of 1 for negative returns and 0 otherwise} \]

\[ EPERS = \text{Accounting Earnings per Share, Proxy for Income Statement} \]

\[ BVKPS = \text{Accounting Book value per Share, Proxy for Statement of financial position} \]
CASPS = Accounting Cash flow per Share, Proxy for Cash flow Statement  
FSIZE = Firm Size, Measured as log of Total Asset

Added to the above, the variables for this study include share price (DECCP) as the dependent variable while the independent variables were negative share price for disposition effect (RMINUS), Accounting earnings per share; a proxy for income statement (EPERS), Accounting book value per share; proxy for statement of financial position (BVKPS), accounting cash flow per share; proxy for cash flow statement (CASPS) and firm size (FSIZE).

3.5 Method of Data Analysis
Generally, there are legal differences, defined in terms of corporate policies and specificities in the way companies do business. This suggests that the quoted companies in Nigeria are very different from each other. This is coupled with the fact that the degrees of operating practices, nature of business, innovation drive focus and risk profiles of shareholders and management differs. Consequently, it is likely that the consideration of momentum and disposition effect of Nigerian quoted companies, without considering such differences, no doubt, would impair our generalization and even our estimation process.

On this note, panel data is preferred as it considers the cross-sectional and time-series characteristics of the sample data. In essence, the panel data analysis accommodates ‘time as well as the heterogeneity’ effects of the quoted companies. However, for ease of comparison, the simple pooled ordinary least square (OLS) was employed in this work holding the pooling assumption constant. Regression models were adopted in this study.

The panel data econometric techniques adopted in this study was the unbalanced or balanced panel data regression techniques based on the possibility of some missing data. The use of panel data regression methodology in this study was based on three fundamental justifications: (1) the data collected were subject to time and cross sectional attributes and this enabled us to study innovation and performance of firms over time (time series) as well as across the sampled quoted companies (cross-section), (2) the panel data regression provides better results since it increases sample size and reduces the problem of degree of freedom, and (3) the use of panel regression caters for the problem of multicollinearity, aggregation bias and endogeneity problems (Greene, 2002).

The estimation results were evaluated based on individual statistical significance test (t-test) and overall statistical significance test (F-test). The goodness of fit of the model was also tested using the coefficient of determination (R-squared). In this study, we conducted the descriptive statistics and correlation analysis to properly describe the nature of our data. In conducting all our data analyses, we used Microsoft Excel, Eviews 9 and Stata 13 software packages.

4. Data Presentation, Analysis and Discussion of Results
4.1 Disposition Effect Results and Interpretation
The results and interpretations below are for the disposition effect results as revealed by our second result in the work.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std.Dev</th>
<th>Jarque-Bera</th>
</tr>
</thead>
<tbody>
<tr>
<td>BVKPS</td>
<td>7.04</td>
<td>13.56</td>
<td>144,467.00(0.00)**</td>
</tr>
<tr>
<td>CASPS</td>
<td>4.00</td>
<td>3.05</td>
<td>21,249.61(0.00)**</td>
</tr>
<tr>
<td>DECCP</td>
<td>2.21</td>
<td>17.67</td>
<td>308,706.50(0.00)**</td>
</tr>
<tr>
<td>EPERS</td>
<td>1.00</td>
<td>0.89</td>
<td>49.25(0.00)**</td>
</tr>
<tr>
<td>FSIZE</td>
<td>0.55</td>
<td>0.46</td>
<td>166.10(0.00)**</td>
</tr>
<tr>
<td>RMINUS</td>
<td>4.17</td>
<td>0.50</td>
<td>149.56(0.00)**</td>
</tr>
<tr>
<td>RPLUS</td>
<td>0.31</td>
<td>897.00</td>
<td>897.00(0.00)**</td>
</tr>
</tbody>
</table>

Source: Stata Output, 2016

TABLE 1 shows the mean (average) for each of the variable, their standard deviation (degree of dispersion) and Jarque-Bera (JB) statistics (normality test). The results in TABLE 1 provided some insight into the nature of the selected companies that were used in this study. Firstly, the accounting book value per share (BVKPS) shows the highest average in the study with a mean value of 7.04. This is followed by share prices and firm size.

The accounting book value per share (BVKPS) shows the highest dispersion in the study with a standard deviation value of 13.56 while the momentum effect shows the least dispersion with a standard deviation value of 0.46.

The dispersion of firm size shows that the companies sampled are not too dispersed from each other as the standard deviation is very small.

Lastly, the Jarque-Bera (JB) statistics in TABLE 1 shows that most of the variables are normally distributed.
at 1% level of significance.

In examining the relationship among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the results are presented in table 2.

**TABLE 2 Correlation Analysis (General)**

<table>
<thead>
<tr>
<th></th>
<th>BVKPS</th>
<th>CASPS</th>
<th>DECCP</th>
<th>EPERS</th>
<th>FSIZE</th>
<th>RMINUS</th>
<th>RPLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BVKPS</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASPS</td>
<td>0.55</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DECCP</td>
<td>0.21</td>
<td>0.26</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPERS</td>
<td>0.43</td>
<td>0.49</td>
<td>0.40</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSIZE</td>
<td>0.32</td>
<td>0.15</td>
<td>0.13</td>
<td>0.26</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMINUS</td>
<td>-0.05</td>
<td>-0.08</td>
<td>-0.06</td>
<td>-0.09</td>
<td>-0.04</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>RPLUS</td>
<td>0.14</td>
<td>0.15</td>
<td>0.12</td>
<td>0.20</td>
<td>0.18</td>
<td>-0.74</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Source: Stata Output, 2016

In Table 2, Share price (DECCP) as the dependent variable while the independent variables were positive
Share price return for momentum effect (RPLUS), negative share price for disposition effect (RMINUS),
Accounting earnings per share; a proxy for income statement (EPERS), accounting book value per share; proxy
for statement of financial position (BVKPS), accounting cash flow per share; proxy for cash flow statement
(CASPS) and firm size (FSIZE).

The result shows that share price (DECCP) is positively related to accounting earnings per share (EPERS),
firm size (FSIZE), momentum effect (RPLUS), accounting book value per share (BVKPS) and accounting cash
flow per share (CASPS) While it is negatively related to deposition effect (RMINUS).

The correlation matrix also revealed that no two explanatory variables were perfectly correlated.

**Table 3 Multicollinearity and Heteroscedasticity Test (General)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Variance</th>
<th>Centered Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>8.263529</td>
<td>NA</td>
</tr>
<tr>
<td>RMINUS</td>
<td>1.470703</td>
<td>1.137755</td>
</tr>
<tr>
<td>BVKPS*RMINUS</td>
<td>0.005652</td>
<td>1.790691</td>
</tr>
<tr>
<td>EPERS*RMINUS</td>
<td>0.097282</td>
<td>1.25759</td>
</tr>
<tr>
<td>CASPS*RMINUS</td>
<td>0.012675</td>
<td>1.463997</td>
</tr>
<tr>
<td>FSIZE</td>
<td>0.427392</td>
<td>1.082727</td>
</tr>
</tbody>
</table>

Mean VIF 1.346552

Heteroscedasticity Test: Breusch-Pagan-Godfrey

- F-statistic 6.165418 Prob. F(5,896) 0
- Obs*R-squared 30.00132 Prob. Chi-Square(5) 0
- Scaled explained SS 1321.06 Prob. Chi-Square(5) 0

Source: Stata Output, 2016

The table above shows the multicollinearity and Heteroscedasticity test result for our data. The result of VIF= 1.34 is less than the accepted VIF value of 10 for multicollinearity. This means that there is the absence of multicollinearity problem in our model. Multicollinearity between explanatory variables may result to wrong signs or implausible magnitudes, in the estimated model coefficients, and the bias of the standard errors of the coefficients. Also, the Berusch Pagan test is statistically significant at 1% level of significance signifying the absence of Heteroscedasticity in the variables.

### 4.3 Mental Accounting & Disposition Model Regression Results (General)

However, to examine the relationship between the dependent variable and independent variables and to test our formulated hypotheses we used panel data regression the panel data regression for the general sector sampled companies results obtained are presented is presented in table 4.
Table 4: Mental Accounting & Disposition Model Regression Results (General)

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-1.97</td>
</tr>
<tr>
<td></td>
<td>(-1.32)</td>
</tr>
<tr>
<td></td>
<td>[0.18]</td>
</tr>
<tr>
<td>RMINUS</td>
<td>-3.33</td>
</tr>
<tr>
<td></td>
<td>(-3.09)</td>
</tr>
<tr>
<td></td>
<td>[0.00]*</td>
</tr>
<tr>
<td>BVKPS*RMINUS</td>
<td>-0.05</td>
</tr>
<tr>
<td></td>
<td>(-0.49)</td>
</tr>
<tr>
<td></td>
<td>[0.61]</td>
</tr>
<tr>
<td>EPERS*RMINUS</td>
<td>1.90</td>
</tr>
<tr>
<td></td>
<td>(2.07)</td>
</tr>
<tr>
<td></td>
<td>[0.03]**</td>
</tr>
<tr>
<td>CASPS*RMINUS</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>(-0.92)</td>
</tr>
<tr>
<td></td>
<td>[0.35]</td>
</tr>
<tr>
<td>FSIZE</td>
<td>1.67</td>
</tr>
<tr>
<td></td>
<td>(3.51)</td>
</tr>
<tr>
<td></td>
<td>[0.00]*</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.07</td>
</tr>
<tr>
<td>Adj-R-Squared</td>
<td>0.07</td>
</tr>
<tr>
<td>F-Statistic</td>
<td>14.83 (0.0)*</td>
</tr>
<tr>
<td>(n)</td>
<td>902</td>
</tr>
</tbody>
</table>

Note: (1) Parentheses ( ) are t-statistic while bracket [ ] are p-values
(2) * and ** and *** are 1% and 5% and 10% level of significance accordingly.
Source: Stata Output, 2016

4.4 Discussion of General Sector Regression Results (Mental Accounting & Disposition Effect Model)

This study adopted the pooled regression analysis which has been corrected for Heteroscedasticity using the White Method. In table 4, we presented an OLS pooled regression. From the Table above, we observed that the results show that the R-squared and adjusted R-squared values were (7%) and (7%) respectively. This indicates that all the independent variables jointly explain about 7% of the systematic variations in the model for the sampled period (2008-2014). The small R square shows that there are more excluded variables that drive the dependent variable which have been excluded from the model. The F-statistics (14.83) with a p-value of 0.00 shows that the model is generally significant at 1% level which means that the model was well specified.

Regression models for MENTAL ACCOUNTING & DISPOSITION MODEL (GENERAL) provided the following results; negative share price Returns (Disposition Effect) (RMINUS) has a negative and significant effect on share price. This result suggests that there is a significant relationship between disposition effect and share prices in the general sector of the Nigerian stock market in the period under review. Book Value interaction with disposition effect (BVKPS* RMINUS) was found to be negative but statistically insignificant in driving share prices in the general sector in Nigeria. Earnings per share interaction with disposition effect (EPERS* RMINUS) showed a negative and statistically insignificant impact of share prices in the sector. Accounting Cash Flow per share interaction with disposition effect (CASPS* RMINUS) is positive but insignificant in driving stock prices in the general sector of the Nigerian stock market in the period under study.

Firm Size (FSIZE) has a positive statistically significant relationship with share prices of sampled companies in the Nigerian stock market.

4.5 Test of Hypotheses

In this section, we tested the research hypotheses formulated in earlier chapter of the study. However, four (4)...
research hypotheses were formulated and they are hereby restated and tested as follows:

4.6 Test of Hypothesis 1 (General)

\( H_1: \) Rising stock prices are not significantly related to increase in the sales of shares.

In order to test the hypothesis 1 of this study, we analysed the relationship between rising stock prices and increase in the sales of shares. The result is summarized in Table 41 below.

| Table 41: Summary of Regression Result for Test of Hypotheses 1 & 2 (General) |
|-------------------------------|-------------------|-----------------|-----------------|-------------------|
| Dependent Variable: DECCP     | Method: Least Squares | Date: 06/21/16   | Time: 01:22     | Sample: 1952      |
| White heteroskedasticity-consistent standard errors & covariance | Coefficient | Std. Error | t-Statistic | Prob. |
| C                              | -1.978836         | 1.495188       | -1.32347       | 0.186             |
| RMINUS                         | -3.336127         | 1.076813       | -3.098148      | 0.002             |
| BKVPS*RMINUS                   | -0.05528          | 0.110679       | -0.499465      | 0.6176            |
| EPERS*RMINUS                   | 1.900512          | 0.914402       | 2.078421       | 0.038             |
| CASPS*RMINUS                   | 0.275204          | 0.297629       | 0.924654       | 0.3554            |
| FSIZE                          | 1.67831           | 0.476836       | 3.519679       | 0.0005            |
| R-squared                      | 0.076467          | Mean dependent var | 4.001785       | |
| Adjusted R-squared             | 0.071313          | S.D. dependent var | 17.61999       | |
| S.E. of regression             | 16.9801           | Akaike info criterion | 8.508591       | |
| Sum squared resid              | 258338.1          | Schwarz criterion | 8.540551       | |
| Log likelihood                 | -3831.374         | Hannan-Quinn criter. | 8.520798       | |
| F-statistic                    | 14.83738          | Durbin-Watson stat | 0.556929       | |
| Prob(F-statistic)              | 0                 | Wald F-statistic | 5.00616        | |
| Prob(Wald F-statistic)         | 0.000157          | Source: Stata Output, 2016 |

From the Table above, we observed that the results show that the R-squared and adjusted R-squared values were (7%) and (7%) respectively. This indicates that all the independent variables jointly explain about 7% of the systematic variations in the model for the sampled period (2008-2014). The small R square shows that there are more excluded variables that drive the dependent variable which have been excluded from the model. The F-statistics (14.83) with a p-value of 0.00 shows that the model is generally significant at 1% level which means that the model was well specified.

Decision
Since the computed value P-value is 0.002 less than .10, and with a negative coefficient, the hypothesis that rising stock prices are not significantly related to increase in the sales of shares is thus rejected. The conclusion is that rising stock prices are negatively and significantly related to increase in the sales of shares in Nigeria.

5. Conclusion
The nub of this study is to examine the relationship between the disposition effect on equity shares in Nigerian based on the prospect theory and mental accounting. It was empirically verified that, negative share price Returns have a negative influence on share prices and there is a significant relationship between disposition effect and share prices in the Nigerian stock market in the period under review. Also with its interaction with accounting information, it was concluded that, it is negatively related save in Accounting Cash Flow per share which is positively related but is insignificant in driving stock prices. The implication however is that disposing stock that a losing price is a general phenomenon in Nigerian stock market. This can really be miss leading because, that a price is losing price may not necessary mean that it is not viable, it may only be an existence of a systematic mispricing.

REFERENCES


Ruixue Du (2008). The relationship between share price and operating cash flow under the casual theme restaurant setting. *Thesis submitted to the Faculty of the Virginia Polytechnic Institute and State University*


