Appraisal of Change in Investors' Behaviour During and After the Speculative Bubbles and Crashes of the Nigerian Capital Market

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ABSTRACT

The high appraisal of the aggregate market in respect to high price earnings ratio and high asset prices experienced in the equity and asset markets in the end of 1990s and the imminent fall 2008 ascribed to the speculative bubble crash and consistent with investors' irrational behaviour, wrong human judgement of the 2008 market decline due to bad credit lending. It is against this background, that the study appraises how both active private and institutional investors' are influenced by these biases and what influences them to change their investment portfolio during and after the speculative bubble and crash of 1998 to 2009. The use of questionnaires was adopted and directed to both institutional and private investors to get an understanding of what their trading pattern was like; and looks at the behavioural bias that influenced their method of stock picking in the past. The result obtained during the analysis shows that market participants during the speculative bubble and decline of the market are irrational in their decision and this change the composition of the market. During the high valuation in equity price of companies, behavioural factors influenced investors' decision. This result shows that the fundamental value of a company did not affect market overvaluation. The media also played an important role in disseminating information to both investors. Media proved to be most effective in determining the fundamental valuation of assets today when personal intuition has a great impact on investment decision. The overconfidence bias also influences the decision of investors' greatly during the speculative bubble this explains the self-attribution and hindsight bias in investors. The fact that most investors' consider the market overvalued shows the manifestation of this bias. This supports the EMH theory that investors' think that they can predict and outperform the market. Conclusively, the common knowledge of the factors underlying the speculative bubble before its imminent burst and the way psychological factors influences our decision-making should stand as a guide against a reoccurrence of this phenomenon and improve the efficiency of today's reviving financial market.

Keywords: **Investors, Behaviour, Speculative, Bubbles, Crashes, Nigeria and Capital Market**

Introduction

The occurrence of bubbles and crashes in experimental markets with inexperienced participants relates to Smith (1998) documentation of observing stock market bubble and crash pattern. They found that participants who have no previous experience in similar asset market, would exhibit a price bubbles and crashes instead of tracking the fundamental value. When market prices surpass their fundamental values on the high volume, market crashes drop faster in price than their fundamental values often when the terminal stage of the asset is approaching. Resistance to both institutional and environmental changes eradicate Price bubbles.

Zou (2006) says that when bubble bursts, economy crisis will follows like the Japanese financial crisis (1990), and Southeast Asia financial crisis (1997) are examples of financial crisis because of economy bubbles. The impact of this crisis is not limited to the origin country, but expands beyond borders. Stock is one of the main vehicles of bubble economy; according to Shi (2001) asset, pricing bubble is a major factor that triggers bubble economy, the continuous expanding of asset pricing bubble is the sign of bubble economy.

The dot com bubble and crash with Asian Financial crises is a constructive experiment in the study of behaviour of the stock market under extraordinary circumstances, which explains the behaviour of investors in the stock market. Stock markets in the affected countries experience three phases of stock market cycle namely: recent history of general high returns, a spiky fall in market capitalisations after the crisis started and extent of quick but prejudiced recovery. The combination of these three phases establishes the occurrence of a positive bubble followed by a negative price bubble, i.e. the gross overvaluation of share prices before the crisis. Overvaluation of share prices gives rise to overreaction, which results to excessive discounting of share prices (negative bubble).

Robert Shiller in 2005 said, "Once stocks fell, real estate becomes primary outlet for the speculative agitation that the stock market unleashes". Ralph Block (2005) says, "Many baby boomers emerge determined that the stock market won't provide them with adequate assets with which to retire.

The illiquidity of shares plays a major role in the emergence of speculative bubble of any share in the stock market. Though, there is a burgeon interest on liquidity of shares and its effect on asset pricing, and on returns during the market crashes (unexpected situations). Therefore, the future must

remain unpredictable or uncertain. The prediction of the economy is burdening with additional dangers and complications and all indicators change do not have or lose the capacity to predict the future accurately.

According to August 2007 forecast, the UK housing market will fall by at least 15% during the next two years. After which UK interest rate reduce as the housing market declines targets at 5% during the second half of 2008. The implications for this are that the UK economy is heading for sharply lower growth for 2008.

During the past years, the equity market comprises increasing volatility and fluctuations. The vulnerability of the market from investor's perspective has increased uncertainty and volatility of market conditions as financial measures and tools is use to judge them. For a long time market participants have sole depended on rational investor's behaviour and efficient market when making financial decision. The idea of rational investor's behaviour however, is to maximise utility and to demonstrate the perfect self-control which is becoming quite inadequate. In recent years, market inefficiency of both market anomalies and investor's irrational behaviour is observed.

Looking at the recent global economic meltdown starting from the United States based Lehman brothers is an example of market volatility and uncertainty with investor's irrational reactions to investing. Alan Greenspan in his exact words talked about the recent recession as "The predictable image of confidence is a reason that recessions are very difficult to predict". There may not be changes based on degree from a period of economic expansion but difference in processes endangered by fear of the unknown." He emphasised that the economic model adopted have previously been successful in capturing a process driven in large part by irrational behaviour of investors.

The obvious high valuations of the aggregate market and high price earnings ratios, experienced in the equity markets towards and at the end of the 1990s can be characterised as the speculative bubble. The continuation of investor's behaviour and judgement event exhibit their less rational thinking. Shiller (2000) on contrary states that the irrationality of investor's behaviour is controversial to many experts and managers of university to have exposure to the best scholars and trustees drawn from highest positions in the world of business who are actively involved in the market before its peak in March, 2000. The question is can these experts be

characterized as irrational or foolish? Apparently that is what will be consider if one wishes to attribute to market behaviour to human error.

Based on perfect predictions, flexible prices and complete knowledge of investment decisions of other players in the market are increasingly unrealistic in today's global financial markets. Olsen (1998) states that by looking at behavioural finance in a new concept of the finance theory it seeks to understand and predict systematic financial market implications of psychological decision-making. Human behaviour and psychological mechanism is understood by being involved in financial decision-making, and standard finance models be improved to better reflect and help explain the reality of today in evolving markets.

The high valuations in aggregate market are the high price earnings ratios experienced in the equity markets at the end of the 1990s. During this period, there is an assumption that majority of the investors seem to have realized the seriousness of the speculative bubble and they have continued their investment activities knowing the risk for a collapse was inevitable. There are common understanding of the possible psychological factors that promotes the bubble and the possible way it affects decision making and ways to avoid the next occurrences of such phenomenon and improve its efficiency in today's global financial market. To this end, the paper is structured into five major parts. Section one is the Introduction, section two which follows this introduction present, the literature review, section three discusses the methodology, while section four presents Data Analysis and the concluding remarks.

An Overview of Speculative Bubbles and Crashes

Bubbles and crashes history dated back to the 17th century (MacKay 1852). When the relations among traders becomes very strong it reaches significant values, a second-order phase transition and significant behaviour during this phenomenon can be observed, thereby creating a bull and bear market phase. Cassidy (2002) says bubble rise is an initial phase characterised by a new initiative or merchandise, which causes changes in expectations about the future. When the system stays at the bull market phase, speculative bubbles occur in the stock market. Speculative bubble describes the situation where temporal high prices maintained by investors' passion or emotion rather than by reliable evaluation of real value. The high demand for asset created by public memory of high past returns, and the confidence of high returns will generate profit for the future. This results to a feedback effect where rise in price increases investor passion to increase demand.

Feedback effect however arises because of investor's increased confidence in reaction to increased past price. A speculative bubble is not sustainable. The idea of speculative bubble is about the irrational side of investors' behaviour. The theory also necessitate that changes in past prices will create faithlessness in judgments, not that they believe that prices will continue to rise. The history of stock market event ranging from the Great crash of 1929, the 'Tronic boom of the 1960s, the Go-Go years of late 1960, the Nifty Fifty bubble of early 1970, the Black Monday crash of 1992 , the bond market crash of 1994, the Dot com bubble of 1990 and the depression of 2008. The current stock market history has incorporated the internet bubble, the subsequent NASDAQ and telecom crashes, the housing, credit and commodity crash as foundation for behavioural finance. The period of investor's shocking investment sentiment pressed the price of speculative and complex to value technology stocks to immeasurable height in the late 1990s. This period-created opportunity for contrarian arbitrageurs, to force many arbitrageurs out of business, as prices already high went higher before the final market crash. During a bubble however, the propensity to speculate is high, investment bankers can join the chorus arguing for high valuations

Growth of the Housing Bubble

Market value depreciation witnessed in 2008 started back in 2007. However, by mid 2007 the knowledge that some banks were lending carelessly in the US sub-prime mortgage market became obvious. By autumn, the crash of Northern Rock intimated the UK about the credit/liquidity crunch. Between 1997 and 2006, the American house prices rose by 124% in the same period the British housing price rose by 194%, etc. The difference with America was the large numbers of subprime borrowers who has poor credit ratings taking mortgages and buying homes through cheap credit and believing the housing prices would rise. The house bubble occurred because of homeowners refinancing their homes at lower interest rates or financing other mortgages with the hope of price appreciation. With access to credit facility through financial institutions, and the belief that housing prices will continue to rise encouraged many subprime borrowers to borrow more. Financial institutions encouraged borrowers to take on more adjustable mortgages because it offers interest rate below the market for the mortgage term. Borrowers who cannot pay back their mortgages at the time of agreement are compelled to refinance with several defaults.

Commodity Bubble

In the wake of the housing bubble, commodity price was shaped. Between 2007 and 2008, the price of oil tripled from $50 to $140 before the financial crisis of late 2008. Experts are of the opinion that the flood of money from

housing and other investment into commodities to speculate and monetary policy caused the commodity bubble. There are factors responsible for the spiky rise in oil price (bubble). When there is a bubble in the market, it influences the monetary policy. These activities led to the oil market bubble, which otherwise is known as oil price volatility. The loose monetary policy between January 2001 and June 2004 is the cause of the oil price bubble. This is traced to bubble activities through mal-investment straightforward monetary position. The strict regulations from June 2004 to September weaken the continuation of non- productive activities thereby pushing the price of oil upward. Speculators are responsible for this bubble. Mr. Soros a renowned hedge fund investor warned that the oil bubble would not burst until the recession of both the US and Britain's economy; afterwards the price will make a downward fall thereby creating a bubble.

Futures Markets and Bubble Formation in Experimental Asset Markets

The predominance of bubbles and crashes in experimental asset market as inhabited with inexpert subjects who demonstrated flexibility to many institutional changes. Smith (1988) observed that participants who has no experience in asset market are particularly interested in, with the influx of participants into the market will result to a price bubble, afterward a crash instead of price following the fundamental value it goes the opposite direction. When the market crashes, a sudden decline in price to the fundamental value is witnessed, this is at the end of the asset life span. Smith (1988) and Smith (1994) gave details on the occurrence of bubble formation with the opinion that participant's rationality is questionable. Agents believe all participants are irrational because they buy assets when the prices are high than its fundamental value, agents therefore speculating to take in capital gain. As speculative demand rises above the fundamental value, speculative behaviour is strengthen and prices will continue to rise. As the anticipation of future capital gains increases endogenously to participant's irrational behaviour, it leads to bubble formation. These effects and decision error explain the source of speculative bubble and crash occurrence in asset market. The FTSE100 responded throughout the year to a number of significant pieces of asset market news. By November 2008, the market fell sharply, because it was 'priced in' as bad news.

Factors Underlying Speculative Bubble and Crash

Kindleberger (2000) describes speculation as *"buying for resale rather than income" and* bubble means," *predict the bursting"*. According to Kindleberger, speculative bubbles in the past followed the standard

structural pattern, though the information differs from one event to another. Demarzo, Kaniel and Kremer (2008) are of the opinion that a bubble will burst if rational investors can arbitrage without risk. Although Kindleberger adopted Minsky model of validating economic policy, it also describes the structure of a speculative bubble.

The first stage is the *'displacement'* or shock to the economic or financial system that drastically changes the business or financial sector or the economy. The speculation that resulted in the 2000 collapse of the dot com companies was a start of an important growth in telecommunications and technology sector, which includes the Internet.

The second stage is the accommodation of the speculation, monetary and the credit expansion. Kindleberger and Galbraith (2000) are of the argument that the monetary expansion is not enough without the persistent of optimism. As Galbraith noted that "speculation in large necessitated the persistent sense of confidence and optimism to convince ordinary people to become rich".

The third stage is the qualitative and quantitative of the boom stage where over-*trading occurs*. At this stage, there is high demand for goods and financial assets that in turn pushes up prices, thereby creating more demand. A feedback circle between the financial sector and the general economy is developed. The psychology of market participants under study changes their behaviour because of changes in the market.

The last stage is repulsion or shame. This is where the market begins to decline. This movement is either an organized, or a panic. However, supplying the financial sector with liquidity might only evade a riotous panic, or immediate delay in ultimate liquidation. Like the Japanese government struggled with bad debts caused by the speculation in stocks and real estate for more than a decade.

The knowledge about the structure of the speculative bubble allows spectators to become aware of its symptoms when it is in progress, or Kindleberger's over-trading stage. Qualitative interpretation requires an aspect of objectivity. Chamber (1999) argued that trained spectators do this interpretation; the training needs no financial or economic facts. Other symptoms of speculation include:

- Evident investment achievement by non-professional investors,
- Shockingly positive forecasts and advertisements,

- Extensive disapproval of traditional valuation benchmark
- The materialisation of trendy financial figures.

As shown above these outline explains the speculative bubble. However, structural factor such as technology and demography lies outside the stock market but it influences market behaviour. In addition, the Cultural factor helps to strengthen the structure of speculative bubble, i.e. the new economy phenomenon. Lastly, there is the psychological factor that helps define and explain speculative bubble and crashes. These factors are explained further;

Structural Factors

Under this section, I will concentrate on the five factors that have an effect on the market that did not explain rational analysis of economic fundamentals.

Arrival of new technology at a time of unyielding earning growth

It is a known fact that most people in the 1990s never had or used cellular phones and most never heard or used the internet and global web. It was not far before these technologies became a household name making a minded speed at which technology changes. Though, prior to this technology era, people know that there will be a competition between the inexperienced entrepreneurs and traditional businesses. By mid 1990s, earnings rose to the peak; accredited to the birth of a new era that have less or nothing to do with the internet evolution. Instead, this growth is the continuous recuperation of the economy from the mayhem and recession of the early 1990s.

The concurrent event of profit growth is the appearance of the new technologies that led people believing that there was a relationship between two events. Advent of the new millennium (time of optimism) and the bleakness of the future is the introduction of the IT era are the two events.

The realism of the IT uprising is not about stock boom but public ideas about what the revolution creates. The influence of public reaction to the internet fable and its instinctive believe is empowered by ease or an argument that comes to mind. Introduction of new technologies will always have a great impact on the market, but the question is does it have the tenacity to raise the value of existing companies , given that they do not own the control of the new technology?

Blanchard (1989) through his economic argument states that unexpected technological advancement does not have any impact on stock prices. However, it can be agreed that the emergence of technological advancement will improve investment thereby generating new capital that will compete away extra profit.

The baby boom and its impact in the market

This theory explains the last century when people began saving for their retirements. There are two theories explaining the presence of an outsized number of middle-aged people who have the drive to increase their current stock. The first theory is to justify the high price to earnings ratio and the second is spending on current goods and services that push share prices up through generalising the positive effect on the economy: high expenditures means high profits for companies Shiller (2000). The first theory shows that baby boomers struggle with each other to buy stocks in order to save for retirement, thereby pushing share prices up to produce good earnings.

There are shortcomings to these two theories. Firstly, they fail to put into consideration the time and period the baby boom should come in or affect the stock market. Secondly, the theory ignores factors such as the appearance of new capitalist system around the world and demand for them. The theory implies that baby boom pushes the market value up due to their demand for goods that will show that the market is overvalued because of earnings.

This explains the investment- strategy of investors that implies that when there is a need to save their savings push up savings options. Alternatively, if the need is to reduce savings, the selling pressure will push the prices downwards. The obvious truth is that the boom has an assumed effect on stock market, and it is responsible for the rush forward into the market. Many scholars' attributes the strength of the present day stock market to the theory and that it gives a rationale behind the market being highly valued.

Expansion and role of the media in business news

In the 1990s major media houses such as Bloomberg, Reuters, CNBC and CNNfi made coverage of the financial market and stock market media houses were up to date with their news. The media became an essential part of market events because they attract the attention of both viewers and readers. By 1990s, the nature of business reporting changed. Parker (1998) states that financial articles, which used to gear towards discussing, people in the financial world changed their information to profit making opportunity for private investors. The format of media coverage led to boost demand for

securities as increased adverts and commercials make people familiar with financial products such as options and persuasion to buy.

The news media attracts financial markets because there is a constant flow of news in form of daily price changes and company reports. The media sought interesting news. They are the fundamental propagators of speculative price movements through their efforts to make news interesting Shiller (2000). They may try to enhance interest by attaching news stories to stock price movements, which focuses greater attention on the price movements. They focused attention on particular stories for long periods. Shiller refers to this as 'attention cascade'. Attention cascades can contribute to stock market bubbles and crashes.

Investment fads and fashion ensued volatility of speculative asset prices which appears to be correlated to the unpredictability of public participants Shiller (1984). Shiller (1987) states that investors attention to market activities differs from time to time and through the major crashes in the financial market which appears to attract their interest. The media is the backbone of the financial market whether it is promoting or destroying, this does have an abnormal resultant effect on market behaviour.

Rise of gaming Opportunities.

Gambling institutions over the decade has increased tremendously. The effect it has on the culture and attitude of investors towards risk taking or aversion, such as investing in the stock market has increased. It represses investor's natural reserve against risk taking through some gambling activities/games which is similar to activities in the financial market.

Spill over from gambling to financial volatility originated from gambling and institutions that promote it to defer the inflation estimate of prospective good luck, interest in performance compared to other investors and a new way to rouse one out of boredom Shiller (2000). Today we subject to professional adverts to stimulate and instigate our investment consciousness. Example is adverts from mutual funds encouraging people to invest into their retirement age. This marketing strategy, is liken to gambling familiarity or by seeing others gamble will have an effect on encouraging playful risk taking behaviour in the stock market.

Cultural Factors

This section described the cultural factor, which highlight the structure of speculative bubble and crash.

Media

The theory of the diffusion of information is synonymous to the epidemic model. According to this model, there are carriers who are vulnerable Shiller (1989). Stock market (property or asset market) bubbles and crashes are compared to the spread of epidemic outbreak. Another form of media is the face-to-face communication it plays a significant role, which is infectious.
The media is an important part of market dealings because they attract viewers and readers. In general, momentous market dealings take place only if there is a parallel thinking pattern among large groups of people, under this category the news media is an important medium for the spread of ideas. Activities in the stock market attract the attention of the news media because of the persistent flow of news in form of daily price changes and company reports. They pike the interest of viewers by attaching news stories to stock price movements, thereby creating a hub of greater attention on their movements.

Davis (2006) established their role in the growth of extreme market movements. It intensifies market reaction to news, and amplifies irrational market expectations. During the period of market crisis, the media can push trading activity to extremes. The media can set off and strengthen opinions.

Stock Prices Change on Days with Big Headlines

A study carried out by Victor Niederhoffer in the United States in 1971, sought to ascertain whether days with major world news event match up with days with big stock price movement. The survey showed that the New York Times had 432 headlines between the years 1959 and 1966. The study included a study into the S&P Composite index over the period of 1959 and 1966, it shows that a significant one day increase of more than 0.78 percent of only 10 percent trading days etc. After the survey, he concluded that stories on headlines after all might not have an effect on the fundamental value symbolized in the stock market; and national news does not affect the stock market. He speculated those news incidents that represent crises are in a better position to affect the stock market movement. A small amount of the aggregate price movements in the stock market shows meaningful relationship with news headlines.

Major Stock Price Changes on Days with No News

According to the Efficient Market Hypothesis, stock prices react to news as soon as they happen, not when announced in the media. However, this is against the idea of the influence breaking news having on stock market movements.

Shiller and Feltus (1989) talked about a survey carried out in the United States of 101 professionals. The question was if they heard of a takeover and if it is an explanation for the market crash, or of the collapse of UAL stock due to the decline of the market. The survey confirms the initial argument that the news story occurs after the crash not the cause. Therefore news event can act as the basics of stock market crash, because of the image it creates to fuel different feedbacks form; stock price fall will fall further to protect this feedback.

Psychological Factors

This will explain some of the psychological factors that play an important role in enhancing speculative bubble and crashes.

Expectation and Emotions

Different models calculate how rational investors maximize their benefit based on future expectation of price and change. In truth individual investor's decision about how to distribute stock market overall and other asset allocation like bonds, in real estate cannot be calculated. Investor sometime is not bothered about where he invests his money. The question is do investors overreact to long-term reversals? De bondt and Thaler (1985) or do they under react as evidence on short- term momentum as presented by Jegadeesh and Titman (1993).

Investment decisions most times is affected by contradictory emotions (Loewenstein, Weber, Hsee and Welch (2001); Slovic, Finucane, Peters and MacGregor (2002). A flattering sports result or good news about a friend can stimulate a good feeling, and these feelings can affect investment decisions. As emotions increases, it increases with complication and ambiguous surrounding the decision. Stock market repeats performance of past years. The prospect of a key correction in the market is real. If a participant leaves the market without participating in making money that other investor had shared in, it may generate to a sharp feeling of regret. Baker and Nofsinger (2002) explain this as an attachment bias, where investors become emotionally attached to a particular investment.

Emotional attachment can cause investors to focus on good news and ignore bad news of an investment. This could hinder the incorporation of information into a share price. If investors ignore bad news, the share price may fail to reflect the bad news. Baker and Nofsinger (2002) proposed ways to avoid the effect of emotion by other psychological biases, i.e. investing in index tracker funds. Debatably investors are somewhat unlikely to become

emotionally involved in index tracker funds. The feeling of regret discovered by experts is the reason why people make changes in their investment decisions Loomes and Sugden (1982). Envy is another feeling that sees other people making money in the stock market other than one's hard work, creates a painful experience especially when it bruises their ego. On the other hand, if other people are consider smarter, he would feel like a fool even if they were not. Being lucky is considered but that does not make one feel good about oneself. The feeling generated is that of re-trial to alleviate the pain once felt. It makes the feeling of being a gambler run high i.e. 'gambling with the house effect' Johnson and Thaler (1990). Coval (2001) in his work refers to investors becoming more risk averse in the situation of previous loss and less risky when profit is made; but they will like to take more risk as profit grows.

The emotional position of investors when making investment decisions is very crucial as it contributes immensely to the bull market Shiller (2000).

The Market Fall

The bubble phase is share prices reaching an idealistic height. If stock prices reach suitable idealistic levels; through leveraging, stock market crashes causing banking crises. The impact of influence in stock market in the United States in 2007 led to market crash, whereby banks failed and deposited lost money.

One of the events is the emergence of new companies. Moreover, the introduction of new companies will bring about competition between old ones thereby causing profit to fall. Besides, when the new companies survive in the stock market, the extra contribution of the shares will help to lower share prices. The increased supply of these shares overhauled the increase in the demand for those shares and this leads to their fall. Another factor that can push share price downward is the increase in interest rate. When there is a bubble, the borrowing momentum increases in order to finance the purchasing power of individuals. However, when interest rate rises, investors sell to finance it. Such momentum of selling brings about a crash in the market. Example is Japan market in 1990 when interest rate rose suddenly and led to the collapse in property and share prices.

Krugman (2009) explains that 'Greenspan's story of how economic policy makers convinced themselves that they had everything under control, but to their horror and the country's pain that they hadn't. During the Greenspan era, inflation remained low, and the recessions were short lived. Stock market showed a 10% increase each year, which Greenspan saw as 'irrational exuberance' of people lending to asset price bubble.

Low interest rate system generated a significant liquidity in the banking system, with effect of increase in high demand for bank loans, especially for financing highly inflated home mortgages. Lending for home mortgages were not so risky for banks acting only as loan instigators, since those mortgages were structured assets sold through housing finance institutions to investors. The low risk attached to mortgage lending encouraged banks to loan to households who could not deposit for their mortgages (sub-prime borrowers). Some households became wealthy as the stock market rose; attempts to make extra profit from the increasing housing prices by buying more and more houses with borrowed funds. Clients who borrowed became automatic sellers, since they are indebted to repay the loan. This forced investors to sell their stocks and this leads to sharp fall in the stock market.

The first victim of the crisis was a major bank in UK (Northern Rock). Northern Rock sought and received liquidity support from the UK government in September 2007. In February 2008, it was state-owned. On September 7, 2008, US government nationalized (placing into conservatorship) the two US home mortgage lenders, Fannie Mae and Freddie Mac. On September 14, 2008 US investment bank, Lehman Brothers filed for bankruptcy. According to some analysts, that day marks the beginning of the global financial crisis (Credit crunch). The credit crunch can create infection effect between asset markets.

The London times reported that the economic meltdown is labelled the crash of 2008 in comparison to the 1987 'Black Monday' crash. The London times recorded a fall of 21% as compared to the 28.3% in the previous 21 years ago. The business week referred it to the stock market crash or the panic of 2008. Observers have noticed however that the stock market overall fall is not comparable to the brutality of the 1987 market crash. Others are of the opinion that the media influenced and over inflated the stock market crash in order to build the view of a great depression. We have seen the role the irrationality of human behaviour, opinion, judgement created the momentum for the bubbles and the crash in the market. Biases like Herd, Overconfidence etc explained to play a major in determining market movement. Burlow and Klemperer (1994) shows that crashes and its emotion occur when rational investors create the time to buy and sell in unison. The EMH ignores significant mispricing Fama (1965). Rational investors in times of boom and crash cycles were motivated by apparent changes in the basics, of cognitive biases, herding and widespread excitement.

Methodology

For the purpose of this, research the use of deductive approach, which is usually associated with positivism, and inductive approach with interpretivism. Deductive reasoning approach starts from generalisation of statement and the derived principle from the generalisation applied to that particular study. This research design is a multiple case study, which involved a detailed and intensive use of test analysis to explain the irrationality of investors' behaviour toward investing during and after the speculative bubbles and crashes. This is classified as multiple case studies because information to this regard is obtained from active private investors and institutional investors, which consist of fourteen investment firms and banks. This is adopted in order to eliminate any form of bias that would have arisen from information given by a single source. The combination of both uses of quantitative and qualitative methods of collecting data is used. the sampling strategy used is purposive non-probability and snowball non-probability sampling technique.

Data is obtained from both primary and secondary source. The primary source is in form of a survey obtained through questionnaires directed at both active private and institutional investors. The sample size of Two hundred (200) questionnaires used consists of both private and institutional investors. Hundred questionnaires (100) were given to each group of respondents to fill; private investors were more biased in their answers because they don't want to disclose personal information about their investment experience.

The completed questionnaire is collected, serialized, edited and analysed in reference to the research questions. Table are to present information to facilitate analysis. Microsoft excel, Chi Square (χ^2) for non parametric (ordinal &nominal) and cross tabulation analysis using SPSS programme to analyse the overall result. The analysis is divided into two parts: Part A is analyses base on comparison of answers to draw behaviour bias theories. Part B will consist statistical test result analysis using Chi square (χ^2) and t Statistics to test hypotheses as stated in chapter 1. At 5%, significant confidence level tested to the number of degrees of freedom.
For the H_0 (null hypothesis):- Cr > Ct = Accept H_0
Where Cr represents critical value and Ct represents Calculated Value.

This means that the hypothesis is not statistically significant
If Cr < Ct = Reject H_0 There is a statistical significant. Thus, we accept H_1 and reject H_0

The following hypothesis will be tested during the study:

$H_{1:}$ Age of participants influences knowledge of stock market

$H_{1:}$ Men use fundamental Analysis for stock picking than women did

$H_{1:}$ Men use Technical Analysis for stock picking than women did

$H_{1:}$ Advice from friends/colleagues/social class influenced men when picking stock than women

$H_{1:}$ Herd behaviour (identical trading pattern) contributed to market movement from 1998 to 2008

$H_{1:}$ Men can forecast future market movement more than women did.

$H_{1:}$ Representation of stock by investors' contributed to the speculative bubble of 1998 and the market crash of 2001 and 2008.

Data Presentation and Analysis

H_1: Representation of stock by investors' contributed to the speculative bubble of 1998 and the market crash of 2001 and 2008

H_o: $\mu = 0$ is the null hypothesis

H_1: $\mu \neq 0$ is the alternate hypothesis

Note that μ is Representativeness

A two-tailed test is used. The chosen level of significance is 0.05.

Critical value = 3.84

Gender * Information1 Cross Tabulation

			Information1		
			1	**2**	**Total**
Gender	Male	Count	27	10	37
		Expected Count	26.5	10.5	37.0
	Female	Count	16	7	23
		Expected Count	16.5	6.5	23.0
	Total	Count	43	17	60
		Expected Count	43.0	17.0	60.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.081	1	.776
N of Valid Cases	60		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.52.

n= 60, df = 1, p-value= .776, chi square (χ^2) = .081

Interpretation of Result for Private Investors

Using the chi square χ^2 calculated 0.081 < 3.84 we accept Ho and reject H1, this explains that the representativeness of stock and the way people react to it has nothing to do with their level of investment as paraphrased in the hypothesis.

Refering to the descriptive analysis, I can infer that private investors believe in the probabilities that the value of the stock will continue to rise as it has risen to about 70% already and for reason they see the stock as worth buying. As explained in section 2.8 the representativeness bias is the tendency to conclude that good companies are good investments. To determine whether a share is good investment is dependent on the share being over or under priced. Nevertheless, Fesenmaier and Smith (2002) explain private investors' irrational behaviour towards this share. This implies that they have little knowledge of the fundamental value of the company or probable they are not good in statistics and probability knowledge. Relating this however, it shows that the pattern adopted by them are easily available in data, it shows the randomness and continuous movement of price that is questionable. Moreover, investors did not base their choice on information available to buy stocks and it obviously shows that this did not contribute to positive market momentum (bubbles) and negative momentum (crash).

Institutional Investor

Gender * information2 Cross Tabulation

			information2		
			1	2	Total
Gender	Male	Count	11	9	20
		Expected Count	12.5	7.5	20.0
	Female	Count	14	6	20
		Expected Count	12.5	7.5	20.0
	Total	Count	25	15	40
		Expected Count	25.0	15.0	40.0

Chi-Square tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.960	1	.327
N of Valid Cases	40		

n= 40, df = 2, p-value= .327, chi square (χ^2) = .960

Interpretation of Result

For institutional investors it shows that the conclusion is statistically insignificant. We are therefore accepting Ho and reject H1 (0.370 < 3.84). Institutional investors are more heterogenic, and from every indication, it is shows that they are more informed than their counterpart is. However, their result also supports the result of their counterpart that the representativeness bias did not fulfil the hypothesis. Among them however, no one has responded to the probability of the market either going up or down. However, they maintain that information for this stock is in sufficient with a percentage of 53% saying that the stock will continue to rise and create a momentum that will lead to speculative bubble that will burst.

Barberis Sheifer and Vishny (1998) developed these principles of representativeness heuristic and conservatism bias into a model of speculative bubble spread. He states that the representativeness heuristic

persuades people to respond to price changes in an overstated manner, but the conservatism bias spreads this pattern over time.

Findings

It is believed that stocks in the market reflect all the available information in the market supported by researchers and academicians (Fama, 1970, 1965; Malkiel, 1973, 1987, 2003; Kendall, 1953). However, some still believe that stock markets are not efficient (Brealey & Myers, 2000; Blanchard and Watson, 1982; Lo and Mackinlay, 1999) and with this fact, it may be concluded that if markets were not efficient, no market would exist at all. In this research I found out that biases such as herd behaviour, overconfidence and representativeness did not causes the stock market volatility that led to the speculative bubbles (IT bubbles) and it didn't also led to the market crash of 2000 and the subprime global market crash of the 2008.

The estimation of the fundamental analysis shows that few investors has explosives trend following the belief about the persistence of stock deviations. Apparently, investors abandoned the role of fundamental news and continued to buy to stocks for purely speculative reasons. The result showed the bizarre performance of this trend and relied on their beliefs. The behavioural aspect shows that during the periods optimism, rational investors are mostly motivated by short term profitability which probably strengthened the stock prices to rise which set off expected cash flow of the internet, housing and financial sector.

For herd behaviour in the market and the influence of contagion effect it has on market movement; for which it determines the overvaluation/ undervaluation of stock is said to be self -implying from speculators as price deviate from equilibrium. But with this result I found out that herd behaviour or the contagion effect has no influence on market movement for both private and institutional investors. This can infer to the irrationality and complex human nature. Since we all agree that the market is unpredictable, human decisions are also unpredictable.

Finland researcher Grinblatt and Keloharju (2000, 2001) used data to buttress the point that professional investors are prone to the use of momentum trading which has no trace to home bias. Private investors tend to make trading mistakes than institutional investors. This is because of private investor adopting a near identical trading pattern. Psychologists found that men are more overconfident than women are; though different people experience different stage of cognitive biases.

The result also shows that investors suffering from unfortunate outcome through trading preference tend not to suffer from disposition bias. However, investors suffering from overconfidence will suffer less from disposition effect and extrapolation bias. The result also shows that investor with poor trading technique will suffer from overconfidence and extrapolation predisposition.

Concluding Remarks

Market Players for sometime relied on the theory of EMH and the rational investors' behaviour when making financial decisions. The believe that rational investors always maximise their utility and exhibit perfect self control is insubstantial as market inefficiency in form of market anomalies and the irrationality of investors' behaviour which have been observed for the ten years. The result of my test shows that despite what research says the behaviour of market participants at some level unpredictable during and after the speculative bubbles and crashes of the stock market movement. The results also explain the reasons that let to speculative bubble and crash.

The investment perspective of respondents showed that majority invested in stable companies but higher expected returns for during the speculative bubble, investors made short-term investment target due to the profit accrued but currently they are looking at long term but safe investment, which will bring good returns. This may show their level of risk aversion toward short-term investment as the period of speculative bubble. Therefore, they apply more caution to today's investment. Statistical analysis could not prove the relationship between the source of information resource investors used and what sort of companies they invest.

When looking at the factors responsible for the speculative bubble, the result are however scattered. The result showed that institutional investors think that forecast from analysts contributed to speculative bubble, while private investors consider overconfidence, herd behaviour and forecast from analyst major contributing factors. Institutional investors also consider overconfidence and herd behaviour as a contributing factor. This shows that their decision-making was influenced by the strong belief in their own skill. The conclusion is that both investors are responsible for the market burst; most especially the institutional investors, which are considered the most, informed. The behavioural side underlying these views are numerous. Cognitive dissonance influences the decisive nature of investors as they may have reacted to price increase. Anchoring on the other hand, directly affects their decision-making thereby causing the favourable to outweigh the ones

under probability therefore creating a riskless market. With this, believe in place, a herd feedback is created. Heuristics is a situation where people found out their own errors and use this to explain the irrational behaviour in the market, which is against the EMH. Overconfidence bias, during the speculative bubble and burst also played a significant role. Not a bias though, information such news from media also played a tremendous role in influencing investors' decision during the speculative bubble and burst.

With awareness of the existence and seriousness of speculative bubble and its impending crash, major markets still continue to trade. The most incomprehensible is that well-known and well educated institutional investors and active private investors were victim to the bubbles and the burst of the market between 1998 and 2008 market volatility. This shows that there was something wrong with the fundamentals of the present rational market behaviour. Under rational circumstances we expect to see a difference in the trading pattern of both investors, but to my dismay I found out that they have similar trading pattern. It is so obvious that institutional investors adjust their advice or recommendations to accommodate the liking of their clients.

The clarity of the heavy influence of behavioural biases as discussed in chapter two in the speculative market is plausible. However, empirical literature on behavioural finance has failed to develop other theories that might explain market anomalies like EMH do and further explain the irrationality of human decision making in the stock market. Under my statistical analysis, it proved that herd behaviour, overconfidence and representativeness has no influence on the stock market bubble of 1998 (IT bubble), housing bubble and the crash of the market in 2000 and 2008. I can conclude that the behavioural finance has not achieved its study of human irrationality in decision making. I recommed that institutional investors should be re educated on stock market anomalies and the use of EMH by fama should be introduced into stock market trading. Secondly, the stock market should purge herself of noise traders and the use of certified information should be disseminated in the market. Every major economies stock exchange securities commissions should employ a strict regualtions to stocks being placed on IPO and asset that rises above 50% of its intrinsic valued should be pulled out of public offer. For the 2008 crash, we recomend that financial institutions should be re- assessed and quarterly statement of account should be submitted to the central bank of each country and they should in return look at the companies debt/equity ratio just as Graham value screen suggests. And the governemnt should part own this companies shares to avoid future occurrence of the 2008 market crash.

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