

An Investigative Study of Herding Behavior In Indian Stock Market: A Global Perspective

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Abstract

The herding behavior (HB) in stock market is derived from market or investor's sentiments mainly due to predictions and speculations based on group rather than individual decision and are either logical or illogical. Profit and losses or volatility of the stock market is governed by various factors like firm performance, investor sentiment, economic policy, inflation or deflation. The selection of right stock requires a thorough analysis by evaluating company's history, business activities, market capital, quarter and annual results, present and future expectations, daily, weekly and monthly analysis. The market pulse is generated through overall condition, price fluctuations; trading volume of the stock; therefore these parameters should also be considered in stock selection and profitable investment. The study is a view point discussion focusing time span of 2012 to 2018. This comprehensive review highlights a brief scenario of global exchange market, the factors regulating market movement, herding habits in global stock exchanges and India's market sentiments. Moreover, analysis of various tools and techniques based on measurements and impact of HB are also discussed. In conclusion, any country's economic reform strategies should take into consideration the local as well as foreign investment in stock market and should be cautious and alert in taking prompt decision during any type of market crash.

1. STOCK MARKET: A Global Scenario

Stock market plays a significant role in global economic development and a rise in stock market index is considered as a good sign enhancing investors confidence about the future economy. Liberalization in financial markets have played a significant role in emerging economies of any country as it has made market more efficient minimizing the probability of financial crises (Rejeb and Boughrara 2013) and encourage foreign institutional investors (FIIs) (Garg and Mitra 2015). Presently, 20 major stock exchanges with market capital of more than \$1trillion and

New York stock exchange being the leading one with nearly \$24000 billion capital are playing significant role in regulating global economy. According to World Federation of Exchanges there are 46583 listed companies with a market capital of more than \$87.1 trillion and among these Asia-Pacific accounts for 26961, followed by US and Europe, Middle East and Africa (EMEA) 9806 and 9749 companies, respectively. The annual statistics states that value of share trading and number of trades decrease upto 2.6 and 5.1% in 2017, whereas domestic market capital recorded an

increase of 22.6% with Asia-Pacific showing a rise of 27.6% followed by EMEA (24.3%) and US (17.8%) compare to previous year (WFE, 2018).

2. FACTORS RESPONSIBLE FOR VOLATILITY IN STOCK MARKET

Stock market volatility is determined by various factors namely technical factors, company fundamentals, and market sentiments (Quaye et al 2016). In stock markets the analysts and consultants, are the responsible factors for trading customers capital, on contrary investors decisions are mainly influenced by the decisions of other investors. There is a general tendency to follow group decisions by individual investors compared to new information which are very noisy and also not accurate (Harmon et al. 2011; Beine and Candelon 2011). The market performance is governed by causative factor "influence" which is a power that affects person's prestige and compels him to perform in a particular way. The good internal and external information are beneficial for investor as it executes the high returns expectation, on contrary bad information or event may result in low returns (Quaye et al 2016). The mental shortcut approaches in the "decision making" referred as "heuristics" are also common among investors and they lead to poor decision as they are without a detailed market information and analysis (Khan et al. 2017).

Behavioural finance, a new field of investor's behaviour for investing in stock market (Haritha and Uchil, 2016) based on market sentiment leads to investors' sentiments and influences financial decision making. Among various market sentiments, herding behaviour (HB) derived from the powerful force of social conformity, sense of

belongingness and individual requirement associated with love and belongings (Quaye et al 2016), although rational or irrational causes a significant impact on capital investment decision.

3. HERDING BEHAVIOUR (HB) IN GLOBAL EXCHANGE MARKET

Herding behaviour (HB) refers to individual decisions influenced by group behaviour. It's similar to the phrase "If a herd of animals starts moving in one direction, all the animals follow the same". These phenomena are generally witnessed in stock market and generally occur as to follow the crowd trend, market professional opinion and investor's psychology not to get left behind or miss out market sentiment (Pettinger, 2018). Investors mimicking the investment pattern are not being a profitable strategy as it could even damage both investors and markets (Ganesh et al. 2016). HB causes decrease in the illustrative power of accounting information of stock returns and lowers the value effecting earnings quality (Chaudhry and Sam 2018). Industry level analysis of HB in emerging markets represents a major cause of unpredictable bubbles and suggests investors trading decisions leading to divergence of the stocks prices from basic value (Filip et al 2015). Shapira et al (2014) designed stock market behavior model with two concepts-quantitative effect of the individual behavior to follow the group and the consequences of the individual reaction to the available information. This model helps to clarify several important features of the stock market: like significant correlations between the individual stocks and the index, the high irregularities or real market behaviour and Epps effect. The model was

efficient in describing complicated long term phenomena, such as rupturing of synchronized average correlation and superiority of the index as expressed through partial correlation.

US market shows a remarkable change in HB during subprime crisis and it exists during bull period or days of high trading volumes. A contrasting relationship is witnessed between market sentiment and HB, and it contributes not only in energizing market volatility but also in increasing the housing bubble and asymmetric herding are visible during low volatile market (Jlassi and Naoui, 2015). Chinese market shows high prevalence in Herding behaviour compared to Indian market during large market movements (Lao and Singh, 2011). Moreover, in Chinese market approaches towards contrarian strategy based on mutual fund herding resulted in sound return. Most of the loser stocks with a high degree of herding perform better, compared to loser stocks with a low degree of mutual fund herding. It indicates that the profit of an investment depends on the degree of mutual fund herding. The investors should buy loser stocks with a note of high degree of herding and disposed winner stocks with a low degree of herding during a two-year generation time. The zero-cost contrarian strategies help in yielding the highest return and the outcome shows positive relation to the herding effect and negative relation with macro economic variables (Hu et al 2018).

Some rational herding model has potentiality in predicting perfect herding that generally arises from principal-agent grievances, torrent and direct profit externalities like positive externalities in the formation of trading liquidity or acquiring

information (Ivo Welch 1996). The herd behavior, profit and quality interactions, social learning, and informational torrent play a significant role in capital markets. Besides, behavior of firms, investors and analysts are also important. There should be provision of incentives for parties who indulge in herding or cascading, and for parties who protect or take benefits of herding by others (Hirshleifer and Teoh 2001). Adverse herding behaviour existed in Egypt during 2011 revolution period showing non-linearity, as herding behaviour was short-lived with weak adverse herding in bullish markets and indecisive in bearish markets during pre- and post-revolution phases (Mertzanis and Allam, 2018). Economou et al. (2018) observed a significant impression of fear on herding estimations in UK stock market with evidences of herding as well as cross market herding during specific sub-periods.

4. MEASUREMENT OF IMPACT OF HERDING BEHAVIOUR

Various tools to measure the influence of investors' fear on their investment behaviour are provided in literature. Lindhe (2012) applying Chiang and Zheng (2010) methodology analysed HB in Nordic countries viz. Denmark, Finland, Norway and Sweden, observed that only Finland shows evidences of herding during both up and down markets. Moreover, Finland and Sweden in particular herds around the US market and in general all Nordic countries are reported to herd around each other and the European market, indicating that geographical distance affects herding across national borders. Li et al. (2018) exploited weighted cross-sectional variance (WCSV) model to analyse the level of HB by

utilizing a Fama-French augmented seven-factor model that instigate the trading volume and turnover rate factors. The regression results found the model more authentic as it clarifies the empirical aspect and relationship between the market stress and herding. Further, analyses of asymmetric herding behaviour the splitting of sub-samples into pre-crisis and post-crisis time based on market directions shows more disturbance during large compare to down market.

Some researches strongly advocated the use of digital currencies to resolve cryptomarkets issues, as Poyser (2018) using Markov-Switching approach suggest that cryptocurrencies' prices are herding based, with evidences of asymmetric and symmetric aspects of HB and the existence of different herding regimes. On contrary Bouri et al (2018) adopted rolling-window analysis to study herding in the cryptocurrency market and logistic regression reveals that Herding Behavior varies over time and it increases as unpredictability increases. Volatility index (VIX) barometer analyses reveals that Herding Behaviour is directly proportional to VIX and increases with the VIX as investors responses instantly to bad news compare to good news; and as their fear decreases they again give more quick response to good news which implies an inverse asymmetric reaction. The empirical results more surprisingly picturizes an enhancement in Herding Behaviour on days when stock market shows a large trading volume (Huang and Wang, 2017). Chen et al. (2015) using Jegadeesh and Titman's method found weekly frequency more profitable in 52-week cycle, and overreaction of investors results contrarian profits which shows positive correlation with Herding Behaviour. Multiple regression analysis using

various market elements such as trading volume, market volatility and market return employed to study Herding Behaviour in Malaysian stock market during 1995-2016 reveals that trading volume is determined by Herding Behaviour for Shariah-compliant and conventional stocks (Mand et al 2018).

A universally accepted methodology given by Chang et al. in 2000 has been used by several researchers to investigate the impact of herding behavior. Pochea et al. (2017) using quantile regression analysis method concludes that as the market rises the trading volume increases, making investors enthusiast and optimistic, denying their own information. As the market goes down, investors follow the market consensus mainly due to panic and fear and start in overselling transactions. Chaffai and Medhioub (2018) applying quantile regression analysis and autoregressive conditional heteroskedasticity (GARCH) models observed negative trend in upward, compare to downward market regarding herd information's under social implications especially in Islamic Gulf markets. Chong et al. (2017) observed short-term investor horizon, analyst recommendation and risk as the principal causes of herding. Filip et al (2015) recorded that trading decisions of Central and South-eastern European market is based on expression of Herding Behaviour in both upward and downward market trends, however herd is noisy during decline, with a significant difference in pre-crisis and post crisis time compared to the crisis period. Cross sectional volatility method of stock return given by Christie and Huang (1995) along with Chang et al. (2000) methodology reveals an increase in return rate during rising days. It

significantly increases cross sectional volatility of the market and shows Herding Behaviour. Further, there exist a non linear relationship between stock exchange and herding in Istanbul stock exchange (Kapusuzoglu2011).

In Indian context, cross sectional absolute deviation (CSAD) technique a sub-section of Chang et al. (2000) methodology do not found any type of herd formation in the Indian market and investors take their own decision without indulging in herd tendency during bull and bear phases or extreme market conditions (Kumar et al 2016). When same methodology was employed to study daily analyses in NSE also not reported any Herd Behavior in sectoral index, (example IT), compare to multi-sectoral index. Even, the bullish and bearish market conditions do not show any trace of herd behavior in the market; however investors should be cautious in their investment strategies and do not approach "imitation buying" and take the decisions based on relevant information (Kumar and Bharti 2017). Likewise, the application of this method along with cross-sectional standard deviation (CSSD) suggested by Christie and Huang (1995) on the basis of daily, weekly, and monthly data of NSE reveals that during the time of extreme price movements, the presence of herding leads to increase in equity return, whereas herding is not observed during extremely high or extremely low trading volume days. The adaptation of regulatory reforms in equity market shows harsh presence of FII, investors' whose behavior is more rational, indicating use of rational pricing models in the stock markets (Garg and Gulati, 2013).

5. HERDING BEHAVIOUR IN INDIAN STOCK MARKET

Bombay stock exchange (BSE) and National stock exchange (NSE) showing global ranking at 10th and 11th position with a market capital of nearly \$2298 billion and \$2273 billion, respectively, are playing significant role in regulating Indian economy. Besides, there are 25 other active stock exchanges in the country supporting capital momentum. Age, gender, marital status and word of mouth shows an decisive impact on Herding Behaviour of stock investors and are not always rational instead traditional, based on demographical profile and the financial information from various sources that influences stock investment decisions (Nair et al. 2017).

NSE analyses from 1997 to 2012 using Kalman filter technique reveals that investors show significant Herding Behaviour varying with time capturing market volatility and direction. The Herd exhibit significant movements in both bullish and bearish with a remarkable increase in bearish condition in the Indian market (Poshakwale and Mandal 2014). Multivariate regression and vector auto regression models employed to analyse the daily impact of foreign institutional investors (FIIs) shows inadvertent herding, creating short term volatility in the Indian market with more focus on buying than selling of stock (Garg and Mitra 2015). Another study found destabilizing effect of the foreign institutional investors (FIIs) which was evidenced through panel regression method suggested by Lakonishok et al 1992 and shows presence of both buy and sell-side herding in the Indian stock market, which is a matter of concern for the regulators (Garg et al 2016). The similar methodology when applied to analyse the Herding

Behaviour in Indian mutual fund market observed that business managers herd initially as they purchase or sale large capital or famous stocks. Indian market shows more herding than developed market and lot of variations are seen among different investors and their investment decisions (Patro and Kanagaraj, 2012).

Discriminant function analysis reveals that the herd behaviour is crucial in mutual fund market in Indian context and there is a need to revise investor strategies with fewer risks along with efficient grievance remediation and a sound investor services (Saji and Nair 2017). Augmented Dickey-Fuller (ADF) test applied for studying HB in Indian stock market reach to the conclusion that HB is absent during pre and post-financial, or crisis period or even in rising and declining market, justifying finance theories like Capital Asset Pricing Model and Efficient Market Hypothesis (EMH) (Satish and Padmashree, 2018). Symmetric study of the cross-sectional return distribution reported herding in the Indian stock market which becomes noisier during crash periods. The security return dispersion rate decreases during up market than down market days (Bhaduri and Mahapatra, 2013). Dutta et al (2016) employing Chrishtie and Haung (1995) methodology observed no herding even in severe conditions; however a periodic herding is reported indicating semi-strong nature of Indian stock market.

6. CONCLUSION

In conclusion, the herding behavior in global stock markets either presence or absence, depends on relevant information and investors manoeuvre to take appropriate decision before investing. The herd is a group decision which is either rational or

irrational, so the investor require skill in volatile market which also shows ups and down or even bullish or bearish. Market predictions are not always genuine as they are large and uncontrollable. Bear market predictions are stressful but opting bullish condition is a type of escape. Most of the business house believes that immediate losses in the market also bring prolonged gain in the stock, but this quote is conditional depending on stock choice and investment duration. In general herding does not provide significant outcomes. Instead technical research, wise decision and are skills give a satisfied results and thus more safe for investors.

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