

Herding Behaviour in Investment Decision Making: A Review

Abstract

Herding denotes how individuals act together in a group without any centralized direction. Herding is widely studied as it drives asset prices away from the fundamental value and there are concerns it leads to volatility, destabilizes the market and increases the fragility of the financial market. In this paper, a concise review of the literature of herding is provided. Various types of herding, its significance and occurrences along with the determinants are discussed. Various approaches used for measuring herding have been reviewed. The relationship of herding along with other variables such as market conditions, volatility, and liquidity is reviewed and studied. For the purpose of drafting the review paper, 79 papers for over three decades have been consulted. Further, future research directions are included for the benefit of the academicians, researchers and policymakers.

Keywords

Herding behaviour, financial market, volatility, liquidity, behavioural biases

1. Introduction

Herding may be defined as mimicking the actions of others in a group. Herding in financial markets has been typically described as a behavioural tendency for an investor to follow the actions of others (1). Among wide perspectives on defining herding, it can be defined in its general form as how individuals act together in a group without any centralized direction. Herding is one of the important behavioural biases affecting investor's decision. Herding as a behavioural bias gained its popularity after being the major reason behind the bursting of dotcom bubble in late 1990. The venture capitalists and private investors invested huge amounts of money into internet companies following the trend without even assuring its financial soundness. Later, in 2008 again herding was attributable to the bursting of Real Estate Bubble. Presently the critics of the crypto-currency boom of recent years suggest that a similar phenomenon may be taking place in that space.

The investment is influenced by the investor's psychology as opposed to the classical theory of finance. The classical theory is built upon the Efficient Market Hypothesis (EMH). This hypothesis states that available information is the key determinant of prices of all the assets and securities at any given moment of time. Roughly around middle of 1980's the model of the efficient market was challenged and led to the emergence of behavioural finance. The prospect theory developed by Kaheman et al. (2) popularised the concept of behavioural finance. The credit of founding the field goes to David Kaheman, Amos Tversky and Richard Thales.

Herding has been put in the category of behavioural biases in the literature. The behavioural biases are the cognitive factors that influence the investment decisions of the investors in financial markets. The behavioural biases locate the causes of irrational and illogical behaviour of the investors and expound how investors logically make faults and mistakes while making judgements. The several behavioural biases that drive bad estimates while taking

43 investment decisions are Anchoring Bias, Regret Aversion Bias, Disposition Effect Bias,
44 Herding Bias, Hindsight Bias, Self-attribution Bias, Familiarity Bias, Trend-chasing Bias, and
45 Overconfidence Bias. The investors take suboptimal decisions due to the behavioural biases and
46 such decisions on a large scale causes disturbances leading to market anomalies. These
47 anomalies affect the individuals as well as economies health ruinously. The biases ultimately
48 affect the stock prices and stock returns.

49 For the purpose of conducting review a set of articles for 31 years from 1987 to 2018
50 were identified and consulted using the keywords such as 'herding in financial markets', 'herding
51 and market conditions', 'herding in commodity markets', 'institutional herding', 'investors
52 herding behaviour'. Furthermore, important financial journals such as 'The Journal of Finance',
53 'Journal of Banking and Finance', 'International Finance Journal', 'Journal of Basic and Applied
54 Sciences', 'Journal of Emerging Market Finance' and books named 'Thinking, Fast and Slow' by
55 Daniel Kahneman and 'The Laws of Wealth' by Daniel Crosby have been explored to gather the
56 required literature regarding the research topic.

57 **2. Basics of Herding**

58 The origin of herding ages back in 1936 when J.M. Keynes developed renowned
59 "General Theory". According to this theory, the long term investors simply follow the market in
60 order to ensure healthy investment and professional managers herd so that their reputation is not
61 harmed due to contradictory behaviour. Later herding was defined as "under certain
62 circumstances, managers simply mimic the investment decisions of other managers, ignoring
63 substantive private information" (3). Herding is important and interesting for research for its
64 relation and impact on the stock prices. When investors' decisions to invest in a specific stock
65 unite, the subsequent effect is an augmented demand (4). The fundamental-driven herding is
66 normally functional and helps to determine the prices, whereas imitation-driven herding is
67 normally dysfunctional and can lead to price turnarounds and too much volatility (5). Herding is
68 important and is well acknowledged by the academic researchers; as it affects the stock prices
69 which affect the attributes of risk and return models and ultimately affects the asset pricing
70 theories (6).

71 Herding can be sorted under two heads: rational herding and non-rational herding. These
72 two concepts describe the origin of herd behaviour (7). The rational concept can be described as
73 investors embracing other investors' investment decisions to protect their own interests and
74 enhancing their reputation among other investors (3).

75 The rational herding typically emerges from direct payoff externalities, principal-agent
76 problems or informational learning (cascades). In direct payoff externalities, the individual
77 decisions affect the payoffs to other which lead to convergence or divergence of investor's
78 behaviour. There are adverse externalities in case of bank runs; favourable externalities in the
79 generation of trading liquidity or in information procurement. In principal-agent problem the
80 investor's decision relies on their desire to protect the reputation in line with another observer. In
81 informational learning, investor's decision does not rely on their own personal indicators as it is
82 believed that other investor's actions, payoffs, or even discussion are more significant (7). The
83 three probable causes for rational herding are incomplete information, reputation concern, and
84 compensation structures (5). Herding based on imperfect information is termed as information
85 cascade models. According to this model, investors herd as they believe others being more
86 valuably informed than them (3 and 10). Herding as a concern for reputation, investors herd as
87 they believe their reputation will be spoiled if their decisions are not correlated with other

88 investors (3, 10). Herding based on compensation structure, fund managers herd as they believe
89 that their compensation is tied to the decisions of other professional managers (5).

90 The non-rational view focuses on investor psychology which exhibits the role of agents
91 as lemmings, blindly following others and ignoring the rational reasoning. According to the
92 intermediate view the investors decision are near-rational that uses 'heuristics' to cut down
93 information handling or information procurement costs, and that third-party rational activity
94 cannot eradicate this impact. The irrational herding occurs when investors with inadequate
95 information and insufficient risk assessment neglect their previous beliefs and blindly imitate
96 other investors' action. The irrational herding can be described as investors blindly copying other
97 decisions, despite having their own information (4). The non-rational view of herd behaviour
98 focuses on investor psychology and assumes that investors behave like imitators, ignoring all
99 rational analysis and following others blindly (7).

100

101 **3. Types of Herding**

102 Herding in the financial markets can be studied under various heads. The most important
103 types of herding are market wide herding, institutional herding, mutual fund herding.

104 **3.1 Market Wide Herding**

105 Market wide herding is defined as, "the collective behaviour of all participants towards
106 the market views and therefore buying or selling a particular asset at the same time" (11). In the
107 U.S. equity Real Estate Investment Trust (REIT) market; market wide herding was present in
108 high quantiles of REIT return dispersion. Asymmetry of herding behaviour was more likely to
109 occur and was stronger in rising markets than in the declining markets; investors do not herd in
110 case of extreme turbulent conditions while they herd when market conditions were moderately
111 turbulent (12). It was established that the market wide herding exists in the Indian market but is
112 not very severe and FII (Foreign Institutional Investors) flows did not significantly influence the
113 herding behaviour; i.e., overall market-level herding was not impacted whether the FII flows rose
114 or fell. Interestingly, the mutual funds increase the propensity to herd and their influence of
115 volatility is significant; it has been suggested that the regulators need to lookout for herding
116 tendency when volatility shoots up (11).

117 The market wide herding behaviour was studied by many researchers in different
118 financial markets. Literature provides evidence for the presence of herding in Indian and Chinese
119 stock markets (13), South Korea and Taiwan (14), advanced Stock Markets (except the US) and
120 Asian markets (15), Finland, Sweden, Norway and Denmark (16), Amman Stock Exchange (17).

121 There have been only some studies conducted in respect to the Indian market. Some of
122 the important studies that signify the incidence of market wide herding in India in different
123 periods and phases of the stock market are (13), (18), (19). Contrastingly, there have been studies
124 that indicate the absence of herding in Indian stock market. The probable reasons for the absence
125 concluded are reforms in the Indian stock market and the increased presence of institutional
126 players (20).

127 **3.2 Herding and Institutional Investors**

128 Institutional herding has been defined as "institutional investors following each other into
129 and out of the same securities and institutional investors following their own lag trades" (21).
130 Numerous studies have been conducted in order to find out the influence of institutional herding
131 on the stock prices. The effect of institutional herding is twofold it can either drive the prices

132 away from their fundamental values (22, 23, 24, 25, 26, 27, 28, 29) or it helps to determine price
133 and improves the market efficiency (30, 4, 31, 21, 32).

134 The institutional buy herding is consistent with price determination and sell herding is
135 consistent with price distortions and is stronger for high yielding bonds, small bonds and illiquid
136 bonds during the financial crisis (33).

137 **3.3 Herding and Mutual Funds**

138 Herding behaviour has also been studied in the mutual fund industry, to study if the
139 professionals who are supposed to be tremendously rational and knowledgeable display the
140 herding behaviour. Mutual fund makes up a large percentage of trading capacity and their
141 behaviour influences the market prices. Literature provides evidence for presence of herding
142 behaviour among Chinese Investment Funds (34), Portuguese Mutual Funds (35), mutual fund
143 industry of Finland (36), Australian Mutual Funds (37), Japanese Mutual Funds (38), US Mutual
144 Funds (39, 40), German mutual funds (41), Swedish Mutual Funds (42), Spain Equity Funds
145 (43), Greek Mutual Funds (43), Indian Mutual Funds (44).

146 Mutual fund herding is also being studied in order to figure out relationship between
147 herding and types of funds, herding and personality traits of institutional managers. Mutual fund
148 herding for large capitalisation shares was more prominent in all periods than the small and
149 medium capitalisation shares (44). Fund managers herd more while purchasing a stock and
150 trading voluminous stocks as compared to trading a stock (45). The fund managers herd in order
151 to safeguard their careers and get immunity in numbers. Thus career immunity is the main reason
152 of herding and the inexperienced managers herd more as compared to the experienced managers
153 (46). Institutional managers destabilise the stock prices, they follow analyst recommendations
154 while trading which ultimately affects the stock prices. When unskilled managers overreact to
155 the analyst revisions the stock prices show great reversal (23). Herding by actively managed
156 equity funds disturbs their performances and flows, but no direct positive correlation between
157 herding behaviour and fund performance have been established. It was found that on average,
158 funds that trade with the herd benefit from this behaviour. The funds that lead the herd earn no
159 abnormal returns while the funds that follow the herd earn negative abnormal returns (47).
160 Poorly performing Mutual funds herd more than well performing funds. Mutual Fund herding is
161 more prominent in down market as compared to the up market. Thus, the poorly performing
162 managers have stronger career concerns and particularly so in down market (48).

163 **4. Approaches to Measure Herding**

164 Numerous approaches have been devised to measure the herding behaviour. These
165 approaches can be classified into quantitative approaches that involve running statistical analysis
166 on data having numerical values and qualitative approaches looking for patterns in non-statistical
167 data.

168 **4.1 Quantitative approaches**

169 Herding as a behavioural effect became popular after Lakonishok *et.al.* (49) studied and
170 designed the most widely used herding measure known as LSV in which 769 tax-exempt pension
171 funds were studied to examine herding, positive feedback trading and its effect on stock prices.
172 The measure estimates the average propensity of specific investors to gather on the similar side
173 of the market in a specific stock for particular period, juxtaposed to what could be anticipated if
174 investors traded solitarily to measure herding. LSV has been criticised for its invalid assumption
175 of binomial distribution while calculating adjustment factor used for correcting randomness,

176 therefore not being able to segregate the herding bias arising from information cascades,
177 correlated information and linked objective functions and for not specifying the direction of
178 herding. Moreover, the LSV method needs complete accounts of individual trading activities
179 which is quite complicated to obtain the collective behaviour of all participants towards the
180 market views and therefore buying or selling a particular asset at the same time. Further, an
181 intuitive measure of herding based on dispersion, defined as the cross-sectional standard
182 deviation of returns was designed being referred to as CH method in order to test the objective
183 for the presence of market wide herd behaviour during stress. The methodology was based on the
184 assumption that unlike rational asset pricing model, in the presence of herding dispersions
185 increases at a decreasing rate or can even decrease if herding is severe (50). CH method does not
186 incorporate any plan to check for movements in fundamentals, if the market is moving towards
187 or away a relatively efficient or inefficient outcome. Another problem with using CH is that the
188 cross sectional standard deviations are not free of time series volatility in case of individual stock
189 returns. Then, a sign based herding measure known as GTW was devised which provides an
190 indication of whether a specific stock in a fund during a specific quarter follows the crowd or
191 goes against the crowd. In order to detect herding it calculates momentum measures and
192 checking its statistical inference using alternative t and F test derived from a time series
193 procedure (30). It concluded that the tendency of individual funds to herd was shown to be
194 highly correlated with fund performance over the period of study. Since the LSV method does
195 not specify the direction of herding. It was further modified by Wermers (51) in order to
196 distinguish between buy herding and sell herding. It computed the degree to which any subgroup
197 of fund herds in a stock quarter. The proposed method require detailed accounts of individual
198 trading activities which are difficult to gather and might not be available in many cases. Another
199 method in order to examine the herd behaviour of market participants was devised by extending
200 the CH method known as CCK. It assumes that herding in the market implies a non linear
201 relation between return on market portfolio and dispersion of individual assets. For computation
202 of dispersion it uses CSAD which is based on the conditional version of CAPM (14). As
203 compared to CH CCK is less strict for computing market wide herding and is able to compute
204 herding more normal conditions additionally to periods of market stress. Later a new approach
205 known as HS method was proposed for detecting, measuring and evaluating market wide herding
206 towards particular sectors or styles in the market including the market index itself which
207 critically separated herding from common movements in asset returns induced by movements in
208 fundamentals. The methodology was applied in the United States and South Korean stock
209 markets. Herding behaviour towards market was found to be independent of market conditions
210 and macro factors and herding was even present when the market was quiet and investors were
211 confident of market direction. Herding behaviour towards market portfolio was prevalent in both
212 bull and bear markets (51). Unlike CH, HS method focuses on cross sectional variability in
213 factor sensitivities (betas) rather than market returns and thus, HS method is free from the
214 influence of idiosyncratic components. HS method provides more depth examination of the
215 dynamic evolution of herding prior, later and during the crisis. The data for HS method is easier
216 to obtain and is based on observed returns and does not require the detailed accounts of
217 individual trading activities. Moreover, the HS method is able to detect herding even when the
218 market is silent and investors are certain about the market trend which cannot be detected in CH
219 method. CH and LSV method try to discover herding in absolute terms while HS method assumes
220 that herding should be viewed in the relative sense rather than absolute and that no market will
221 be ever entirely free of herding. Hwang and Salmon proposed a non parametric method of

222 computing herding for slow moving herd behaviour in the market and evidenced that herding
223 was more apparent when investors felt confident on the future direction of the market and further
224 evidence that the proposed herd measure is robust to business cycle and stock market movements
225 i.e. opposite to popular assumption that herding is significant when the market is in stress. The
226 proposed method is more versatile as it does not assume any specific parameter dynamic process
227 for herding (52).

228 **4.2 Qualitative approaches**

229 Herding can also be measured using qualitative approaches. Some of the authors have
230 used survey methods to collect the primary data to find out if herding and other behavioural
231 biases are present among the investors and how it influences the performance. Interacting
232 directly with the investors is the most appropriate method to extract the opinions and analyse
233 them. Since the behavioural biases explore the psychological attitudes of investors, primary data
234 is more likely to accurately reflect the inner motivation of investors.

235 An experiment was being designed and conducted to observe the herding behaviour,
236 information uncertainty and investor's cognitive profile in three settings, each with different
237 level of information. The experiment being conducted confirmed the relationship among the
238 three phenomenons. The information concerning the number of previous transactions relevantly
239 explains herding behaviour (53).

240 Collecting the data via self computation questionnaire is the most appropriate and
241 unbiased method. The research questions can be defined clearly and represents standardized data.
242 The method is less expensive and saves time. The respondents can even provide the sensitive
243 information without hesitation and can be filled by them at their free time. A questionnaire
244 consisting of sixty three items dealing with six biases was developed to study the psychological
245 and demographic determinants of individual decision making in Tunisian Stock Exchange.
246 Significant evidence was found for both behavioural and demographic biases. It was observed
247 that the behavioural biases that affect investors' decisions are: representativeness, herding
248 attitude, loss aversion, mental accounting, and anchoring. The investor's decision is not fully
249 rational but governed by psychological biases studied under the behavioural finance (54).
250 Another questionnaire consisting of thirty-six items divided into three sections was developed to
251 study the behavioural biases among Indian investors. The first section of questionnaire provides
252 personal information and the other two sections consist of scenario based questions related to
253 hypothetical stock market. The study confirmed strong presence of overconfidence, excessive
254 optimism, disposition and herd behaviour as the major behavioural biases affecting investors'
255 decision. It was also observed that there was significant relationship between demographics,
256 investor characteristics and behavioural biases (18). An additional eighteen item questionnaire in
257 the Vietnamese version based on the theories of behavioural finance was developed. The six
258 point likert rating scale was used for asking respondents, opinions and attitudes in order to find
259 out behavioural biases affecting the individual investors. It confirmed the presence of herding,
260 prospect, and overconfidence and anchoring bias (55). Furthermore, a questionnaire consisting of
261 twenty eight questions with nine items concerning to herding effect was developed to study the
262 effects of market variables and herding on investment decisions in Tehran Stock Exchange and
263 how it influences the investment performance. Market variables and herding both had a positive
264 effect on the investment decision but market variables had a higher influence and investment
265 decisions positively influenced the investment performance (56). Another survey was conducted
266 in Karachi Stock Exchange to study the role of behavioural biases in investment decision making
267 and moderating role of investor's type. A Two stages least square method was used to examine

268 the moderating effect of investor's type on relationship between behavioural biases and financial
 269 decision making. Significant evidence of positive impact of disposition effect, herding and
 270 overconfidence was found in investment decisions. It was concluded that passive investors show
 271 more herding bias and active investors show more overconfidence bias (58). Later a
 272 questionnaire comprising of straight forwards questions related to investors' personal
 273 information and various behavioral biases was devised to determine the psychological factors
 274 affecting decisions of Indian individual investors grouped into two categories based on
 275 experience. All questions were designed on five point likert scale. Significant evidence was
 276 found for herding to be present among both groups in an equal manner but loss aversion bias,
 277 regret aversion bias, anchoring bias were present more with experienced investors than the less
 278 experienced investors (58).

279 The qualitative methods can be criticised on the upcoming grounds. The respondents
 280 might give socially acceptable responses being reluctant to admit their biases. This can be
 281 minimized to a certain extent by not asking the questions directly and giving them the situations
 282 but cannot be eliminated. The responses are gathered in a relaxed environment which can be
 283 totally in contrast with the responses in a stressful market environment. Moreover, the herding
 284 can be a stock specific phenomenon i.e. the investor herds only in 3 out of 8 stocks. The
 285 tendency to herd varies according to stock subject to limited information, new technology. The
 286 primary data collection methods are unable to figure out such stock specific herding.

287 **5. Herding and Market Conditions**

288 Around the time the researchers were conducting studies in order to study the relationship
 289 between herding behaviour and market conditions. This relationship was studied in terms of
 290 returns, volatility and volume of transactions. The findings of different authors to study this
 291 relationship are as follows:-

Author	Year of Research	Place	Method	Findings
(50) Christie and Huang 1995	1995-1998	New York Stock Exchange	CH	Individual returns do not cluster around market return during market stress.
(14) Chang et al. 2000	1963-1997	International markets (US, Hong Kong, Japan, South Korea, Taiwan)	CCK	Herding in South Korea and Taiwan. Security returns dispersion was higher in up markets.
(59) Gleason 2003	1995-2002	European Future Market	Christie and Huang (1995)	No herding in European Futures Market. Dispersion increases during extreme market conditions.
(16) Lindhe 2012	2001-2012	Nordic countries namely	Chiang and Zheng (2010)	Herding in Finnish market. Herding was more prevalent during large market

		Denmark, Finland, Norway and Sweden		movements.
(60) Ouarda 2013	2001-2012	European Markets	Christie and Huang (1995) and Chang et al. (2000)	Herding influenced by the sub-primes crisis in the finance and technology sector. Strong herding sharply contributed to a bearish situation characterized by a strong volatility and a trading volume.
(61) Mobarek 2014	2001-2012	11 countries of Europe	Chiang and Zheng (2010)	Herding apparent in Financial Crisis and in continental countries.
(62) Blasco et al. 2017		35 International Markets		Herding behaviour affected by cultural and various environmental and organisational factors (training, business conditions and styles, governance, technology, education and development of equity and non equity markets).

292 The relationship between herding behaviour and market conditions is asymmetrical and
293 conditional of if market is rising or falling. Many researchers remarked that herding was stronger
294 during rising market. This was evident in Athens Stock Market (63), Australian Stock Market
295 (64), Turkish Stock Market (65) and Chinese Stock Market (24).The probable reason for this
296 effect is that it is produced by ‘flight to safety’ of the market consensus during “bad times” (66).
297 Contrastingly there have also been researches that concluded, herding was stronger during falling
298 market. This was evident in Taiwan spot and future market (67), eleven European Markets (62).
299 The probable reason for this effect can be that humans react to losses more enormously than
300 gains (68).

301 **6. Impacts of Herding**

302 Herding is an endogenous instrument of financial instability which increases the volatility
303 and the amplitude of financial system. The asset prices become extremely volatile when the
304 noise traders occur in the market and this volatility cannot be accounted to news i.e. the
305 fluctuations are more than it can be explained taking into account only the changes in
306 fundamental values (69). It was proved that the substantial share of movement in prices cannot
307 be accounted to news related to weather (70), future dividends and discount rates (71). When
308 large fraction of investors allocates a constant share of their wealth to stocks, then even a small
309 portion of noise traders can have a great impact on prices. Thus, the impact of noise increases
310 when the proportion between sophisticated and noise traders decreases. It was also observed that
311 volatility was higher in transparent markets i.e. where traders can observe the prices and past
312 actions of other market participants than the opaque market (72). Volatility has opposite relation
313 with volume traded and negative relation with trade size (63). It is said that informed traders
314 usually trade in higher volume as compared to the uninformed traders. Thus, higher the amount

315 of informed trading lesser is the volatility and higher the amount of uninformed traders higher is
316 the volatility (73 and 74).

317 Thus, many studies stated that volatility rises with uninformed trading (73 and 74) and
318 some others relate volatility to be directly and positively related to herding (75, 76).

319 Further, it was studied that price impact of herding is asymmetrical. The buy herding aids
320 price discovery and it is permanent while the sell herding results in temporary yet significant
321 price distortions. Thus, the sell side herding poses substantial risk to financial stability. When
322 investors herd to sell, the stock prices fall significantly during that period but reverse slowly over
323 upcoming quarters. This result is true in equity market (40, 28, 26, 23) but is much stronger in
324 magnitude in institutional market (33). . The price destabilizing effect of sell herding was found
325 to be particularly strong for high-yield bonds, small bonds, and illiquid bonds and during the
326 recent global financial crisis (33).

327 Herding has a negative relationship with market liquidity i.e. in the presence of herding
328 behaviour the liquidity of market decreases (66).as the liquidity of market is measured by the
329 bid-ask spread (77). The larger spread results into higher adverse selection costs and ultimately
330 lowers the liquidity of market. Not much literature is available on the relationship between
331 herding and liquidity. The field needs to be explored and can be taken up by future researchers.

332

333 **7. Future Research Directions and Conclusions**

334 A number of futuristic research issues can be extracted from the above text. Firstly,
335 quantitative measurement of herding is still elusive of perfection. Measures suggested by
336 Lakonishok (49), Christie and Hwang (50), GTW (30) and Wermers (51) come with a number of
337 limitations (14, 53, 15, 11). Although these techniques have seen improvement over a period of
338 time but there is a definite scope on the side of mathematical frontier.

339 Secondly, there are very few studies based on qualitative measurement of herding at
340 individual investor (78). Qualitative measurement involves the use of primary data. Therefore,
341 there is a pertinent need to further research on qualitative dimension of herding behaviour.
342 Herding is treated as a behavioural dimension; therefore, further research may be directed at
343 studying the relationship between herding tendency and other personality traits of an individual.
344 Further, tendency to herd may be affected by other variables such as wealth, status, risk taking
345 ability, stage of life cycle, knowledge quotient etc. Studies on these aspects can be a worthwhile
346 contribution to the current body of knowledge concerning herding.

347 Thirdly, the domain of herding may be studied from cross cultural dimension. There can
348 be differences/similarities in the tendency to herd on account of national economies, socio
349 cultural variables, and maturity of stock markets and level of economic development. Existing
350 literature provides evidence of research on herding largely from the developed countries (11, 79).
351 But the domain of herding remains relatively lesser explored in context of emerging economies
352 such as India.

353 Herding is a phenomenon that affects stock prices movements and leads to volatility has
354 the potential to destabilize financial markets and increases the fragility of financial system.
355 Therefore, further research may be undertaken to study the link between herding bias and future
356 stock returns (22). Allowing forecasting future stock returns with higher surety. Appropriate
357 policies may be formulated helping to protect the financial system from vagaries of herding and
358 building a sturdy and robust financial system for the economy.

359

360

361 **Competing Interests**

362 I hereby declare that both the authors do not have competing interests.

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