Herding Behaviour and Cross-Market Correlation: Evidence from BRICS stock markets on India

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Abstract

Herding behaviour refers to the tendency of investors to follow the actions of their fellow participants, while ignoring their self-analysis and wisdom. It is one such manifestation of human psychology which is assumed to significantly influence investment decisions, leading sometimes to market inefficiencies like overpricing, asset bubbles and crashes. The herding behavior escalates not only because of domestic factors, but is significantly influenced by the global economic and political events as well. This spillover effect, known as contagion impact, is more visibly seen among countries which are economically and politically interconnected, especially in case of trade blocs like BRICS. This paper attempts to study contagion impact exerted by BRICS nations (other than India) on Indian herding behaviour. It employs the pioneer technique of Cross- Sectional absolute deviation (CSAD) to compute the impact of herding and market fluctuations in other BRICS nations on Indian herding. The paper studies daily closing prices of stocks listed on the important stock exchange indices namely NIFTY- 50, SSE, BOVESPA, MOEX and FTSE/JSE for a period of 10 years (2015-2024) to assess herding. The study concludes that there is a robust direct correlation between herding in China and Brazil and that of India. Although the other two member nations of BRICS trade-bloc, namely Russia and South-Africa also exert a similar impact, but the empirical evidence obtained is not very strong. This contagion impact may be clearly visible during times of turbulence, be it political or economic. The findings of the study will have important implications for regulators of stock markets and will assist them in promoting a more stable environment.

Keywords: Contagion effect, cross- market correlation, Herding spill-over, BRICS, stock market, CSAD

Introduction

Financial decision-making is not exclusively determined by economic factors. This has been demonstrated by an alternate theory of finance, popularly known as behavioral finance, which explains that investment decisions are significantly influenced by social factors and psychological biases of market participants. One of the most prominent behavioral biases affecting market dynamics is herding behavior, which refers to the tendency of investors to follow the trading actions of fellow participants, rather than relying on their own decisions (Banerjee, 1992; Bikhchandani & Sharma, 2001). Such mimicking behavior may not only manipulate asset prices but can also intensify uncertainty in the market leading to price inefficiencies, asset bubbles and market crashes (Chang et al., 2000) (Shrotriya & Kalra, 2019).

There is one aspect of herding that has gained scholarly attention in recent years, which is its cross-border transmission, especially when there is growing expansion in the economic interdependence and financial association among economies. This effect is termed as contagion—where financial disturbances originating in one country spills over to others. In other words, market fluctuations or herding behavior in one country can intensify herding in the other associated economies by increasing perceived risk and uncertainties. This contagion effect is eminently seen among nations which share strong economic connections, like those within regional or strategic trade blocs (Forbes & Rigobon, 2002; Dornbusch, Park, & Claessens, 2000). One such deeply integrated trade bloc is the BRICS. The member nations of this trade group, namely, Brazil, Russia, India, China, and South Africa—provide a critical context to study herding behavior and contagion due to their increasing economic integration and financial interdependence. As these economies expand their presence in global trade, capital flows, and investment, shocks in one BRICS country can propel investor reactions that resonate across the others. Understanding the dynamics of herding within the BRICS framework is vital because these nations represent a bridge between advanced and developing markets. Their heterogeneous market structures, regulatory environments, and investor bases mean that behavioral contagion may manifest differently compared to developed markets. Moreover, increased volatility and reduced market depth which are common characteristics of emerging economies amplify the effects of herding, highlighting the need for empirical research to identify, measure, and manage contagion risks associated with behavioral biases.

As a fast-growing emerging economy with rapidly growing financial system, India holds a unique position within the BRICS framework. As an emerging nation, it has the innate tendency

to react to international shocks originating from the other BRICS nations. Prior research has reported coordinated behavior of BRICS markets, particularly during periods of international distress, hinting to the presence of both contagion and cross-market imitation. (Chiang, Jeon, & Li, 2007; Kenourgios, Samitas, & Paltalidis, 2011). Global events like 2015 Chinese financial crisis, Brazilian geo-political turmoil and western permits on Russia have exerted significant influence on behavior of Indian investors, leading to escalated instability and swing trading (Yao, Ma, & He, 2014; Samitas & Tsakalos, 2013).

Contagion effect demonstrated is not the same as mere correlation. Contagion refers to a phenomenon where interdependency among economies grows exceptionally beyond historical or fundamental connections (Dornbusch et al., 2000). Herding, here, becomes both a root and manifestation of contagion. For instance, when Indian investors notice excessive sell-offs or buying in other BRICS countries, they may imitate the financial behavior. Investors in India respond rapidly to political and economic changes in other BRICS countries, especially China, resulting in market uncertainty and similar trading (Shrotryia & Kalra, 2022). This mimicking tendency may not be a result of direct exposure, but because of perceived market intelligence. (Zhang et al., 2024; Gouta & BenMabrouk, 2024). Mobarek et al. (2014) concluded that German herding had a strong influence on the herding behavior of other European countries. Further, Pochea et al. (2017) studied the spill-over effects of herding in the economies of Cental and East Asia. The contagion impact is substantially observed during periods of turbulence. Zhang and Giouvris (2023) noticed intense herding in BRICS during global shocks. These findings suggest that correlational behavior among BRICS nations is not merely a theoretical concept but a statistically noticeable occurrence with a real policy impact. This paper attempts to statistically evaluate the herding driven contagion impact of members of BRICS (other than India) on Indian investment behaviour. It adds to the growing research in the domain of herding by empirically investigating the extent and trend of the contagion effect from BRCS nations to India. The present paper will have important implications for regulators, investors and policy makers in order to bring stability in market in a globally interwoven financial ecosysytem, diversify their risks and manage crises respectively. This study also attempts to bring new insights in the international dynamism of herding behavior by emphasizing the importance of cross-border spillover effects in investment management as well as regulatory structure.

Review of Literature

Financial contagion may be defined as a significant increase in cross-market linkages resulting from a global event, outshining what fundamentals can describe. As explained by Forbes and Rigobon (2002) and Dornbusch et al. (2000), contagion effect occurs when inter-market associations considerably increase during turbulent periods, often credited to behavioral instruments such as herding behavior. Further, Dornbusch et al. (2000) demonstrate that contagion is a pattern of diffusion wherein the interdependence between economies escalates abruptly as a result of a global event (political or economic), often leading to ripple effect that magnify the impact of the global jolt beyond the country of origin.

Within this framework, herding behavior—where market participants copy the choices of their fellow members rather than relying on their own personal analysis—plays an important catalyst for the intensification of contagion (Bikhchandani & Sharma, 2001). This behavior holds a special relevance when examined in the context of trade bloc like BRICS (Brazil, Russia, India, China, South Africa), where growing economic and financial interdependence among member nations over the past two decades has bred a productive environment for both reasonable spillovers and unreasonable contagion. Although there exist significance differences between the governance regimes and political systems of the member countries of BRICS, there exist robust and dynamic macroeconomic interconnections among these nations owing to trade, international investment, and political collaboration (O'Neill, 2001; Wilson & Purushothaman, 2003). These socio-economic interlinkages among BRICS nations allow them to behave collectively and exhibit synchronised market movements, particularly during times of global as well as local crises.

India, being one of the rapidly growing emerging economies, has been susceptible to contagion impact originating from other BRICS nations, and existing literature has made several attempts to explain these observed co-occurence in their financial behavior. Prior studies tend to examine whether these co-movements are a result of logical economic principals or emotional herding induced by events in other member nations of BRICS, namely, Brazil, Russia, China, and South Africa. The theoretical foundation of emotional contagion is based on three main principals: fundamental connections (through trade and cross-border investment), monetary and fiscal linkages (through asset-allocation and portfolio optimisation), and social contagion, particularly herding, where stock investors follow collaborative indicators rather than personal analysis (Dornbusch et al., 2000).

The past studies in this field have established strong evidence of these contagion channels. Zhang et al. (2024) have established that bandwagon effect is strongly associated with international shocks, with significant contagion impact of Russia and China on Indian herding. Further, Mulki and Rizkianto (2020) investigated herding in BRICS markets during the Asian and Global Financial Crises and concluded that India responded parally to herding in the stock markets of Brazil and China, while these spillover effects were weak with repect to Russia. These behavioral patterns were further strengthened during COVID-19 pandemic: Ghorbel et al., (2023) noted robust contagion effect in context of BRICS economies during the pandemic, with Indian stock investors behaving in congruence with those from Brazil and China. These results were attributed to similar lockdown policies and investor sentiment in both countries. Similarly, positive behavioral contagion was established between Indian investors and those belonging to Russia and China during extreme events like the Russia- Ukraine war by Kalra and Shrotryia (2022). These findings confirm with Suresh (2024), who concluded that the geopolitical crisis induced aggravated herding behavior in India, distorting prices and increasing uncertainty. Narula (2016) gave the idea of "shift contagion," demonstrating that structural shifts in Brazil and Russia strongly impact uncertainty in Indian stock market, particularly in energy stocks. Zhang and Giouvris (2023), examined oil and gas sector and found that India's heavy reliance on imports made it vulnerable to herding behaviors in Brazil and South Africa.

Contagion effect on account of herding is very powerful as it implies coordinated actions across markets, aggravating the transmission of fear and volatility (Diebold & Yilmaz, 2009). This situation confronts the assumptions of traditional finance theory, which presumes markets to be efficient. On the contrary, this theory observes increased correlations between assets during uncertain times leading to crowd behavior.

Behavioral patterns, especially herd behavior, have been widely accepted as the significant drivers propelling contagion effect during turbulence. This intensification effect is particularly pronounced in emerging economies and economies sharing strong trade and economic interconnections as in a regional or a trade-bloc such as the BRICS countries—Brazil, Russia, India, China, and South Africa—owing to peculiar characteristics like restricted market access, dispersion in information availability and the dominant role of retail investors (Anyikwa & Phiri, 2023). Herding can intensify contagion in these economies by inducing rapid withdrawal or influx of funds, often leading to escalated market volatility during times of crises (Nyakurukwa & Seetharam, 2023). Hence, it becomes significant to study the impact of

behaviourally driven contagion for policymakers so as to assist them in promoting a financially stable environment in globally integrated emerging markets.

Data and methodology

The study follows a quantitative and empirical research design**,** utilizing time-series econometric methods to assess non-linear herding behavior and study its contagion impact from peer BRICS economies on India. To empirically assess the extent and direction of contagion effect of other BRICS nations on Indian herding, this study applies the methodology of *Cross-Sectional Absolute Deviation* (CSAD), initially given by Chang et al. (2000). This methodology has been widely employed by researchers worldwide to detect herding. It is a return centric approach which estimates the non-linear relationship between market return and cross-sectional return variation. It is a dispersion method which calculates herding as a measure of the deviation of individual stock returns from the consensus return. It further modifies CSAD model to integrate it with '*Quantile Regression'* to calculate herding parameters, which will study the vast data into smaller sub-sets called quantiles. This will also consider the extreme observations, unlike the least squares method which focusses on the mean values.

The dataset comprises daily closing values of major stock indices representing the BRICS economies for the period 2015 to 2024. These indices include India's NIFTY 50, China's Shanghai Stock Exchange (SSE), Brazil's BOVESPA, Russia's MOEX (Moscow Stock exchange), and South Africa's FTSE/JSE (Johannesburg stock exchange). The data has been collected from yahoofinance.com. By analysing these time-series datasets, the paper attempts to establish the emotional contagion and ripple effects in investment markets of BRICS nations, with India being the primary recipient of these spillover effects.

The CSAD model formulated by Chang et al. (2000) is given as follows:

$$CSAD_t = \frac{1}{N} \sum_{x=1}^{N} |R_{x,t} - R_{m,t}| \tag{1}$$

Where, $CSAD_t$= Cross sectional absolute deviation, $R_{x,t}$= Return on security x, $R_{m,t}$ = consensus/ market return, and N= number of securities in the portfolio. All the aforementioned parameters will be measured for time t. The least squares model given by Chang *et al.* (2000) will be converted into Quantile Regression specification and will be separately stated for normal (equation (2).

$$Q_\tau(\tau/Y_t) = \alpha_\tau + \gamma_{1,\tau}|R_{m,t}| + \gamma_{2,\tau}R^2_{m,t} + \varepsilon_{t,\tau} \qquad (2)$$

Where, $Q_\tau(\tau/Y_t)$ = vector of all the independent variables in equation (2), $|R_{m,t}|$ = absolute value of consensus return, $R^2_{m,t}$ = squared value of consensus return, α_τ = intercept, and $\varepsilon_{t,\tau}$ = error term.

All the parameters will be measured for time *t* and quantile τ. The traditional theories posit that variations in returns behave in a linear manner with the consensus returns (Li et al., 2017). However, during high price fluctuations, this pattern shifts where differences in returns shrink leading to a non-linear relationship (Tan et al., 2008; Gebka and Wohar, 2013). Hence, a negative and statistically significant coefficient of non-linear term (γ2, τ) denotes herd behavior. Similar equation is applied individually to each quantile (sub-set) of each of the BRICS stock market.

Further, the contagion effect has been analysed to assess the inter-connections between the BRCS markets and Indian herding by employing an extended statistical model proposed by Luo and Schinckus (2015). The following equation represents the contagion model:

$$Q_\tau(\tau/Y_t) = \alpha_\tau + \gamma_{1,\tau}|R_{m,t}| + \gamma_{2,\tau}R^2_{m,t} + \gamma_{3,\tau}R^2_{m,CH,t} + \gamma_{4,\tau}CSAD_{CH,t} + \varepsilon_{t,\tau} \qquad (3)$$

where, $R^2_{m,CH,t}$ = squared value of the Chinese market return, and $CSAD_{CH,t}$ = cross sectional absolute deviation for the Chinese firms. A significantly negative $\gamma_{2,\tau}$ indicates herding behaviour, where stock returns get closer to the market return even during large market movements. Further, a substantially positive $\gamma_{4,\tau}$ will manifest that herding in China has a strong contagion impact on herding in Indian stock market. A significant and negative value of $\gamma_{3,\tau}$ will signify that the market fluctuations in Chinese market will bear a significant impact on the herd activity in the Indian market.

Moving further, three similar equations (4 to 6) will be framed to study the impact of herding in Brazil, Russia and South Africa on the herding behaviour in India. Two independent regressors will be added on the right side of each equation pertaining to the three nations respectively.

Analysis of data

4.2.1 Impact of herding behaviour in China on stock investment behaviour in India.

The present study employed cross-sectional absolute deviation and extended it to Quantile Regression model to study the contagion impact of the herding tendency in BRCS nations on herding in India. In the empirical model, the nifty-50 return, square of the nifty-50 returns, CSAD of firms listed on SSE index and square of the SSE index return are considered as independent factors while the CSAD of Indian firms is taken as a dependent variable. The impact of herding behaviour in China on the herding behaviour of Indian investors is depicted by the coefficient of CSAD of Chinese firms and SSE Composite Return square Coefficient. The results of the regression analysis are depicted in the following table 1.

Table 1 showing contagion effect of herding in China on Indian herding behaviour

Quantile	Intercept Coefficient	Nifty Return Coefficient	Nifty Return Square Coefficient	CSAD China Coefficient	SSE Composite Return square Coefficient
0.1	0.006 (34.08**)	0.163 (13.18**)	0.362 (2.11**)	0.021 (2.12**)	0.237 (1.63)
0.2	0.007 (44.01**)	0.150 (12.75**)	1.022 (6.47**)	0.028 (3.24**)	0.070 (0.51)
0.3	0.008 (47.58**)	0.181 (13.02**)	0.774 (3.02**)	0.039 (4.80**)	-0.074 (-0.55)
0.4	0.008 (48.06**)	0.209 (14.80**)	0.552 (2.40**)	0.041 (4.78**)	-0.154 (-1.05)
0.5	0.009 (50.36**)	0.216 (14.57**)	0.467 (2.17**)	0.039 (4.41**)	-0.149 (-0.92)
0.6	0.009 (49.99**)	0.223 (13.89**)	1.140 (5.42**)	0.050 (5.41**)	-0.344 (-1.94)
0.7	0.010 (49.46**)	0.217 (12.04**)	1.979 (9.55**)	0.060 (6.13**)	-0.456 (-2.21**)
0.8	0.011 (47.15**)	0.201 (9.09**)	3.151 (14.07**)	0.074 (6.50**)	-0.577 (-2.33**)
0.9	0.012 (37.13**)	0.186 (5.38**)	5.625 (17.95**)	0.068 (4.09**)	-0.301 (-0.66)

The CSAD China measures the dispersion in the returns of the stocks listed on SSE index and is often used to examine herding. The results revealed that the CSAD China coefficients are found to be positive and statistically significant for all quantiles, indicating a significant correlation between herding behaviour in the Chinese firms and that of India. China, being a major growing economy in the international market and having geographical proximity to India has the potential to significantly impact Indian investment behavior. These results confirm that the countries having trade ties are interconnected in many diverse ways as uncertainty and herd-behaviour spreads across borders.

The result of the quantile regression also reported that the SSE Composite Return square coefficient was insignificant in lower quantiles but turn significantly negative at higher quantiles indicating a strong impact of higher market movements in Chinese macroeconomic indicators on investor behaviour in India. The quantile plots of various independent variables in the quantile regression model are shown below:
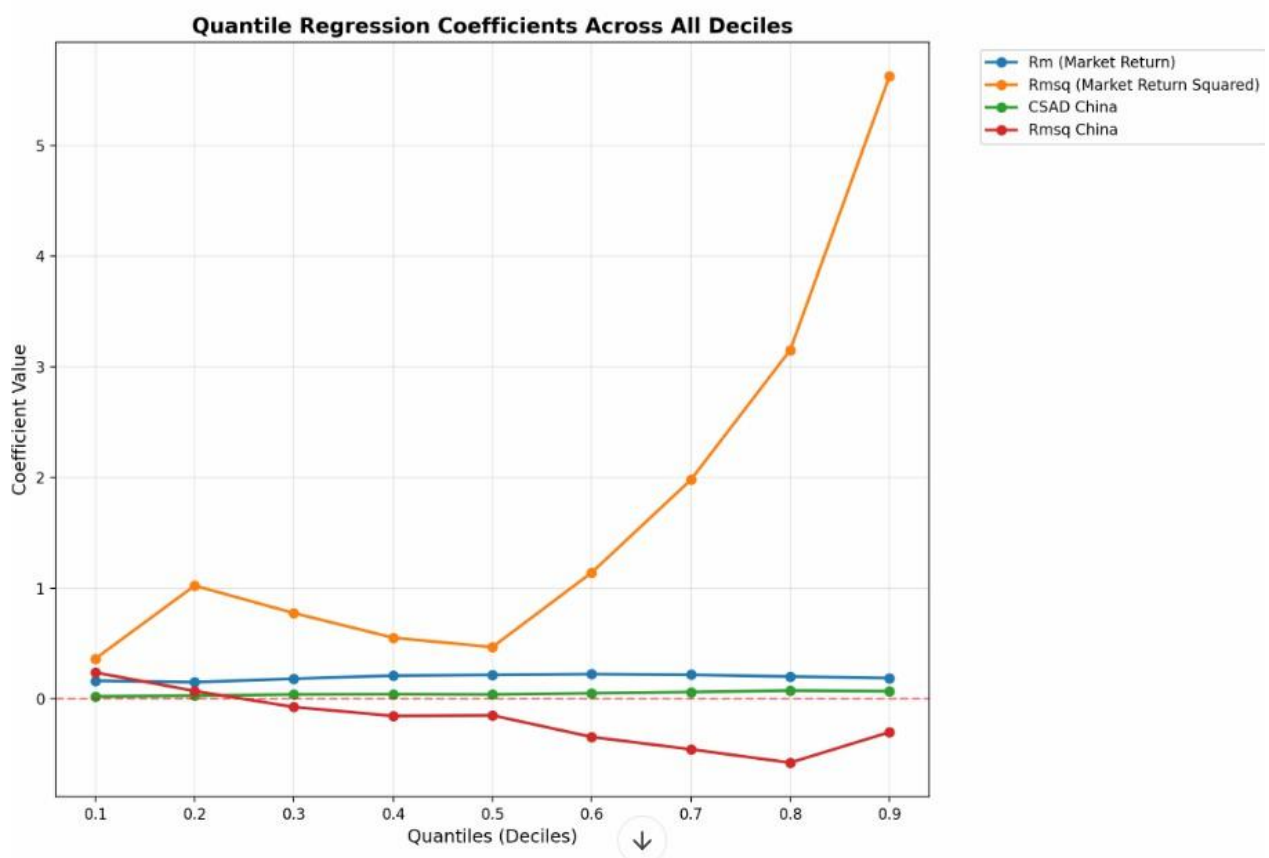

Figure 1 showing quantile plots for regressors in quantile regression for China

4.2.2 Impact of herding behaviour in Brazil on stock investment behaviour in India.

Due to the expanding global integration of stock markets and the rapid transmission of investor sentiment worldwide, Brazil can exert a significant influence on stock market variations in India. In emerging economies, where flow of funds is extremely sensitive to international sentiments, market fluctuations in one country can impact investor decision-making in another. When Brazilian investors chase market trends driven by macroeconomic news or global developments—these patterns can also influence global risk perceptions, swaying Indian investors to follow parallel trading routes. The study employs quantile regression model to evaluate the contagion impact exerted by Brazil on Indian investors where CSAD of India is assumed as an explained variable whereas the nifty return, nifty return square, CSAD of firms listed in Bovespa stock index and square of the Bovespa index returns are assumed as exogenous factors. The result of the quantile regression is shown in the following table 2.

Table 2: Contagion effect of herding in Brazil on Indian herding behaviour

Quantile	Intercept Coefficient	Nifty Return Coefficient	Nifty Return Square Coefficient	CSAD Brazil Coefficient	Bovespa return square Coefficient
0.1	0.006 (34.98**)	0.163 (12.23**)	1.007 (7.34**)	0.008 (0.91)	-0.212 (-1.28)
0.2	0.007 (45.03**)	0.173 (14.12**)	0.881 (6.48**)	0.024 (3.30**)	-0.291 (-2.30**)
0.3	0.007 (49.38**)	0.184 (13.13**)	0.756 (2.87**)	0.030 (4.36**)	-0.272 (-2.54**)
0.4	0.008 (51.27**)	0.200 (14.32**)	0.596 (2.58**)	0.039 (5.90**)	-0.221 (-2.28**)
0.5	0.008 (49.73**)	0.227 (14.97**)	0.384 (1.71)	0.043 (6.14**)	-0.298 (-3.03**)
0.6	0.009 (48.87**)	0.220 (13.33**)	1.056 (4.76**)	0.043 (5.86**)	0.279 (2.75**)
0.7	0.009 (48.29**)	0.239 (13.14**)	0.746 (3.29**)	0.055 (7.26**)	0.235 (2.21**)
0.8	0.010 (45.45**)	0.233 (11.39**)	1.304 (5.94**)	0.078 (9.44**)	-0.028 (-0.23)
0.9	0.011 (30.73**)	0.188 (5.36**)	3.678 (11.52**)	0.103 (8.05**)	0.361 (2.26**)

The CSAD Brazil measures the variation in the returns of the stocks listed on BOVESPA index and is often used to examine herding. The results reported that the CSAD Brazil coefficients are found to be positive and statistically significant for all quantiles, indicating a significant correlation between herding behaviour in the Chinese firms and that of India. Hence, it can be concluded that herding in Brazilian stock market exerts a significant impact on herding behaviour in India. This is a signal of robust global interdependence and sentiments transmission between the emerging economies.

The coefficient of Bovespa return square indicates the nonlinear effects of macroeconomic fluctuations in Brazilian economy on investment behavior in India. The results of BOVESPA return square coefficients indicate strong impact of higher market variations in Brazil on the herding behaviour in India. The results found that in the middle quantiles, the fluctuations in Brazilian stock market strongly affect herding in India, which implies that moderate shocks in Brazilian market influences Indian investment behaviour significantly. The quantile plots of different exogenous variables in the quantile regression model are shown below:
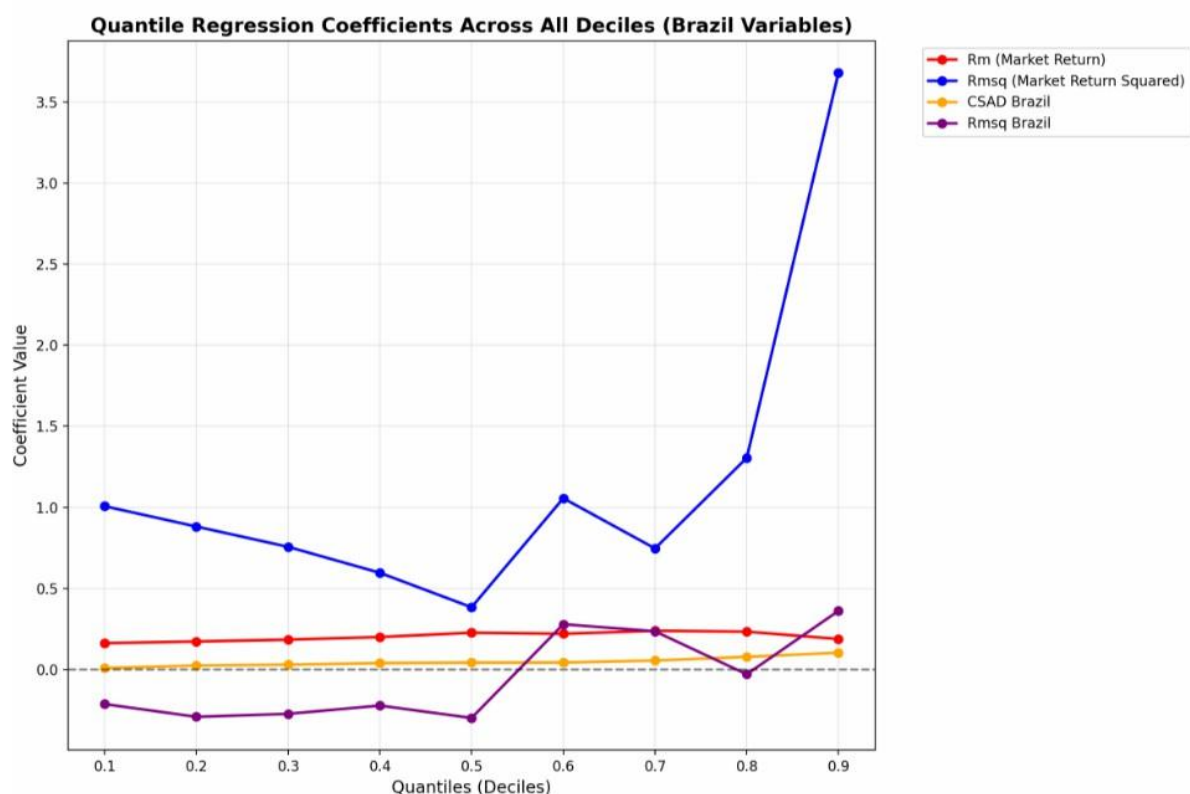

Figure 2 showing quantile plots for regressors in quantile regression for Brazil

4.2.3 Impact of herding behaviour in South Africa on stock investment behaviour in India.

The present study investigates the contagion effect of herding in South Africa on investment behaviour among Indian investors by using quantile regression model, with India CSAD assumed to be the dependent variable while the nifty return, square of the nifty return, CSAD of firms listed on Johannesburg stock exchange (JSE) and return square of the JSE index are assumed as independent variables. The impact of herding behaviour in South African stock market on the herding tendency of Indian investors is reflected by the coefficient of CSAD of South African firms and return square coefficients of JSE. The results of the analysis are shown in the following table 3.

Table 3: Contagion effect of herding in South Africa on Indian herding behaviour

Quantile	Intercept Coefficient	Nifty Return Coefficient	Nifty Return Square Coefficient	CSAD SA Coefficient	FTSE-JSE return square Coefficient
0.1	0.007 (54.21**)	0.165 (12.95**)	0.551 (3.04**)	0.001 (0.89)	0.030 (1.15)
0.2	0.008 (66.37**)	0.169 (14.09**)	0.897 (5.57**)	0.003 (2.26**)	0.014 (1.01)
0.3	0.008 (68.95**)	0.193 (13.83**)	0.690 (2.67**)	0.004 (3.03**)	0.004 (0.24)
0.4	0.009 (69.63**)	0.216 (15.26**)	0.500 (2.17**)	0.005 (3.16**)	0.012 (0.65)
0.5	0.009 (69.23**)	0.216 (14.46**)	0.889 (4.10**)	0.004 (2.86**)	0.061 (3.02**)
0.6	0.010 (68.00**)	0.240 (15.15**)	0.846 (4.12**)	0.004 (2.21**)	0.069 (3.02**)
0.7	0.011 (64.62**)	0.230 (12.79**)	1.747 (8.35**)	0.002 (1.22)	0.093 (3.62**)
0.8	0.012 (57.27**)	0.201 (8.78**)	3.423 (14.59**)	0.003 (1.35)	0.083 (2.35**)
0.9	0.013 (48.76**)	0.205 (6.74**)	4.937 (17.86**)	0.009 (2.85**)	0.035 (1.16)

The coefficient of South African CSAD measures the variation in the stock returns and is an indicator of herding behaviour. The results found that the coefficients of the CSAD of South

African firms are found to be significantly positive for most of the quantiles indicating a strong significant contagion impact of herding behavior in South Africa on herding among Indian investors. These results hint towards robust international association and emotional transmission between emerging markets.

The FTSE-JSE return square coefficients signify the asymmetric effects of market variations in South Africa on the herding behaviour among Indian investors. The FTSE-JSE return square coefficients are reported insignificant initially but from middle (5th quantile), they become significant. These results suggest that higher market variations in South Africa bear a significant impact on the herding behaviour in Indian stock markets. The quantile plots of different independent variables in the quantile regression model are shown below:
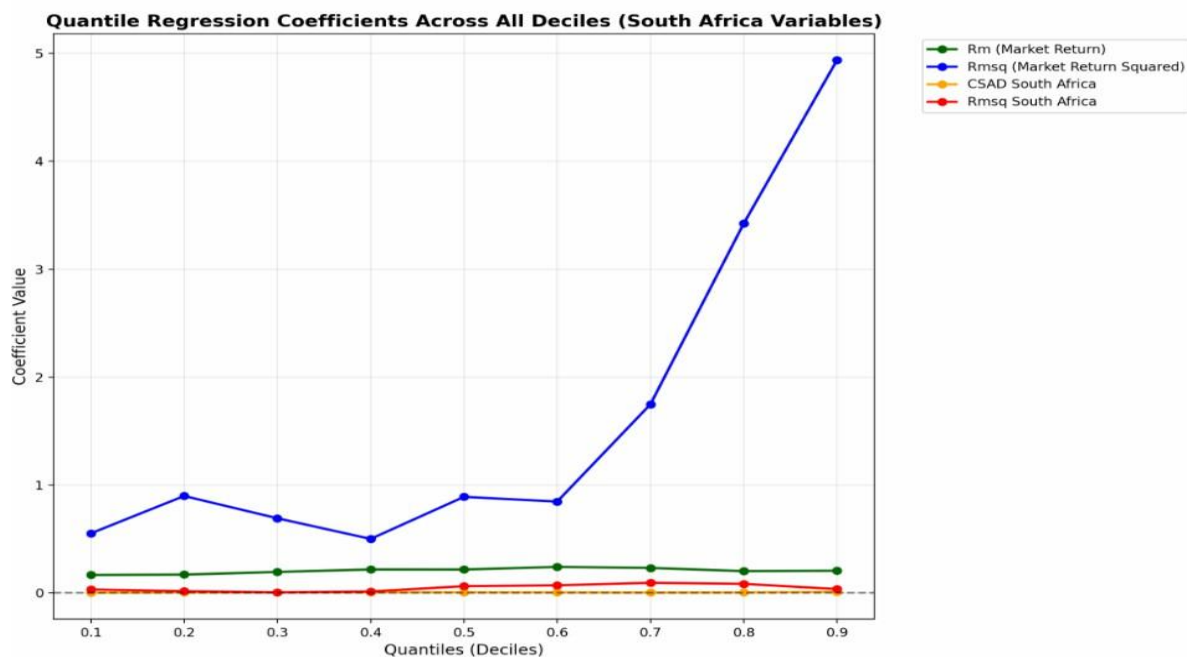

Figure 3 showing quantile plots for regressors in quantile regression for South Africa

4.2.4 Impact of herding behaviour in Russia on stock investment behaviour in India.

Russia and India represent two of the most resourceful markets within the BRICS trade-bloc. While these both are different in their economic structures, both display important interlinkages influenced by global shocks, international market connections and commodity price variations. These global interconnections tend to get more intense during crises, when unreliability and pessimistic attitude influence investors to take decisions in tandem.

Existing literature in herding has established robust association among BRICS nations,

particularly during crises. Soni (2025) established that Russia and India often move parallelly during phases of high volatility, indicating the spill-over effects from one market to another. Sheikh and Raza (2024) too supported the above conclusions and established sentiment-driven interactions among BRICS economies.

The present study evaluates the contagion effect of herding in MOEX stock exchange on Indian herding through quantile regression model, where CSAD India is taken as a predicted variable while Indian market return, square of the market return (India), CSAD MOEX index and square of the MOEX index returns are assumed as predictor factors. The coefficient of CSAD MOEX and coefficient MOEX index return square represent the impact of herding in Russian stock market on the herding behaviour in the India. The results of the analysis are shown below in the following table 4.

Table 4 showing contagion effect of herding in Russia on Indian herding behaviour

Quantile	Intercept Coefficient	Nifty Return Coefficient	Nifty Return Square Coefficient	CSAD Russia Coefficient	MOEX return square Coefficient
0.1	0.006 (42.02**)	0.168 (13.33**)	0.247 (1.37)	0.025 (3.15**)	-0.081 (-4.51**)
0.2	0.007 (54.56**)	0.167 (14.02**)	0.885 (5.49**)	0.022 (3.05**)	-0.070 (-4.17**)
0.3	0.008 (59.22**)	0.199 (14.13**)	0.624 (2.41**)	0.025 (3.70**)	-0.083 (-4.54**)
0.4	0.008 (60.86**)	0.212 (15.05**)	0.500 (2.19**)	0.028 (3.92**)	-0.062 (-2.91**)
0.5	0.009 (59.71**)	0.216 (14.27**)	0.798 (3.63**)	0.023 (2.91**)	-0.030 (-1.15)
0.6	0.0010 (57.92**)	0.230 (14.10**)	1.024 (4.79**)	0.022 (2.45**)	-0.035 (-1.05)
0.7	0.010 (53.63**)	0.238 (13.39**)	1.313 (6.39**)	0.040 (3.74**)	-0.065 (-1.48)
0.8	0.011 (42.45**)	0.205 (8.88**)	3.199 (13.51**)	0.057 (3,63**)	-0.097 (-1.35)
0.9	0.0132 (7.92**)	0.195 (5.60**)	5.049 (15.55**)	0.071 (2.38**)	-0.131 (-0.86)

CSAD Russia is a measure of variation in the stock returns of the Russian firms listed on the Moscow stock exchange. The analysis concludes a direct relationship between herding behaviour in the Russian firms and herding behaviour among Indian investors. These results are indicated by positive and empirically significant coefficients of the CSAD of Russian firms at all the quantiles.

The coefficient of MOEX return square signifies the irregular effects of market volatility in Russian stock market on herding in India. The analysis further confirms that higher market fluctuations in Russian stock market have a significant effect on herding behavior in India. As per the results of the analysis, it can be concluded that the moderate shocks in Russian market significantly influence Indian herding as reflected by statistically significant negative coefficient of first five quantiles. However, these results turn insignificant thereon. Hence, it can establish a weak impact of variations of Russian markets on Indian investment behavior.
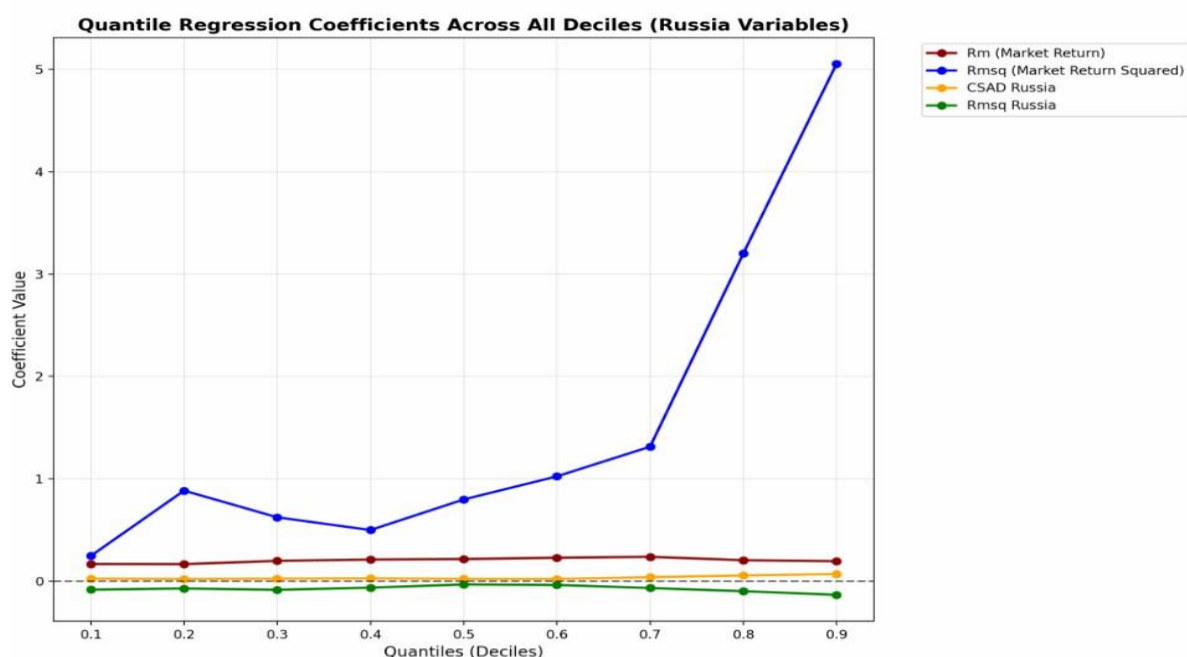

Figure 4 showing quantile plots for regressors in quantile regression for Russia

Conclusion and Findings

The present study concludes a strong emotional contagion between other member nations of BRICS trade-bloc and India. However, the strength of these spill-over effects may vary across economies, time of study and trade relations between the two countries. The findings of the study indicate that there exists a strong and statistically significant contagion effect from China

and Brazil on Indian herding behavior. These results are in congruence with Ghorbel et al. (2023) (Stavroyiannis, 2017), who concluded that retail investors from Brazil and China are highly prone to emotional cascades. Such empirically established immediate linkages between the two economies of the same trade bloc are the result of strong global alliance and emotional spread of mood among investors of emerging markets. These emotionally synchronised trading behaviours become more visible during times of political and economic turbulence.

On the contrary, the strength and consistency of the contagion effects originating from Russia and South Africa are relatively weaker. There have been numerous studies in the past which confirm to these results, suggesting that there exist differences in financial and economic interdependencies within BRICS, as economies differ in terms of market scale, availability of information, media visibility and investor maturity (Morales & Andreosso-O'Callaghan, 2014; Vari, 2021). A deeper understanding of these inter-linkages is significant for risk management and policy formulation. It becomes imperative to consider these emotional inter-linkages operating within trade group like BRICS to ensure effective policy formulation, promote investor awareness and strategic integration in a growingly interwoven international economic system. Regulatory bodies should aim to capture sentiment driven trading behavior to manage distress selling and market distortions.

It can be concluded that the literature strongly supports the view that India's financial market is highly susceptible to contagion from its BRICS counterparts, with herding behavior amplifying the effects of external shocks. While fundamental linkages through trade and commodities remain important, the dominant drivers appear to be financial channels and behavioral contagion, particularly from China and Brazil. During crises, herding in India intensifies, leading to price distortions, heightened volatility, and systemic risk. For policymakers, this underscores the need for stronger regulatory frameworks, diversification of capital inflows, and closer monitoring of behavioral contagion channels. Future research should deploy high-frequency data, sentiment analysis, and machine learning models to capture the evolving complexity of contagion-herding dynamics in India's integration with BRICS. Such insights will be critical not only for academic debates but also for practical strategies in safeguarding India's financial stability amid increasing global interconnectedness.

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