

Key findings reveal that herding is not a straightforward phenomenon. Instead, it exhibits a non-linear pattern across the entire market. While herding is present to some extent at the sectoral level, the most significant changes occur over time. The first period (pre-Covid-19) exhibits a tendency towards "adverse herding" where investors go against the crowd, selling when others are buying. Investors become suspicious of a strong market sentiment and choose to sell their assets when others are buying heavily, fearing an inflated market or a potential correction. This behavior suggests a focus on short-term trends and a potential lack of confidence in individual investment strategies. If investors

with a short-term perspective see a sudden surge in buying, they might interpret it as a temporary bubble and sell their shares before the price drops (Bikhchandani, S., & Sharma, S., 2001). Meanwhile, the Covid-19 pandemic appears to have triggered a significant shift. The second period (the Covid-19 period) shows a marked increase in "positive herding" with greater intensity. Investors became more likely to blindly follow the lead of others, potentially due to the heightened uncertainty associated with the pandemic. Faced with an overwhelming amount of information about the virus and its economic impact, investors might have found it difficult to make informed decisions and relied on the actions of others as a shortcut. Additionally, the emotional distress and anxiety caused by the pandemic could have led to herding behavior as a coping mechanism, providing a sense of comfort in uncertain times (Bouri et al, 2021).

The study also finds evidence of asymmetric herding, where herding behavior differs depending on market conditions. This asymmetry is most pronounced during periods of rising or falling market returns, high trading, and high or low volatility. This suggests that investors are more likely to blindly follow the crowd when the market is experiencing dramatic swings. Conversely, there is limited evidence of asymmetry when trading volume is low, particularly at the sectoral level. This implies that during calmer market periods with lower trading activity, investors might be more likely to rely on their own analysis and investment strategies.

Interestingly, the study suggests that market volatility itself does not significantly influence the formation of time-varying herding. However, the research reveals that time-varying herding can significantly impact market volatility, with both destabilizing and stabilizing effects on different sectors. At the overall market level, the destabilizing effect of herding on volatility is found to be statistically significant with near certainty for both periods. When examining individual sectors, the first period exhibits a stabilizing herding effect on volatility in most sectors, while the second period shows a destabilization effect.

These findings hold valuable implications for both investors and regulators within the Vietnamese stock market. Understanding herding behavior can inform investment strategies and guide regulatory policies aimed at promoting market stability.

2. NEW FINDINGS AND CONTRIBUTIONS OF THE DISSERTATION

One of the key findings challenges the traditional notion of herding as a linear phenomenon. Our analysis reveals a non-linear pattern across the entire market, suggesting that herding intensity fluctuates depending on market conditions and becomes more evident at the individual industry level.

The most significant contribution lies in uncovering time-varying herding trends. By dividing the data into two periods, we discover a distinct shift in investor behavior. The first (pre-Covid) period exhibits a tendency towards "adverse herding," where investors follow a sell-off mentality when others are selling, and vice versa. Conversely, the second period (Covid period) demonstrates a remarkable rise in "positive herding," indicating a stronger herd mentality where investors more intensely follow the lead of others.

Furthermore, the study identifies asymmetric herding, meaning herding behavior reacts differently depending on market circumstances. This asymmetry is evident in both periods, herding is more pronounced during periods of significant market movements, such as rising or falling returns and periods of high or low volatility. Interestingly, the research suggests minimal evidence of asymmetric herding when low trading volume, particularly within individual sectors.

While market volatility itself doesn't significantly influence the formation of herding behavior, the research uncovers a crucial finding: herding has a significant impact on market volatility. Herding does not cause volatility, but it can worsen it (destabilizing) or dampen it (stabilizing) in some situations. At the overall market level, herding consistently worsened volatility in both periods. Interestingly, pre-Covid herding generally stabilized sector volatility, while post-Covid herding worsened it, possibly due to pandemic uncertainty.

Existing research on herding behavior lacks depth in two key areas: industry-specific dynamics and impact on volatility, especially in Vietnam. With a multifaceted approach, this study addresses this gap and offers several key contributions:

- (1) Quantifying herding intensity: Using advanced measures, the study not only confirms herding's presence but also tracks its intensity across sectors and the entire market. This paints a more detailed picture of how herding fluctuates.

- (2) Unveiling sectoral herding: Beyond overall market analysis, delving into individual industries can reveal hidden herding tendencies missed at the aggregate level, offering a more complete understanding.
- (3) Deconstructing Herding-Volatility link: Examining the relationship between herding and volatility across sectors and the entire market sheds light on the debate about herding's impact (stabilizing or destabilizing) under different industry conditions, crucial for market behavior and investment strategies.
- (4) Actionable insights for market participants: By analyzing the herding-volatility connection, we offer valuable insights for both academics and investors. Understanding these dynamics allows for the development of more precise forecasting models and the implementation of effective hedging strategies to mitigate potential risks.

3. APPLICATIONS / APPLICABILITY IN PRACTICE AND DIRECTIONS FOR FUTURE STUDIES

These findings hold significant implications for both investors and regulators within the Vietnamese stock market. Understanding the non-linear nature and time-varying trends of herding behavior, alongside its asymmetric patterns, can equip investors with valuable tools for navigating market complexities. Additionally, regulators can leverage this knowledge to develop policies that promote market stability and mitigate the potential risks associated with herding behavior. Here are some recommendations for future research based on the findings and limitations of this dissertation.

(1) Investigating the non-market determinants of sectoral herding: This study identifies sectoral differences in herding behavior. Future research could delve deeper into the non-market factors driving these differences. Are there specific industry characteristics (e.g., information asymmetry, regulation) that contribute to stronger herding tendencies?

(2) Examining the role of investor sentiment and behavioral biases: This study focuses on herding behavior. Future research could incorporate investor sentiment analysis and explore how emotions and behavioral biases, like overconfidence or anchoring, interact with herding tendencies within the Vietnamese market.

Investor Segmentation: Utilize disaggregated data to explore potential variations in herding behavior across different investor segments. This could involve analyzing

herding tendencies among retail investors, institutional investors, and different demographic groups.

(3) *Comparative studies across markets:* Future research can explore herding behavior in other financial markets like commodities, derivatives, and real estate. Analyzing potential similarities and differences in herding tendencies across these markets can provide a broader understanding of investor psychology within the Vietnamese financial system.

(4) *Exploring alternative approaches for analyzing time-varying herding behavior:* Our study employed beta dispersion to measure time-varying herding, relying on CAPM-based models for beta estimation. To strengthen the foundation of future research, it would be beneficial to investigate whether alternative beta estimation models, such as those based on Fama-French factors, produce similar results for herding measurement. This comparative analysis can enhance the robustness of our understanding of herding dynamics. Techniques like Markov regime-switching models can be employed to differentiate market states. This allows researchers to infer the hidden market regimes that might be driving the fluctuations in herding behavior (Fu et al., 2021; Blasco et al., 2012). By incorporating these alternative approaches, future research can shed further light on the complex dynamics of herding within the Vietnamese stock market.

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