

Investor herding during COVID-19: Evidence from the South African Exchange Traded Fund market

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Abstract

The volatility of financial markets has been exacerbated by the recent outbreak of the COVID-19 pandemic. During periods of increased market volatility, investors tend to exhibit herd behaviour. However, investor herd behaviour may result in suboptimal investment decisions and market anomalies. Given the rising popularity of Exchange Traded Funds (ETFs), the objective of this study is to investigate whether the COVID-19 pandemic has induced investor herd behaviour in the South African ETF market. To achieve the objective of this study, ETFs trading on the Johannesburg Stock Exchange (JSE) are analyzed from March 4, 2019 to August 14, 2020. The results of this study indicate that investor herd behaviour is not present in the South African ETF market during the full sample period. The Chow breakpoint test confirms that there is indeed a structural break on March 5, 2020 – the date on which South Africa confirmed its first COVID-19 case. However, the subperiod analysis reveals that herd behaviour is not present in the South African ETF market before and after South Africa confirmed its first COVID-19 case. Therefore, this study concludes that the COVID-19 pandemic and its related market volatility has not induced herd behaviour in the South African ETF market. These findings suggest that ETF investors are not influenced by the herd bias and, therefore, this finding could be an indication that ETF traders make informed trading decisions that are rational.

Keywords: Coronavirus; COVID-19; exchange traded fund; herd behaviour; pandemic.

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1. Introduction

The widespread transmission of COVID-19 has created economic turbulence in countries around the world. On March 11, 2020, the World Health Organization (WHO) characterized COVID-19 as the first pandemic caused by a coronavirus (WHO, 2020a). Globally, WHO (2020b) reported a combined total of approximately 21 million confirmed cases, including over 750 000 deaths, in 216 territories, areas, or countries as at August 15, 2020. According to WHO (2020b), South Africa had the highest number of confirmed cases on the African continent. Specifically, WHO (2020b) reported that South Africa had approximately 580 000 confirmed cases, including nearly 12 000 deaths, on August 15, 2020. In an attempt to protect the lives of their citizens, national governments have imposed strict travel restrictions and quarantine policies (Ashraf, 2020). However, these policies have had an adverse impact on the global economy.

According to Topcu and Gulal (2020), the COVID-19 pandemic has not only impacted consumption behaviours, labour markets, and supply chains, but the pandemic has also had a significant impact on financial markets. For instance, Nicola, *et al.* (2020) note that quarantine policies have led to an increase in unemployment which, in turn, has reduced consumption and economic output. As a result, expected future cash flows for firms have lowered, consequently, causing a sharp decline in stock prices due to the market's reassessment of stocks' values (Mazur, *et al.*, 2020). Therefore, Mazur, *et al.* (2020) argue that the COVID-19 pandemic induced a stock market crash in March 2020 which has unfolded extreme volatility in global financial markets. This increase in market volatility and unpredictability has generated an unprecedented level of market risk, thus, causing investors to experience significant losses (Zhang, *et al.*, 2020). During periods of increased market volatility and uncertainty, investors tend to exhibit herd behaviour (Economou, *et al.*, 2018).

Traditional finance theories assume that market participants are rational, however, in reality, market participants are not always rational and their investment decisions are often based on cognitive and emotional biases (Kapoor and Prosad, 2017). According to Shah, *et al.* (2019), the herding bias is the most prominent bias influencing the trading patterns of participants in financial markets. Herd behaviour refers to the tendency of investors to disregard their own private information, and instead, replicate the choices of other market participants (Filip, *et al.*, 2015). Herding may be caused by the level of sophistication of the market, the desire for similar assets, the cost of

reputation, the quality of information disseminated to the market, or by market participants interpreting information in a similar manner (Vieira and Pereira, 2015). As such, investor herding could either be rational or irrational. Rational herding occurs when investors mimic the market consensus assuming that the majority holds better information (Hwang and Salmon, 2004). On the contrary, irrational herding occurs when investors act without any rational considerations, and decisions are based on emotions and do not take into account fundamental information (Hwang and Salmon, 2004).

According to Mobarek, *et al.* (2014), herding is common during periods of abnormal information flows and volatility because the volatility of the market may impede the reliability of investment predictions. Adopting the market-wide consensus during periods of market stress can be regarded as a cost-efficient strategy relative to the cost of acquiring reliable information (Gleason, *et al.*, 2004). Moreover, during periods of extreme market movements, investors may believe that they can at least achieve the average market return if they follow the herd (Gleason, *et al.*, 2004). However, these biased investment choices may result in suboptimal investment choices and irrational investment decisions which could lead to anomalies in financial markets. For instance, Yao, *et al.* (2014) notes that investor herding causes security prices to diverge from their fundamental values, subsequently, inducing short term trends and excess volatility in financial markets.

In recent years, the presence of herd behaviour in financial markets has been extensively researched. Investor herding has been studied in the context of different markets, including, developed markets (Messis and Zapranis, 2014; Economou, *et al.*, 2018), emerging markets (Balcilar, *et al.*, 2017; Indārs, *et al.*, 2019), and frontier markets (Bui, *et al.*, 2018; Economou, 2019). Previous studies have also investigated herd behaviour in the context of different asset classes, including, stocks (Dang and Lin, 2016; Stavroyiannis and Babalos, 2019), bonds (Galariotis, *et al.*, 2016; Cai, *et al.*, 2019), real estate (Babalos, *et al.*, 2015; Yang, *et al.*, 2020), commodities (Philippas, 2014; Júnior, *et al.*, 2020), cryptocurrencies (Bouri, *et al.*, 2019; Ballis and Drakos, 2020), and exchange traded funds (ETFs) (Rompotis, 2018; Bahadar, *et al.*, 2019). More locally, Seetharam and Britten (2013) report that herding in stocks constituted in the JSE All Share Index is not present overall, but is present only during periods of declining market conditions. On the contrary, Niyitegeka and Tewari (2015) report that herding is present in the top 100 stocks (ranked by market capitalization) listed on the JSE only during periods of rising market conditions.

Similarly, Ababio and Mwamba (2017) report that herding is present in the JSE's financial sector only when the market is rising. The mixed results between Seetharam and Britten (2013), Niyitegeka and Tewari (2015), and Ababio and Mwamba (2017) could be attributed to the differing sample periods, sample constructions, and empirical methodologies. Notably, investor herding in the South African ETF market has not been tested.

Several studies report that herding is more pronounced during periods of high market volatility (Balcilar and Demirer, 2015; BenSaïda, 2017; Fu and Wu, 2020). On the contrary, Economou, *et al.* (2015) and Guney, *et al.* (2017) report that herd behaviour is more pronounced during periods of low market volatility. Regarding herd behaviour during the COVID-19 pandemic, Mnif, *et al.* (2020) and Kizys, *et al.* (2020) report that COVID-19 has induced investor herding in the cryptocurrency and stock markets, respectively. However, Yarovaya, *et al.* (2020) report that herd behaviour in cryptocurrency markets has not been significantly amplified by the COVID-19 pandemic. Notably, to the knowledge of the authors of this study, there are no existing studies that examine the impact of COVID-19 on herd behaviour in ETF markets.

An ETF is a pooled investment vehicle that comprises of a basket of securities that are selected in an attempt to replicate the performance and risk levels of a specific benchmark or index (Rompotis, 2010). Therefore, ETFs signify low-cost investment tools that allow investors to diversify their risk exposures with a single transaction (Rompotis, 2010). In recent years, ETFs have transformed the investment management landscape, and their popularity continues to soar exponentially (Liebi, 2020). This is also the case during the COVID-19 pandemic. For instance, Nicholas Elward, Senior Vice President and Head of Business Development and ETFs at Natixis Investment Managers, notes that, despite high market volatility, ETFs have experienced high trading volumes since the COVID-19 outbreak (Elward, 2020). More locally, Adèle Hattingh, Manager of Business Development and Exchange Traded Products (ETPs) at the Johannesburg Stock Exchange (JSE), mentions that, given the heightened volatility in the current economic environment, ETFs are attractive investment instruments because of their simplicity, liquidity, cost, and diversification benefits (IOL, 2020). Remarkably, Brown (2020) acknowledges that the capitalization of the South African ETF market grew by approximately R11 billion in the first half of 2020.

Despite the soaring popularity of ETFs, ETF investment choice may not always be rational. Irrational investment choices may lead to excessive trading,

mispricing of securities, and exacerbated market volatility. This, therefore, poses a threat to the efficiency of ETF markets and broader financial markets since ETFs have exposures to different asset classes. The presence of herd behaviour in U.S.-listed ETFs has been reported by Chen, *et al.* (2011) and Bahadar, *et al.* (2019). On the contrary, Gleason, *et al.* (2004) and Rompotis (2018) report that herd behaviour is not present in the surveyed U.S.-listed ETFs. Although Gleason, *et al.* (2004), Chen, *et al.* (2011), Rompotis (2018), and Bahadar, *et al.* (2019) survey the U.S. ETF market, the contradictory results may be due to the different sampling methods. For instance, Rompotis (2018) has surveyed small and large capitalization ETFs whilst Bahadar, *et al.* (2019) has surveyed leveraged ETFs. Remarkably, there are no existing studies that have examined the presence of investor herd behaviour in the South African ETF market. Furthermore, herding in ETF markets during the COVID-19 pandemic has not been researched. Given the increasing popularity of ETFs, the objective of this study is to investigate whether herd behaviour is present in the South African ETF market during the COVID-19 pandemic.

Although ETFs have received a great deal of attention from investors, trading patterns in ETF markets have been understudied (Rompotis, 2018). This study, therefore, contributes to existing literature in at least three important ways. ETFs provide diversification benefits by investing in a variety of securities. However, the effectiveness of this diversification is challenged when the trading activity in ETF markets is a result of investors' imitative behaviour (Rompotis, 2018). Furthermore, the tendency of ETF investors to herd creates excess market volatility because investors may disregard relevant fundamental information, subsequently, causing ETF prices to deviate from their fundamental values (Dang and Lin, 2016). Therefore, the first major contribution of this study is that it provides insight into whether South African ETFs can be regarded as efficient risk reducing tools. Relative to developed markets, herd behaviour may be more pronounced in emerging markets because of inadequate regulatory frameworks, lack of informational disclosure and transparency, and market participants' characteristics and incentives (Kallinterakis and Kratunova, 2007; Economou, *et al.*, 2018). Hence, the second contribution of this study is that it tests for herding in ETFs trading in an emerging market (that is, South Africa) whilst existing research has focused on herding in ETFs trading in developed markets (that is, the U.S.).

The third contribution of this study is that it tests for investor herding in ETFs during the COVID-19 pandemic which, to the knowledge of the authors, has

never been done before. According to Goodell (2020), research on the impact of the COVID-19 pandemic on financial markets remain scanty. The outbreak of the pandemic has created market volatility and uncertainty which could promote investor herding since herding is more pronounced during periods of market uncertainty. Whilst herding during COVID-19 has been investigated in the cryptocurrency and stock markets, investor herding during COVID-19 has not been investigated in ETF markets. Therefore, the results of this study are particularly important for investors trading in ETF markets, for investment management companies guiding investment choices, and for policymakers and regulators who are responsible for promoting the efficiency and development of ETF markets, specifically, the South African ETF market.

2. Data and methodology

This study surveys ETFs trading on JSE from March 4, 2019 to August 14, 2020. A total of 75 ETFs were trading on the JSE as at August 14, 2020. To avoid issues relating to the survivorship bias, the 8 ETFs delisted during the sample period are included in the sample of this study. Therefore, this study's sample constitutes of a total of 83 ETFs – 75 of which are currently listed on the JSE and 8 of which were delisted from the JSE. Given that South Africa has reported its first COVID-19 confirmed case on March 5, 2020 (WHO, 2020c), the post-COVID-19 subsample ranges from March 5, 2020 to August 14, 2020. Therefore, the pre-COVID-19 subsample ranges from March 4, 2019 to March 4, 2020. Table 1 below summarizes the sample periods of this study.

TABLE 1: SAMPLE PERIODS OF THIS STUDY

Sample	Period
Full sample	March 4, 2019 to August 14, 2020
Pre-COVID-19	March 4, 2019 to March 4, 2020
Post-COVID-19	March 5, 2020 to August 14, 2020

According to Lao and Singh (2011), herding is a short-lived phenomenon. As such, this study employs data that is of a daily frequency since it may help uncover investor herding even if it is short-lived. Secondary data of daily closing prices are obtained for each ETF from the EquityRT database. The ETFs' daily closing prices are used to compute their daily returns in the following manner:

$$R_t = \ln\left(\frac{P_t}{P_{t-1}}\right) \times 100 \quad (1)$$

where \ln represents the natural logarithm, and P_t and P_{t-1} are current and previous closing prices, respectively.

During periods of normal information flow and volatility, investors tend to make investment decisions based on their own information (Christie and Huang, 1995). Thus, during periods of normal market conditions, investors follow different trading strategies which lead to large dispersions in ETF returns. On the contrary, during periods of extreme market stress, investors tend to ignore their private information, and instead, as a form of reassurance, they mimic the aggregate market behaviour when making investment choices (Christie and Huang, 1995). Subsequently, during extreme market conditions, a large number of investors in the market tend to follow the same investment decision, causing ETF returns to converge to the market return, leading to smaller dispersions of ETF returns. Therefore, when herding is present in an ETF market, the dispersion of ETF returns should be low.

Following Chang, *et al.* (2000), the cross-sectional absolute deviation (CSAD) is used to measure the dispersion of ETF returns and is calculated as follows:

$$CSAD_t = \frac{1}{N} \sum_{i=1}^N |R_{i,t} - R_{m,t}| \quad (2)$$

where $CSAD_t$ refers to the cross-sectional absolute deviation of the individual ETF returns on day t , $R_{i,t}$ represents the return on the i th ETF on day t , $R_{m,t}$ represents the cross-sectional average of the returns of all individual ETFs in the market on day t , and N represents the number of ETFs in the market on day t .

According to Chang, *et al.* (2000), to detect herd activity in markets, the relationship between $CSAD_t$ and $R_{m,t}$ needs to be evaluated since $CSAD_t$ in itself does not measure herd behaviour. Thus, to investigate the presence of herd behaviour in the South African ETF market, this study employs the following non-linear model proposed by Chang, *et al.* (2000):

$$CSAD_t = \alpha + \gamma_1 |R_{m,t}| + \gamma_2 (R_{m,t})^2 + \varepsilon_t \quad (3)$$

When herd behaviour is present, the return dispersion and aggregate market return exhibits a negative, non-linear relationship. Hence, if herding is present, γ_2 would be negative and statistically significant (Mobarek, *et al.*, 2014). This is enough to document the presence of investor herding (Economou, *et al.*, 2018). On the contrary, if herd behaviour is absent, γ_1 would be positive and γ_2 would equate to zero (Mobarek, *et al.*, 2014). Equation (3) is estimated for the full, pre-COVID-19, and post-COVID-19 samples in order to investigate the presence of investor herding in the South African ETF market during the different samples.

Following Economou, *et al.* (2018), the following equation is estimated to determine whether investor herding is more pronounced before or after the COVID-19 crisis:

$$CSAD_t = \alpha + \gamma_1 D^{COVID-19} |R_{m,t}| + \gamma_2 (1 - D^{COVID-19}) |R_{m,t}| + \gamma_3 D^{COVID-19} (R_{m,t})^2 + \gamma_4 (1 - D^{COVID-19}) (R_{m,t})^2 + \varepsilon_t \quad (4)$$

where $D^{COVID-19}$ is a dummy variable that takes the value of one during the post-COVID-19 sample (that is, from March 5, 2020 to August 14, 2020) and the value of zero otherwise. If herding is present after the confirmation of South Africa's first COVID-19 case, γ_3 would be negative and statistically significant. On the other hand, if herding is present before the confirmation of South Africa's first COVID-19 case, γ_4 would be negative and statistically significant. If herd behaviour is more pronounced after South Africa confirmed its first COVID-19 case, γ_3 would be less (or more negative) than γ_4 . In line with Hwang and Salmon (2004) and Yao, *et al.* (2014), Equations (3) and (4) are estimated using the Ordinary Least Squares (OLS) method. However, following Economou, *et al.* (2018), the Newey and West (1987) estimator is employed to compute heteroscedasticity and autocorrelation consistent standard errors for the OLS regression coefficients.

3. Empirical results

Table (2) provides a summary of the descriptive statistics for the return on the South African ETF market ($R_{m,t}$) and the cross-sectional absolute dispersion of individual ETF returns ($CSAD_t$). During both, the full sample and the post-COVID-19 sample periods, the average daily market return ranges from -7.85% to 3.91%, while the average daily market return ranges from -3.16% to 3.50% during the pre-COVID-19 sample period. Overall, the average daily market return is greater during the post-COVID-19 sample (0.06%) relative to the full sample (0.04%) and the pre-COVID-19 sample (0.03%). Likewise, the average daily cross-sectional absolute dispersion of individual ETF returns is also greater during the post-COVID-19 sample (1.58%) relative to the full sample (1.04%) and the pre-COVID-19 sample (0.81%).

TABLE 2: SUMMARY OF DESCRIPTIVE STATISTICS

	Full Sample		Pre-COVID-19		Post-COVID-19	
	$R_{m,t}$	$CSAD_t$	$R_{m,t}$	$CSAD_t$	$R_{m,t}$	$CSAD_t$
Mean	0.041	1.040	0.032	0.807	0.061	1.581
Maximum	3.912	6.456	3.497	2.711	3.912	6.456
Minimum	-7.848	0.235	-3.156	0.235	-7.848	0.487
Std. Dev.	1.017	0.814	0.622	0.440	1.598	1.157
Skewness	-1.484	3.062	-0.210	1.906	-1.287	2.040
Kurtosis	17.263	15.379	9.427	6.584	9.093	7.255
Jarque-Bera	3051.041	2741.921	416.567	274.890	189.622	150.632
Probability	0.000	0.000	0.000	0.000	0.000	0.000

The presence of investor herding is detected by analysing the non-linear relationship between the market return and the cross-sectional dispersion of ETFs' returns. Accordingly, Equation (3) is estimated for the full sample period and the results are presented in Table (3) below:

TABLE 3: ESTIMATED REGRESSION COEFFICIENTS FOR THE FULL SAMPLE PERIOD

	α	γ_1	γ_2	$Adj.R^2$
$CSAD_t$	0.512***	0.842***	-0.003	0.658
	(9.573)	(6.552)	(-0.185)	

Notes: 1. Refer to Equation (3) for the detailed equation.

2. Values in parentheses represent t-statistics using the Newey and West (1987) estimator.

3. *** represent statistical significant at the 1% level.

The results in Table (3) indicate that the coefficient on the linear market return term (γ_1) is positive and statistically significant. This positive and significant γ_1 coefficient indicates that the cross-sectional dispersion of ETF returns ($CSAD_t$) increases with the magnitude of the return on the ETF market ($R_{m,t}$). However, as mentioned in Section 2, the squared market return coefficient (γ_2) needs to be analysed in order to detect the presence of investor herd behaviour. Specifically, herd behaviour is present when γ_2 is negative and statistically significant. However, the results in Table (3) show that γ_2 is negative and statistically insignificant. Therefore, the negative and statistically insignificant γ_2 coefficient indicates that the cross-sectional dispersion of ETF returns increases at a decreasing rate, however, it is not significant enough to document the presence of herd behaviour. As such, this finding suggests that investor herd behaviour was not present in the South African ETF market from March 4, 2019 till August

14, 2020. Notably, the adjusted R^2 value (0.66) suggests that the model exhibits a high explanatory power when explaining the $CSAD_t$.

In order to detect the presence of a structural break on the date that South Africa confirmed its first COVID-19 case, the Chow breakpoint test is employed. The Chow test is conducted using a breakpoint of March 5, 2020 and the results are presented in Table (4). The results in Table (4) reject the null hypothesis of no break on March 5, 2020. Thus, the results in Table (4) confirm that there is a structural break on March 5, 2020 which further supports the dates chosen for the pre-COVID-19 and post-COVID-19 subsamples.

TABLE 4: RESULTS OF THE CHOW BREAKPOINT TEST

F-statistic	Log likelihood ratio
11.927*** (0.000)	34.619*** (0.000)

- Notes: 1. Breakpoint test for March 05, 2020.
 2. Values in parentheses represent probability values.
 3. *** represent statistical significant at the 1% level.

Based on the results of the Chow breakpoint test, the presence of investor herd behaviour is examined before and after South Africa confirmed its first COVID-19 case on March 5, 2020. Accordingly, Equation (3) is estimated for the pre-COVID-19 and post-COVID-19 subsamples¹ and the results are presented in Table (5) below.

TABLE 5: ESTIMATED REGRESSION COEFFICIENTS FOR THE SUBSAMPLES

	$CSAD_t$	
	Pre-COVID-19	Post-COVID-19
α	0.522*** (12.718)	0.697*** (5.665)
γ_1	0.642*** (4.618)	0.862*** (4.815)
γ_2	-0.008 (-0.186)	-0.010 (-0.450)
Adj. R^2	0.368	0.697

- Notes: 1. Refer to Equation (3) for the detailed equation
 2. Values in parentheses represent t-statistics using the Newey and West (1987) estimator.
 3. *** represent statistical significant at the 1% level.

¹ Refer to Table (1) for subsample dates.

The results in Table (5) suggest that, before and after the confirmation of South Africa's first COVID-19 case, the cross-sectional dispersion of ETF returns increased (because γ_1 is positive and significant) but at a decreasing rate (since γ_2 is negative). Notably, the magnitude of the decreasing rate (γ_2) is greater after South Africa confirmed its first COVID-19 case. However, in both subsamples, γ_2 is negative but statistically insignificant, thus, indicating that there is no evidence of investor herd behaviour before and after South Africa confirmed its first COVID-19 case. To further examine whether the COVID-19 pandemic induced investor herding in the South African ETF market, Equation (4) is estimated for the full sample period and the results are presented in Table (6) below.

TABLE 6: ESTIMATED REGRESSION COEFFICIENTS

	α	γ_1	γ_2	γ_3	γ_4	$Adj.R^2$
$CSAD_t$	0.584*** (11.266)	0.962*** (6.938)	0.509*** (3.316)	-0.023 (-1.354)	0.032 (0.655)	0.685

- Notes: 1. Refer to Equation (4) for the detailed equation.
 2. Values in parentheses represent t-statistics using the Newey and West (1987) estimator.
 3. *** represent statistical significant at the 1% level.

The results in Table (6) show that γ_3 is negative, thus, indicating that the dispersion of returns decreased after South Africa confirmed its first COVID-19 case. However, even though γ_3 is negative, it is not statistically significant and, therefore, suggests that the COVID-19 pandemic did not induce herding in the South African ETF market. Notably, γ_4 is positive and statistically insignificant, thus, indicating that investor herd behaviour was also not present before South Africa confirmed its first COVID-19 case.

In summary, the results of this study indicate that investors trading in the South African ETF market do not exhibit herd behaviour during the full sample period. In addition, this study finds that herd behaviour was not present in the South African ETF market before the COVID-19 pandemic. Remarkably, the findings of this study also indicate that the COVID-19 pandemic has not induced herding in the South African ETF market. Overall, this study finds no evidence of investor herd behaviour in the South African ETF market. This finding is consistent with Gleason, *et al.* (2004) and Rompotis (2018) who report that investors do not herd when trading in U.S.-listed ETFs. According to Gleason, *et al.* (2004), the absence of herd behaviour in ETF markets may be because information is efficiently disseminated to traders in ETF markets, subsequently, causing investors to make their own rational trading decisions. Moreover, ETFs

attempt to track the performance of a specific benchmark by combining multiple securities. As such, investors can access information on the ETFs' individual constituents and, aggregate information on all the constituents before making a trade decision (Gleason, *et al.*, 2004). Therefore, ETF investors have access to sufficient and efficient information which enables them to make their own, informed trade decisions without being influenced by the market consensus. As such, ETF trade decisions may be rational, thus, promoting the efficiency of the South African ETF market. This is because, the presence of investor herding may result in excess market volatility, trading volume, and security mispricing, and therefore, the absence of investor herding helps to mitigate these problems.

The findings of this study have significant implications for policymakers and regulators. Firstly, it is important that policymakers and regulators continue to ensure that accurate and reliable information about ETFs and their constituents are readily available in order to facilitate informed trading decisions. Moreover, it is important that policymakers continue to implement policies that seek to promote the efficiency of South African ETF market by reducing biased investment decisions. For investors, ETFs trading on the JSE may be a good option to reduce their risk exposures, even during the COVID-19 pandemic, since the diversification benefits of ETFs have not been adversely affected by investor herding. However, such decisions should be made with caution, and investors should always aim to make informed trading decisions and avoid irrational trading decisions.

4. Conclusion

This study investigates the presence of investor herd behaviour in the South African ETF market during the COVID-19 pandemic. The sample of this study constituents of ETFs trading on the JSE and the period of analysis ranges from March 4, 2019 to August 14, 2020. The results of this study indicate that investor herd behaviour is not present in the South African ETF market during the full sample period from March 4, 2019 to August 14, 2020. The Chow breakpoint test confirms that there is indeed a structural break on March 5, 2020 – the date on which South Africa confirmed its first COVID-19 case. However, the subperiod analysis reveals that herd behaviour is not present in the South African ETF market before and after South Africa confirmed its first COVID-19 case. Therefore, this study concludes that the COVID-19 pandemic and its related market volatility has not induced herd behaviour in the South African ETF market.

On one hand, the absence of investor herd behaviour may indicate that ETF investors are not influenced by the herd bias and, therefore, this finding could be an indication that ETF traders make informed trading decisions that are rational. On the other hand, the absence of investor herd behaviour may indicate that investors make trade decisions based on their own private information which could lead to the presence of investor overconfidence in the South African ETF market. Therefore, the key policy implication is that policymakers and regulators need to implement policies which ensure that information about the South African ETF market is fully disclosed in order to promote the efficiency of the South African ETF market and to mitigate biased investment decisions. For instance, policymakers can ensure that complete information about ETFs and their constituents are published in a database that is easy to access. Moreover, regulators can also improve the ETF creation and redemption process to ensure that the manipulation of ETF prices is limited. Policymakers and regulators can also promote rational investment decisions by ensuring that financial advisors are well-trained by, for example, including behavioural finance in the curriculum of investment courses.

The limitations of this study include the following: firstly, this study focuses only on the South African ETF market. Secondly, the only structural break employed in this study is the outbreak of the COVID-19 pandemic in South Africa. Thirdly, whilst there are several behavioural biases that could influence ETF investment choices, this study only focuses on the herd bias. Based on these limitations, further research should examine the presence of investor herd behaviour during the COVID-19 pandemic in markets for different asset classes, including commodities, bonds, stocks, and Real Estates Investment Trusts (REITs). Further research can also explore the presence of investor herd behaviour in the South African ETF market during different crises, including the 2008 global financial crisis. Finally, future studies should also examine the presence of different behavioural biases in the South African ETF market.

Biographical Notes

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