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Modelling the impact of COVID-19 pandemic on some Nigerian sectorial Stocks: Evidence from GARCH models with structural breaks

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Brief Description

In the past the world stock markets have suffered from Global financial crisis and now the market is been plague by the COVID-19 pandemic of which developed, developing and underdeveloped economies and markets are not left out.

Therefore, this study investigates the impact of COVID-19 on five (5) Nigerian Stock Exchange (NSE) sectorial stocks namely: NSE Insurance, NSE Banking, NSE Oil and Gas, NSE Food and Beverages, NSE Consumer goods.

To achieve the goal of this paper, daily stock prices were obtained from a secondary source ranging from 2nd January 2020 to 25th March 2021.

Because of the importance of incorporating structural breaks in modelling stock returns, the Zivot-Andrews Unit Root Test was applied to the stock returns and the results of the test revealed 20th January 2021, 26th March 2020, 27th July 2020, 23rd March 2020 and 23rd March 2020 as potential break point for NSE Insurance, NSE Food, Beverages and Tobacco, NSE Oil and Gas, NSE Banking and NSE Consumer goods respectively.

This study investigates the volatility in daily stock returns for the five (5) Nigerian Stock Exchange (NSE) sectorial stocks using nine variants of GARCH models: sGARCH, girGARCH, eGARCH, iGARCH, aPARCH, TGARCH, NGARCH, NAGARCH, and AVGARCH along with the half-life and persistence values were obtained.

The study used the Student t and Skewed Student t distributions.

The results from the GARCH models revealed negative impact of COVID-19 on NSE Insurance, NSE Food, Beverages and Tobacco, NSE Banking and NSE Consumer goods stock returns except NSE Oil and Gas returns which showed positive correlation with the COVID-19 Pandemic.

This study recommends shareholders; investors and policy players in the Nigerian Stock exchange markets should be adequately prepared in form of diversification of investment in stocks that can withstand future possible crisis in the market.

Abstract

In the past the world stock markets have suffered from Global financial crisis and now the market is been plague by the COVID-19 pandemic of which developed, developing and underdeveloped economies and markets are not left out. Therefore, this study investigates the impact of COVID-19 on five (5) Nigerian Stock Exchange (NSE) sectorial stocks namely: NSE Insurance, NSE Banking, NSE Oil and Gas, NSE Food and Beverages, NSE Consumer goods. To achieve the goal of this paper, daily stock prices were obtained from a secondary source ranging from 2nd January 2020 to 25th March 2021. Because of the importance of incorporating structural breaks in modelling stock returns, the Zivot-Andrews Unit Root Test was applied to the stock returns and the results of the test revealed 20th January 2021, 26th March 2020, 27th July 2020, 23rd March 2020 and 23rd March 2020 as potential break point for NSE Insurance, NSE Food, Beverages and Tobacco, NSE Oil and Gas, NSE Banking and NSE Consumer goods respectively. This study investigates the volatility in daily stock returns for the five (5) Nigerian Stock Exchange (NSE) sectorial stocks using nine variants of GARCH models: sGARCH, girGARCH, eGARCH, iGARCH, aPARCH, TGARCH, NGARCH, NAGARCH, and AVGARCH along with the half-life and persistence values were obtained. The study used the Student t and Skewed Student t distributions. The results from the GARCH models revealed negative impact of COVID-19 on NSE Insurance, NSE Food, Beverages and Tobacco, NSE Banking and NSE Consumer goods stock returns except NSE Oil and Gas returns which showed positive correlation with the COVID-19 Pandemic. This study recommends shareholders; investors and policy players in the Nigerian Stock exchange markets should be adequately prepared in form of diversification of investment in stocks that can withstand future possible crisis in the market.