Chapter 95
COVID-19, Stock Market, Exchange Rate, Oil Prices, Unemployment, Inflation, Geopolitical Risk Nexus, the Case of the BRICS Nations:
Evidence Quantile Regression

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ABSTRACT

This chapter attempts to study the impact of the COVID-19 pandemic on the stock markets of the BRICS nations. Such an exercise will have an important bearing on portfolio allocation in the context of the BRICS. The major contribution of the chapter in the extant literature is to examine based on the multifactor model of the capital asset pricing theory, how uncertainty owing to the pandemic interplay with the geopolitical index to impact the stock market of the BRICS. Further, the major macroeconomic factors are used as control variables. The daily observations were used from 31 December 2019 to 30 December 2020. The results based on the quantile regression model demonstrate the asymmetric response of the stock market to the pandemic. The policy implication that follows from this study is the need for strategic intervention of the central bank to ease the liquidity challenges in the crisis period.

INTRODUCTION

The occurrence of the novel coronavirus, Covid-19 contagion, is declared as a major pandemic, Yang *et al*., (2020), with approximately 105,935,704 confirmed cases and 2,309,486 deaths as of February 6, 2021. The strict measures imposed by various governments such as closedown of borders, lockdown

DOI: 10.4018/978-1-6684-7460-0.ch095

and movement restrictions have severely impacted the economies and financial markets worldwide. The IMF (International Monetary Fund) in its April 2020 report projected a negative global growth rate worse than that of the global financial crisis of 2007/2009. The economic consequences of the pandemic included disruptions in the supply chain, a plunge in the production process, a decline in consumption activities and a slowdown of investment. Furthermore, the stock markets also experienced downswings particularly due to governmental restrictions on movement. Against this backdrop, the current study attempts to explore the impact of the COVID-19 pandemic upon the stock markets across the major economies of the BRICS nations. According to Salvatore (2020), the COVID-19 has severely impacted the emerging economies of the BRICS nations such as Brazil, Russia, India, China and South Africa which were the major countries contributing to the global share of economic growth. According to Mensi *et al*., (2014) the BRICS nations is projected to account for more than 40 per cent of global stock market capitalization by 2030. Understanding the current potential dependence of the BRICS nations in the financial world it is worthwhile to investigate the impact upon the BRICS. The study further explores the potential moderating impact of the recent pandemic on the geopolitical risk and how it further impacts the stock market. Geopolitical risks affect business cycles which has adverse implications upon the financial markets, Caldara and Iacoviello (2018). To the best of our knowledge, this chapter is the first of its kind which analyses the moderating role of the Geopolitical index along with the COVID-19 impact upon stock markets. Our chapter contributes to the existing literature as follows. First, our study can be considered as the trailblazer which explores the impact of the COVID-19 pandemic on the performance of the stock market for the BRICS nations. Second the current research examines how the government response measures impacted the stock markets. Third to analyze the responsiveness of the stock market to the pandemic situation the study utilizes the multifactor model, a variant of the Capital Asset Pricing Model postulated by (Sharpe,1964, and Fama and French, 1996). The study further used major macroeconomic variables as control variables to avoid misspecification bias. Fourth this is one of the very few researches to our knowledge that addresses the geopolitical implications and its moderating impact upon the stock market fluctuations. Geopolitical implications impact power structures across nations and this may have interesting implications upon the stock market behaviour in the backdrop of the pandemics. Last, the study used quantile regression (QR) methods to explore how the pandemic impacted the stock market indices across various quantiles. According to Baur (2013), the utilization of the QR methods for studying the implications on stock market behaviour can throw crucial information on the asymmetric and non-linear influences of the conditional variables on the dependent variable.

The hypothesis to be tested is as follows:

1. The COVID-19 pandemics impact the stock market negatively owing to the pessimism associated with the pandemic. Further other macroeconomic factors like unemployment, exchange rate fluctuations and central bank policy rate may have an abnormal impact on stock prices in the backdrop of the pandemic.
2. The announcements of government stringency measures cause stock prices to decline because of associated uncertainties. However, the overall government response index will cause stock prices to rise owing to the public's faith in multi-directional attitude of the government.
3. The declaring of government economic incentive packages and health programmes on testing generate positive sentiments leading to a rise in stock prices.
4. Geopolitical index has a mediating impact on stock prices.
5. The impact of the pandemic will be asymmetric across the stock markets.

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