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Impact of the COVID-19 Outbreak on the Currency Exchanges of Selected Countries

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ABSTRACT

The paper aims to analyse the impact of the COVID outbreak on the currency market. The study considers spot rates of seven major currencies (i.e., EUR/USD, USD/JPY, GBP/USD, AUD/USD, USD/CAD, USD/CHF, and CHF/JPY). To capture the impact of the outbreak on returns and the volatility of returns of seven currencies during pandemic, the study has segregated in two window periods (i.e., pre- [1st Jan 2019 to 31st Dec, 2019] and post-outbreak of COVID-19 [1st Jan, 2020 to 22nd Dec, 2020]). The study has applied various methods and models (i.e., econometric-based compounded annual growth rate [CAGR], dummy variable regression, and generalized autoregressive conditional heteroskedasticity [GARCH]). The result of the study captures the negative impact of the COVID-19 pandemic on three currencies—USD/JPY, AUD/USD, and USD/CHF—and positive significant impact on EUR/USD, GBP/USD, USD/CAD, and CHF/JPY. Investors can take short position in these while having long position in other currencies. The inferences drawn from the analysis are providing insight to investors and hedgers.

KEYWORDS

COVID-19, Currency Exchange, Forex Market, Investor, Liquidity, Pandemic Crisis, Spot Rate, Trend Analysis

BACKGROUND AND MOTIVATION OF THE STUDY

Uncertainty and volatility caused by the COVID -19 pandemic has created major disruptions in the global economy. The unprecedented economic crisis has adversely affected different aspects of the world economy. The impact of COVID -19 has adversely affected global trade and the World Trade Organization has projected that the world trade will decline by 13% to 32% in 2020. The International Monetary Fund (IMF) has projected that the worldwide market will shrink by 3% in the year 2020. It has further been predicted that the major economies such as United States, United Kingdom and Japan will contract by 5.9%, 6.5% and 5.2% respectively. COVID-19 has created three major shocks in the form of negative demand and supply shock, and financial shock. Demand shock, on the one hand, has negatively affected the purchase of commodities by consumers and has also created travel limitations or restrictions. On the other hand, supply shock has negatively impacted the economy's ability to produce goods and services. Liquidity crisis and volatility in the stock and exchange market

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has created financial shock. The amalgam of these three major shocks has unfavorably impacted the growth of overall economy.

The outbreak of the corona pandemic has heightened the levels of disruptions in the foreign exchange market leading to the turbulence of foreign exchange rates. Exchange rate volatility has become a major perturbing factor in many countries as it is signaling to economic distress. Lockdown measures during the COVID-19 pandemic resulted in the low demand for energy products leading to the depreciation of the currency rates of net oil - exporting countries like Brazil, Australia, and Indonesia. During the worldwide lockdown, currencies of the countries dependent on the export of a few goods depreciated to a great extent. Foreign debt requirements further resulted in the depreciation of the specific currencies. In response to the persistent depreciation of many currencies, direct coordinated intervention in the foreign exchange market can be strategized by G-20 and other affected countries.

The forex market witnessed the strengthening of the US Dollar (USD) in comparison to the other most traded currencies in the world. The value of British Pound (GBP) was 1.2822 USD on Feb 29,2020, and it went down to 1.2393 USD on March 30,2020. The GBP fell significantly against the USD during the outbreak of the pandemic. The value of Australian Dollar and Brazilian real also plunged in a considerable way. However, currencies like the Japanese Yen and Swiss Franc did not observed a great decline in their value against USD. The Indian rupee also depreciated significantly against the USD during the COVID outbreak. In the week ended March 20, India's foreign exchange reserve also declined by as much as $11.98 billion. Thus, the impact of COVID can be sharply observed in the fluctuations of different foreign currencies. Valuable information can be gathered through disease outbreaks that can be used in volatility predictions and can enhance exchange rate returns (Lyke, 2020).

There is a very scant literature available on impact of pandemic currency market. This study analyses the impact of pandemic both on returns and volatility of returns of select currencies and finally the empirical evidences extended to identifying the diversification opportunities in the pandemic scenario. This makes the study novel and unique from the existing literature. This motivates the authors to empirically analyse or capture the impact of pandemic crisis on the currency market. The study is limited to seven currencies and hence the results derived by applying various models capture a glimpse of the impact of pandemic on currency market.

The study captures the impact of the outbreak of COVID-19 on seven currencies that are EUR/USD, USD/JPY, GBP/USD, AUD/USD, USD/CAD, USD/CHF, and CHF/JPY. To capture the impact of the outbreak on returns and volatility of currency market during pandemic, the study has to be done in two window periods i.e. pre and post outbreak of COVID-19. The study has applied various methods and models to understand the impact of pandemic on returns and volatility of returns of the select currencies. For this trend analysis i.e. econometric based Compounded Annual Growth Rate (CAGR) model has been done in both window periods and then the study has applied econometric based Dummy variable regression to capture the overall impact of the outbreak of COVID-19 on the returns of indices. Finally, the study strengthened by applying standard Generalized Autoregressive Conditional Heteroskedasticity (GARCH 1, 1) to understand the volatility persistence both long and short term.

The result of the study captures the negative impact of the outbreak of COVID-19 on three currencies that are USDJPY; AUDUSD and USDCHF and positive significant impact on currencies like EUSUSD, GBPUSD, USD/CAD and CHFJPY. The overall impact of pandemic outbreak is mixed i.e. 4 currencies have positive impact and remaining 3 have negative impact. Overall low volatility was noticed in 6 out of 7 currencies during the outbreak of the COVID -19. During the pandemic outbreak, the short term volatility increased significantly but the long term volatility reduced significantly. It has been further observed that EURUSD, USDCAD and CHFJPY have positive returns with low volatility during the pandemic outbreak. Henceforth, these currencies have been considered as hedge against the probable loss in this pandemic. The inferences drawn from the analysis are providing insight to investors and hedgers.