

Was the Foreign Exchange Market Affected by the Pandemic Crisis?

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Abstract. *In order to understand the impact of Covid-19 on different economies, this paper tries to underline the effects of the Covid-19 pandemic over some of the most traded currencies. For this purpose, a period of 3 years has been taken into consideration and the data was analyzed with the help of MetaTrader platform. The findings indicate a correlation between the pandemic and the volatility of the analyzed exchange rates. The results indicate that the observed pairs were affected negatively by the pandemic crisis. Thus, the effect of the pandemic is not only on a short time, but the effects will also be seen on a longer period of time.*

Key words: Covid-19, pandemic, forex market, currency exchange

JEL Classification: F31, G15

1. Introduction

The COVID-19 pandemic has been a global pandemic initiated in December 2019, from the city of Wuhan, China. The World Health Organization (WHO) declared this as a pandemic on March 11, 2020.

The Covid-19 pandemic has affected the global economy in a very short period of time. A lot of countries around the world imposed restrictions, lockdowns and social distancing in order to try to stop the spreading of the virus. All these measures influenced the financial environment and continued to freeze the economy worldwide.

According to the WHO, as of June 2021, 176.156.662 cases and more than 3.815486 death have been confirmed. The most affected areas in terms of confirmed cases are America (about 70 million cases), out of which 33 million only in United States, followed by Europe with about 55 million cases and South-East Asia with a number of 33 million confirmed cases. Regarding the number of vaccine doses that were administered until June 2021, the statistics show a number of 2.3 billion doses. These figures outline the idea of the pandemic impact, a global impact that affected all the economies and markets worldwide, including the Forex market.

The impact of the pandemic on the world's financial markets has been also observed in the changes registered by the foreign exchange (Rizvi et al., 2020; Umar et al., 2021). The exchange rate is considered to be a major economic indicator, which was also affected by the pandemic, which led to the fluctuation of the exchange rate (Su et al., 2021).

The researchers worldwide have conducted a high number of studies on the effects of the Covid-19, based on the impact of the pandemic on different economies. The price fluctuations and the returns of the investment funds from Europe during the pandemic were evaluated by Mirza (2020).

Cepoi (2020) analyzed the correlation between COVID-19 and the performance of the stock market in six of the countries that were mostly affected by the pandemic. The negative impact of the pandemic was also investigated by Apergis (2020), by observing the Chinese stock market. The influence of Covid-19 was also observed

(CAMBA and CAMBA, 2020) on the Philippines stock exchange, the exchange rate of peso and the diesel prices.

Another study tested if the pandemic crisis affected the exchange rate, by taking into consideration the exchange rate of five currencies (Pasiouras and Daglis, 2020). Feng et al. (2021) analyzed the correlation between the number of confirmed cases and the volatility of the exchange rate. Another study, based on the correlation between the American dollar and the price of oil has been conducted by Devpura (2021). Yarovaya et al. (2021) examined the effects and the impact that the capital had on the returns of the mutual funds during the three phases of the pandemic.

All the above mentioned studies used different variables instead of the exchange rates. Even so, most of the studies were only conducted on certain markets and in certain regions without considering the impact of the pandemic on the global FX markets (Nikkinen et al., 2006; Antonakakis et al., 2016; Caporin et al., 2019; Fasanya and Akinde, 2019; Albulescu, 2020; Corbet et al., 2020). Thus, this paper tries to focus on the impact of pandemic on the exchange rate, by using 6 of the major pairs.

2. Data and methodology

The data sample consists of six major pairs traded in Forex markets (EUR/USD, GBP/USD, USD/CAD, EUR/JPY, EUR/CHF, USD/JPY) and their evolution on a 3 years' period, including also the pandemic period, in order to observe the changes and the effects that the Covid-19 pandemic had over the Forex market.

COVID-19 was first reported by the Chinese authorities on December 31st, 2019 to the World Health Organization (WHO), who declared it as a pandemic in March 2020. Based on this date, the analyzed period is divided into two sub-periods: before the Covid-19 pandemic (March 2018 – March 2020) and during the Covid-19 pandemic (March 2020 – June 2021). The data on COVID-19 are obtained from World Health Organization (WHO) reports and the exchange pairs data are from the database of Forex Forum Global.

To measure the influence of the pandemic crisis was used the MetaTrader platform, which is an electronic trading platform used by several retail speculative traders worldwide. In order to observe the volatility and the trend of the exchange rate, both the moving average (calculates the averages of the market's fluctuation to identify trends and to establish a trading strategy) and the moving average convergence divergence (to show both the bullish and bearish moments in order to identify the entry and exit points) were taken into calculation.

3. Empirical results and discussions

• EUR/USD

The EUR/USD pair is the most popular one on the Forex market and has the highest liquidity, as the two currencies represent the largest economies in the world. Both the European Central Bank and the United States Federal Reserve have a very important contribution to the global economic environment. The difference in volatility between the two currencies makes one more valuable than the other, thing that is reflected in the trading platforms as the traders can speculate regarding the direction in which the market is heading.

During the pandemic, the United States' gross domestic product (GDP) decreased with 4.8% during the first quarter of 2020, thing that brings to an end the longest era of prosperity for the American economy. Even if the American dollar is the most popular

currency for trading and investing worldwide, the pandemic affected its value very strongly.



Figure 1 - EUR/USD pair (2018 – 2021)
Source: MetaTrader4, 2021

Figure 1 shows the EUR/USD pair and its fluctuations starting with March 2018 up to June 2021. At the beginning of 2021, the exchange rate reaches a peak of 1.2325, level that was registered before in April 2018 (as seen with the help of the C yellow line). The downward trend indicates the loss of euro against the dollar, and after almost two years, in March 2020, immediately after the World Health Organization declared the beginning of the pandemic, a minimum value was reached, thing represented by the red line (A). After this date, the trend of the pair was an upward one until June 2021, registering an increase from the level mentioned on March 2020 (from 1.0658 to 1.2105).

The Moving Average Convergence Divergence (MACD) indicator on June 11,2020 shows a short market crash at 1.0656, level known as red line (A).

A downward trend, observed from April 2018 until the beginning of the pandemic, is presented by the red fluctuation channel. As seen in figure 2, the situation changes and the exchange rate registers an upward trend (green fluctuation channel), only after hitting the 1.0656 value (A line). Thus, the Euro becomes stronger against the American dollar, reaching the value of 1.2165 (B line), with a maximum value of 1.2325 (C line).



Figure 2 - EUR/USD pair (2020 – 2021)
Source: MetaTrader4, 2021

• **GBP/USD**

The British Pound (GBP) is the 4th most traded currency in the Forex market. The pair GBP/USD, also referred to as the cable, is one of the oldest traded currency pairs and it is influenced by several factors. For example, the interest rates differences between the Bank of England and the Federal Reserve will affect both the currencies. When the American dollar gets stronger, after the intervention of the Fed, the value of the pair GBP/USD could decrease and the other way around.

On March 11, 2020 the Bank of England lowered the interest rates from 0.75% to 0.25% and then to 0.1% (March 19, 2020), as a measure in response to the pandemic, thing that determined the currency pair to reach the lowest value since 1985 (figure 3). The MACD indicator shows a short time crash below the value of 1.150 (point A).



Figure 3 – GBP/USD pair (2020-2021)

Source: MetaTrader4, 2021

The upward trend (figure 4) registered from the beginning of the pandemic (March, 2020) until June, 2021, moved the value from 1.1415 (point A) to 1.4206 (point B), showing different fluctuations shown in correlation with the C line.



Figure 4 – GBP/USD pair (2018-2021)

Source: MetaTrader4, 2021

Even if the American Dollar remains the most important currency for the Forex market, the British pound will still have a strong position, as it realized to face the problems of 2020, given by the pandemic and the backdrop of Brexit. So, for the first six months of 2021, both the economy of the United Kingdom and the value of the GBP’s exchange rate will remain uncertain. Meanwhile, as it can be seen above, the British

Pound (GBP) raised against the American dollar (USD) due to the monetary policy that was adopted by the European Bank related to the problems faced by the American government.

• USD/CAD

The Canadian dollar (CAD) was adopted in 1841 and its exchange rate was fixed to the American dollar during the Second World War (1 USD = 1.1 CAD). Since 1970, the Canadian dollar became a floating currency and is also known as the loonie. The USD/CAD pair is one of the most liquid and actively traded pairs in the Forex market, as between the 2 nations there are important business relations. Even so, the American dollar was, most of the time, the stronger of the two currencies. The value of the pair is affected by the interest rates established by the Federal Reserve and the Bank of Canada. On the other hand, the value of the Canadian dollar is also influenced by the price of different commodities, especially of crude oil, as the Canadian economy relies hardly on oil.

As seen in figure 5, point A represents both the value from the beginning of June 2021, as well as the minimum exchange rate registered (1.2035) during the analyzed period. The previous low value was observed in 2017, when the trend started to increase. This minimum value in recent years should exceed the resistance line (B line), which has as reference point the value from February 2018 (1.2239), representing the start point for the upward trend until the beginning of the pandemic.



Figure 5 - USD/CAD pair (2017-2021)

Source: MetaTrader4, 2021

The highest exchange rate during the observed period is represented by the C line (yellow line), with a value of approximately of 1.4501, one week after the beginning of the pandemic, a value last recorded in 2016.

As the pandemic started the markets panicked and the Central Banks cut the interest rates and the commodity currencies, such as the Canadian dollar, dropped, as the oil price went down. The exchange rates were very volatile and the Canadian dollar weakened in early March 2020, going all the way up to 1.4660 (figure 6). The American dollar has a short growth period due to the interest rates that have been lowered by the Federal Reserve, from 2% to 0.25% (March, 2020), but afterwards a downtrend followed.



Figure 6 - USD/CAD pair (2020-2021)

Source: MetaTrader4, 2021

• EUR/JPY

The Japanese Yen (JPY) is the 3rd most traded currency worldwide and is considered a backup currency after the American dollar. It was introduced in 1871 by the Meiji government in order to modernize the economy of the country. Japan is one of the most technologically advanced nation in the world, being known for its innovation accuracy in various field, reason for which the Japanese yen is considered to be a safe haven. The value of the pair is affected by the interest rates established by the European Central Bank and the Bank of Japan.

Figure 7 shows the evolution of the EUR/JPY exchange rate for a 3 years' period, from March 2018 up to June 2021, taking into consideration both the period prior to the pandemic, but also the following period. The fluctuation channel (red channel) represents the downward trend of the EUR/JPY parity from March 2018 until the beginning of the pandemic.



Figure 7 - EUR/JPY pair (2018-2021)

Source: MetaTrader4, 2021

The exchange rate in May 2021 was around 133.244, a value recorded last in April 2018, thus becoming the resistance for this pair for over three years, later managing to exceed this value (B blue line). On the other hand, as a result of the interest rates changes and the economic growth, euro becomes stronger against the Japanese yen, with an upward trend in this exchange rate.

In May 2020, the EUR/JPY parity registered a low around 114.500 (point represented on the A line), value previously met in April 2017 (figure 8). From this point forward, an increase was registered up to the value of the B line (133.244).



Figure 8 - EUR/JPY pair (2020-2021)
Source: MetaTrader4, 2021

• **EUR/CHF**

The Swiss franc (CHF), also called swissie, is the 7th most traded currency in the world and is a popular currency, being considered a safe haven currency due to the Switzerland’s political and economic stability and a relatively low inflation rate.

The highest value of this parity for the observed period, was recorded in April 2018 of 1.1987, represented by the C line (yellow line). Since then, the EUR/CHF parity followed a downward trend, reaching the B line at the end of 2019 and the lowest point of 1.051 (line A), after which the market started to recover (figure 9). The exchange rate of the EUR/ CHF pair has changed the direction due to the increased number of goods exported outside the EU and the foreign currencies bought in order to ensure the adequate monetary conditions.



Figure 9 - EUR/CHF pair (2018-2021)
Source: MetaTrader4, 2021

A few months after the beginning of the pandemic, the EUR/CHF parity recorded the level of 1.051 (red line A), level last reached in the summer of 2015. The blue line (B) represents the parity value at a level of 1.0937, with a fluctuation between 1.091 and 1.101, recorded during the last observed month (figure 10).



Figure 10 - EUR/CHF pair (2020-2021)
Source: MetaTrader4, 2021

- **USD/JPY**

When investors change their confidence in a financial instrument, they move to a safe haven currency, a currency that is sustained by a stable economy. The USD/JPY pair is one of the most liquid and traded pairs on the Forex market, as the two currencies represent two very important economies, both having the status of reserve currencies.

The green and the red fluctuation channel show both a downward and an upward trend, due to the exchange rates adjustments and the health status of the two economies. The value of the interest rates and the prices for the treasury bonds are just some of the factors that determine the fluctuation of the parity's value.

The minimum value registered during the 3 years' period is represented by the A line (red line) at a value of 102.711, level last observed in April 2016 (figure 11). At the opposite pole, the maximum level was recorded in October 2018 (114.530), represented by the C line (yellow line) and last observed several times in 2017.



Figure 11 - USD/JPY pair (2018-2021)
Source: MetaTrader4, 2021

After the pandemic started (Figure 12), a change in the trend was captured, from descending (up to line A) to ascending (up to line B, with a value of 109.524), fluctuation registered also due to the change in the interest rates. The high volatility determines the traders to enter on the market, in order to be able to obtain a profit.



Figure 12 - USD/JPY pair (2020-2021)

Source: MetaTrader4, 2021

3. Conclusions

Following the analysis of the 6 major pairs during the 3 years' period, before and during the pandemic crisis, the changes that Covid-19 brought to the Forex market were observed.

As for the evolution of EUR/USD parity, it registered a decreasing trend, with a minimum hit when the Covid-19 pandemic was declared and followed by an upward trend afterwards, as the Euro started to gain value against the American dollar.

The same downward trend was also observed for the GBP/USD parity, until declaring the pandemic, reaching a historical minimum value, last recorded in 1985. After this period, the British Pound (GBP) starts to appreciate, exceeding the resistance line from 2018.

As a result of US monetary policy, the American dollar recorded a growth for a short period of time, followed by a decrease, as the Canadian dollar gets stronger.

The pandemic affects the EUR/JPY parity, by influencing both the price fluctuation and the trend change. Before the declaration of the pandemic in March 2020, the parity was on a downward trend, but the situation changed due to the decisions taken by the central banks, which made Euro gain value and reach the recorded value from the beginning of 2018.

Against the Swiss franc (CHF), the Euro is gaining value most of the time, but when the pandemic was declared and also at the end of the analyzed period the franc shows little signs of recovery.

Due to the change of the interest rates, the USD/JPY exchange rate fluctuated several times, thing that caused traders to trade the parity. As for the trend registered, the USD/JPY pair shows the continuous changes in value, down to a minimum level of 102.711, followed by the American dollar appreciation, reaching a value of 109.524, at the beginning of June 2021.

In conclusion, all the analyzed pairs fluctuated, moving along with the health of the economies.

The foreign exchange market was affected by what happened worldwide and the pandemic impact has led to high volatility, trend changes, historical prices (GBP), but also to a higher degree of liquidity compared to the previous period. The measures taken by the central banks have led to the implementation of monetary policies to support the exchange rate of the currencies in question.

Besides all these, the pandemic also had positive effects, which led to an increase in the trading values and volumes, thing that created a beneficial environment for the forex traders.

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