Assignment

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**International Finance**

**Introduction**

Forecasting has conducted through three different ways technical, fundamental and market-based analysis, these techniques are mostly used for investment decision purposes. In later decades, both academics and professionals had attracted towards technical analysis. The efficient nature of market is confirmed by the previous work and this historical price is used to make a profitable strategy. Some research studies show positive empirical evidence in simple trading rule return which is based on visual chart patterns, channels, resistance, and support or moving average. In technical analysis, the historical data is used to forecast the direction of prices such as market volume and price (Edwards, Magee, & Bassetti, 2018). To examine related financial and economic factors fundamental analysis is used to measure the security intrinsic value. Anything which can affect the vale of security is analyzed through fundamental analysis which may include microeconomic factors, such as effectiveness of the management of the company and macroeconomic factors such as industry conditions and state of the economy. The investor finally can see the value of a security which may be over or undervalued (Bartram, & Grinblatt, 2018). The third way to analyze data is market-based forecasting in which forward, and current spot exchange rates are used to forecast exchange rate in the future point of time. The main purpose of study is to analyze the US dollar value may change against the German currency. The technical, fundamental and market-based analysis will be conducted to forecast the exchange rate of US dollars concerning German Euro.

**Discussion**

The German currency has found 56% predictable the german currency is a very stable currency, and its technical forecasting shows that the investment in Euro will be profitable in future. By using Generic AlgorithmNeutral Network (GANN) the studies shows the movement predictions of Euro to USD. GANN results show that the values of RMSE open at 0.00043, the high value of RMSE Is 0.00068, the low value of RMSE is 0.00075 and the RMSE closes at 0.00070. which shows that the market is moving in predictable behavior. The results of the study show that the prediction accuracy value is always high when the market is open. The market open pricesof the next day is the close of the previous day prices. The historical trends show that the market shows predictable fluctuation at 30 minutes earlier from market opening. The results revealed that all provided some impulse buy or sell. Those trades were accepted on the digital option up/down (Kolková, 2017). By using GARCH in mean analysis the results shows that there is a mean and volatility spillover effect from the US market to the German market. The risk of investment present in the US market will effect is associated with German market (Moosa, 2000).

By conducting fundamental analysis the results show that there is a chance of weakening European economy and external risk which may weaken the demand of US dollars and European bonds. These challenging factors kept the range of EUR/USD in 1.5/1.12. There is a prediction of volatility spike in the future. Last year America has economically outperformed the euro area, the federal reserve has controlled the increase in interest rate. The GDP growth rate of the US has slowed down from 3.4% to 2.4% in the last two quarters, due to its US dollar will suffer as compared to EUR.

Cointegration market based analysis is used to forecast the trend of US and German market and the results show that null hypothesis of most of the exchange rates has rejected. Market-based forecasting is based on two different hypotheses: the unbiased efficiency hypothesis and the random walk hypothesis. In unbiased efficiency hypothesis, the spot rate is efficient and unbiased which forecast the prevailing exchange rate of forwarding contract maturity date. In the random walk hypothesis, the fluctuations in the exchange rate are period to period and spot exchange rate is unpredictable and random (Moosa, 2000). The result shows the weak linear trend among the market of the US and Germany. The analysis conducted through the vector error correction model (VECM) shows that market efficiency is consistent in two cases only. The rest of the cases shows the inconsistency of efficiency between both markets. Market efficiency cannot be rejected for both sub-periods and results show that EUR is weakly exogeneous in both cases. The euro and dollars show a small range of cointegration and exchange rate pairing. The results shows that investment in the From Germany will not show any cointegration in the US market.

The ARCH method used the high-frequency data which was sampled in the frequency of five minutes, private information and new announcements create an impact on return and volatility of Euro/Dollars FOREX. The announcement includes both kind scheduled and un-scheduled new announcements. The EGARCH analysis which is usually used to check the robustness of results, also shows significant mean and volatility spillover effect among the market of Germany and the US. The increase in volatility spillover effect is sometimes insignificant when the news is unscheduled excluded the interbank intervention or interest rate reports.  The results also show that the volatility spillover effect is increased when the news is scheduled and periodic unscheduled news (Bauwens, Omrane, & Giot, 2015).

**Conclusion**

           The research based on three techniques of forcasting shows that the euro and dollar show linear cointegration when the news announcement is scheduled or periodic unscheduled. The results show significant mean and volatility effect between both markets. But the volatility effect is more positive when there is a scheduled news announcement. The economic factors of US are unstable sometimes as compared to Germany. The investors have to be vigilant while investing in the US market.

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