CHAPTER 5

Discussion and Future Work

5.1   Discussion

This project aims to analyse the historical data from exchange rate ,CPI ,interest rate and 10-Year bond of China and US.Through the result of the analysis,it can conclude that interest is a major and significant factor which affect the change of the FOREX.Furthermore,CPI and 10-year bond also plays an important role in the movement of the FOREX by directly affecting the interest.

By the use of the LSTM model, it exports the trending of the USD to CNY exchange rate over the next 30 days based on historical data and its relationship with four key macroeconomic factors: CPI for both the US and China, and interest rates and 10-year bond yields from both countries.The LSTM model is good at catching long-term dependencies in sequential data, transforming it to an effective and valuable data for financial time series analysis. It conveys and converts past patterns in the exchange rate and these influencing factors to detect deep relationships and predict future trends.

5.2 Future Work

Due to the limitation of single machine learning,LSTM which is powerful at capturing sequential dependencies,we acknowledge that it may have a shortage in ensuring consistently high accuracy because of challenges such as overfitting, sensitivity of hyperparameters, and the analysis of nonlinear or stochastic relationships in complex datasets.It will lead to misrepresent and slant the final conclusions or findings.

In the future work tackling these inappropriate issues,it is necessary to

concern the possibility of involving hybrid models to facilitate the ability of the current single model,LSTM. Moreover,currently,there are various studies which exhibit kinds of hybrid frameworks such as merging LSTM with ARIMA (AutoRegressive Integrated Moving Average), Monte Carlo Simulation, or HMM(Hidden Markov Model),.According to the research,it is obvious to display the framework can export more accurate and valuable predictions.