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Letter from the Editor-in-Chief

Myanmar and Korea have many similarities and are complementary relationship. Therefore, we believe that research exchange will expand mutual understanding between Myanmar and Korea, and will be the cornerstone for mutual development.

KOMYRA and YUE have co-published The Myanmar Journal since August 2014. So far, many scholars have published numerous papers through the journal, and We are sure that this journal has helped many people understand Myanmar and Korea more clearly and closely.

The Myanmar Journal covers various issues in Myanmar and Korea. It covers various topics that can promote bilateral development and mutual understanding, not limited to specific topics such as economy, industry, society, education, welfare, culture, energy, engineering, healthcare, and agriculture.

We hope that this journal will continue to promote understanding of the current status and potential capabilities of Myanmar and South Korea and promote in-depth international exchange and cooperation.

We would like to express our deepest gratitude to the editorial board and YUE and KOMYRA for their valuable support in The Myanmar Journal publication.

February 28, 2022

Youngjun Choi *yj choi*

Editor-in-Chief of THE MYANMAR JOURNAL
Vice-President of KOMYRA
Email: yjchoi@khu.ac.kr
Office: +82-2-961-0485
Web address: komyra.com/doc/scope.php

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INFORMATION ABOUT The Myanmar Journal

The Myanmar Journal (ISSN 2383-6563) is the official international journal co-published by Yangon University of Economics (YUE) and Korea Myanmar Research Institute (KOMYRA).

This journal aims to promote the mutual cooperation and development of Myanmar and Korea through intensive researches in the entire field of society, economy, culture, and industry.

It will cover all general academic and industrial issues, and share ideas, problems and solution for development of Myanmar.

Articles for publication will be on-line released twice a year at the end of February and August every year on the Myanmar Journal webpage (http://www.komyra.com/bbs/board.php?bo_table=articles).

Time Series Analysis of Foreign Exchange Rate in Myanmar and Korea

WEI EI AYE*

*University of Co-operative and Management, Sagaing
Sagaing, Myanmar*

ABSTRACT : This paper is concerned with the monthly exchange rate between the MMK/USD and KRW/USD. The objectives of this paper are to analyze the most appropriate model for foreign exchange rate in Myanmar and Korea and to forecast the future value based on fitted models for foreign exchange rate in Myanmar and Korea. The monthly data of foreign exchange rate from 2012 to 2021 are calculated by using the released of International Financial Statistics (IFS). In this study, Box-Jenkins methodology are applied. It was found that the exchange rate of Myanmar is upward trend and Korea exchange rate is slightly upward and downward trend. The best fitted models are ARIMA (1, 1, 2) and ARIMA (2, 1, 1) model of Myanmar and Korea respectively. Finding the forecast values of confidence interval have between 95% lower and upper limits. The forecasted values of USD are found that exchange rate of Myanmar is growing from November 2021 to October 2022 and Korea will gradually decrease the next months. Consequently, Central Bank of Myanmar could come forward by working with the policies and financial system efficiency that would be useful in improving the mechanisms for inflation. Moreover, a proper plan for monetary policy is required to reduce the gap between the values of dollar and MMK. Korea can control a largely fixed exchange rate regime for the dollar-won exchange rate.

Key words : *Exchange Rate, MMK/USD, KRW/USD, Box-Jenkins Methodology*

I. Introduction

Exchange rate is known as the foreign exchange rate or forex rate between two

* Associate Professor, Department of Statistics, University of Co-operative and Management, Sagaing, Myanmar, eieiaye96@gmail.com, +959268135700

currencies specified how much one currency is worth in terms of the other (Adetunde, 2011). It is the value of a foreign nation's currency in terms of the home nation's currency (Adetunde, 2011). The exchange rate is a relative price that measures the worth of a domestic currency in terms of another currency (Nwankwo, 2014). Foreign exchange denotes the process of trading domestic currencies for foreign ones at varying exchange rates. Exchange rate is the rate at which two national currencies exchange for each other (Nyoni, 2018). Exchange rate is often expressed as the amount of domestic currency needed to buy one unit of foreign currency (Nyoni, 2018).

Foreign exchange is a major issue in the discussion of world economy (Nyoni, 2018). Modern macroeconomics relies hugely on foreign exchange rate dynamics (Medel, et al, 2015). Exchange rate modeling and forecasting is important for policy making (Hina and Qayyum, 2015). The currency in forecasting the foreign exchange rate or at least predicting the trend correctly is of crucial importance for any future investment (Nwankwo, 2014). Forecasting exchange rate is crucial as it has significant impact on the macroeconomic fundamentals such as oil price, interest rate, wage, unemployment and the level of economic growth (Ramzan et al, 2012).

The exchange rate serves as an important price factor in the economy (Nyoni, 2018). It is a measurement of the price of country's domestic currency relative to a foreign basket of goods or prices (Gourinchas, 1999). It determines the relative prices of domestic and foreign goods, as well as the strength of external sector participation in the international trade (Mohammed and Abdulmuahymin, 2016). In fact, foreign exchange is the component that is widely used on daily basis for settlement of international transactions and international bills (Nyoni, 2018).

Foreign exchange is one of the most important financial instruments. Nowadays, the role of the foreign exchange market is becoming more and more important in the financial markets around the world. The foreign exchange market which is an over-the-counter market is used for the trading of currencies. The trading is happening 24 hours a day around the world and a great number of currencies is being transacted every hour. It makes the foreign exchange market the largest and most liquid market among the financial markets (Yongtao, 2011).

Exchange rate is a crucial variable which influences decisions taken by the participants of the foreign exchange market, namely investors, importers, exporters, bankers, financial institutions, business, tourists and policy makers both in the developing and developed world as well (Nyoni, 2019).

In Myanmar, an overvalued exchange rate makes economic activity undermine involving all tradable goods. If this situation persists, the country's industrial base will shrink, investors will be discouraged, unemployment will rise, poverty will deepen, more people will leave the country, the divide between rich and poor will grow, and

national strength and the people's prosperity will be diminished if not destroyed (Dapice et al, 2011). In 2011-2012, the exchange rate of MMK per U.S dollar was 5.3990. Between April 2012 and October 2021, the value of the kyat has ranged between roughly \$824 kyat and \$1,171 kyat for every 1 USD (Dapice et al, 2011).

Korea has maintained a largely fixed exchange rate regime for the dollar-won exchange rate, then switched to a heavily managed floating exchange rate regime around 1980, and continue until the Asian Financial Crisis occurred in 1997, which forced Korea to adopt a market-based exchange rate regime. Korea focus on the free-floating exchange rate regime in 2000 is after the Korean economy fully recovered from the crisis (Behera, Kim, & Kim, 2020).

The structure of a country's exchange rate is one of the factors that affect the survival of the country in the international trade (Njoki, 2019). Exchange rate forecasts play a fundamental role in nearly all aspects of international financial management (Njoki, 2019). Moreover, exchange rate forecasting is very important to assess the benefits and risks attached to the international business environment (Njoki, 2019). Therefore, forecasting of the exchange rate in Myanmar and Korea countries are analyzed in this study.

1. Objectives of the Study

The objectives of the study are

- (i) to analyze the most appropriate model for foreign exchange rate in Myanmar and Korea
- (ii) to forecast the future value based on fitted models for foreign exchange rate in Myanmar and Korea.

2. Material and Method

Time series analysis is used in this study, based on secondary data. The monthly data of foreign exchange rate from 2012 to 2021 are calculated by using the released of International Financial Statistics (IFS). In this study, Box-Jenkins methodology are applied. This study is limited to only foreign exchange rate in Myanmar and Korea.

II. Literature Review

Ahmed & Keya (2019) studied "Time Series Analysis for Predicting the Exchange

Rate of USD to BDT" by using time series data from year 1971-72 to 2014-15. The objectives of this paper are to study the trend of exchange rate of US dollar to Bangladeshi taka, to test the stationarity of the time series data and fit best ARIMA model and to forecast value of USD in terms of BDT for the years from 2015-16 to 2019-20. In this paper, Box-Jenkins methodology are used. After applying this method, the best fitted ARIMA (2, 1, 1) model has been obtained. Subsequently, forecasting has been made for USD in term of BDT from year 2015-16 to 2019-20. It is found that the forecast values of USD (in taka) continuously increase for next years.

Nyoni & Thanban (2019) explored "An ARIMA Analysis of the Indian Rupee / USD Exchange Rate in India" by using annual time series data from 1960 to 2017. The objectives of this paper are to develop an optimal ARIMA model for the analysis of the Indian Rupee / USD exchange rate, to check whether the Random Walk Model out performs other ARIMA processes in forecasting the Indian Rupee / USD exchange rate and to forecast the exchange rate of India over the period 2018 to 2027 (Nyoni, 2019). To forecast exchange rates is used the Box-Jenkins ARIMA technique. After applying this method, the optimal ARIMA (0, 1, 6) model has been obtained. The forecast results have shown that the exchange rate of India will depreciate slightly until 2027.

Nyoni & Thabani (2018) investigated "Modeling and Forecasting Naira / USD Exchange Rate in Nigeria: A Box-Jenkins ARIMA Approach". The Box-Jenkins ARIMA approach is used to model and forecast the Naira / USD exchange rate in Nigeria over the period 1960-2017. Diagnostic tests such as the ADF test indicate that exchange rate time series data is I (1). Based on the minimum AIC value, the optimal model is the ARIMA (1, 1, 1) model in this paper. It is also important to note that the forecast evaluation statistics, namely ME, RMSE, MAE, MPE, MAPE and Theil's U absolutely show that forecast accuracy is quite good. The forecast value indicates that the Naira will go on to depreciate.

Muhammed & Abdulmuahymin (2016) explored "Modelling the Exchange Ability of Nigerian currency (Naira) with respect to US Dollar". This research intends to explore the movements of the Naira/USD exchange rate and forecast the future exchange strength of Naira per Dollar using Naira/USD exchange rate data. Box-Jenkins method has been used in this study to forecast the exchange rate of Nigerian Naira with respect to US Dollar. Base on the criteria AIC and BIC, results show that ARIMA (0, 2, 1) was selected as the best model fits the data. A forecast value for period of six (6) years was made and the forecasted values were all within the confidence limits and the value of naira will continue to depreciate.

Kumar & Anand (2014) analyzed "An Application of Time Series ARIMA Forecasting Model for Predicting Sugarcane Production in India". In this paper, the

aim is to forecast sugarcane production for the five leading years. Box-Jenkins methodology has been used in this study to forecast sugarcane production in India. The best fitted model was found to be ARIMA (2, 1, 0) according to the lowest AIC and BIC values. The forecast results have shown that the annual sugarcane production will grow in 2013, then will take a sudden sharp decrease in 2014 and in future years 2015 through 2017, it will continuously raise.

III. Methodology

At first the descriptive statistics of the time series data of exchange rate from April 2012 to October 2021 has been found out to learn the summary of the entire data. Then a time series plot has been drawn to illustrate the trend of the data. Now the question of stationary arises. Augmented Dickey-Fuller (ADF) test is used to know whether the data is stationary or not. If the test tells that the data is not stationary, then differencing will be needed to make the data stationary. Autocorrelation Function (ACF) and Partial Autocorrelation Function (PACF) are expressed to choose the order of Autoregressive Integrated Moving Average (ARIMA) model. This process should be repeated until the best ARIMA model has been obtained. To get the best ARIMA model some criteria such as Akaike Information Criterion (AIC) or Bayesian Information Criterion (BIC) can be used. Finally, forecast of the time series data can be made using the best ARIMA model.

ARIMA is specified by three order parameters: (p, d, q). The procedure of fitting an ARIMA model is referred to as the Box-Jenkins method (Box and Jenkins, 1976).

1. Autoregressive (AR) Model

An Autoregressive AR(p) component is referring to the use of past values in the regression equation for the series Y. The autoregressive parameter p specifies the number of lags used in the model. For example, AR (2) or, equivalently, ARIMA (2, 0, 0), can be written as

$$Y_t = c + \phi_1 Y_{t-1} + \phi_2 Y_{t-2} + e_t \quad (1)$$

where ϕ_1 , ϕ_2 are the parameters for the model.

The d represents the degree of differencing in the integrated component. By differencing a series, it means simply subtracting its current and previous values d times. Differencing is often used to stabilize the series when the stationarity

assumption is not satisfied.

2. Moving Average (MA) Model

A Moving Average MA (q) component gives the error of the model as a combination of previous error terms e_t . The order q tells the number of terms to be included in the model. For example, MA (2) or ARIMA (0, 0, 2) can be written as

$$Y_t = c + \theta_1 e_{t-1} + \theta_2 e_{t-2} + e_t \quad (2)$$

where, θ_1 and θ_2 are the parameters of the MA (2) model.

3. Autoregressive Moving Average (ARMA) Model

An ARMA(p,q) model, according to Adhikari and Agarwal (2009), is a model that is derived by combining the Autoregressive AR(p) model, illustrated in Eq. 1 in the section above and the Moving Average MA(q) model, illustrated in Eq. 2 in the section above. It is suitable for analyzing univariate time series. Combining Eq. 1 and Eq. 2 will arrive at ARMA (p, q) model which has its explanatory variables being both the lag values of Y_t and the lag values of the error term of Y_t as illustrated in Eq. 3 below.

$$Y_t = c + \phi_1 Y_{t-1} + \phi_2 Y_{t-2} + \dots + \phi_p Y_{t-p} + \theta_1 e_{t-1} + \theta_2 e_{t-2} + \dots + \theta_q e_{t-q} + e_t \quad (3)$$

4. Autoregressive Integrated Moving Average (ARIMA) Model

Differencing, autoregressive, and moving average components formulate a non-seasonal ARIMA (p, d, q) model which can be represented as following:

$$\Delta^d Y_t = c + \phi_1 \Delta^d Y_{t-1} + \dots + \phi_p \Delta^d Y_{t-p} + \theta_1 e_{t-1} + \dots + \theta_q e_{t-q} + e_t \quad (4)$$

Here, c is a constant and Δ^d means Y differenced d times.

5. Box-Jenkins Model Selection

Box-Jenkins promoted a three-stage procedure aimed at selecting an appropriate ARIMA model from a collection of probable models for the purpose of estimating and forecasting a univariate time series. The three stages are: (i) the identification

stage, (ii) the estimation stage, and (iii) the diagnostic checking stage, which are briefly described.

1) Identification

A comparison of the sample ACF and PACF to those of various theoretical ARIMA processes may suggest several probable models. A common stationarity-inducing transformation is to take logarithms and then first differences of the series (or any number of differencing required). Once stationarity is achieved, and then the p and q orders of the ARIMA model is needed to identify.

2) Estimation

At this second stage, the estimated models are compared using their AIC (Akaike Information Criteria) and BIC (Bayesian Information Criterion). The parameters of the model are estimated using least square method. Importance of each model parameter can be tested using the hypothesis that $H_0: \theta_i = 0, i > q$ against $H_1: \theta_i \neq 0, i > q$ and similarly for the AR part. Using the t-test it can reject the null hypothesis when the corresponding p-value of a parameter estimate is less than the preset significance level α .

3) Diagnostic Checking

In the diagnostic checking stage, the goodness of fit of the model is examined. The special statistics that are used the Box-Piece statistic (BP) and the Ljung-Box (LB) Q statistic, which serve to test for autocorrelations of the residuals.

IV. Results and Discussion

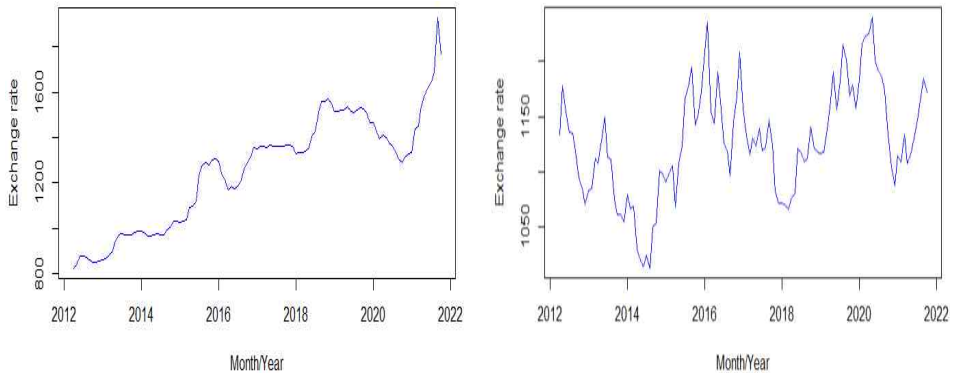
This section consists of monthly foreign exchange rate, model identification, test of stationary, estimation of the ARIMA model, diagnostic checking of fitted model and forecasting using ARIMA in Myanmar and Korea.

1. Foreign Exchange Rate in Myanmar and Korea

Figure 1 shows the foreign exchange rate series in Myanmar and Korea for the period from April, 2012 to October, 2021. The historical currency exchange rates from

April 2012 to October 2021, promulgated by the International Financial Statistics (IFS) are used.

Figure 1. Monthly Foreign Exchange Rate in Myanmar and Korea



Source: IFS

It is quite evident that the exchange rate of Myanmar is upward trend. There are slightly upward and downward trends in the exchange rate of Korea.

The descriptive statistics of the exchange rate (MMK/USD) of Myanmar and (KRW/USD) of Korea are summarized in the following table.

Table 1. Summary of the Foreign Exchange Rate (MMK/USD) and (KRW/USD) from April 2012 to October 2021

	Min	1st Qu.	Median	Mean	3rd Qu.	Max
MMK/USD	824.00	988.00	1314.70	1252.22	1429.00	1927.10
KRW/USD	1013.60	1094.10	1123.90	1127.22	1164.40	1239.40

Source: IFS

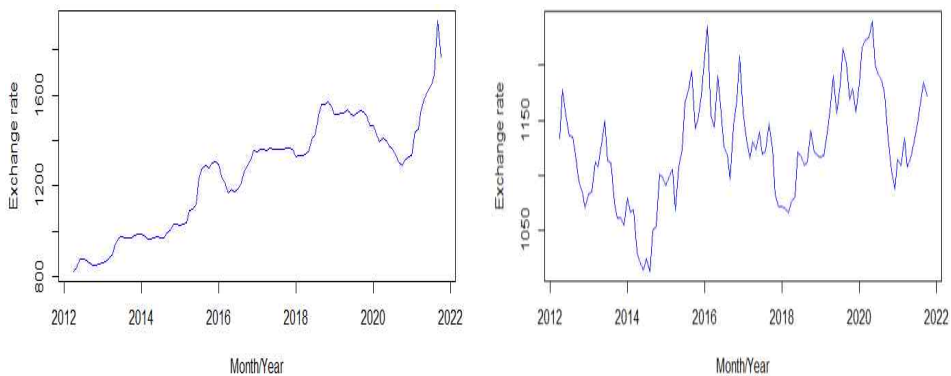
The minimum exchange rates are 824 which was in April, 2012 and 1013.60 which was in August, 2014 and the maximum values are 1927.10 which was in the year of September, 2021 and 1239.40 which was in the year of May, 2020 respectively Myanmar and Korea. The mean and median exchange rate are 1252.22 and 1314.70 in Myanmar, 1127.22 and 1123.90 in Korea.

Since, to build an ARIMA model for forecasting of a variable requires following steps: model identification, selecting the candidate model, diagnostic checking and forecasting using ARIMA model.

2. Model Identification

First stage of ARIMA model building is to identify whether the variable, which is being forecasted, is stationary in time series or not (Kumar and Anand, 2014). By stationary it means, the values of variable over time varies around a constant mean and variance (Kumar and Anand, 2014). In figure 1, the plot of the exchange rate data clearly presents that the data is non-stationary. Before the time series is made stationary, the ARIMA model cannot be created. The first stage is difference of the time series 'd' times to have a stationary series to get an ARIMA (p, d, q) model with 'd' as the order of differencing used (Kumar and Anand, 2014). The best outline is to start the differencing with lowest order (of first order, $d=1$) and test the data for unit root problems. Therefore, the first order differencing exchange rate in Myanmar and Korea are presented in figure 2.

Figure 2. Foreign Exchange Rate of First Order Differencing



Source: IFS

This is show that in figure 2, the exchange rate to be stationary both in its mean and variance. But it will be first testing the differencing time series data for stationary by using Augmented Dickey-Fuller test before moving further.

3. Test of Stationary

Null hypothesis (H_0) in the test is that the time series data is non-stationary while alternative hypothesis (H_1) is that the series is stationary. The hypothesis then is tested by performing appropriate differencing of the data in d th order and applying the ADF test to the differenced time series data. First order differencing

(d=1) means generating a table of differenced data of current and immediate previous one ($Y_t = Y_t - Y_{t-1}$). The ADF test results are shown below:

Table 2. ADF Test for Foreign Exchange Rate

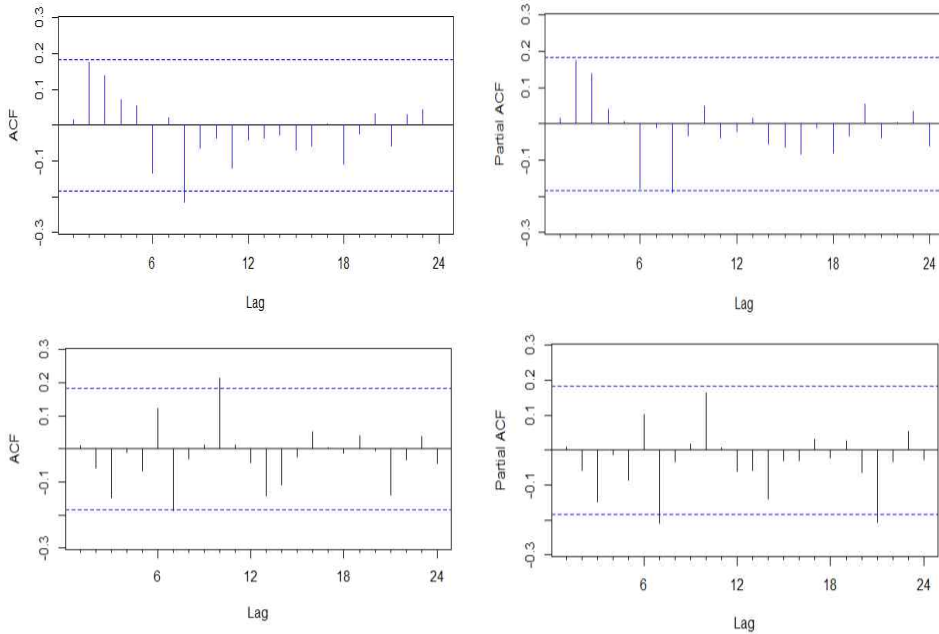
Country	ADF	p-value
Myanmar	-4.0795	0.01
Korea	-5.4931	0.01

Source: IFS

In the table 2, the H_0 is not accepted and hence the alternative hypothesis is true can be concluded that the series is stationary in its mean and variance. Thus, there is no need for further differencing the time series and $d=1$ is adopted for ARIMA (p, d, q) model. This test enables to go further in steps for ARIMA model development to find suitable values of p in AR and q in MA in model. The correlogram and partial correlogram of the stationary (first order differencing) time series are needed to examine.

4. Correlogram and Partial Correlogram

Figure 3. ACF and PACF of First Order Differencing



Source: IFS

The figure 3 represents the auto-correlation function (ACF) and partial auto-correlation function (PACF) of the first order differencing for the exchange rate in Myanmar and Korea.

It can be chosen for the best model using the model selection properties. As the distinctiveness of a good ARIMA model is economical, avoiding the higher order of p and q , the tentative models based on model selection properties are as follows.

5. Selecting the Candidate Model

To select as the best appropriate model for forecasting, the one with lowest BIC and AIC values will be chosen. The following table 3 summarizes the output of each of the fitted ARIMA model:

Table 3. AIC and BIC Values of Fitted ARIMA Models

For Myanmar							
ARIMA Model	Coefficients				AIC	BIC	AICc
	AR1	AR2	MA1	MA2			
(1,1,2)	0.6552	-	-0.7662	0.4036	1153.92	1164.86	1154.28
(1,1,1)	0.7816	-	-0.6604	-	1161.18	1169.39	1161.40
(1,1,0)	0.0780	-	-	-	1162.94	1168.41	1163.05
(0,1,2)	-	-	-0.1030	0.3590	1157.30	1165.50	1157.51
(2,1,1)	0.2320	0.4093	-0.3245	-	1155.71	1166.65	1156.07
For Korea							
ARIMA Model	Coefficients				AIC	BIC	AICc
	AR1	AR2	MA1	MA2			
(1,1,2)	0.8609	-	-0.9041	-0.0803	1055.66	1066.60	1056.02
(1,1,1)	-0.2170	-	0.2312	-	1059.00	1067.20	1059.21
(1,1,0)	0.0097	-	-	-	1057.01	1062.48	1057.12
(0,1,2)	-	-	-0.0085	-0.0614	1058.63	1166.84	1058.85
(2,1,1)	0.9447	-0.0755	-0.9847	-	1055.63	1066.58	1056

Source: IFS

For Myanmar, according to table 3, the lowest AIC and BIC values are for the ARIMA (1, 1, 2) model with ($p = 1$, $d = 1$ and $q = 2$) and hence this model can be the best fitted model to forecast for future values of time series data.

For Korea, the lowest AIC and BIC values are for the ARIMA (2, 1, 1) model with ($p = 2$, $d = 1$ and $q = 1$) and so this model can be the optimal model to make forecasts for future values of time series data.

6. Estimation of the ARIMA Model

The above selected model ARIMA (1, 1, 2) and ARIMA (2, 1, 1), which these

models are fitting to time series data, means that it is fitting ARMA (1, 2) model and ARMA (2, 1) model of first order difference to its time series. Also, ARMA (1, 2) model and ARMA (2, 1) model have three parameters in its. Therefore, these models can be expressed as:

For Myanmar, ARIMA (1, 1, 2) Model

$$\hat{Y}_t = Y_{t-1} + \phi_1(Y_{t-1} - Y_{t-2}) - \theta_1 e_{t-1} - \theta_2 e_{t-2} \quad (5)$$

For Korea, ARIMA (2,1,1) Model

$$\hat{Y}_t = Y_{t-1} + \phi_1(Y_{t-1} - Y_{t-2}) + \phi_2(Y_{t-1} - Y_{t-2}) - \theta_1 e_{t-1} \quad (6)$$

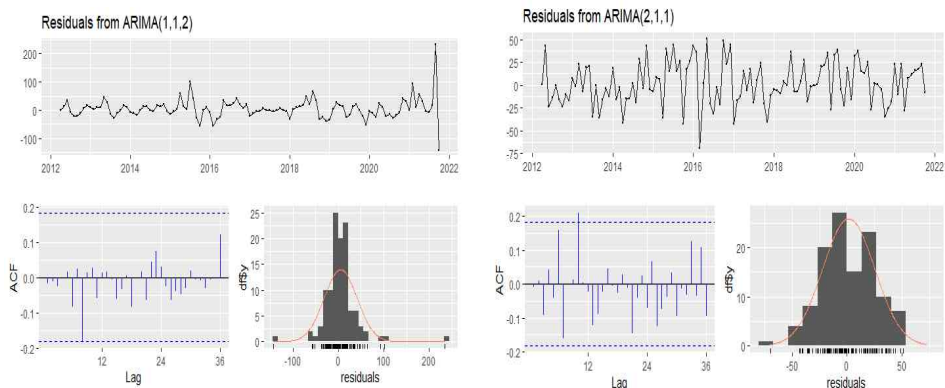
In Myanmar, according to equation (1), where Y_t is the stationary time series, ϕ_1 is parameter to be estimated the AR1 term in the fitted ARIMA (1, 1, 2) model values as above in table 3, $AR1 = 0.6552$, θ_1 and θ_2 are parameters to be estimated the MA1 and MA2 terms in the fitted ARIMA (1, 1, 2) model values as above in table 3, $MA1 = -0.7662$ and $MA2 = 0.4036$.

In Korea, according to equation (2), where Y_t is the stationary time series, ϕ_1 and ϕ_2 are parameters to be estimated the AR1 and AR2 terms in the fitted ARIMA (2, 1, 1) model values as above in table 3, $AR1 = 0.9447$ and $AR2 = -0.0755$, θ_1 is parameter to be estimated the MA1 term in the fitted ARIMA (2, 1, 1) model values as above in table 3, $MA1 = -0.9847$.

7. Diagnostic Checking of Fitted Model

The correlogram (ACF) and histogram will be plotted and Ljung-Box test will be examined for the forecast errors. The following figure 4 represents residuals from ARIMA models:

Figure 4. Residuals from ARIMA (1, 1, 2) and ARIMA (2, 1, 1)



Plotting the ACF of the residuals in figure 4 from ARIMA (1, 1, 2) and ARIMA (2, 1, 1) showed that it was uncorrelated since none of them were significant. The histogram of the residuals showed that it was normally distributed. In Ljung-Box test of table 6, it was clear that all the p-values were greater than 5% significance level. This showed that ARIMA (1, 1, 2) and ARIMA (2, 1, 1) are good model respectively in Myanmar and Korea.

Table 4. Ljung-Box Test Statistics

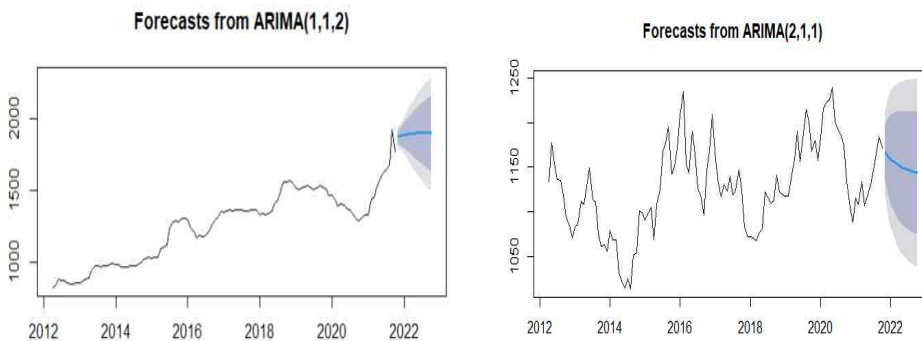
Countries	Q*	Degree of Freedom	p-value
Myanmar	9.375	21	0.9859
Korea	21.279	21	0.442

Source: IFS

8. Forecasting using ARIMA Model

The chosen ARIMA (1, 1, 2) model for exchange rate in Myanmar and ARIMA (2, 1, 1) model for exchange rate in Korea will be fitted to forecast for the future values of time series. The following figure 5 shows that the forecast values of confidence interval have between 95% lower and upper limits.

Figure 5. Forecast Values for Foreign Exchange Rate in Myanmar and Korea



Source: IFS

In figure 5, it is found that, exchange rate of MMK/USD is growing every month. In Korea, the forecasted values of the exchange rate will gradually decrease the next months.

V. Conclusion

In Myanmar, the time series plot of the exchange rate shows upward trend. That is, the gap between the value of American dollar and Myanmar Kyat has been increasing over the years. In Korea, the time series plot of the exchange rate shows ups and downs. That is, the gap between the value of American dollar and Korean Won has been increasing and decreasing over the years. After following Box Jenkins methodology for the time series data of exchange rate of Myanmar Kyat per US dollar and Korean Won per US dollar, it has been found that there are five models that can be fitted for the time series data of exchange rate. The best one out of total five possible models has been obtained as ARIMA (1, 1, 2) model and ARIMA (2, 1, 1) model, respectively. Both the point estimate and interval estimate are computed to forecast the values of MMK and KRW for each unit of USD from November 2021 to October 2022. It was found that the forecast values of confidence interval have between 95% lower and upper limits. Consequently, the forecast value obtained was generally considered to be reliable by using fitted model. It was found that, exchange rate of MMK/USD is growing every month. In Korea, the forecasted values of the exchange rate will gradually decrease the next months.

In Myanmar, from the result it is obvious that the exchange rate of USD in terms of MMK is showing upward trend over the years. It is high time to take steps to reduce this gap. Further research may be suggested, however, working on the already known factors is the demand of time now. Central Bank could come forward by working with the policies and financial system efficiency that would be useful in improving the mechanisms for inflation. So, a proper plan for monetary policy is required to reduce the gap between the values of dollar and MMK. And, government should be aware of any faults – such as government debt, political instability, etc. from their side that might influence the exchange rate. Korea can control a largely fixed exchange rate regime for the dollar-won exchange rate.

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