Effectiveness of Sukuk as a Tool of Monetary Policy

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Abstract

In interest based Capitalist system, monetary policy (MP) has become mostly ineffective in increasing output, and employment in recent years. Recession in the form of low or even negative growth rates of real GDP and high unemployment rates have set in and there are no signs of robust recovery in many of the capitalist economies. Today, conventional expansionary monetary policy appears to be creating more adverse effects than increasing real output and cutting unemployment rates. This paper attempts to explain such ineffectiveness of interest based conventional MP and provides alternative tools of monetary policy based on Sukuk mode of Sharia-compliant financing. In addition, it compares the relative effectiveness of the tools of monetary policy in both systems under fixed and flexible exchange rate regimes and finds that Sukuk based MP is relatively more effective in increasing output, employment, and maintaining low inflation rates without creating any negative side effects in the economy.

JEL Classification: E5, F42, G23 and P5.

Keywords: Sukuk based Monetary Policy, Sharia-compliant, Fixed and Flexible Exchange Rates, Inflow and Outflow of Funds, Destabilizing Factor.

1. Introduction

The capitalist countries used to pursue monetary policy for controlling inflation rate and maintaining full employment or at least reducing unemployment rate. As a result, the misery index (MI), which is the sum of unemployment rate and inflation rate are kept as minimum as possible. However, MP in interest based system has become less and less effective in increasing output, employment and controlling inflation, and as a result, MI is neither decreasing nor remaining constant in many of the capitalist interest based economies, rather increasing over the years. The current interest based MP in many of the Capitalist countries creates more negative effects and eventually the Central banks may not have choice but to give up the initial plan for either expansionary MP or tight MP. Most of the Central banks use bank rate or discount rate as the main tool of MP. Unfortunately, such interest based tools of monetary policy may not achieve the goals of attaining full employment and controlling

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inflation because interest rate has negative effects on aggregate expenditures (AE) and also it affects exchange rates and international flow of funds. As a result, often achieving the goals for domestic economy may contradict with the goals of maintaining stability in exchange rates and international flow of funds. Consequently, interest rate has become one of the most destabilizing factor for maintaining simultaneous stability in domestic and international sectors of the economy. In this paper an attempt has been made to replace bank rate and other interest based tools of monetary policy with Sukuk as one of the most important Islamic modes of financing. Accounting and Auditing Organisation for Islamic Financial Institutions (AAOIFI) defines Sukuk as being: “Certificates of equal value representing after closing subscription, receipt of the value of the certificates and putting it to use as planned, common title to shares and rights in tangible assets, usufructs and services, or equity of a given project or equity of a special investment activity”. In this paper we will explore how Sukuk can be used as a tool of monetary policy, and how CB can employ Sukuk to change the money supply and thus pursues the stabilization and growth policies simultaneously without the adverse effects of interest rates on real and financial sectors. In this paper literature review and previous works are cited in section 2. The model is developed in section 3. Section 4 explores and compares transmission mechanism of sukuk based as well as conventional interest based expansionary monetary policies under fixed exchange rate system. Section 5 compares the relative effectiveness of Sukuk based monetary policy and conventional interest based monetary policy under flexible exchange rates. Concluding remarks are summarized in section 6.

2. Literature Review

The development of systematic MP in Islamic Economic System is quite new. The pioneers in this fields include among others, Siddiqi (1982), and Chapra (1982). In addition, Kahf (1982), Khan (1982), Uzair (1982), Akram Khan (1982) and Khan et al (1989) also contributed in this field. Many of the above experts suggested open market operations for the securities with variable rates of return to be bought and sold for changing money supply. However, the variability in the rates of return may not necessarily make the securities legitimate or halal from Islamic perspective. Mohsin (1989) analyses the monetary policy transmission mechanism in Islamic Economic system by employing the modified version of IS-LM model but IS-LM model is based on interest rate system directly or indirectly and as such, it cannot be used for Islamic MP. According to Bindseil (2004), the overall strategy for monetary policy changed dramatically in recent years. In conventional interest based system, monetary policy has become less and less effective. Kassim and Majid (2009) found that bank deposits and loans play important role in monetary transmission process. Hasin and
Majid (2010) suggested that Central Bank should actively consider Islamic financing as an alternative channel for monetary transmission. Selim (2013) has found that Mudaraba-based monetary policy is relatively more effective compared to interest-based conventional monetary policy, but has not explained how Sukuk could also be used as a tool of monetary policy. Omar, Md. Noor and Meera (2010) proposed Arbitrage Pricing Theory (APT) as an alternative to interest rate but failed to show how such a tool can be implemented. Husin (2013) showed monetary policy transmission through profit rate channel instead of interest rate in the Malaysian economy. However, Husin employs Overnight Policy Rates (OPR), Conventional Interbank Rates (CIR) and Islamic Interbank rates (IR) and according to Husin (2013) all three rates are interlinked and thus interest rate is somewhat embedded in his model. This paper attempts to avoid all such shortcomings and investigates the transmission mechanism of Sukuk as a tool of monetary policy by employing aggregate demand (AD) and aggregate supply (AS) model.

3. The Model

Let us assume that Central Bank (CB) is planning to pursue expansionary monetary policy (EMP) and Sukuk will be the only tool for the time being. Sukuk can be based on Musharakah or partnership. Sukuk can also be based on Ijarah or Istisna or Murabaha or Salam or Hybrid—a combination of more than one Sharia-compliant mode of financing. Let us assume that CB is planning to make partnership and will use Musharakah Sukuk (henceforth in this article, Musharakah Sukuk will be called just Sukuk) and increase money supply by BD2 billion. If CB employs Sukuk as the only tool of EMP, CB will announce that it is planning to finance projects equivalent to BD2 billion and prospective companies, entrepreneurs, firms, small, medium and large, all will be asked to submit their proposed manufacturing, construction, service and agricultural projects to the commercial banks as well as to the rest of the members of the money market. The members of the money market will screen the applications and potential entrepreneurs and competent firms will be chosen. It may be mentioned that the members of the money market have field experience and will apply appropriate screening techniques for selecting eligible entrepreneurs and projects. These firms will be asked to issue Sukuk against the funds they will borrow from CB. In other words, CB will buy such Sukuk from the entrepreneurs and issuers of Sukuk. The members of money market including the commercial banks will also receive a share of return from the Sukuk as they are supervising, advising and even helping the potential entrepreneurs in making their projects successful. It may be mentioned that such Sukuk will not be short term papers such as treasury bills and money market instruments which conventional interest-based system often use. In
conventional interest based system, CB uses bank rate as one of the single most important tool of monetary policy. In Sukuk financing, it is not money market or short term papers rather capital market instruments and fairly long term financing instruments, ranging from 5 years, 10 years, 15 years, or even 20 years. Such long term financing instruments are extremely useful for the success of new ventures compared to short time interest based financing where the firms must keep paying installments of their borrowed funds at a time when the potential firms may not generate enough cash flow because of the new and less familiar in the market place. Monthly installment of interest based loans strain further to the low cash flow problems and many of the new ventures do not have any other choice but to declare bankruptcy at the early stage of infancy. The relatively long term Sukuk financing and absence of monthly installments are the key ingredients for success of new ventures.

Now as the CB buys the Sukuk from all the Entrepreneurs who issued BD2 billion worth of Sukuk either directly or through Commercial banks, money supply in the economy will increase by BD2 billion. Increase in BD2 billion, will increase investment spending because all the funds will directly go to the production of goods and services as stipulated in the contract between CB and entrepreneurs. Increase in investment spending of BD2 billion will increase equilibrium income. According to the aggregate expenditure-aggregate output (AE-AO) model, AE is the sum of aggregate consumption (C), Investment spending (I), government spending (G), and exports (X) less imports (M). The AE function can be written as follows:

\[ AE = C + I + G + X - M \]  \hspace{1cm} (1)

where \( C = C_0 + bY_d \), \( Y_d = Y - T \)  \hspace{1cm} (2)

\( T = zY_n \), \( Y_n = Y - C_E \), \( M = M_0 + mYd \)  \hspace{1cm} (3)

In above, \( C_0 \)= Autonomous Consumption; \( b \)=Marginal Propensity to Consume; \( Y_d \)=Disposable Income, \( Y \)=Aggregate Output or Income; \( T \)=Taxes or Zakat; \( Y_n \)=Zakatable income, \( z \)=Marginal Propensity to Zakat; \( C_E \) = Non-Zakatable Consumption Expenditures; \( M_0 \)=Autonomous Imports; \( m \)=Marginal Propensity to Import.

In equilibrium, aggregate expenditure (AE) equals aggregate output (AO), denoted by \( Y \) and equilibrium condition for the economy can be written as:

\[ Y = AE \]  \hspace{1cm} (4)
Substituting the values for $AE$ from Equations 1 to 3 above, the equilibrium output $Y^*$ is calculated in the following Equation 5 as follows:

$$Y^* = \Omega A_0 \ldots \ldots \ldots \ldots \ldots (5)$$

In Equation 5, equilibrium output, $Y^*$ equals autonomous expenditures, $A_0$ times multiplier, $\Omega$. An increase in $A_0$ or $\Omega$ or both will increase $Y^*$ and vice-versa.

Now in Sukuk based EMP, MS will increase by BD2 billion, and as a result, investment spending ($\Delta I$) will increase. Consequently, the equilibrium output will increase an additional amount of $\Delta Y$ as follows:

$$\Delta Y = \Omega \Delta I \ldots \ldots \ldots \ldots \ldots (6)$$

In above equation 6, $\Omega$ is the multiplier. If the value of multiplier $\Omega=4$, then an increase in additional investment of $\Delta I=\text{BD}2$ billion, will cause an increase in $Y$ by $\Delta Y=4X \text{BD}2$ billion $=\text{BD}8$ billion.

Therefore, the increase in equilibrium output depends on the value of the multiplier. Higher the value of the multiplier, the higher will be the additional increase in GDP. Increase in equilibrium income increases employment and unemployment rate will fall. The economy will reach full employment or near full employment.

Will the price level increase? Increase in additional money supply will increase additional output of goods and services or additional GDP. Let $y$ be the real goods and services produced and $P$ be the average price level, the nominal GDP=$P.y$. Total increase in money supply equals actual increase in money supply, $M$ times its velocity, $V$ and, therefore, the total money supply equals MV:

$$MV = Py \quad \text{or} \Delta MV = \Delta Py \quad \text{or} \Delta MV = \Delta yP \quad \text{or} P = \frac{\Delta MV}{\Delta y} \ldots \ldots \ldots (7)$$

In fact, $\Delta y > \Delta MV$ because of value added in production of goods and services and in such case, price level may even fall because of excess supply of goods and services produced in the economy. The production function of the economy can be written as:

$$y = f(L, N, K, E) \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (8)$$

In Equation 8, $y$=Output; $L$=Land; $N$=Labor; $K$=Capital; $E$=Entrepreneur. If money supply increases BD2 billion and investment spending on K increases by BD2 billion, the value added on $\Delta y$ will be higher than the additional increase in money supply.
In the production process, $y$ is produced from all the factors, $L$, $N$, $K$ and $E$ and, therefore, additional output produced will exceed additional increase in money supply:

$$\Delta y > \Delta MV \tag{9}$$

In Equation 7, price level, $P$ will fall if $\Delta y > \Delta MV$, which in turn will shift the aggregate Supply curve (AS) to the right and $Y^*$, employment will increase further. Fall in $P$ will also make the country more competitive and net exports, $X_n$, will increase and the country will be able to narrow the existing trade deficits or even may run trade surplus.

Furthermore, an increase in GDP will increase exportable surplus and imports may even fall because some of the goods and services produced in domestic economy may eventually replace imports. In other words, some the firms will directly produce import substitutes. If the products are of high quality similar to imported products, it is likely that domestic consumers may buy those products.

Increase in net exports will increase the foreign currency reserves (FCR) in the CB and money supply in the economy will increase further. The AD curve will shift to the right further and equilibrium income will increase without the threats of inflation because additional increase in money supply will be matched by increase in the production of goods and services because all most all the increase in money supply will be invested in the production of goods and services and new goods and services will be produced in the economy.

There will be inflow of capital in domestic economy because the full employment in domestic economy may increase the return on investment compared to the economies with high unemployment rates, high tax rates and volatile exchange rates.

Inflow of capital will increase FCR with the CB and the money supply in domestic economy will increase further and AD curve will shift to the right further and income and employment will increase further.

*Sharia’a- Compliant Sukuk based monetary policy (SMP)* is derived from the principle that God has permitted trade and commerce and prohibited interest. Interest financing, borrowing, lending, being a witness or inscribing on interest based transactions all are strictly prohibited in Islamic Economic System. In the Holy Qur’an, interest, also specified as Riba in Arabic or usury is vehemently condemned and strictly prohibited:

Those who devour Riba (interest or usury) will not stand (on the Day of Resurrection) except like the standing of a person beaten by Shaitan (Satan)
leading him to insanity. That is because they say, “Trading is only like Riba,” whereas Allah has permitted trading and forbidden Riba. So whosoever receives an admonition from his Lord and stops devouring Riba, for him is what is in the past; his case is for Allah (to judge); but whoever returns (to Riba), such are the dwellers of the Fire- they will abide therein forever. Allah will destroy Riba and will give increase for Sadaqat (deeds of Charity, alms). And Allah likes not disbelievers, sinners. (Qur’an, 2:275-276).

4. Transmission Mechanism of Expansionary Monetary Policy Under Fixed Exchange Rate System: Sukuk and Conventional Interest Based Monetary Policy

After the Second World War until 1973, Breton Woods fixed exchange rate system was in place for most Capitalist countries. Almost all the countries of the world enjoyed fixed exchange rate and each country pegged its currency against US dollar. After 1973, USA could not afford to maintain fixed exchange rates because countries which ran huge trade surplus in terms of US dollars such as Germany, Japan, could exchange dollar for gold at fixed exchange rate. When USA ran out of gold stock and refused to convert US dollar for gold, the Breton Woods fixed exchange rate regime collapsed and most countries returned to flexible or floating exchange rate system. However, still today many countries in the world peg their currencies against US dollar without the commitment on behalf of USA to convert surplus US dollar into gold at fixed exchange rate.

The effectiveness of conventional MP largely depends on whether the currencies are fixed or flexible. It may be mentioned that the conventional interest based MP is relatively more effective under flexible exchange rate compared to fixed exchange rate system. However, the effectiveness of Sukuk as a tool of MP is not affected by fixed or flexible exchange rate systems.

4.1 Sukuk Based Expansionary Monetary Policy (SEMP) Under Fixed Exchange Rate System

Now we will examine the effectiveness of Sukuk based Expansionary monetary policy (SEMP) under fixed exchange rate system. Please note that the sign $\uparrow$ in Equations 10-16, indicates positive direction for $P$, such as increases, rises, shifts to the right, and, $\downarrow$ shows negative direction for $P$, such as decreases, falls, shifts to the left. Here, $P$ is a typical variable but it can be any variable. Under fixed exchange rate system, the currency of a country is fixed against another currency or a basket of currencies or against gold.
In Equation 10, when the CB pursues Sukuk based expansionary monetary policy (SEMP), CB increases money supply (MS) and as a result, investment spending (I) increases. Aggregate demand (AD) curve shifts to the right, equilibrium income or GDP (Y) increases, employment (E) increases, unemployment rate (U) falls and price level (P) falls for the reasons explained in Equations 7-9 that additional increase in output will exceed the additional increase in money supply. As P falls, exports (X) will increase and imports (M) will fall and net exports or trade balance (Xn) will increase. As Xn increases, foreign currency reserves (FCR) with the CB will increase and as a result, money supply (MS) will increase.

As MS increases, I will increase again, AD curve will shift to the right again, and there will be further increase in Y and E, and further fall in U and P and the discomfort index (DI) or misery index (MI) = U + P, will fall. The cycle will continue through Multiplier-Accelerator process and in each stage, the economy will settle on higher and higher level of Y and at lower and lower level of MI or DI and the Phillips curve will continue to shift towards the left or to the origin while in Capitalist interest based system, Phillips curve continues to shift to the right and, therefore, misery index (MI) is increasing year after year.

4.2 Flow of funds in Sukuk Based Expansionary Monetary Policy (SEMP) Under Fixed Exchange Rate System

Equation 10A below shows flow of funds in SEMP under fixed exchange rate system. As the CB pursues Sukuk based expansionary monetary policy (SEMP), CB increases money supply (MS) and as a result, investment spending (I) increases. Aggregate demand (AD) curve shifts to the right, equilibrium income or GDP (Y) increases, the profit rate, (pr) in the economy increases as well. Usually, on average, the profit rate or the overall rate of return in the economy will be higher when the economy is on expansionary phase of business cycle compared to the down turn or recessionary cycle with declining Y and rising U. As (pr) increases and remains relatively higher compared to countries where Y is falling and U is rising, the inflow of funds (IFF) from relatively lower (pr) countries will flow into the country or countries where profit rates are relatively higher. As IFF increases, FCR with the CB will increase and as a result, money supply (MS) will increase.
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In Equation 10A, when MS increases, I will increase, AD curve will shift to the right, and Y and E will increase and subsequently U and P will fall and the discomfort index (DI) or misery index (MI) = U + P, will fall as well. The equilibrium income, Y, will continue to rise and per capita income will also increase and the performance of the economy in terms of low MI or DI will continue to improve and the Phillips curve will continue to shift towards the origin. Virtually the economy will enjoy high growth rates of GDP and low inflation and unemployment rates - a scenario envy to most of the capitalist and non-capitalist interest based economies.

4.3 Conventional Interest Based Expansionary Monetary Policy (CIEMP) Under Fixed Exchange Rate System

Equation 11 indicates that if CB pursues conventional interest based expansionary monetary policy (CIEMP), CB cuts bank rate (BR), interest rate (r) falls and money supply (MS) increases, and as a result, investment spending (I) increases. Aggregate demand (AD) curve shifts to the right, equilibrium income or GDP (Y) increases, employment (E) increases, unemployment rate (U) falls and price level (P) increases. P will increase because there is no guarantee that all the additional increase in money supply will go for the production of goods and services and if additional increase in output is less than the additional increase in money supply then from Equation 7, one can conclude that P will increase and this is the case in reality. As P increases, exports (X) will fall and imports (M) will increase and net exports or trade balance (Xn) will decrease and the country will run into trade deficits. As Xn decreases, foreign currency reserves (FCR) with the CB will fall and as a result, money supply (MS) will decrease.

\[
\begin{align*}
\text{CIEMP} & \quad \downarrow \quad \text{BR} \quad \downarrow \quad \text{I} \quad \downarrow \quad \text{AD} \quad \downarrow \quad \text{Y} \quad \uparrow \quad \text{E} \quad \downarrow \quad \text{U} \quad \downarrow \quad \text{P} \quad \downarrow \quad \text{X} \quad \uparrow \quad \text{M} \quad \downarrow \quad \text{Xn} \quad \downarrow \quad \text{FCR} \quad \downarrow \quad \text{MS} \quad \downarrow \quad \text{I} \quad \downarrow \quad \text{AD} \quad \downarrow \quad \text{Y} \quad \downarrow \quad \text{U} \quad \downarrow \quad \text{P}
\end{align*}
\]

As MS decreases, I will decrease, AD curve will shift to the left, and there will be decrease in Y and E, and increase in U and P and the discomfort index (DI) or misery index (MI) = U + P, will increase. This time P will increase because of the decrease in Y and there will be stagflation when P increases and Y shrinks. The cycle will continue through Multiplier-Accelerator process and in each stage, the economy will
settle at lower level of Y and at higher level of MI or DI and the Phillips curve will continue to shift to the right, further away from the origin.

4.4 Flow of Funds (FF) in Conventional Interest Based Expansionary Monetary Policy (CIEMP) Under Fixed Exchange Rate System

In Equation 12, when CB pursues conventional interest based expansionary monetary policy (CIEMP), CB cuts bank rate (BR), interest rate (r) falls. As interest rate falls, the domestic currency, say Bahraini Dinar (BD) will depreciate but CB will maintain fixed exchange rate and BD will not depreciate. However, because of the low interest rates, investors, especially the billions and billions of Dinar Mutual Funds or Pension Funds managers will look outside the country for relatively higher rate of return for the fund owners, such as Retirement Funds, Savings Funds, etc., and will take the funds outside the country where rate of return on such funds are relatively higher. Billions of Dinars will flow outside the country overnight, especially in countries where free movement of capital flows are allowed. Therefore, in such countries, outflow of funds (OFF) will increase.

\[ \begin{align*}
\text{CIEMP} & \rightarrow BR \rightarrow \ldots \rightarrow OFF \\
\text{FCR} & \rightarrow MS \rightarrow I \rightarrow AD \rightarrow Y \rightarrow U
\end{align*} \tag{12} \]

As OFF increases, FCR falls, MS falls, I decreases and AD will shift to the left. As a result, Y will decrease and U will rise.

5. Transmission Mechanism of Expansionary Monetary Policy Under Flexible Exchange Rate System: Sukuk versus Conventional Interest Based Monetary Policy

In flexible exchange rate system, the currency of each country is allowed to float and determined by the market forces. However, interest rate plays a vital role in the determination of exchange rates. If a country raises interest rates, its currency is likely to appreciate and vice versa. Currency also appreciates if the demand for exports of a particular country increases. Therefore, any country running trade surplus, its currency will likely to appreciate and any country running deficits, its currency will likely depreciate. Now we will turn to the effectiveness of Sukuk based expansionary MP under flexible exchange rate system.

5.1 Sukuk Based Expansionary Monetary Policy (SEMP) Under Flexible Exchange Rate System
In Equation 13 below, when the country runs trade surplus, Xn increases as shown in the following equation, and the currency will appreciate under flexible exchange rate system. When the currency appreciates, the following impact on Xn and FCR may occur. First, Xn may slow down because exports will appear to be expensive to the foreigners and imports will appear to be cheaper to domestic consumers because of the appreciation of the currency. As a result, Xn may tend to slow down or even may fall but the appreciation of the currency may cause inflow of funds (IFF) as shown in Equation 14, and FCR will increase, MS will increase.

\[ \ldots \rightarrow \quad \text{SEM} \quad \rightarrow \quad \text{MS} \quad \rightarrow \quad \text{F} \quad \rightarrow \quad \text{AD} \quad \rightarrow \quad \text{Y} \quad \rightarrow \quad \text{P} \quad \rightarrow \quad \text{U} \quad \rightarrow \quad \text{PR} \quad \rightarrow \quad \text{X} \quad \rightarrow \quad \text{Yn} \quad \rightarrow \quad \text{FCR} \quad \rightarrow \quad \text{AD} \quad \rightarrow \quad \text{Y} \quad \rightarrow \quad \text{I} \quad \rightarrow \quad \text{M} \quad \rightarrow \quad \text{S} \quad \rightarrow \quad \ldots \]  \quad (13)

Now even though Xn tends to slow down because of the appreciation of the currency, the full employment output will generate huge exportable surplus and eventually, producers will absorb some of the cost of the appreciation of the currency and export will continue to rise. As Xn increases, FCR will increase and MS will increase. As MS increases, I will increase, AD will shift to the right and Y will increase, and of course, MI or DI will decrease.

5.2 Flow of Funds in Sukuk Based Expansionary Monetary Policy (SEMP) Under Flexible Exchange Rate System

In Equation 14, in SEMP under flexible exchange rates it will produce similar effects except the currency BD will appreciate and the inflow of funds (IFF) will be higher compared to SEMP under fixed exchange rates. As a result, FCR will be higher, MS will increase relatively more than before and I will increase, AD will shift to the right, Y will increase further.

\[ \ldots \rightarrow \quad \text{SEM} \quad \rightarrow \quad \text{MS} \quad \rightarrow \quad \text{F} \quad \rightarrow \quad \text{AD} \quad \rightarrow \quad \text{Y} \quad \rightarrow \quad \text{P} \quad \rightarrow \quad \text{PR} \quad \rightarrow \quad \text{IFF} \quad \rightarrow \quad \text{FCR} \quad \rightarrow \quad \text{MS} \quad \rightarrow \quad \ldots \]  \quad (14)

In Equation 14, when MS increases, I will increase further, AD curve will shift to the right even more than before, and Y and E will increase further. As a result, U and P will fall further and the discomfort index (DI) or misery index (MI) = U + P, will fall even more and the Phillips curve will continue to shift towards the origin.

5.3 Conventional Interest Based Expansionary Monetary Policy (CIEMP) Under Flexible Exchange Rate System

In Equation 15, when CB pursues conventional interest based expansionary monetary policy (CIEMP), CB cuts bank rate (BR), interest rate (r) falls and the
currency, BD will depreciate as well under flexible exchange rate system. As BD depreciates exports (X) will increase and imports (M) will fall and net exports or trade balance (Xn) will increase and as a result, foreign currency reserves (FCR) with the CB will increase and money supply (MS) will increase.

\[
\text{CIEMP} \rightarrow BR \rightarrow BD \rightarrow X \rightarrow M \rightarrow Xn \rightarrow FCR \rightarrow MS \rightarrow I \rightarrow AD \rightarrow Y \rightarrow Y \rightarrow U \rightarrow P \rightarrow \text{DI} \rightarrow \text{MI} = U + P \rightarrow \ldots \ldots (15)
\]

As MS increases, I will increase, AD curve will shift to the right, and Y will increase. U will fall but P may not fall rather may increase and discomfort index (DI) or misery index (MI) = U + P, may remain the same, or may increase. Therefore, conventional interest based expansionary MP is most effective under flexible exchange rates. However, when the currency, BD will start to depreciate, as we will see in the following section 5.4, the outflow of funds (OFF) will increase and as a result, FCR will fall and MS will decrease and the gain in output (Y) and employment (E) will disappear.

5.4 Flow of Funds in Conventional Interest Based Expansionary Monetary Policy (CIEMP) Under Flexible Exchange Rate System

As mentioned in above that under flexible exchange rates, when the currency will depreciate, Xn will increase but outflow of funds (OFF) will also increase as shown in Equation 16.

\[
\text{CIEMP} \rightarrow BR \rightarrow BD \rightarrow \ldots \ldots \rightarrow OFF \rightarrow \ldots \ldots
\]

\[
\ldots \ldots \rightarrow FCR \rightarrow MS \rightarrow I \rightarrow AD \rightarrow Y \rightarrow U \rightarrow \ldots \ldots (16)
\]

As OFF increases, FCR decreases, MS decreases, I will decrease and AD curve will shift to the left. Income (Y) will fall and U will increase. Therefore, CIEMP is not even effective under flexible exchange rate system because of increase in outflow of funds. Therefore, interest rate is one of the single most destabilizing factor and the policy makers are just helpless because conventional interest based expansionary MP will not eventually work except it will make things worse by creating inflation, debts and deficits.

6. Conclusion

It is clear that Sukuk based MP is not only relatively more effective compared to conventional interest based MP but also it can really bring real change and it is capable of increasing real output, employment and income and at the same time, can effectively control inflation and reduce unemployment rates which in turn, decreases
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MI and thus improves macroeconomic performance and helps the policy makers to maintain full employment and eventually can increase the standard of living for the people. Both SEMP and CIMP are examined under fixed and flexible exchange rate systems and it was found that SEMP is relatively more effective in both fixed and flexible exchange rate systems. However, SEMP seems to be relatively more effective under flexible exchange rate system. Even though it is claimed that CIMP is relatively more effective under flexible exchange rate system compared to fixed exchange rate system but in presence of free movement of capital, even the CIMP is eventually ineffective. It appears from this study that interest rate is the single most destabilizing factor because any attempts made by the policy makers to maintain stability in domestic economy, will create disturbance in external sector through capital outflow and vice-versa. SEMP is always effective compared to CIMP because in our model, SEMP is developed without any destabilizing interest rate, LIBOR or overnight policy rates or any other form of interest rates, embedded or not.

References


Kahf, M., Islamic Economy, Indiana Muslim Student Association of the United States and Canada, (1978).


