

# Factors that Determine and Influences Foreign Exchange Rates

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## Abstract

The Foreign Exchange rate is very much crucial for determining the economic health level of the country. The foreign exchange rate provides financial stability, enhances purchasing power and allows global trades. This rate usually fluctuates due to the market forces which control the supply and demand of the currency. Nominal and relative inflation and income level have a substantial effect on determining the exchange rates. Government measures, international situations, natural disasters or any unexpected situation like Covid-19, Rohingya crisis etc. can affect the exchange rates. Besides this, the interaction between the factors can create different reasoning to affect the market. This study tries to identify some factors with relevant examples.

KEYWORDS: Foreign exchange rate, economy, inflation

## Introduction

Foreign exchange rates are one of the most critical determinants of the economy of any country. Exchange rates play a vital role in any country's trade condition. Foreign exchanges are exchanged based on the equilibrium exchange rate. When a rate increases, it is called appreciation in the exchange rate, and when a decrease, it is called depreciation. The foreign exchange rate determines over time by the changes in supply and demand. This change in demand and supply schedule occurs because of some factors (Eitrman, 2013). These factors are known as factors influencing foreign exchange rates.

## Impact of Foreign Exchange Rates on Economy

Before knowing what factors influence the exchange rate, we describe the effect of any exchange rate on a country's economy. A higher exchange rate makes export expensive and imports cheaper for the country. But lower exchange rate makes the export more affordable and import costly. Any country expects a higher exchange rate as it keeps a country's condition favorable. It is also expected as a higher exchange rate helps keep the balance of trade of any country lower. Thus, the factors that influence exchange rates positively or negatively impact the whole economy of a nation.

## Factors Influencing Foreign Exchange Rates

There are so many factors that influence exchange rates. But five factors are considered most important in influencing foreign exchange rates. These five factors are inflation, interest rate differentials, and differences in income level, government control and changes in expectations (Madura, 2010). All the factors in an equation is shown below-

$$e = f(\Delta INF, \Delta INT, \Delta INC, \Delta GC, \Delta EXP)$$

Here,

$e$  = percentage change in foreign exchange spot rate

$\Delta INF$  = Change in the differential between home country inflation and foreign country inflation

$\Delta INT$  = Change in the differential between home country interest rate and foreign country interest rate

$\Delta INC$  = Change in the differential between home country income level and foreign country income level

$\Delta GC$  = Change in Government Controls

$\Delta EXP$  = Change in Expectations of future exchange rates

### **Relative Inflation Rates**

Changes in relative inflation rates affect international trade activity, which influences the demand and supply of currencies, which influences exchange rates (Eun, 2007). Let a US firm and a UK firm sell goods that are substitutes. If UK inflation increases and US inflation remains the same, then demand in the UK for US goods will increase and increase UK demand for US dollars. Moreover, US demand for UK goods will reduce and thus reduce the supply of US dollars. Because of the reduction in supply, the supply curve will shift leftward and because of increased demand, the demand curve will shift rightward. Then the new equilibrium exchange rate will be higher than the present rate. Let US exchange rate is £1.5 per Dollar. Now increase in UK inflation increases demand in the UK and reduces the supply of \$ has creates upward pressure in the dollar price. The new equilibrium exchange rate is now £1.6 = \$1. But if UK inflation increased and US inflation remained the same, then the opposite would have occurred, and the US supply of dollars has increased. UK demand would have decreased, creating the opposite and exchange rate value would have decreased to a new equilibrium price. In this situation, exchange rate should have been £1.4 = \$1

### **Relative Interest Rates**

Investment in foreign securities is affected by the change in the relative interest rates, which affects the demand and supply of any currency and influences the exchange rates (Alam., Khondker & Molla, 2013). Let's assume the UK interest rate rises while the US interest rate remains the same. In this case, UK investors will likely reduce their demand for dollars. UK rates are more attractive now and US banks require keeping fewer deposits. As UK rates are now more attractive, US investors with excess cash will increase the supply of dollars for sale by US investors as they want to invest in the UK. Because of the inward shift of demand of the dollar and the dollar supply's outward change, the equilibrium exchange rate will decrease. Let the exchange rate is £1.5 = \$1. As UK interest rates rise and US interest remains, UK investors have reduced demand for US dollars. But investment in the UK has become an attractive option for US investors that have increased US dollars' supply. This condition of increased supply and reduced demand creates a new equilibrium condition that depreciated the exchange rate, and the new equilibrium exchange rate is £1.4 = \$1. But, if the US interest rate rises and the UK rate remains the same, there would have been increased demand for the dollar as US investors wanted to invest more in the US. As it is an attractive option, banks' supply would have decreased as they need to keep more deposits. As a result of the outward shift of the demand curve and the inward shift of the supply curve, the new equilibrium exchange rate would have increased. The new equilibrium interest rate would have been £1.6 = \$1

### **Relative Income Levels**

The third factor influencing the exchange rate is the relative income level because income level affects the amount of import demanded and the exchange rate (Eun, 2007). Let, between the US and UK, UK income level increases and US income level remains unchanged. As a result demand curve will shift upward because of the increase in UK income and increased demand for US goods. But the supply schedule is not expected to change. For this reason, there is an increase

in the equilibrium exchange rate. Let, the exchange rate is  $\text{£}1.5 = \$1$ . If the UK's income level increases and the US's income remains the same, then the demand US goods in the UK will increase. But, because of no change in supply schedule, the exchange rate will appreciate, and the new exchange rate would be  $\text{£}1.6 = \$1$ . But, if the UK's income level decreases and the US income level remains the same, the UK's demand for US goods will reduce. As a result of decreased income level in the UK and decreased demand, the demand curve will shift downward. But there will be no change in the supply schedule. As a result, there will be a decrease in the equilibrium exchange rate. The new equilibrium exchange rate would be  $\text{£}1.4 = \$1$

### Government Controls

Government can control equilibrium exchange rates by many ways. There are so many factors, such as foreign exchange barriers, foreign trade barriers, Intervening transactions etc., in the foreign exchange market that government can impose to affect the exchange rate (Madura, 2010). As described above, the UK interest rate example, the rate rose, and the US interest rate remains the same. The typical situation would be the increase in Dollar supply. If the government imposes a high tax on interest income earned from foreign investment, investors will be discouraged from exchanging the dollar for pounds. The result will be an increase in the exchange rate rather decrease. If the government imposes all the other barriers described above the result becomes a decrease in supply, whether there is an increase in demand or no change in demand and the exchange rate will become influenced in the opposite direction.

Let, the exchange rate  $\text{£}1.5 = \$1$ . The exchange rate had to be decreased to  $\text{£}1.4 = \$1$  when there is an increase in the UK's interest rate through the normal procedure of increase in interest rate. But because of government intervention and imposition of High tax on foreign investment, the supply curve will move upward and the result will be an increase in the exchange rate to  $\text{£}1.6 = \$1$ .

Let, the exchange rate is  $\text{£}1.5 = \$1$ . If the demand remains the same but because the government imposes barriers, there will be a decrease in supply. As a result exchange rate will increase to  $\text{£}1.6 = \$1$ . Moreover, if there is an increase in the demand of the US dollar but because of government intervention, there is a decrease in supply, which will lead to more equilibrium exchange rates. The new exchange rate will be again  $\text{£}1.6 = \$1$ . So, government intervention influences the exchange rate adversely.

### Expectations

The last factor that influences the exchange rate is expectations of future exchange rates. Like all financial markets, foreign exchange markets react to the news that can create future effects. The effective can either increase or decrease the exchange rate (Eitrman, 2013).

Let news spreads in the US that inflation will increase in the recent future. It will make traders sell US dollars and supply will increase. But, demand will have no impact. As a result, supply will be decreased and this will result in a decreased exchange rate. But if news spread that there will be deflation in the US, traders will buy US dollars as they will try to purchase all the US dollars from the market, increasing US dollar demand. But there will be no change in supply. This will increase equilibrium exchange rate.

Let Equilibrium exchange rate is  $\text{£}1.5 = \$1$ . As news spreads that US inflation will increase in the future, traders try to sell their dollars. So, there is an increase in supply. But, there is no increase in demand, the exchange rate falls. The new exchange rate is  $\text{£}1.4 = \$1$ . But, if news spreads that deflation will occur at US, there will be increased demand in traders to buy dollars.

### **Natural Disasters or Unexpected Event**

Natural disasters like floods, cyclones, tornados etc can occur from time to time, affecting the foreign exchange rate. Natural disasters can create food shortages and heavy damage to the economy. The domestic currency becomes weak and demand for foreign currency grows higher. This shifts the foreign exchange rate to an adverse level for the country. (Escaleras, & Register, 2011). Unexpected events like Covid-19 can also impact the foreign exchange market. The government of different countries are imposing lockdown and economic growth is severely affected. (Ahamed, 2021). The recent Rohingya crisis in the country also created pressure on the food and other imports which in turn affected currency price. (Minar, 2019). The international trade and exchange markets become stagnant, and the global supply chain faces severe challenges. It creates volatility in the foreign exchange market and increases pressure on the country's economy.

### **Current Account Deficit**

The current account is the part of the balance of trade that reflects the exchange of goods and services with other countries. The deficit in this account shows that the country is expending more on foreign expenses than earning. On the other hand, which means the country needs more foreign currency than its earnings. This excess demand for foreign currency reduces the home currency's exchange rate in exchange of foreign currency up to the situation when home goods become cheaper to foreigners (Agarwal O, 2009).

### **Public Debt and Tax**

The countries which have more public debts pay most of their earnings in payment of debts. Foreigners do not like these kinds of countries. As a result, they become discouraged from doing any type of business with these countries, making imports expensive and export cheaper. (Eitrman, 2013). This situation, in turn, makes the exchange rate depreciated of those countries against foreign countries. The change in the tax rate draws money in and out of the country. Empirical evidence show a significant expansionary effect of tax cuts on the macroeconomic variables. Cuts in personal and corporate income taxes cause a rise in output, investment, employment, and consumption. (Alam, 2021).

### **Political Stability**

Foreign investors always seek to find politically stable countries. The more stable the country's political condition, the more the country is attractive in the eyes of foreign investors and vice versa. (Eun, 2007). Now, a politically stable country is more appealing to foreigners and the demand of the currency of that country is more to the foreigners. As a result, the exchange rate of the country will appreciate against foreign currencies and the country's currency will be strengthened

### **Terms of Trade**

Terms of trade are also an important factor affecting the exchange rate of any country. If a country's export is more than the import, it can be said that trade is favorable. But, if the opposite occurs, then it is not in favorable condition. When increasing export conditions, the country's goods have much demand outside the country, which shows increased demand in currency. As a result currency of that country appreciates (Madura, 2010).

### **Market Judgment and Speculation**

Foreign exchange market does not always follow logical pattern. Rates sometimes are influenced by judgments, emotions as well as analysis of economic and political events. Before making the information public, market make its own judgment and influence on exchange rates occur accordingly (Madura, 2010). Speculation by the major traders of the market is another important factor that influences the exchange rate. Direct movement of currencies in international market is very low. Most trades are done by speculative trading on currencies that influences exchange rates (Agarwal, 2009).

### **Interaction of Factors**

Interaction among factors can create change in factors' influence. Most of the times, the factors don't affect the exchange rate individually. The effect is simultaneous on the exchange rate. Because of the interaction of factors, the exchange rate sometimes goes in the opposite direction as it should have been. (Feinberg, 1986). This interaction mainly determines the exchange rates. As an example Increase in income levels can cause an increase in expectations of higher interest rates. It also can result in increased imports and more financial inflows. Favorable financial flows at best can strengthen the local currency, and exchange rate decreases against foreign currency. In this way interaction of factors can make different results

### **Conclusion**

So, finally, it can be said that there are so many factors that influence exchange rates. The most important are five factors which are inflation, interest rate differentials, and differences in income level, government control and changes in expectations. These factors move the demand and supply schedule and create a new exchange rate in a new equilibrium condition. But there are some other factors like political stability, terms of trade, market judgment, etc., which also play an essential role in determining the demand condition of currency and determining the foreign exchange rate change.

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