

# **Chapter 2 Different Types of Foreign Exchange Transactions and Associated Risks**

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# **Chapter 2 Different Types of Foreign Exchange Transactions and Associated Risks**

## **Introduction**

The assets and liabilities or cashflows of an enterprise, that are denominated in foreign currencies undergo a change in their value, as measured in domestic currency, over a period of time, because of variation in exchange rate. This variability in the value of assets and liabilities or cashflows is referred to as exchange rate risk.

When the value and the maturity dates of assets and liabilities as well as claims and counterclaims in a foreign currency are matched against each other, then there is no net exposure. In such a situation, there is no foreign exchange risk. But foreign exchange risk results from an open position - the position can be either long or short. When an enterprise owns a net claim (or an asset) in foreign currency, it is said to be long; and when it has a liability in foreign currency, it is said to be short.

Fluctuations in exchange rates leading to variations in the value of assets and liabilities warrant management or hedging of risk.

The word 'hedging' means taking steps to reduce risk. 'Hedging' the risk and 'covering' the risk are used synonymously.

## **2.1 Foreign Exchange Risk**

### **Different Categories of Exchange Risk**

Exchange risk results from the fact that future costs and cashflows are denominated in foreign currencies. Essentially, what it means is that if exchange rate changes, it affects the amount of cashflow, converted into domestic currency. There are three types of exchange risks. These are: (i) Transaction risk, (ii) Translation or Consolidation risk, and (iii) Economic risk.

### **2.1.1 Transaction Risk**

Transaction risk is related to either (i) trade transactions, that is, exports and imports, or (ii) financial operations such as borrowing and lending in foreign currencies, or (iii) payment or receipt of dividends and interests. In other words, a transaction exposure occurs when a company is committed to a foreign currency denominated transaction. As the transaction will result in a future foreign currency cash inflow or outflow, any change in the exchange rate between the time the transaction is entered into and the time it is settled in cash will lead to a change in the home currency amount of the cash inflow or outflow.

The total position relating to transaction exposure of an enterprise is obtained by grouping together all the debts and credits in foreign currencies of the same maturity or the terms that are sufficiently close. The treasurer of the enterprise calculates difference between debts and credits. If credits exceed debts, it is said that the enterprise has an open long position. The reverse situation is referred to as an open short position.

There are different ways of accounting for trade transactions, involving foreign currency by using a reference rate. Normally, the reference rate is communicated by finance division of the enterprise. This rate can be used by all branches or subsidiaries for all of their operations. Use of Spot rate is also an option and so is the use of Forward rate. This rate is used essentially when a transaction has been covered through Forward market.

Debts, credits and cash in foreign currencies figure in balance sheet at their counter value at the end of the financial year. The differences resulting from exchange rate variations

are noted under the account, called 'exchange loss or gain'. The provision is made for exchange loss.

Enterprises have a tendency to cover either a particular operation, such as a purchase or sale, or to cover the totality of purchases or sales planned for next three months or a year or even more.

### **2.1.2 Translation Risk**

Translation or consolidation risk relates to assets and liabilities of a balance sheet denominated in foreign currencies. While consolidating the accounts, one uses a rate of exchange to transform the accounts of a foreign subsidiary, denominated in foreign currency to the domestic currency of the parent company. As a matter of fact, investors and financial institutions have an interest in knowing the consolidated position of the whole group in domestic currency. This transformation entails a variation of profits of the group as a function of exchange rate variations.

The exchange risk also affects the estate of an enterprise. For instance, a French company, selling a building owned by its Indonesian subsidiary, would obtain a lower price in Euros than that it would have got by selling it before the devaluation of Indonesian Rupiah in 1997.

Different methods of translation are used by different enterprises. These are: (a) current/non-current method, (b) monetary/ non-monetary method, (c) closing (or current) rate method, and (d) temporal method.

#### **Current/Non-Current Method**

Based on the length of life of an asset or liability, this method uses closing rate for converting current assets and liabilities, and historic rates for converting non-current assets and liabilities. Historic rate is the exchange rate which was used at the time of

acquisition of an asset or incurring of a liability or when these items entered the balance sheet. The exchange position that results from this method corresponds to the working capital of the enterprise.

An appreciation of foreign currency results in a translation gain if the working capital is positive (current assets are more than current liabilities) and a translation loss if the working capital is negative. Reverse is true in the case of a depreciation of foreign currency.

It is possible to modify the exchange position by modifying the factors that affect the working capital.

As regards the income statement, its constituent items are converted at the mean rate for the period of the income statement. Exception is made for the figures relating to revenues and expenses linked with long term assets and liabilities (say depreciation and amortization) which are converted using historic rates, that is, at the rates as per the corresponding balance-sheet items. In other words, different revenue and expense items may be translated at different rates, under this method.

### **Monetary/Non-Monetary Method**

This method makes, a distinction between monetary assets and liabilities and non-monetary ones. The monetary accounts consist of long-term debt, receivables, payables and cash. The non-monetary accounts are physical assets and liabilities such as inventories and fixed assets.

Monetary assets and liabilities are converted by using closing rates while non-monetary ones are converted at historic rates. The figures of income statement are converted by using the mean rate of the period, except those related to revenues and expenses linked to non-monetary assets and liabilities which are converted at historic rates. Generally, depreciation expense and cost of goods sold fall in the latter category. These are translated at the same rate as the corresponding balance-sheet items. Thus, it is possible

that the cost of goods sold may be translated at a different rate from that used to translate sales.

### **Closing Rate Method**

As per this method all figures are converted by using closing or current rate. Under this method, if a firm's foreign-currency denominated assets exceed its foreign-currency-denominated liabilities, a depreciation of foreign currency will result in a loss and appreciation will result in a gain.

### **Temporal Method**

This method is a modified version of the monetary/non-monetary method with the difference that in this method, inventory is translated at the current rate. Income statement items are normally translated at an average rate. However, cost of goods sold and depreciation are translated at historic rates.

It is, thus, evident that the methods used give different results as regards the consolidation position and figures obtained for consolidation gain or loss are also different.

Many companies do not provide cover against consolidation risk because they think of it as a simple accounting position. There are others which like to cover this risk. Depending on the method of conversion used, different strategies will be required to reduce the translation risk. For example, companies would try to reduce working capital if the foreign currency is likely to depreciate in the event of their using current/non-current methods.

### **2.1.3 Economic Risk (or Operating Exposure)**

Economic risk or economic exposure refers to the impact of exchange rate changes on future cashflow of a company. For this reason, this exposure is also known as long-term

cashflow exposure. Economic risk can be defined as the variability in the company's present value, caused by uncertain change in exchange rate. Since operating exposure is related to company's future revenues and costs, measuring it requires a longer-term perspective. Viewed in this perspective, a company faces operating exposure whenever it is subjected to foreign competition, when it is sourcing raw materials or other inputs abroad and so on. The measurement of operating exposure is difficult as it is not possible to ignore the effect of inflation while considering the impact of exchange rate change. As a consequence, this exposure cannot be hedged solely through financial hedging techniques. It would require longer-term operating adjustments.

Appreciation or depreciation of a currency will lead to changes in the relative prices of inputs as well as products sold by the company in different countries. The effect of these currency-induced changes on corporate revenues and costs depends on the extent of the company's international operations, its competitive environment and its degree of operational flexibility. In order to manage these relative price changes, the company may adjust its production process or marketing mix. Moreover, a company may try to shift out of currencies which are moving against its long-term profitability. For example, over the period 1985-95, a UK company would have increased its earnings in sterling if it had bought imports denominated in US dollars and sold its exports denominated in Deutschmarks. This is because during this period, Pound sterling was appreciating against US dollar and depreciating against Deutschmark.

## **2.2 Exchange Risk in Enterprises**

As enterprises earn more of their revenues/earnings from abroad, they are vulnerable to exchange rate fluctuations. An unfavorable movement of rates can result in sizeable losses and thus may affect their financial results adversely. Given the significance of the issue, the top management of an enterprise formally indicates its policy with regard to exchange risk and puts in place a system for risk management.

The treasury manager centralises all foreign currency operations of the enterprise or its branches in a manner so as to have a full blue print of all the transactions, entailing exchange risk. For the purpose, he may carry out the following activities:

(i) Collect the data with respect to foreign trade and financial flows, with details indicating currency involved, the period of transaction and duration of cover required.

(ii) Assess the total exchange risk of the enterprise.

(iii) Propose a strategy of covering, that is, whether to cover the net position or to cover each operation.

(iv) Suggest the best financial instruments to cover the risk—buying or selling forward different currencies, buying or selling an option and so on.

(v) Determine the level of risk that the enterprise is ready to accept, in tune with management guidelines and policies in this regard.

(vi) Manage the exchange position on a permanent and regular basis and review the strategy of risk management regularly.

In order to ensure the security of exchange operations on the one hand and to avoid the counterparty risk on the other, it is desirable to have covering operations with banks which have high credibility.

### **2.3 Exchange Risks for Banks**

Exchange risk for banks emanates from their activities relating to currency trading, management of risks for their clients as also the risks of their own balance sheet and operations. Broadly, we can classify these risks in four categories :

- (1) Exchange rate risk,
- (2) Credit risk,
- (3) Liquidity risk, and
- (4) Operational risk.

### **2.3.1 Exchange Rate Risk**

Exchange rate risk relates to appreciation or depreciation of currencies. Every bank that has a long position in a currency, runs a risk of loss if that currency depreciates. Likewise, any bank that has short position in a currency, runs the risk of loss if that currency appreciates. The risk can result from the mismatch of amounts of assets and liabilities as well as from the mismatch of maturity dates of the assets and liabilities.

When an exchange dealer of a bank takes a position in a currency, he does so on the assumption that the currency is going to evolve in his favour. The currency, however, may move in the opposite direction resulting in a loss. In addition, the dealer also runs the risk of interest rate changes. If, for example, the position taken by the dealer is financed by a loan which needs to be renegotiated during the period of the position, the dealer is exposed to a risk, as the interest rate of the borrowed currency may increase. That is why limits are prescribed by the banks on the total position as well as on the position per currency. These limits depend on the financial situation of the bank and on its reading of the ensuing risk. Likewise, the position of a dealer should be closed if he has already suffered a certain amount of loss.

### **2.3.2 Credit Risk**

The second category of risks that banks are exposed to is credit risk. This risk arises from the possibility of a counterparty making a default. This risk may appear either during the period of contract or at the maturity date. It can be reduced by fixing the limits of operations per client, based on the creditworthiness of the client, by incorporating the clauses for rescinding the contract if the rating of a counterparty goes down.

The Basle Committee, consisting of the governors of Central banks of G10 observed that the increasing complexity, diversity and growth in volume of derivative products presents increasing challenges for the management of risk. It makes the following recommendations for containment of risk: (i) constant follow up on risks, their measurement (quantification), supervision and control, (ii) effective information system, and (iii) procedures of audit and control.

### **2.3.3 Liquidity Risk**

This is the risk of refinancing. It may happen when a dealer has placed funds for a period longer than that of the deposits that finance this placement. At the time of refinancing, the interest rate may go up, resulting in a loss for the dealer. Likewise, in a reverse situation, the dealer may increase his profits.

### **2.3.4 Operational Risk**

This risk is related to the operations of the bank. The bank may be able to limit this type of risk by precisely identifying the problems: definition of responsibilities, reporting, accountability for operations and so on.

### **Need for Covering Exchange Risks**

If exchange risk is not covered, it may result in significant losses for the enterprise, in the event of wide variations of exchange rates. Covering against exchange risk reduces the variability of cashflows and of financial results.

The basic principle behind covering a risk is that the enterprise or financial institution that covers itself, compensates for the potential loss that it is likely to suffer by the gains resulting from covering the risk.

The act of covering is quite similar to the technique of insurance, used for protecting against an unfavourable evolution of a currency. Some techniques are quite simple, like buying or selling the currency in Forward market. Yet others are more complex, such as Options, Swaps or Futures. The methods of covering vary depending on enterprises, their size and the nature of their activities.

For instance, if an exporting enterprise anticipates an appreciation of currency in which its exports are invoiced, it may cover with Options. This will permit the enterprise to enjoy the benefit of anticipated appreciation but at the same time, will assure it a minimum price for the currency in the case of depreciation. On the other hand, if it anticipates a depreciation of the invoice currency, it will prefer to cover itself on the Forward market.

Inversely, if an importing enterprise anticipates a depreciation of the currency in which its imports are invoiced, it will take recourse to Options. This will permit the enterprise to take advantage of anticipated depreciation of foreign currency but will also assure for it the maximum price for the currency in the case of its anticipation not being met. On the other hand, if it anticipates an appreciation of currency, it will prefer to cover in Forward market.

## **2.4 Exchange rate theories**

It is necessary to know long-term future exchange rates in order to take strategic decisions concerning investment and management of foreign subsidiaries. These predictions of future rates will be written in the strategic plan of the group as a whole, comprising the parent as well as the different subsidiaries. Besides long-term future rates, it is equally important to estimate exchange rate in medium term, that is, over a period of one year, because cash flows of subsidiaries consist of domestic as well as foreign currencies. Short-term prediction on the other hand, is necessary for managing exchange exposure on day-to-day basis.

Generally graphs and charts are used for short-term prediction while fundamentals are used for predicting medium and long term rates. Fundamentals consist of factors like interest rates, inflation, economic growth, and money supply. It is reasonable to assume that these factors will have some impact on exchange rate. The effect of each of them may not always be distinctly clear, yet the fact is that each of the fundamental factors has an influence on the evolution of exchange rates.

From the above, the significance of prediction of future exchange rate is apparent. Theorists have been trying to explain exchange rate variations and to predict their future course. Several theories have been propounded to this effect. These theories, by and large, use factors such as inflation, interest rates and balance of payment deficit. The two important theories are:

- (1) Purchasing Power Parity (PPP), and
- (2) Interest Rate Parity (IRP).

#### **2.4.1 Purchasing Power Parity (PPP) Theory**

Purchasing Power Parity theory is based on the premise that the same product cannot have different prices in two different markets at any given point of time. This theory assumes restriction free movements of goods and absence of incidental costs such as transportation. According to this theory, if a product costs Rs 100 in India and \$ 2.5 in USA, then one US dollar has to be equal to Rs 40. That is, a sum of Rs 100 has the same purchasing power as the sum of \$ 2.5.

This theory was first enunciated by Gustav Cassel, a Swedish economist. He said that the purchasing power of a currency is determined by the amount of goods and services that can be purchased with one unit of that currency. If there are more than one currency, the exchange rates between them should be such that they provide the same purchasing power to different currencies. In case the existing rate is such that purchasing power

parity does not exist, it is a situation of disequilibrium. It is expected that the exchange rate among different currencies conforms eventually to purchasing power parity.

Though this theory is conceptually sound, there are a number of factors which prevent it from predicting exchange rate in practice. Some of the major factors in this regard are:

- (i) Trade restrictions,
- (ii) Government restrictions on exchange rates,
- (iii) Continuation of long-term flows despite the disequilibrium between purchasing power parity and exchange rates,
- (iv) lack of definition of the relevant rate of inflation and price levels. For example, it is important to establish whether price indices should be based on only those commodities that are traded internationally or on all commodities.

The PPP takes into account only the movement of goods and not that of capital. In operational terms, it is concerned only with the current account segment of Balance of Payments and not the total BOP. If a currency is an instrument of payment for other countries, as is the case with the US dollar, then exchange rate may evolve in a manner independent of price level of the country concerned, i.e. USA.

The PPP theory is ideal for predicting exchange rates in specific situations such as high rate of inflation or monetary disturbances. In these specific situations, the response of individuals to changes in value of real and monetary assets is expected to be strong and the prediction of exchange rates by the PPP theory may turn out to be realistic.

#### **2.4.2 Theory of Interest Rate Parity (IRP)**

The basic premise of this theory is that in an open economic system, the real future worth of a monetary asset should be the same irrespective of the currency in which it is invested. As per Fisher, the nominal rate of interest is related to real rate of interest and inflation by the equation:

$$(1 + i_n) = (1 + i_r) (1 + r)$$

where

$i_n$  = nominal rate of interest

$i_r$  = real rate of interest

$r$  = rate of inflation.

The market rate of interest is the nominal rate. The real rate of interest or real rate of return corresponds to increase of purchasing power.

The theory of Interest Rate Parity and Fisher effect have been tested. It is found that the countries that have higher rate of inflation have higher nominal interest rates. Thus, it seems that the major part of variations of nominal interest rates can be attributed to the anticipated difference to inflation rates. Yet, it is not easy to test the hypothesis of equality of real interest rates.

Integration of capital markets brings in some degree of homogeneity of interest rates. If the capital markets were integrated, there would be a global demand of funds against a global supply and thus a rate of interest will result from equilibrium of demand and supply. On the contrary, when markets are segmented, demand and supply are determined at the level of each country as a function of its specific conditions and hence theory of interest parity is not fully verified. The differences that exist between real interest rates may be either due to exchange risk or political risk.

### **2.4.3 Fundamental Analysis**

As we have seen, PPP and IRP are able to quantitatively link future exchange rate with inflation rate and interest rate respectively. But these two theories do not capture exchange rate changes in totality. It is so because exchange rates are influenced, in a very complex way, by many economic factors, collectively known as fundamentals. An

analysis of how these factors affect exchange rate is called fundamental analysis. Some of these factors include:

- Balance of payments,
- Inflation rate,
- Long-term as well as short-term interest rates,
- Monetary policy,
- Budgetary and fiscal deficit,
- Evolution of GDP,
- Borrowing by household sector,
- Indicators of demand, such as orders for durable goods, capital investment, retail sales, wholesale orders, and housing market, and
- Indicators of supply, such as industrial production, use of the capacity of production, employment market and capital market.

Most of these factors are inter-dependent in a rather complex manner. Therefore, it is not easy to develop precise mathematical equations linking future exchange rate with each one of these factors. However, mathematical models can be developed and verified on empirical data to see which factors have had more significant influence on exchange rates than others over a given period of time. We have already seen how inflation and interest rates are linked to exchange rates. Other factors enumerated can be discussed in qualitative terms.

For example, balance of payments comprise trade balance, balance of services and invisibles, and balance of capital in short term as well as long term. The current and capital accounts are balanced by variations of official reserves, by borrowing from or lending to international institutions in foreign currency. The external trade and capital movements influence the supply and demand of foreign exchange and consequently, the prices of currencies on the market. Generally, currencies of the countries suffering from a deficit of current account have a tendency to depreciate. Some thinkers consider that the BOP is a good indicator of the pressure that a currency may be subject to. If, over a

certain period, a country buys more than what it sells overseas, the probability of depreciation of its currency vis-a-vis others increases. Theoretically, a country with a surplus of BOP, all things being equal, should have a strong currency.

This adjustment of exchange rate through BOP, however, is not always verifiable for different reasons. Firstly, all the capital flows are not registered in the BOP account. There are always 'errors and omissions' whose amount is significantly high in certain countries. Secondly, Forward contracts are not included in the accounts of BOP. Besides, governments have different ways of acting in short term on the equilibrium of BOP. These include measures relating to (i) monetary and fiscal policies, (ii) price controls, (iii) exchange control, and (iv) quantitative and tariff barriers on imports. In any case, when the foreign currency reserves of a country fall below the value of three months' imports, the currency of that country is considered vulnerable. If a country's reserves are represented by R and annual imports plus debt service obligations by I, then N should be greater than 3 months if the currency is not to enter a dangerous zone. Here, N is given by the equation

$$N = \frac{R}{I} \times 12$$

Similarly, other factors will influence the exchange rates.

## 2.5 Medium of exchange

### 2.5.1 Basic Understanding of Medium of Exchange

A medium of exchange is an intermediary used in trade to avoid the inconveniences of a pure barter system.

By contrast, as William Stanley Jevons argued, in a barter system there must be a coincidence of wants before two people can trade - the one must want exactly what the other has to offer, when and where it is offered, so that the exchange can occur. A

medium of exchange permits the value of a good to be assessed and rendered in terms of the intermediary, most often, a form of money widely accepted to buy any other good.

A longer term obligation need not be measured in the same terms as the immediate medium is, that is, the medium need not be a standard of deferred payment. Many currencies in periods of high inflation have become unacceptable as denominations of debt - creditors demand contracts that specify US dollars, or a quantity of gold or food perhaps, but continue to use the unstable local currency as the daily medium of exchange. The standard of deferred payment tends to trade at a premium in such circumstances, and some goods are not available to those who deal in the medium of exchange currency only.

Although the unit of account must be in some way related to the medium of exchange in use, e.g. coinage should be in denominations of that unit making accounting much easier to perform, it has often been the case that media of exchange have no natural relationship to that unit, and must be 'minted' or in some way marked as having that value. Also there may be variances in quality of the underlying good which may not have fully agreed commodity grading. The difference between the two functions becomes obvious when one considers the fact that coins were very often 'shaved', precious metal removed from them, leaving them still useful as an identifiable coin in the marketplace, for a certain number of units in trade, but which no longer had the quantity of metal supplied by the coin's minter. It was observed as early as Oresme, Copernicus and then in 1558 by Sir Thomas Gresham, that bad money drives out good in any marketplace (Gresham's Law states "Where legal tender laws exist, bad money drives out good money"). A more precise definition is this: "A currency that is artificially overvalued by law will drive out of circulation a currency that is artificially undervalued by that law." Gresham's law is therefore a specific application of the general law of price controls. A common explanation is that people will always keep the less adulterated, less clipped, sweated, less filed, less trimmed coin, and offer the other in the marketplace for the full units for which it is marked. It is inevitably the bad coins proffered, good ones retained.

The fact that a bank or mint has always been able to generate a medium of exchange marked for more units than it is worth as a store of value, is the basis of banking. Central banking is based on the principle that no medium needs more than the guarantee of the state that it can be redeemed for payment of debt as "legal tender" - thus, all money equally backed by the state is good money, within that state. As long as that state produces anything of value to others, its medium of exchange has some value, and its currency may also be useful as a standard of deferred payment among others, even those who never deal with that state directly in foreign exchange.

Of all functions of money, the medium of exchange function has historically been the most problematic because of counterfeiting, the systematic and deliberate creation of bad money with no authorization to do so, leading to the driving out of the good money entirely.

Other functions rely not on recognition of some token or weight of metal in a marketplace, where time to detect any counterfeit is limited and benefits for successful passing-off are high, but on more stable long term social contracts: one cannot easily force a whole society to accept a different standard of deferred payment, require even small groups of people to uphold a floor price for a store of value, still less to re-price everything and rewrite all accounts to a unit of account (the most stable function). Thus it tends to be the medium of exchange function that constrains what can be used as a form of financial capital.

It was once common in the United States to widely accept a check as a medium of exchange, several parties endorsing it perhaps multiple times before it would eventually be deposited for its value in units of account, and thus redeemed. This practice became less common as it was exploited by forgers and led to a domino effect of bounced checks - a forerunner of the kind of fragility that electronic systems would eventually bring:

In the age of electronic money it was, and remains, common to use very long strings of difficult-to-reproduce numbers, generated by encryption methods, to authenticate transactions and commitments as having come from trusted parties. Thus the medium of

exchange function has become wholly a part of the marketplace and its signals, and is utterly integrated with the unit of account function, so that, given the integrity of the public key system on which these are based, they become to that degree inseparable. This has clear advantages - counterfeiting is difficult or impossible unless the whole system is compromised, say by a new factoring algorithm. But at that point, the entire system is broken and the whole infrastructure is obsolete - new keys must be re-generated and the new system will also depend on some assumptions about difficulty of factoring.

Due to this inherent fragility, which is even more profound with electronic voting, some economists argue that units of account should not ever be abstracted or confused with the nominal units or tokens used in exchange. A medium is just that, a medium, and should not be confused for the message.

## 2.5.2 Exchange rates

### Historical exchange rates

<b>Currency units per U.S. dollar, averaged over the year.</b>									
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Euro	0.9387	1.0832	1.1171	1.0578	0.8833	0.8040	0.8033	0.7960	0.7293
Japanese yen	113.73	107.80	121.57	125.22	115.94	108.15	110.11	116.31	117.76
Pound sterling	0.6184	0.6598	0.6946	0.6656	0.6117	0.5456	0.5493	0.5425	0.4995
Renminbi	8.2781	8.2784	8.2770	8.2771	8.2772	8.2768	8.1936	7.9723	7.6058
Canadian dollar	1.4858	1.4855	1.5487	1.5704	1.4008	1.3017	1.2115	1.1340	1.0734
Mexican peso	9.553	9.459	9.337	9.663	10.793	11.290	10.894	10.906	10.928

### **2.5.3 Fixed exchange rate**

A fixed exchange rate, sometimes (less commonly) called a pegged exchange rate, is a type of exchange rate regime wherein a currency's value is matched to the value of another single currency or to a basket of other currencies, or to another measure of value, such as gold. As the reference value rises and falls, so does the currency pegged to it. In addition, fixed exchange rates deprive governments of the use of an independent domestic monetary policy to achieve internal stability. A former president of the Federal Reserve Bank of New York described fixed currencies as follows:

"Fixing the value of the domestic currency relative to that of a low-inflation country is one approach central banks have used to pursue price stability. The advantage of an exchange rate target is its clarity, which makes it easily understood by the public. In practice, it obliges the central bank to limit money creation to levels comparable to those of the country to whose currency it is pegged. When credibly maintained, an exchange rate target can lower inflation expectations to the level prevailing in the anchor country. Experiences with fixed exchange rates, however, point to a number of drawbacks. A country that fixes its exchange rate surrenders control of its domestic monetary policy."

In certain situations, fixed exchange rates may be preferable for their greater stability. For example, the Asian financial crisis was improved by the fixed exchange rate of the Chinese renminbi, and the IMF and the World Bank now acknowledge that Malaysia's adoption of a peg to the US dollar in the aftermath of the same crisis was highly successful. Following the devastation of World War II, the Bretton Woods system allowed Western Europe to have fixed exchange rates until 1970 with the US dollar.

Yet others argue that the fixed exchange rates (implemented well before the crisis) had become so immovable that it had masked valuable information needed for a market to function properly. That is, the currencies did not represent their true market value. This

masking of information created volatility which encouraged speculators to "attack" the pegged currencies and as a response these countries attempt to defend their currency rather than allow it to devalue. These economists also believe that had these countries instituted floating exchange rates, as opposed to fixed exchange rates, they may very well have avoided the volatility that caused the Asian financial crisis. Countries like Malaysia adopted increased capital controls believing that the volatility of capital was the result of technology and globalization, rather than fallacious macroeconomic policies which resulted not in better stability and growth in the aftermath of the crisis but sustained pain and stagnation.

Countries adopting a fixed exchange rate must exercise careful and strict adherence to policy imperatives, and keep a degree of confidence of the capital markets in the management of such a regime, or otherwise the peg can fail. Such was the case of Argentina, where unchecked state spending and international economic shocks disbalanced the system and ended up forcing an extremely damaging devaluation (see Argentine Currency Board, Argentine economic crisis, and the Mexican peso crisis). On the opposite extreme, China's fixed exchange rate with the US dollar until 2005 led to China's rapid accumulation of foreign reserves, placing an appreciating pressure on the Chinese yuan.

### **Maintaining a fixed exchange rate**

Typically, a government wanting to maintain a fixed exchange rate does so by either buying or selling its own currency on the open market. This is one reason governments maintain reserves of foreign currencies. If the exchange rate drifts too far below the desired rate, the government buys its own currency off the market using its reserves. This places greater demand on the market and pushes up the price of the currency. If the exchange rate drifts too far above the desired rate, the opposite measures are taken.

Another, less used means of maintaining a fixed exchange rate is by simply making it illegal to trade currency at any other rate. This is difficult to enforce and often leads to a black market in foreign currency. Nonetheless, communist countries are highly successful

at using this method due to government monopolies over all money conversion. This is the method employed by the Chinese government to maintain a currency peg or tightly banded float against the US dollar. Throughout the 1990s China was highly successful at maintaining a currency peg using a government monopoly over all currency conversion between the Yuan and other currencies

### **Criticisms**

The main criticism of fixed exchange rate is that flexible exchange rates serve to automatically adjust the balance of trade. When a trade deficit occurs, there will be increased demand for the foreign (rather than domestic) currency which will push up the price of the foreign currency in terms of the domestic currency. That in turn makes the price of foreign goods less attractive to the domestic market and thus pushes down the trade deficit. Under fixed exchange rates, this automatic re-balancing does not occur.

### **2.5.4 Floating exchange rate**

**Floating rate** may also refer to a floating interest rate applied to a loan or other lending product.

A floating exchange rate or a flexible exchange rate is a type of exchange rate regime wherein a currency's value is allowed to fluctuate according to the foreign exchange market. A currency that uses a floating exchange rate is known as a floating currency. The opposite of a floating exchange rate is a fixed exchange rate.

Many economists think that, in most circumstances, floating exchange rates are preferable to fixed exchange rates. They allow the dampening of shocks and foreign business cycles. However, in certain situations, fixed exchange rates may be preferable for their greater stability and certainty. This may not necessarily be true, considering the results of countries that attempt to keep the prices of their currency "strong" or "high" relative to others, such as the UK or the Southeast Asia countries before the Asian currency crisis.

Canada is the only country whose currency's value is determined absolutely and entirely by the foreign exchange market; <sup>[1]</sup> in cases of extreme appreciation or depreciation, a central bank will normally intervene to stabilize the currency. Thus, the exchange rate regimes of floating currencies may more technically be known as a managed float. A central bank might, for instance, allow a currency price to float freely between an upper and lower bound, a price "ceiling" and "floor". Management by the central bank may take the form of buying or selling large lots in order to provide price support or resistance, or, in the case of some national currencies, there may be legal penalties for trading outside these bounds.

### **Fear of floating**

A free floating exchange rate increases foreign exchange volatility. This may cause serious problems, especially in emerging economies. These economies have a financial sector with one or more of following conditions:

- high liability dollarization
- financial fragility
- strong balance sheet effects

When liabilities are denominated in foreign currencies while assets are in the local currency, unexpected depreciations of the exchange rate deteriorate bank and corporate balance sheets and threaten the stability of the domestic financial system.

For this reason emerging countries appear to face greater fear of floating, as they have much smaller variations of the nominal exchange rate, yet face bigger shocks and interest rate and reserve movements (Calvo and Reinhart, 2002). This is the consequence of frequent free floating countries' reaction to exchange rate movements with monetary policy and/or intervention in the foreign exchange market.

According to data from Levy-Yeyati and Sturzenegger (2004), the number of countries that present fear of floating increased significantly during the nineties.

## **Flexible exchange rates**

The ECB targets interest rates rather than exchange rates and in general does not intervene on the foreign exchange rate markets, because of the implications of the Mundell-Fleming Model which suggest that a central bank cannot maintain interest rate and exchange rate targets simultaneously because increasing the money supply results in a depreciation of the currency. In the years following the Single European Act, the EU has liberalised its capital markets, and as the ECB has chosen monetary autonomy, the exchange rate regime of the euro is flexible, or floating. This explains why the exchange rate of the euro vis-à-vis other currencies is characterised by strong fluctuations. Most notable are the fluctuations of the euro versus the U.S. dollar, another free-floating currency. However this focus on the dollar-euro parity is partly subjective. It is taken as a reference because the euro competes with the dollar's role as reserve currency. The effect of this selective reference is misleading, as it gives observers the impression that a rise in the value of the euro versus the dollar is the effect of increased global strength of the euro, while it may be the effect of an intrinsic weakening of the dollar itself.

[http://en.wikipedia.org/wiki/Image:Euro\\_exchange\\_rate\\_to\\_USD%2C\\_JPY%2C\\_and\\_GBP\\_from\\_march.png](http://en.wikipedia.org/wiki/Image:Euro_exchange_rate_to_USD%2C_JPY%2C_and_GBP_from_march.png)

[http://en.wikipedia.org/wiki/Image:G\\_foreign\\_exchange\\_market\\_turnover.gif](http://en.wikipedia.org/wiki/Image:G_foreign_exchange_market_turnover.gif)