

# Managing currency risk by derivatives and accounting thereof

“Profit is the reward of risk”. An entrepreneur is always said to be a risk-taker. But In today’s technology driven global village, unanticipated fluctuations in financial or business derivatives may change the whole scenario unless the enterprise takes appropriate steps to identify, measure the said risk and take defensive steps to minimize the losses.



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- (debt holder are given more interest, therefore stakeholder may loose interest)
6. Tax may be more as tax on book profit will be payable and in the period of loss the compensating is not available.

## How to manage currency risk

### Currency risk (exposure)

The currency exposure is a measure of the sensitivity of real value (adjusted for inflation) of enterprise’s assets and income (or liability/loss) expressed in functional currency (an enterprise’s operational currency) to unanticipated risk. A project has currency exposure when the currencies for its expenditures and revenues are not the same.

### Higher currency exposure to Financial risk leads to:

1. Financial distress and possible bankruptcy, as manager may compromise to quality and safety of workers.
2. The customers will start thinking of after-sales service and sale volume will decrease.
3. Suppliers will tighten credit terms.
4. Cost of running the enterprise will be high.
5. Conflict between stakeholders and debt holder



### The devices (derivatives) available:

**Forward market hedge:** In this the Net Liability is covered by Forward contract of specific period at a premium or discount.

**Roll over contracts:** These are similar to Forward contract but rolled over after specified period at premium or discount.

**Financial Swaps:** It is the exchange of one set of financial obligation to another for specific period. These are mainly currency swap or interest rate swap.

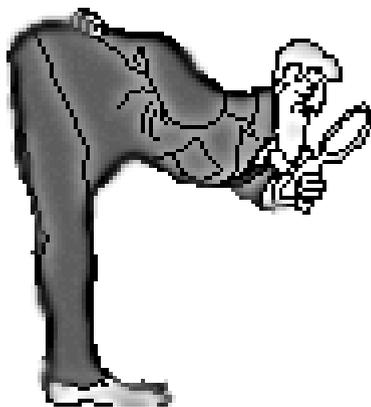
**Money Market Hedge:** In this the exposed position of currency is covered through borrowing or lending in money market.

**Currency options:** Option is right (but not obligation) given by the seller (writer) to buyer (holder) to buy or sale (depend on put or call option) at predetermined price in the specific period. The writer sells the product at the price that changes on the basis of the time factor and the movement (fluctuation) in the currency. These are the options where physical currency is not being transferred but only the difference is being settled.

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## How to manage currency risk more efficiently

1. **Select your currency:** It is desirable to hedge but all part of it, as the favourable side may generate great benefits. You may put different currencies in



order of your requirement and hedge in order of preference. Suppose an enterprise is exposed to payables in dollar and euro, one may find euro to be less strong than dollar for specific period so

while hedging the currency, it may hedge euro first.

2. **Seek more quotations:** Different Banks or dealers may have different rates, so it is always better to get two or more quotations from different dealers. Even quotation from same dealer at different times also differs. Currencies are always quoted in pairs. One unit of the base currency (first currency in the pair) represents the number of units of the second currency of the pair as indicated by the exchange rate.

Example: USD/CHF@1.4000. This means 1 US dollar purchases 1.4000 Swiss francs.

3. **Knowing the Spread:** It is the difference between the price you buy at (also known as the ask) and the price you sell at (also known as the bid). The enterprise should develop the ability to sell the buy price (ask) and the sell price (bid) at all times. Spread has historically been a “hidden” cost. However, by using technology such as the Internet, the market has become more transparent. An enterprise can see the spread and thus can know exactly what the cost of the trade is prior to entering a position.

4. **Try to minimize dependence on one currency hedge:** An enterprise should try to expose to dif-

ferent currencies and hedge accordingly. Firms exposed to dollar in early nineties suffered a lot by using Risk Profiling, the method of worst case and Best case through scenario management on performance measure of individual currency.

5. **Shift:** Firms should shift from one ‘instrument’ to another or one currency to another depending upon the changing market conditions or changing economy indicators (which are key factors of currency rates).

6. **Exchange rate predictions:** Based on Economic forecasting models (PPP-relative purchasing power parity, balance of payment, interest rate parity), exchange rate may be predicted and acted accordingly.

Rate expected = spot rate  $(1 + \text{diff inflation rate})^{\text{year}}$

Suppose inflation in ‘A’ currency is 6% and ‘B’ currency 3%, and the spot rate is 48.25 after 5 years, the predicted rate would be: -

$$48.25 (1 + (.06 - .03))^5 = 55.93$$

Other methods like Economic indicators, oscillators, Currency and other investment ratings may also be used to predict or forecast the currency rates.

7. **Internal derivatives ‘currency concentration’:** Where a ‘hedging affiliate’ (member of group having net exposure in particular currency) using the

derivative for ‘issuing affiliate’ (member of group, having declined to use the derivatives for the group having net exposure in particular currency) to enter into a contract with unrelated party to netting off the consolidated exposure. FABS (US GAAP) have facilitated to use internal derivatives by issuing the statement 138 (amending statement 133).

Ronald Fink, in CFO Magazine described this as ‘Natural Hedge’, matching revenues and costs for the same currency or offsetting losses in one currency with gains in another. There are two main reasons for this shift, and probably a third. One, most multinationals have centralized their treasury operations, at least on a regional basis. With access to data from inter-company and third-party transactions

**The devices (derivatives) available at present for managing currency risk, include Forward market hedge, Roll over contracts, Financial Swaps, Money Market Hedge and Currency Options.**

within the various countries in which a multinational operates, risk managers can better understand how transactions in one currency offsets those in another, and thus erects natural hedges.

The owner of the enterprise may also cover the exposure in currency in the firm by changing his investment portfolio. This is backed by theory given by some analysts like Modigliani-Miller.

### Accounting of Currency derivatives

Though In India accounting of currency derivatives are not fully implemented, the Accounting Standard (AS) 11, the Effects of Changes in Foreign Exchange Rates (revised 2003), has come with some accounting treatments:

An enterprise may enter into a forward exchange contract or another financial instrument that is in substance a forward exchange contract, which is not intended for trading or speculation purposes, to establish the amount of the reporting cur-

Currency risk can be managed efficiently by careful selection of the currency; seeking more quotations from different dealers; knowing the Spread; minimizing dependence on one currency hedge; shifting from one 'instrument' to another or one currency to another; careful prediction of Exchange rates and through Internal derivatives.

rency required or available at the settlement date of a transaction. The premium or discount arising at the inception of such a forward exchange contract should be amortized as expense or income over the life of the contract. Exchange differences on such a contract should be recognized in the statement of profit and loss in the reporting period in which the exchange rates change. Any profit or loss arising on cancellation or renewal of such a forward exchange contract should be recognized as income or as expense for the period.

- Any premium or discount arising at the inception of a forward exchange contract is accounted for separately from the exchange differences on the

forward exchange contract.

- Exchange difference on a forward exchange contract is the difference between (a) the foreign currency amount of the contract translated at the exchange rate at the reporting date, or the settlement date where the transaction is settled during the reporting period, and (b) the same foreign currency amount translated at the latter of the date of inception of the forward exchange contract and the last reporting date.



### For enterprises entering into contract for trading or speculation purpose:

A gain or loss on a forward exchange contract to which paragraph the above not apply should be computed by multiplying the foreign currency amount of the forward exchange contract by the difference between the forward rate available at the reporting date for the remaining

maturity of the contract and the contracted forward rate (or the forward rate last used to measure a gain or loss on that contract for an earlier period).

- The gain or loss so computed should be recognized in the statement of profit and loss for the period.
- The premium or discount on the forward exchange contract is not recognized separately.

### Accounting for currency hedge transactions in US

Historically, companies have been required to disclose hedge contracts, but not record them in financial statements. However, this has changed with the adoption of the Financial Accounting Standards Board (FASB) Statement No. 133 (and its associated amendment, Statement No. 138).

Hedge transactions fall into three categories and accounting treatment varies by type:

- Cash flow hedges
- Fair value hedges
- Net investment in a foreign operation hedges

**Cash Flow Hedge:** A cash flow hedge is a hedging relationship in which the variability of the hedged item's cash flow is offset by the cash flows of the hedging instrument. In addition, the hedged item is a forecasted transaction or balance sheet item with variable cash flows.

- The remaining market value of the derivative contract is reported on the balance sheet in Other Comprehensive Income (OCI).
- Ineffective gain or loss is recorded in earnings.
- Cash flow hedge treatment is typical for the use of floating to fixed interest rate swaps in conjunction with variable rate loans.

**Fair Value Hedge:** A fair value hedge is a hedge of the exposure to a change in fair value of a recognized asset, or liability, or of an unrecognized firm commitment attributable to a particular risk. In addition:

- The hedged item is exposed to price risk.
- For a highly effective hedge there must be offsetting fair value changes for the hedged item and the hedging instrument.
- Changes in fair value of the hedged item and the hedging instrument are recorded in earnings.
- Fair value hedge treatment is typical when hedging fixed rate debt with a matching fixed to floating rate swap.

**Net Investment in a Foreign Operation Hedge**

Relatively unchanged from FAS 52, FAS 133 calls for the changes in fair value of the hedge instrument to be consolidated with the translation adjustment in other comprehensive income with the difference between the total hedge results and the translation adjustment flowing through earnings. This statement

- Includes hedges of cash flow, fair value, and net investments in foreign operations.
- Permits the limited use of non-derivative instruments.
- Expands hedge accounting, particularly for forecasted transactions and tandem currency hedges.

**Accounting as per international accounting standard: IAS 39**

IAS 39 demands that hedging relationships have to be reported by demanding that both the hedging transaction and underlying hedged transaction be reported. According to IAS 39, there are three types of heading relationship, of which the following two are relevant:

**1. Fair value Hedge:** The hedging transaction secures the value of an asset or liability. The standard demands that changes in value of the hedged underlying transaction and the derivative hedging transaction,

**Most multinationals have centralized their treasury operations. With access to data from inter-company and third-party transactions within various countries in which a multinational operates, risk managers can better understand how transactions in one currency offsets those in another, and thus erects natural hedges.**

i.e. the hedging relationship, be reported with compensating effect on the results.

**2. Cash flow hedge:** If a future payment stream is hedged, profits and losses from the hedging transaction are recorded, to the extent to which the hedging relationship can be classified as valid, in a separate item in the equity. The profits and losses recorded in the equity are then redeemed against the results in the periods when a future cash flow is no longer exclusively secured. This is the case, for example, if first of all an order value is secured and later the order value is billed and receivable is produced.

**The reporting of hedging transactions must cease (immediately) if:**

- A hedging relationship does not pass the effectiveness test.
- The hedging instrument is sold, cancelled or exercised.
- The hedged position is settled.
- The management decides to terminate the hedging relationship.
- Within the framework of hedging, the planned transaction is no longer highly likely.

**The financial instruments can be divided into four categories:**

**Category 1: Financial assets and liabilities held for trading purposes:** The main intention is to make a profit with the financial instrument from short-term price changes. Derivative financial assets and liabilities are also categorized as financial instruments held for trading purposes unless they are designed and

effectively used for hedging. The subsequent valuation is at fair value.

**Category 2: Financial investments held to maturity** are financial assets with fixed or calculable payments, which the company wants to hold for a fixed term until maturity and has the chance to do so. The subsequent valuation is at amortised costs.

**Category 3: Loans and receivables originated by the enterprise** are financial assets, which the company has originated through the direct provision of cash, goods or services to a debtor. This includes, for example, trade receivables, other receivables and loan receivables. The subsequent valuation is at amortised costs. Purchased receivables are reported under category 4 and not under this category.

**Category 4: Financial assets available for sale** include all other financial assets, which do not fall into the first three categories. This includes, for example, securities that are not held for trading purposes. The subsequent valuation of financial assets available for sale is at fair value.

### An example of accounting of derivatives under IAS 39

**Business Event:** Sales of Cotton to the value of £100000 by enterprise in Germany to a customer in UK on 30.06.2003. The value of the order is immediately hedged by means of a forward exchange contract. Goods are shipped to the customer on 31st August, 2003. Payment for the goods is due on 31st October 2003.

Basic Data	6/30/2003	7/31/2003	8/31/2003	9/30/2003	10/31/2003
Spot Rate (GBP-EURO)	0.610	0.620	0.610	0.600	0.620
Forward rate of cover transaction (GBP-EURO)	0.590	0.590	0.590	0.590	0.590
Forward rate for delivery on 31/10/2003 (GBP-EURO)	0.590	0.595	0.600	0.610	[0,620]

Entry No.	Entries	Date	Amount	Remarks
1	Dr. Derivatives	30-Jun-03		When the derivative transaction is entered into on 30/6/2003, the forward rate for 31/10/2003 is identical with the forward rate at which hedging transaction is concluded. Since current forward rate and settlement rate are identical, the derivative has zero value.
	Cr. Valuation Reserve IAS 39	30-Jun-03	0.00	
2	Dr. Derivatives	31-Jul-03	1,424.30	The rise in the exchange rate renders a forward currency sale less favourable vis-à-vis the position on 30/6/2003. Since the original position was hedged by the forward contract, fair value accrues to the latter.
	Cr. Valuation Reserve IAS 39	31-Jul-03	1,424.30	
3	Dr. Derivatives	31-Aug-03	1,400.56	Likewise at the end of the following month the exchange rate rises. The fair value of the derivative rises further. A hedge of a future payment stream is deemed to be a cash flow hedge, variations in the value of which are accounted over reserves.
	Cr. Valuation Reserve IAS 39	31-Aug-03	1,400.56	
4	Dr. Receivables	31-Aug-03	161,109.57	Invoicing the customer gives rise to an asset to which the hedge transaction continues to be related. The cash flow hedge is now regarded as a hedge of the current value of the asset (fair value hedge). The amount held in Valuation Reserve IAS 39 is now related to the measurement of the asset.
	Dr. Valuation Reserve IAS 39	31-Aug-03	2,824.86	
	Cr. Foreign Sales	31-Aug-03	163,934.43	
5	Dr. Receivables	30-Sep-03	5,557.10	Measurement of receivable at current spot rate accounted to profit and loss.
	Cr. gains from value variation IAS 39 underlying transaction	30-Sep-03	5,557.10	

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6	Dr. Derivatives	30-Sep-03	2,732.24	Measurement of the forward exchange contract by comparing the current forward rate for the settlement date with the forward rate of the contract actually booked. The difference is taken to Profit & Loss.
	Cr. gains from value variation IAS 39 hedging transaction	30-Sep-03	2,732.24	
7	Dr. Expense o/a Value Fluctuations IAS 39 underlying transaction	31-Oct-03	5,376.34	Follow-up re-measurement of receivable at spot rate as at date.
	Cr. Receivables	31-Oct-03	5,376.34	
8	Dr. Derivatives	31-Oct-03	2,644.10	Follow-up remeasurement of forward exchange contract
	Cr. Income o/a Value Fluctuations IAS 39 hedging transaction	31-Oct-03	2,644.10	
9	Dr. Balances with Banks (GBP)	31-Oct-03	161,290.32	Payment received from customer measured at spot rate, which equals the amount of the receivable since the latter has already been marked to market (entry 7).
	Cr. Receivables	31-Oct-03	161,290.32	
10	Dr. Balances with Banks (EURO)	31-Oct-03	169,491.53	The foreign currency amount received is exchanged into euros at the contracted forward rate as per the forward contract. The difference in value of the foreign currency amount vis-à-vis the spot rate is equivalent to the value of the forward contract at the moment of settlement.
	Cr. Balances with Banks (GBP)	31-Oct-03	161,290.32	
	Cr. other assets from derivatives with hedging relationships	31-Oct-03	8,201.21	
11	Dr. gains from value variation IAS 39 underlying transaction	31-Oct-03	5,557.10	The net sum of the value fluctuations booked to Profit Loss is reversed since the hedging relationship is concluded. The contra entry is to Sales since as a result of the hedging transaction, the proceeds from the sale of goods could be locked in.
	Dr. gains from value variation IAS 39 hedging transaction	31-Oct-03	5,376.34	
	Cr. Expense o/a Value Fluctuations IAS 39 underlying transaction	31-Oct-03	5,376.34	
	Cr. Foreign Sales	31-Oct-03	5,557.10	

**As per standard practice under IAS 39:** In case of Fixed assets related forward contracts, the accounting treatment will be same for forward booking, valuation of contracts before actual delivery of fixed assets will be from valuation reserve. On actual delivery the Fixed assets be capitalized and the value in valuation reserve will be transferred to Fixed assets. Subsequent valuation will be at mark to market and shown in Profit and loss account and on capitalization transferred to

Fixed assets.

In case of Hedge relationship is broken like purchase deal is being concealed or otherwise Balances of valuation reserve being transferred to Gain /loss in profit and loss account.

Since we are committed to go inline with IAS, similar type of guidelines are sought for growing demand of derivatives which are buzzword of today's and tomorrow's financial markets.

**Any premium or discount arising at the inception of a forward exchange contract is accounted for separately from the exchange differences on the forward exchange contract.**