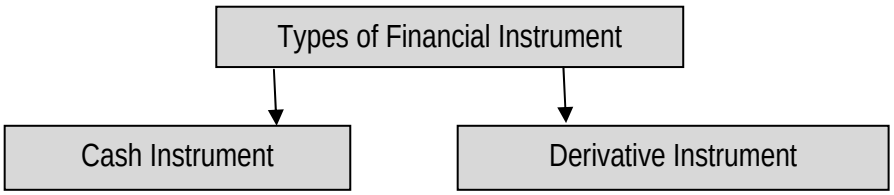
CHAPTER 6

Accounting and Reporting of Financial Instruments

BASIC CONCEPTS

Financial Instrument is contract that may give rise to financial asset of one entity and a financial liability of another entity.



There are four categories of Financial Assets and two categories of Financial Liabilities. Their recognition, measurement, presentation and disclosure in financial Statements depend upon the classification of Financial Assets and Liabilities.

Categories of Financial Assets

The four categories are:

a) Financial Assets at fair Value through Profit and Loss-it has two sub categories-financial assets held for trading and those designated to the category at inception
b) Held to maturity investments
c) Loans & Recievable
c) Available for sale

Held for trading: A financial asset or financial liability is classified as held for trading if it is:

(i) acquired or incurred principally for the purpose of selling or repurchasing it in the near term; or
(ii) part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking;
(iii) a derivative (except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument).

For example - Hemakshi Ltd intends to sell the loan in the near term to Sona Ltd at 9% yield. The loan clause allows the initiator to sell the loan to a third party.

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity that an entity has the positive intention and ability to hold to

maturity other than:

(a) those that the entity upon initial recognition designates as at fair value through profit or loss;

(b) those that meet the definition of loans and receivables; and

(c) those that the entity designates as available for sale.

For Example- Sona Ltd has medium term deposits amounting to 300000 with HDFC bank and they will mature in three years. Sona ltd intends to hold them till maturity. These will be classified as maturity investments. However if after Two years, Sona Ltd with draws 2,00,000 from the deposits, then balance will have to be reclassified as Financial Assets held for sale.

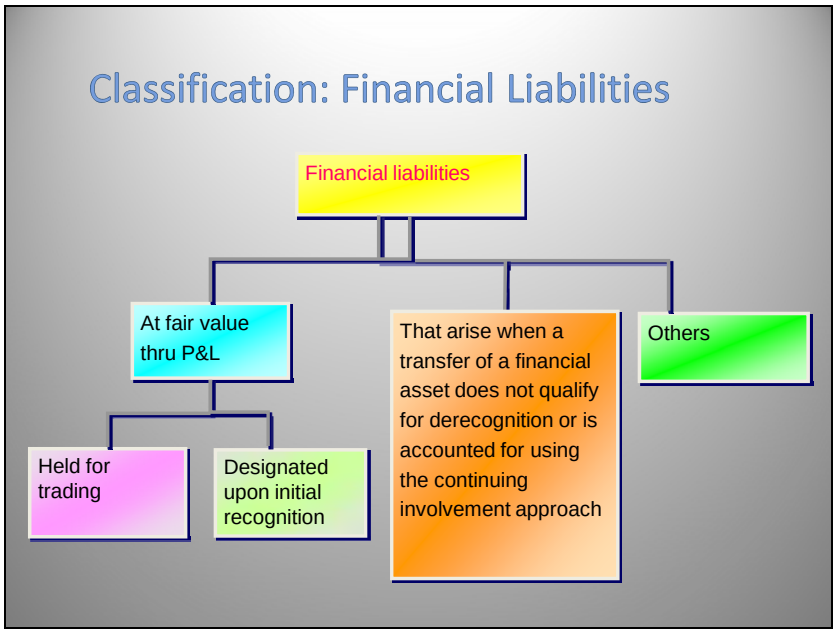
Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market, other than: (a) those that the entity intends to sell immediately or in the near term, which should be classified as held for trading, and those that the entity upon initial recognition designates as at fair value through profit or loss; (b) those that the entity upon initial recognition designates as available for sale; or (c) those for which the holder may not recover substantially all of its initial investment, other than because of credit deterioration, which should be classified as available for sale.

Available-for-sale financial assets are those non-derivative financial assets that are designated as available for sale or are not classified as

(a) loans and receivables,

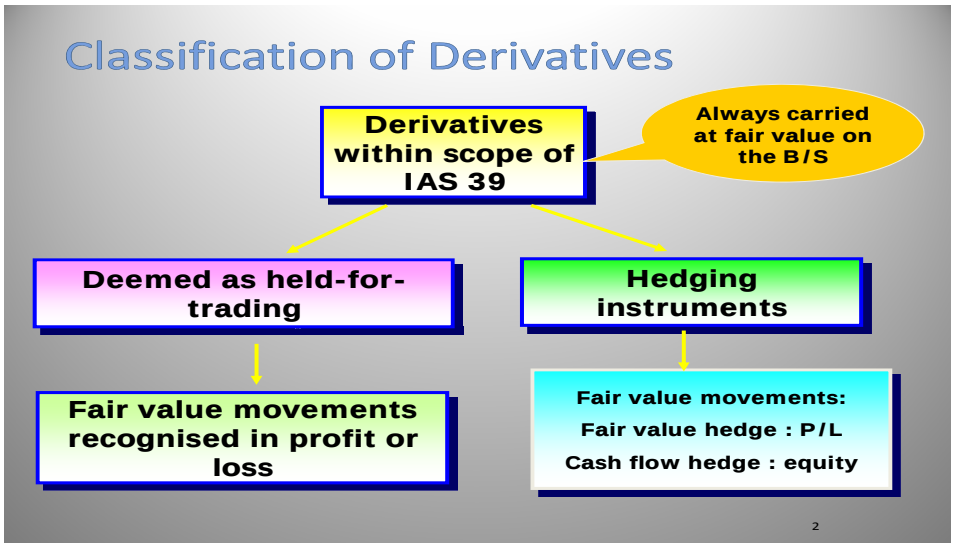
(b) held-to-maturity investments, or

(c) Financial assets at fair value through profit or loss.



Derivatives

Derivatives are financial instruments that drive their value from changes in benchmark based on stock prices, interest rates, mortgage rates, currency rates, commodity prices or some other agreed upon base. It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors; and it is settled at a future date.



Hedge Accounting

For hedge accounting purposes, only instruments that involve a party external to the reporting entity (i.e., external to the group, segment or individual entity that is being reported on) can be designated as hedging instruments. There is normally a single fair value measure for a hedging instrument in its entirety

Hedging relationships are of three types:

(a) fair value hedge: a hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss.

(b) cash flow hedge: a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognised asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and (ii) could affect profit or loss.

(c) hedge of a net investment in a foreign operation as defined in AS 11.

Forwards and Options

A forward contract is basically a contractual arrangement in which one party buys and other

party sells designated currency at a forward rate mutually agreed upon on the date of contract for delivery at designated future date. The difference between the forward rate and the exchange rate at the date of transaction should be recognised as income or expense over the life of the contract, except in respect of liabilities incurred for acquiring fixed assets, in which case, such difference should be adjusted in carrying amount of the respective fixed assets.

Embedded Derivatives

An embedded derivative is a component of a hybrid instrument that combines the derivative and a non-derivative host contact – with the effect that some of the cash flows of the combined instrument vary in a way similar to stand-alone derivative.

Question 1

(a) Explain currency options related to foreign exchange.

(b) Write short note on Interest Rate Swaps.

Answer

(a) Currency Options give the client the right, but not the obligation, to buy/sell a specific amount of currency at a specific price on a specific date. Currency options provide a tool for hedging foreign exchange risk arising out of the firm's operations. Currency options enable the business house to remove downside risk without limiting the upride potential. Options can be put option or call option. A put option is a contract that specifies the currency that the holder has the right to sell. A call option is a contract that specifies the currency that the holder has the right to buy.

(b) Interest rate swap can be defined as a financial contract between two parties (called counter parties) to exchange on a particular date in the future, one series of cash flows (fixed interest) for another series of cash flows (variable or floating interest) in the same currency on the same principal (an agreed amount called notional principal) for an agreed period of time. The contract will specify the interest rates, the benchmark rate to be followed, the notional principal amount for the transaction, etc. Interest rates are of two types, fixed interest rates and floating rates which vary according to changes in a standard benchmark interest rate. An investor holding a security which pays a floating interest rate is exposed to interest rate risk. The investor can manage this risk by entering into an interest rate swap.

Question 2

ABC Ltd. grants a loan of ₹10 crore for five years, to XYZ at a fixed rate of 8% payable half yearly. XYZ Ltd. in turn grants, independently a separate loan of equal amount and equal period at a floating rate, to ABC Ltd. The arrangement envisages payment of interest on net basis. The chief accountant of ABC Ltd. says that the loan is not a derivative instrument. Comment if it is a derivative.

Answer

Yes. The contract should be considered as a derivative, since in substance, it is a fixed-to-floating rate swap.

Question 3

On 1 April, 2012 Omega Ltd. issued ₹ 10,00,000, 6 % convertible debentures of face value of ₹ 100 per debenture at par. The debentures are redeemable at a premium of 10% on 31.03.14 or these may be converted into ordinary shares at the option of the holder, the interest rate for equivalent debentures without conversion rights would have been 10%.

The present value of ₹ 1 receivable at the end of the end of each year based on discount rates of 6% and 10% can be taken as:

		6%	10%
End of year	1	0.94	0.91
	2	0.89	0.83
	3	0.84	0.75
	4	0.79	0.68

Being compound financial instrument, you are required to calculate the debt portion of the debentures as on 01.04.12.

Answer

Computation of Debt Component of Convertible Debentures as on 1.4.2012

	₹
Present value of the principal repayable after four years [10,00,000 × 1.10 × 0.68 (10% Discount factor)]	7,48,000
Present value of Interest [60,000 x 3.17 (4 years cumulative 10% discount factor)]	1,90,200
Value of debt component	938,200

Question 4

Comforts Ltd. granted ₹ 10,00,000 loan to its employees on January 1, 2011 at a concessional interest rate of 4% per annum. Loan is to be repaid in five equal annual instalments along with interest. Market rate of interest for such loan is 10% per annum. Following the principles of recognition and measurement as laid down in AS 30 'Financial Instruments : Recognition and Measurement', record the entries for the year ended 31st December, 2011 for the loan transaction, and also calculate the value of loan initially to be recognised and amortised cost for all the subsequent years. The present value of ₹ 1 receivable at the end of each year based on discount factor of 10% can be taken as:

Year end	1	0.9090
	2	0.8263
	3	0.7512
	4	0.6829
	5	0.6208

Answer

(i) Journal Entries in the books of Comfort Ltd.

for the year ended 31st December, 2011 (regarding loan to employees)

		Dr. (₹)	Cr. (₹)
Staff loan A/c To Bank A/c (Being the disbursement of loans to staff)	Dr.	10,00,000	 10,00,000
Staff cost A/c ₹ (10,00,000 – 8,54,763) [Refer part (ii)] To Staff loan A/c (Being the write off of excess of loan balance over present value thereof, in order to reflect the loan at its present value of ₹ 8,54,763)	Dr.	1,45,237	 1,45,237
Staff loan A/c To Interest on staff loan A/c (Being the charge of interest @ market rate of 10% to the loan)	Dr.	85,476	 85,476
Bank A/c To Staff loan A/c (Being the repayment of first instalment with interest for the year)	Dr.	2,40,000	 2,40,000
Interest on staff loan A/c To Profit and loss A/c (Being transfer of balance in staff loan Interest account to profit and loss account)	Dr.	85,476	 85,476
Profit and loss A/c To Staff cost A/c (Being transfer of balance in staff cost account to profit and loss account)	Dr.	1,45,237	 1,45,237

(ii) Calculation of initial recognition amount of loan to employees

Year end	*Cash Inflow*		*Total*	*P.V. factor*	*Present value*
	Principal	Interest @ 4%			
	₹	₹	₹		₹
2011	2,00,000	40,000	2,40,000	0.9090	2,18,160
2012	2,00,000	32,000	2,32,000	0.8263	1,91,702
2013	2,00,000	24,000	2,24,000	0.7512	1,68,269

2014	2,00,000	16,000	2,16,000	0.6829	1,47,506
2015	2,00,000	8,000	2,08,000	0.6208	1,29,126
Present value or fair value					8,54,763

(iii) Calculation of amortised cost of loan to employees

Year	Amortised cost (Opening balance) [1]	Interest to be recognized @10% [2]	Repayment (including interest) [3]	Amortised Cost (Closing balance) [4]=[1]+ [2] – [3]
	₹	₹	₹	₹
2011	8,54,763	85,476	2,40,000	7,00,239
2012	7,00,239	70,024	2,32,000	5,38,263
2013	5,38,263	53,826	2,24,000	3,68,089
2014	3,68,089	36,809	2,16,000	1,88,898
2015	1,88,898	19,102 (Bal. fig.)*	2,08,000	Nil

Question 5

Identify the host and embedded derivative in the case when A Co. holds a debenture bond in B Co. which is convertible into ordinary shares of entity B at the option of entity A.

Answer

The debenture bond is the host contract. The option to convert to shares is the embedded derivative.

Question 6

In the following derivative contracts, identify the underlying variable:

(a) Interest Rate Swap

(b) Currency Swap (Foreign Exchange Swap)

(c) Commodity Swap

(d) Equity Swap

(e) Credit Swap.

Answer

Type of Contract	*Main Pricing-Settlement Variable (Underlying Variable)*
a. Interest Rate Swap	Interest rates

* The difference of ₹ 212 (₹ 19,102 - ₹ 18,890) is due to approximation in computations.

b.	Currency Swap (Foreign Exchange Swap)	Currency rates
c.	Commodity Swap	Commodity prices
d.	Equity Swap	Equity prices (equity of another entity)
e.	Credit Swap	Credit rating, credit index or credit price

Question 7

X Ltd. purchases 1000, 6% ₹ 100 Debentures of ABC Ltd. for ₹ 99 redeemable at ₹ 102 after 5 years. These debentures are unquoted. Can the holder classify the financial asset (Investment redeemable preference shares) as loans and receivables?

Answer

Yes. The holder has, of course, the choice to classify them as available for sale.

Question 8

ABC bank has a deposit with other banks which are negotiable but the depositor has not negotiated these deposit documents. How will you categorize this deposit as a financial asset?

Answer

It should be loans and receivables. In case the entity has the intention to sell the instrument in the near term, it should be classified as held for trading.

Question 9

Should the embedded derivative, which is an option, be valued at zero at initial recognition?

Answer

Unlike the embedded derivative which is a non-option, it can have non - zero fair value at initial recognition. For the option-based derivatives like call, put, cap etc. critical factor of the fair value determination is strike price. To make the fair value of the option zero, the strike price should be deep out of the money. So there is almost zero probability that the option will be exercised. This assumption will be inconsistent with the feature of embedded derivative wherein probability of exercising the option is not zero.

Question 10

Write short note on 'Forward Contract'.

Answer

A forward contract is an agreement between two parties whereby one party agrees to buy from, or sell to, the other party an asset at a future time for an agreed price (usually referred to as the 'contract price'). The parties to forward contracts may be individuals, corporates or financial institutions. At maturity, a forward contract is settled by delivery of the asset by the seller to the buyer in return for payment of the contract price. For example, a person (X) may enter into a forward contract with another person (Y) on June 15, to buy 10 kgs. of silver at the end of 90 days at a price of ₹ 8,200 per kg. At the end of the 90 days, Y will deliver 10 kgs. of silver to X against payment of ₹ 82,000. If the price of silver, at the end of the 90 days, is

₹ 8,300 per kg., X would make a profit of ₹ 1,000 and Y would lose ₹ 1,000, as X could sell silver bought at ₹ 82,000 for ₹ 83,000, whereas Y would have to buy silver for ₹ 83,000 and sell for ₹ 82,000. On the other hand, if the price of silver at the end of the 90 days is ₹ 7,800 per kg., X would lose ₹ 4,000, whereas Y would make a profit of ₹ 4,000, as X would have to sell silver bought at ₹ 82,000 for ₹ 78,000, whereas Y would buy silver for ₹ 78,000, which he would sell to X at ₹ 82,000.

Question 11

M/s TS Ltd. has entered into a contract by which it has the option to sell its specified asset to NB Ltd. for ₹ 100 lakhs after 3 years whereas the current market price is ₹ 150 lakhs. Company always settles account by delivery. What type of option is this? Is it a financial instrument? Explain with reference to the relevant accounting standard.

Answer

As per AS 31 "Financial Instruments: Presentation", a financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. In the given case, M/s TS Ltd. has entered into a contract with NB Ltd. and company settles its account by delivery, and does not give rise to any financial asset or financial liability. Hence there is no option.

Since, the above transaction does not give rise to a financial asset of one entity and a financial liability or equity instrument of another entity; this is not a financial instrument. It is only a financial contract.

Question 12

Mega Ltd. issued ₹ 1,00,00,000 worth of 8% Debentures of face value ₹ 100 each on par value basis on 1st January, 2011. These debentures are redeemable at 12% premium at the end of 2014 or exchangeable for ordinary shares of Mega Ltd. on 1:1 basis. The interest rate for similar debentures that do not carry conversion entitlement is 12%. You are required to calculate the value of the debt portion of the above compound financial instrument. The present value of the rupee at the end of years 1 to 4 at 8% and 12% are supplied to you as:

	8%	*12%*
End of year 1	*0.926*	*0.893*
End of year 2	*0.857*	*0.797*
End of year 3	*0.794*	*0.712*
End of year 4	*0.735*	*0.636*

Answer

Present value of Debentures redeemable in 2014 ₹ 71,23,200

[₹ 1,00,00,000 x 1.12 x 0.636]

Present value of interest on debentures

[₹ 8,00,000* x 3.038 (sum of 4 years discount factors @12%)] ₹ 24,30,400

Value of Debt component of the convertible debentures ₹ 95,53,600

* Interest payable on debentures every year = ₹ 1,00,00,000 x 8% = ₹ 8,00,000.

Question 13

As point of staff welfare measures, Y Co. Ltd. has contracted to lend to its employees sums of money at 5 percent per annum rate of interest. The amounts lent are to be repaid alongwith the interest in five equal annual instalments. The market rate of interest is 10 per cent per annum.

Y lent ₹ 16,00,000 to its employees on 1st January, 2011.

Following the principles of recognition and measurement as laid down in AS 30, you are required to record the entries for the year ended 31st December, 2011 for the transaction and also calculate the value of the loan initially to be recognized and the amortized cost for all the subsequent years.

For purposes of calculation, the following discount factors at interest rate of 10 percent may be adopted

At the end of year

1	*.909*
2	*.827*
3	*.751*
4	*.683*
5	*.620*

Answer

(i) Calculation of initial recognition amount of loan to employees

Year end	Cash Inflow		Total	P.V. factor @10%	Present value
	Principal ₹	Interest @ 5% ₹	₹		₹
2011	3,20,000	80,000	4,00,000	0.909	3,63,600
2012	3,20,000	64,000	3,84,000	0.827	3,17,568
2013	3,20,000	48,000	3,68,000	0.751	2,76,368
2014	3,20,000	32,000	3,52,000	0.683	2,40,416
2015	3,20,000	16,000	3,36,000	0.620	2,08,320
Present value or Fair value					14,06,272

(ii) Calculation of amortised cost of loan to employees

Year	Amortised cost (Opening balance) [1]	Interest to be recognised @10% [2]	Repayment (including interest) [3]	Amortised Cost (Closing balance) [4]=[1]+ [2]–[3]
	₹	₹	₹	₹
2011	14,06,272	1,40,627	4,00,000	11,46,899
2012	11,46,899	1,14,690	3,84,000	8,77,589
2013	8,77,589	87,759	3,68,000	5,97,348
2014	5,97,348	59,735	3,52,000	3,05,083
2015	3,05,083	30,917*	3,36,000	Nil

(iii) Journal Entries in the books of Y Ltd.

For the year ended 31st December, 2011 (regarding loan to employees)

		Dr. Amount (₹)	Cr. Amount (₹)
Staff loan A/c	Dr.	16,00,000	
To Bank A/c			16,00,000
(Being the disbursement of loans to staff)			
Staff cost A/c ₹(16,00,000 –14,06,272) [Refer part (ii)]	Dr.	1,93,728	
To Staff loan A/c			1,93,728
(Being the write off of excess of loan balance over present value thereof in order to reflect the loan at its present value of ₹14,06,272)			
Staff loan A/c	Dr.	1,40,627	
To Interest on staff loan A/c			1,40,627
(Being the charge of interest @ market rate of 10% on the loan)			
Bank A/c	Dr.	4,00,000	
To Staff loan A/c			4,00,000
(Being the repayment of first instalment with interest for the year)			

* ₹ 3,05,083 x 10% = ₹ 30,508. The difference of ₹ 409 (₹ 30,917 – ₹ 30,508) is due to approximation in computation.

Interest on staff loan A/c	*Dr.*	*1,40,627*	
To Profit and loss A/c			*1,40,627*
(Being transfer of balance of staff loan Interest account to profit and loss account)			
Profit and loss A/c	*Dr.*	*1,93,728*	
To Staff cost A/c			*1,93,728*
(Being transfer of balance of staff cost account to profit and loss account)			

Exercises

Question 1

What are derivatives and what are its characteristics?

Question 2

Write short note on Forward Contract.

Question 3

For determining whether or not an interest rate swap is a derivative contract, would it be necessary to consider the aspect of whether the parties pay interest payments to each other (gross) or settle on a net basis?

[Answer: No. The definition of a derivative does not depend on whether or not the settlement is on net or gross basis.]

Question 4

Alpha Co. has a bond asset with interest payments indexed to the price of gold. The bond has a fixed payment at maturity and a fixed maturity date. Whether there is an embedded derivative in the bond? If yes, identify the host contract and the derivative.

[Answer: Yes, there is an embedded derivative. Interest payments contain an embedded derivative (indexation to gold) that is separated and accounted for as derivative at fair value. Once the embedded derivative is separated, the host debt instrument can be classified as held-to-maturity provided Company G has the positive intention and ability to hold the bond till maturity.]

Question 5

Is gold bullion a financial instrument (like cash) or is it a commodity?

[Answer: It is a commodity. Although bullion is highly liquid, there is no contractual right to receive cash or another financial asset inherent in bullion.]

Question 6

In the following derivative contracts, identify the underlying variable:

(i) Currency Futures

(ii) Commodity Futures

(iii) Interest Rate Forward Linked to Government Debt

(iv) Currency Forward

(v) Commodity Forward

[Answer:

Currency Futures	Currency Rates
Commodity Futures	Commodity price
Interest Rate Forward Linked to Government Debt	Interest rates
Currency Forward	Currency rate
Commodity Forward	Commodity prices]

Question 7

Hena Limited issued 1 million 10.5% 10 year callable convertible bond at ₹ 1000 .Straight bonds (NCD) of similar maturity would carry 12% coupon. Each bond may be converted any time into 40 equity shares of Hena Limited. How will Hena Ltd present the bond issue in Balance Sheet?

[Answer: -B/S(on the year of Issue); Equity-84.75 million; Financial Liability(Loan) - 915.25 million]

Question 8

ABC purchases a five year debt instrument issued by XYZ with the principal amount of ₹ 5 million that is indexed to Nifty. At maturity, ABC wil receive from XYZ the principal amount plus or minus the change in the value of Nifty times 100. The current Nifty Value is 3250.No separate interest payment are made by XYZ. The purchase price is ₹ 5 million.ABC classified the debt instrument as available fro sale. It is embedded derivative?

[Answer: Yes]