




# ACCOUNTING FOR SWAPS, OPTIONS & FORWARDS AND ACCOUNTING FOR COMPLEX FINANCIAL INSTRUMENTS

- Anand Banka

## GET THE BASICS RIGHT!!!

- | What is a financial instrument?
  - | Classification
  - | Measurement
  - | What is Equity?
  - | What are the types of Hedges?
  - | Decision vs. Accounting
- 

## DEFINITION: EQUITY

- | the instrument is an equity instrument if, and only if, both conditions (a) and (b) below are met.
- y The instrument includes no contractual obligation:
  - | to deliver cash or another financial asset to another entity; or
  - | to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the issuer



## DEFINITION: EQUITY ...CONTD


- y If the instrument will or may be settled in the issuer's own equity instruments, it is:
  - | a non-derivative that includes no contractual obligation for the issuer to deliver a variable number of its own equity instruments; or
  - | a derivative that will be settled only by the issuer exchanging a fixed amount of cash or another financial asset for a fixed number of its own equity instruments. For this purpose, rights, options or warrants to acquire a fixed number of the entity's own equity instruments for a fixed amount of any currency are equity instruments if the entity offers the rights, options or warrants pro rata to all of its existing owners of the same class of its own non-derivative equity instruments. Apart from the aforesaid, the equity conversion option embedded in a convertible bond denominated in foreign currency to acquire a fixed number of the entity's own equity instruments is an equity instrument if the exercise price is fixed in any currency.




## INSTRUMENTS TO BE COVERED

- | Interest rates swaps
- | Stock index futures and options
- | Commodity futures and options
- | Currency futures and options
- | Other instruments

May be for

- | Hedging
  - | Speculation
  - | Arbitrage
- 

## RECOGNITION – CLASSIFICATION AND MEASUREMENT

- | Held for trading/ FVTPL
  - | Measured at fair value
  - | Subsequent – fair value, transfer to P/L
  - | Fair value – quoted/ published prices/ transaction value
- 

## CALL OPTION - EXAMPLE

- | Option purchased on – 1st January 2013
- | Contract size – 1,000 shares
- | Option price – Rs. 100 per share
- | Market price – Rs. 98 per share
- | Expiry date – April 30, 2013
- | Premium – Rs. 400

Call Option (Asset)	Dr	400
Cash	Cr	400

## CALL OPTION – EXAMPLE .....CONTD

- | Market Price on 31 March – Rs. 120
- | **FV?**

Call Option (Asset)	Dr	20,000
Income	Cr	20,000

Income	Dr	300
Call Option (Asset)	Cr	300

## CALL OPTION – EXAMPLE .....CONTD

- | Settlement on 30 April
- | Market Price remains at Rs. 120

Cash	Dr	20,000
Expense	Cr	100
Call Option (Asset)	Cr	20,100

## INTEREST RATE SWAP - EXAMPLE

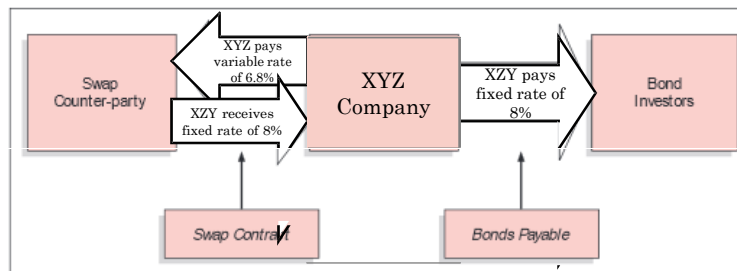
- | Company issues Rs. 1,000,000 bonds
- | 5 yrs maturity
- | 8% Fixed Interest
- | Date of issue – 1<sup>st</sup> April 2012

Cash	Dr	1,000,000
Bonds Payable	Cr	1,000,000

## INTEREST RATE SWAP – EXAMPLE

.....CONTD

- | 5 year interest rate swap
- | Will receive 8% interest
- | Will pay variable rate (6.8% today)



## INTEREST RATE SWAP – EXAMPLE

.....CONTD

- | Note: No entry required when Swap transaction entered into
- | However, FV of swap increases as the interest rate goes down and vice-versa
- | March 31:

Interest Expense	Dr	80,000
Cash (8% of 1,000,000)	Cr	80,000

Cash (8%-6.8%)	Dr	12,000
Interest Expense	Cr	12,000

## INTEREST RATE SWAP – EXAMPLE

.....CONTD

### March 31: Swap Value

Swap Contract (Valuation Assumed)	Dr	40,000
Unrealised Gains (Income or Reserves??? Which Hedge???)	Cr	40,000

Unrealised Gains	Dr	40,000
Bonds Payable (WHY???)	Cr	40,000

XYZ Company Balance Sheet as at 31 March	
Current assets	
Swap contract	\$40,000
Liabilities	
Bonds payable	\$1,040,000

## COMMODITY FUTURES - EXAMPLE

- December 2012: ABC company estimates purchase of 1,000 metric tons of Aluminum in April 2013
- Enters into Aluminum futures contract – 1,000 metric tons for \$1,550 per ton
- Note: No entry required on the date of entering into futures contract

## COMMODITY FUTURES – EXAMPLE

.....CONTD

- March 31: Price for April future increased to \$1,575

Futures Contract	Dr	25,000
Unrealised Gains (Reserves or Income???) Which Hedge???)	Cr	25,000

- April: Say price remains same...

Aluminum inventory	Dr	1,575,000
Cash	Cr	1,575,000

Cash	Dr	25,000
Futures Contract (Settlement)	Cr	25,000

Why is inventory at 1,575,000?

## COMMODITY FUTURES – EXAMPLE

.....CONTD

- When the inventory is sold:

Unrealised Gains	Dr	25,000
Cost of Sales	Cr	25,000



## COMPOUND FI - EXAMPLE

- | Rs.1million 6% convertible debt
- | Repayable end year 3
- | Market rate without conversion 10%

Year	Cash Flow	DF	NPV
1	60,000	0.909	54,545
2	60,000	0.826	49,587
3	60,000	0.751	45,079
3	1,000,000	0.751	751,000
Total			<b>900,211</b>

## COMPOUND FI – EXAMPLE .....CONTD

Particulars	Debit	Credit
Cash	1,000,000	
Liability		900,211
Equity		99,789
(Issue of convertible debt)		
Interest	90,021	
Liability		30,021
Cash		60,000
(Finance charge year 1)		

## COMPOUND FI – EXAMPLE .....CONTD

Particulars	Debit	Credit
Interest	93,023	
Liability		33,023
Cash		60,000
(Finance charge year 2)		
Interest	96,326	
Liability		36,326
Cash		60,000
(Finance charge year 3)		

## EMBEDDED DERIVATIVES

An implicit or explicit term in a contract that makes a portion of the contract behave like a derivative/ change the original cash flows

- ▮ Instruments with conversion features
- ▮ Index-linked payments
- ▮ Option to prepay debt
- ▮ Transactions in 'third currency'

## EXAMPLES

Instrument	Host Contract	Embedded Derivative
<b>Debt Instrument</b>		
Convertible bond	Debt instrument	Call option on equity securities
Callable Debt	Debt instrument	Prepayment Option

### Equity Instrument

Irredeemable convertible preference shares	Ordinary shares/ Equity shares	Written call option
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### Leases

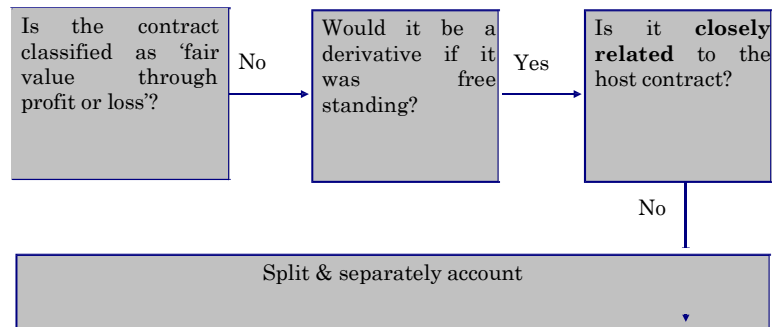
Lease payments indexed to inflation in a different economic environment	Operating lease	Payment determined with reference to inflation-related index
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It is important to note that although the requirement to separate an embedded derivative from a host contract applies to both the parties to a contract, the accounting treatments in the books of both the parties might differ. For example, in the above case if the lessor and lessee are in different economic environments and the lease payments are determined with reference to inflation-related index of the lessor's economic environment, only the lessee would be required to separate the embedded derivative

## EXAMPLES

Instrument	Host Contract	Embedded Derivative
Operating lease payable in foreign currency	Operating lease	Foreign currency denominated rent payments—foreign exchange forward contracts
Contingent rentals based on related sales in operating lease contract	Operating lease	Contingent Rentals
<b>Executory Contracts</b>		
Purchase/ sale of goods in foreign currency	Purchase/ sale contract	Foreign exchange forward contract
Purchase/ sale of goods with option to make payment in alternative currencies	Purchase/ sale contract	Option to make payment in alternative currencies

## WHEN TO SEPARATE?



## CLOSELY RELATED?

- | IAS 39 does not define 'closely related'
- | In general terms, an embedded derivative that modifies an instrument's inherent risk would be considered as closely related (inflation indexed rentals)
- | Conversely, an embedded derivative that changes the nature of the risks of a contract would not be closely related (inflation of a 3<sup>rd</sup> country indexed rentals)

## ACCOUNTING ON SEPARATION

- | Fair value the derivative
- | Reduce from the total cost
- | Residual is the value of host contract
- | No gain or loss on initial bifurcation

## ACCOUNTING

- | Apply IAS 32/39, or other applicable IFRSs if host is not a financial instrument
- | Measure the separated derivative at FVTPL
- | If it is difficult to separate the embedded derivative or otherwise if the entity intends not to do so, apply FVTPL to entire contract

## CASE STUDY

- | An Indian company leases an aircraft from a Japan based company for 5 years. Monthly rentals of Euro 50,000 payable in arrears
  - y What is the host contract?
  - y Are there any derivatives embedded in it?
  - y Do the derivatives need to be separated?

## SOLUTION

- | What is the host contract?
  - y Lease contract (not carried at fair value)
- | Are there any derivatives embedded in it?
  - y Yes, there are 60 embedded forward contracts to exchange Euro 50,000 for INR, which meet the definition of a derivative under IAS 39
- | Do the embedded derivatives need to be separated upon entering into the lease contract?
  - y Yes, each of these embedded forward contracts is a derivative that is within the scope of IAS 39 and is not closely related to the host contract

## EXAMPLES

- | ABC Ltd. takes a loan with a bank. The contractually determined interest rate is calculated as  $[3 \times \text{LIBOR} + 2]$
- | Here, had the interest rate been  $[\text{LIBOR} + 2]$ , the embedded derivative would have been said to be closely related to the underlying LIBOR rate and hence not separable. However, since the rate of interest depends on a multiple of LIBOR (called 'leverage' effect), the embedded derivative shall be separated

## REASSESSMENT

- | Assessment for separation when entity first becomes party to a contract
- | based on the conditions at that date
- | Re-assessment of embedded derivatives
  - y Reassessment is prohibited unless
    - | change in the terms of the contract that significantly modifies the cash flows

## QUESTION

- | Which of the following contracts contain embedded derivatives that are required to be accounted for separately under IAS 39? Assume in all cases that the company is a UK company with a functional currency of Sterling.
- | A company has entered into a contract with a supplier in Eurozone (functional currency of Euro) to purchase inventory (cars). The contract is denominated in US Dollars.
- | A company has leased retail premises. As part of the lease agreement, the amount payable will increase at the rate of the UK retail price index each year.

## SOLUTION

- | Yes. The host contract is viewed as a GBP purchase contract, with the embedded derivative operating as a GBP/USD forward contract. USD is not the functional currency of either of the two parties to the contract, and it is not the currency in which cars are routinely denominated in commercial transactions round the world, nor is it a currency commonly used in contracts to buy and sell non financial items in the economic environment in which the transaction takes place (IAS 39.AG33d)ii) and iii)). Consequently the embedded derivative is not closely related to the host purchase contract and it is required to be accounted for separately.



## SOLUTION

- | No. The host contract is the lease contract, with the embedded derivative being the indexation of lease payments to the retail price index. The embedded derivative does not result in the lease payments being leveraged, and the index relates to inflation in the entity's own economic environment. Consequently the embedded derivative is regarded as being closely related to the host lease contract and is not accounted for separately.

## QUESTION

- | FastCars Plc, a manufacturer of specialist sports cars, has issued preference shares with the following terms:
  - | Mandatory redemption at par after 10 years
  - | Cumulative dividends of 5% of EBITDA per annum. If the company has insufficient distributable reserves to pay the preference dividend, the unpaid amounts are rolled up and attract a market rate of interest in addition to the 5% of EBITDA.
- | How should FastCars Plc account for the preference shares?

## SOLUTION

- | The EBITDA linked feature for coupons is not accounted for separately as an embedded derivative. This is because EBITDA is viewed as being a non financial variable which is specific to a party to the contract (in this case, the issuer). This means that it does not meet the definition of a derivative under IAS 39.9. Instead, at each period end the forecast cash flows arising from the instrument will be updated (in line with revised forecasts of EBITDA).



# ThanQ?

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CONTACT US!

A black fountain pen is shown writing the text 'CONTACT US!' in a cursive, handwritten style on a white surface. The pen is positioned at the end of the text, with the nib pointing towards the right.