Derivatives and Hedge Accounting under Ind AS

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ICAI WIRC Ind AS
Refresher Course

Agenda

- Derivatives
- Embedded Derivatives
- Hedge Accounting

Derivatives

What is a Derivative?

A financial instrument with all three of the following characteristics

- its value changes in response to a specified underlying;
- it requires no or little initial investment; and
- it is settled at a future date.

A derivative always has at least one underlying variable

- Few examples of underlying variable
  - specified interest rate;
  - financial instrument price;
  - commodity price;
  - foreign exchange rate;
  - index of prices or rates;
  - credit rating/index
- Non-financial variable, e.g., occurrence or non-occurrence of fire, can also be the underlying.
  - Provided such non-financial variable is not specific to a party to the contract.

Examples – Underlying variable and notional amount

Derivative contract	Underlying variable	Notional amount
Share option	Share price	Number of shares
Currency forward	Exchange rate	Number of units of currency
Commodity future	Commodity price	Number of units of commodity
Index forward	Share index	Number of units of index
Interest rate swap	Interest rate	Principal amount specified in contract

Little or no initial net investment

- Essential catachrestic 2
  - it has no initial net investment, or
  - An investment which 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

Settlement at future date

- **Third and final characteristic**
  - Settlement takes place at a future date
  - Settlement can be
    - **Gross settlement**, e.g., entity purchases shares against delivery of cash
    - **Net settlement**, e.g., receipt or payment of differences between the forward price and spot rate on the date of settlement.
    - Expiry/ lapse of option – lapse of an unexercised option at its maturity is another form of settlement. Such settlement usually takes place when exercise of option is unfavourable to the option buyer/ holder.

Settlement at future date

- As per the definition of derivative, if underlying is non-financial variable, it should not be specific to a party to the contract.
- Non-financial variables not specific to a party to the contract may include:
  - Index of earthquake losses in a particular region; or
  - index of temperatures in a particular city.
- Any change in fair value of a non-financial asset is specific to the owner if it also reflects the physical condition of the asset held (a non-financial variable).
- For example, if a guarantee of the residual value of a specific car exposes the guarantor to the risk of changes in the car's physical condition, the change in that residual value is specific to the owner of the car

Types of Derivatives

- Options
- Forwards & Futures
- Swaps

Option Contracts

- Option contracts are contracts between two parties – a buyer and a seller
- Gives the buyer the right but not the obligation to purchase or sell something at a later date at a price agreed upon today
- Buyer pays a sum of money – price/ premium
- Seller stands ready to sell or buy according to the terms and when the buyer so desires

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- An option to buy something is called a CALL option
- An option to sell something is called a PUT option

Forwards Contracts and Future Contracts

- Contract between two parties to purchase or sell something at a later date at a price agreed upon today
- The two parties n a forward contract incur the obligation to ultimately buy and sell the good
- They trade strictly in an over-the-contract market consisting of direct communication

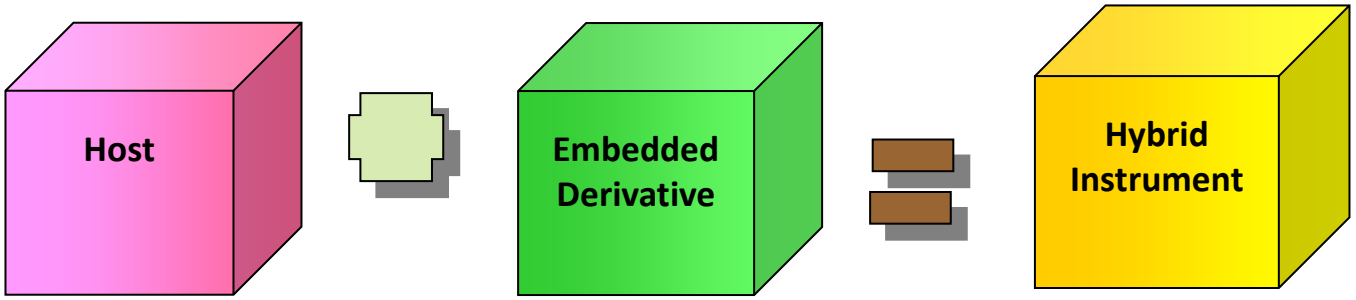
- Future contracts are forward contracts that trade on a future trading and is subject to settlement

Swaps

- A swap is a contract in which two parties agree to exchange cash flows
- The firm and the dealer in effect swap cash flow streams. Depending on what later happens to price or interest rates.
- In this one party might gain at the expense of others
- An option to enter into a swap is called a swaption

Embedded Derivatives

What are Embedded Derivatives?

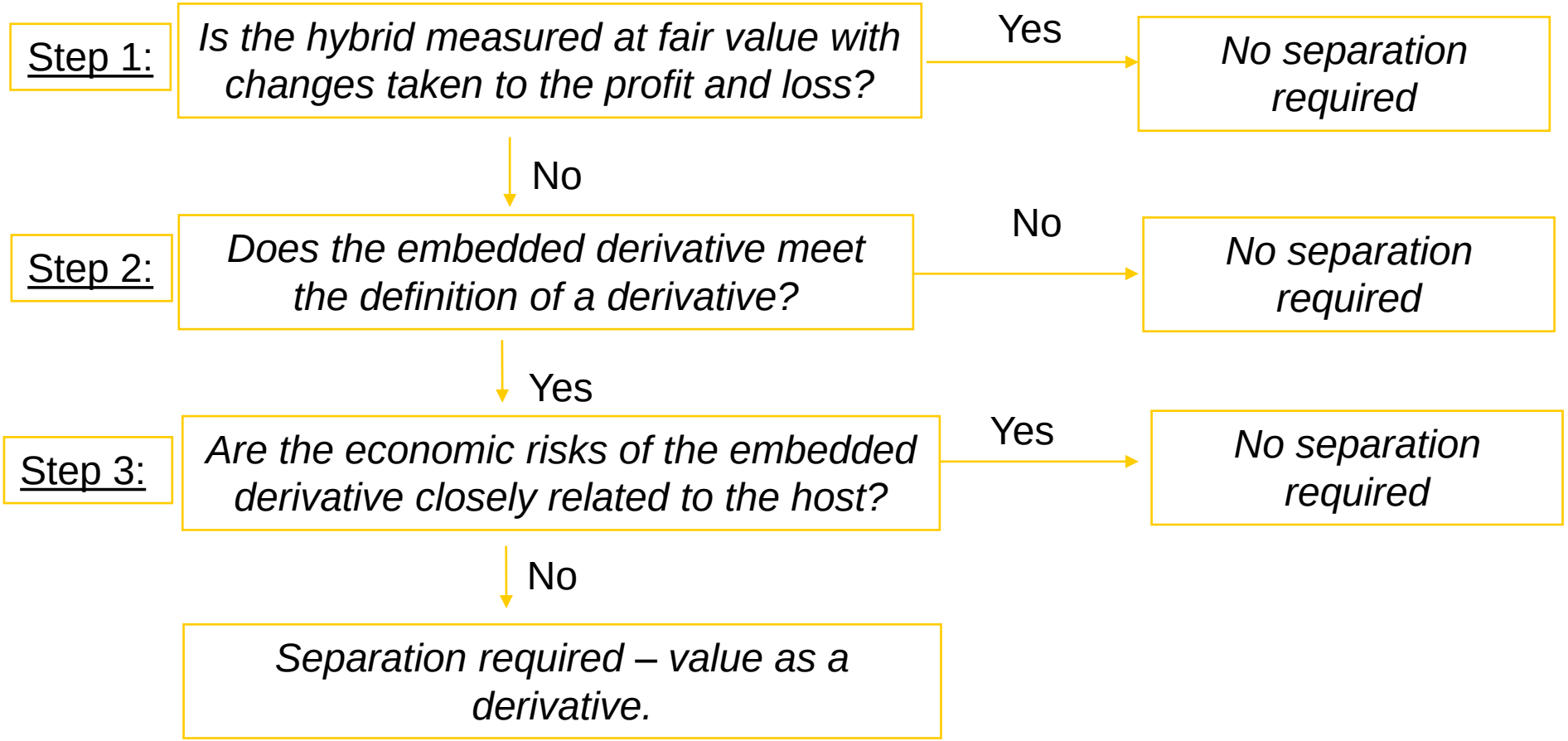


- Contracts may not meet the definition of a derivative on standalone basis, but may have features of both financial instruments as well as embedded derivatives.
- An embedded derivative is a component of a hybrid financial instrument that includes both
  - a derivative and
  - a host contract
- For example – Convertible bond
  - Host contract- the bond
  - Embedded derivative- call option on shares
- Effect of embedded derivatives
  - Some of the cash flows of the combined instrument vary in a similar way to a stand-alone derivative.

Embedded derivatives

- Embedded derivatives in financial assets are not separately recognised, however those in financial liabilities or in non-financial contracts are separated and accounted for as a derivative if they meet the following conditions:
  - Their economic characteristics and risks are not closely related to the economic characteristics of the host contract,
  - A separate instrument with the same terms as the embedded derivative meets the definition of a derivative, and
  - The hybrid contract is not classified and measured at Fair Value Through Profit or Loss (FVTPL).

Embedded derivatives - treatment



Embedded derivatives – Put, Call and Prepayment Options in Debt Host Contracts

- Contractual terms that allow either party to terminate the contract early and accelerate the repayment of the outstanding principal, either in whole or in part, are often embedded derivatives. Examples:
  - Call options of the issuer,
  - Put options of the holder, and
  - prepayment features.
- These embedded derivatives are NOT closely related to the host debt contract UNLESS
  - the exercise price is approximately equal to the debt host contract's amortised cost on each exercise date, or
  - in the case of a prepayment option, the exercise price reimburses the lender for an amount up to the approximate present value of lost interest for the remaining term of the host contract.

Embedded derivatives – not closely related to host

- Put option embedded in an instrument which enables the holder to require the issuer to reacquire the instrument for an amount of cash or other assets that varies on the basis of the change in an equity or commodity price or index.
- An option or automatic provision to extend the remaining term to maturity of a debt instrument is not closely related to the host debt instrument unless there is a concurrent adjustment to the approximate current market rate of interest at the time of the extension.
- Equity-indexed interest or principal payments embedded in a host debt instrument or insurance contract.

Embedded Derivatives in Purchase, Sale and Service contracts

- Pricing of sales, purchase and service contracts is often structured so as to pass on to customers the cost of an ingredient used in the production or delivery of an asset or service.
- The guidance in Ind AS 109 focuses on economic characteristics and risks in determining whether the embedded derivative is closely related.
- The guidance does not specifically refer to a purely quantitative assessment, nor does it refer to a purely qualitative assessment of the relationship.
- Therefore an entity would need to determine whether both quantitative and qualitative factors are relevant in determining whether the pricing adjustment is closely related to the host contract or not.

Embedded Derivatives in Purchase, Sale and Service contracts- Foreign Currency Feature

- Ind AS 109.B4.3.8(d) states the following:
  - *(d) An embedded foreign currency derivative in a host contract that is an insurance contract or not a financial instrument (such as a contract for the purchase or sale of a non-financial item where the price is denominated in a foreign currency) is closely related to the host contract provided it is not leveraged, does not contain an option feature, and requires payments denominated in one of the following currencies:*
    - *(i) the functional currency of any substantial party to that contract;*
    - *(ii) the currency in which the price of the related good or service that is acquired or delivered is routinely denominated in commercial transactions around the world (such as the US dollar for crude oil transactions); or*
    - *(iii) a currency that is commonly used in contracts to purchase or sell nonfinancial items in the economic environment in which the transaction takes place (eg a relatively stable and liquid currency that is commonly used in local business transactions or external trade).*

Case Studies on Derivatives and Embedded Derivatives

Case Study: Issuer Call Option

- Entity A issues a five-year zero-coupon bond for Rs.7.5 crores, with a face value of Rs. 10 crores.
- Embedded in the debt is a call option allowing Entity A to repay the debt after three years for Rs.9 crores, when its amortised cost will be Rs.8.8 crores.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Issuer Call Option

- Because the repayment amount is approximately equal to its amortised cost on that date, the call option is closely related to the host contract and so is not separated from it.
- If the terms were instead such that Entity A could call the debt at any time, but would have to redeem it at a fixed amount (e.g. at par of Rs.10 crores), the call option would not be closely related because the repayment amount would not approximately equal the amortised cost on each date that the call can be exercised.
- For example, the week after issuing the bond (when the bond's amortised cost is approximately Rs.7.5 crores), Entity A could call it back but would have to pay Rs.10 crores to do so.
- This situation arises because the bond was issued at a substantial discount and, therefore, its amortised cost will not approximate to its par value except in the years close to its maturity.

Case Study: Investor Put Option

- Entity X issues 10-year bonds with a par value of Rs.10 crores for proceeds of Rs.10 crores. The bonds have a coupon of 10 per cent.
- Embedded in the bonds is a clause that allows the investors to put the bonds back to Entity X for Rs.10 crores in the event the BSE Sensex declines by 5 per cent. It is reasonably possible that the BSE Sensex will decline by 5 per cent in the near future.
- The issue costs are insignificant.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Investor Put Option

- The embedded put option would not be accounted for separately, even though the put option is contingent on an event that is not related to the host instrument (i.e. a trigger other than interest rates or credit).
- The tests in Ind AS 109 relate to the exercise price (settlement amount), not the trigger.
- The likelihood of the put option being exercised is also irrelevant in determining whether the embedded derivative is closely related, although this will affect valuation.
- In this case, the bonds will be put back at an amount that approximates amortised cost.
- It is not relevant that the put option only becomes exercisable if an equity index performs in a particular manner.

Case Study: Put Option on Preference Shares

- Entity A issues Rs.100 crores 7 per cent cumulative redeemable preference shares. Dividends are payable quarterly. Issue costs are insignificant.
- The preference shares are puttable at par to Entity A for cash if interest rates move by 150 basis points.
- Any dividend that remains accumulated and not paid becomes payable when the shares are put to Entity A.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Put Option on Preference Shares

- The embedded put option would not be separated from the host contract under the embedded derivative requirements.
- The preference shares are classified as a liability under Ind AS 32.
- The put feature is an option that is considered to be closely related to the host because the exercise price of the put option is the amortised cost of the preference shares.
- A debt instrument that may be called by the issuer or put or prepaid by the holder must be assessed in order to determine whether these features are considered to be closely related.

Case Study: Inflation-linked Bond

- Entity X issues an inflation-linked bond.
- The bond pays a coupon of 4 per cent annually, with a repayment of principal on maturity of the bond.
- The principal payment is indexed to the domestic retail price index but cannot decrease below par.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Inflation-linked Bond

- Because the bond is denominated in the local currency, the indexation of the principal payment to domestic inflation rates is closely related to the host contract.
- An inflation feature in a host debt contract in the scope of Ind AS 109 is closely related to the host provided that the inflation index is not leveraged, cannot cause the investor not to recover substantially all of its initial investment, and is the inflation rate of the economic environment for the currency in which the debt is denominated.
- Inflation features that are leveraged will not be closely related to a host debt contract.

Case Study: Interest Adjustments- Debt Covenants

- Entity X issues bonds with a BBB rating.
- The terms of the bond are such that if Entity X violates a specified debt-to-equity ratio covenant, or Entity X's credit rating is downgraded, the interest rate will reset to the then-current market rate for Entity X.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Interest Adjustments- Debt Covenants

- The interest rate reset is considered to be closely related to the host contract because it relates to default in a credit risk-related covenant and Entity X's own credit rating.
- Therefore, the embedded derivative would not be accounted for separately.

Case Study: Executory contract linked to Inflation

- Entity A, an Indian entity, enters into a long-term service contract under which it agrees to clean and maintain specified buildings owned by Entity B for the next 10 years.
- All the buildings are located within the Mumbai.
- Entity A receives a fixed annual fee.
- Embedded in the contract is a clause providing for a one-off adjustment half-way through the contract such that the fee receivable is adjusted for changes in the India's retail price index from the beginning of the contract.
- Thereafter, the fee remains fixed at the new amount.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Executory contract linked to Inflation

- The embedded-inflation indexed payment is closely related to the host service contract because the rate of inflation is not leveraged, and the inflation index is that of the local economic environment.
- In determining whether the inflation feature within a sale, purchase or service contract is leveraged or is that of the entity's local environment, similar considerations to those used when assessing host lease contracts should be applied.

Case Study: Sale/ Purchase Contract denominated in Foreign Currency

- Company A, an Indian company whose functional currency is INR, enters into a contract to purchase machinery from an unrelated local supplier, company B.
- The functional currency of company B is also INR. However, the contract is denominated in USD, since the machinery is sourced by company B from a US based supplier. Payment is due to company B on delivery of the machinery. Following are the key terms of the contract:

Contractual features	Details
Contract Date	9 Sep 2020
Delivery/ Payment date	31 Dec 2020
Purchase Price	US$ 1 million
USD/INR forward rate on 9 Sep 2020 to 31 Dec 2020 maturity	67.8
USD/ INR Spot rate on 9 Sep 2020	66.4
USD/INR forward rate on 30 Sep 2020 to 31 Dec 2020 maturity	67.5
USD/ INR Spot rate on 31 Dec 2020	67

Solution: Sale/ Purchase Contract denominated in Foreign Currency

- The USD contract for purchase of machinery entered into by company A includes an embedded foreign currency derivative due to the following reasons:
  - The host contract is a purchase contract (non-financial in nature) that is not classified as, or measured at FVTPL.
  - The embedded foreign currency feature (requirement to settle the contract by payment of USD at a future date) meets the definition of a stand-alone derivative – it is akin to a USD-INR forward contract maturing on 31 December 2016.
  - USD is not the functional currency of either of the substantial parties to the contract (i.e., neither company A nor company B).
  - Machinery is not routinely denominated in USD in commercial transactions around the world. In this context, an item or a commodity may be considered 'routinely denominated' in a particular currency only if such currency was used in a large majority of similar commercial transactions around the world. For example, transactions in crude oil are generally considered routinely denominated in USD. A transaction for acquiring machinery in this example would generally not qualify for this exemption.

Solution: Sale/ Purchase Contract denominated in Foreign Currency

- USD is not a commonly used currency for domestic commercial transactions in the economic environment in which either company A or B operate.
- This exemption generally applies when the business practice in a particular economic environment is to use a more stable or liquid foreign currency (such as the USD), rather than the local currency, for a majority of internal or cross-border transactions, or both.
- Companies A and B are companies operating in India and the purchase contract is an internal/domestic transaction. USD is not a commonly used currency for internal trade within this economic environment and therefore the contract would not qualify for this exemption.
- Accordingly, company A is required to bifurcate the embedded foreign currency derivative from the host purchase contract and recognise it separately as a derivative.

Solution: Sale/ Purchase Contract denominated in Foreign Currency

Date	Journal Entry	Debit (Rs.)	Credit (Rs.)
9 Sep 2020	*On initial recognition of forward contract*	*No entry*	
30 Sep 2020	*FV change in forward contract*		
	Forward contract asset (67.8-67.5) X 1,000,000)	300,000	
	To Fair Valuation Gain (Profit & Loss)		300,000
31 Dec 2020	*FV change in forward contract*		
	Forward contract asset ((67.8-67) X 1,000,000))- 300,000)	500,000	
	To Fair Valuation Gain (Profit & Loss)		500,000
31 Dec 2020	*Recognition of Machinery Acquired*		
	Property, Plant & Equipment (at Fwd rate)	67,800,000	
	To Forward contract asset		800,000
	To Creditor/ Bank (at spot rate)		67,000,000

Case Study: Group company in a Joint bid, Whether 'Substantial Party to the Contract'

- ABC Ltd. is a large engineering and construction company in India and part of ABC Group worldwide having presence in many countries.
- ABC Ltd., as a part of the ABC Group consortium, wins a tender for providing engineering, procurement and construction of an international airport in India.
- The consortium consists of ABC Inc., a group company in the USA and ABC Ltd. As a part of the tender document, certain part of the procurement cost was bid in USD so as to mitigate the foreign exchange risk component of the contract as ABC would be importing certain airport equipment from the ABC Inc., USA.
- This component of the contract would be denominated in USD by ABC Ltd.

Whether there is embedded derivative should be separated under Ind AS 109?

Solution: Group company in a Joint bid, Whether 'Substantial Party to the Contract'

- Since the US based supplier is a related party of company ABC Ltd. and the contract could not have been fulfilled by company B (considering the requisite resources or technology to fulfil the contract) independently, further analysis may be required to determine if the supplier is also a 'substantial party' to the contract.
- If so determined, then the embedded foreign currency derivative may not require separation since USD is the functional currency of the supplier, being a substantial party to the contract.
- Often in government tenders, large companies' RFP and International Competitive Bids, while evaluating the bids submitted by the bidders, the technical and financial qualifying requirements of the foreign collaborators are also evaluated along with the bidder. The bid may be concluded to be qualified only when all the parties to the bid i.e. bidder as well as collaborators meet the qualifying requirements as specified in the bidding documents.

Case Study: “Commonly Used” currency

- ABC Ltd. wins a tender for providing engineering, procurement and construction of power plant in India through an internationally competitive bidding (IBC).
- Large part of the contract is denominated in USD and Euro since there are significant components that ABC is required to import from international vendors/ foreign collaborators.

Whether there is embedded derivative should be separated under Ind AS 109?
Can ABC argue that USD/ Euro are commonly used currencies?

Solution: “Commonly Used” currency

- Ind AS 109.B4.3.8 is intended to address situations where entities operate in economies in which it is common for business contracts to be denominated in a foreign currency. ‘Economic environment’ should be considered for the country concerned as a whole. It may be the case that more than one currency is commonly used.
- An example of a common currency as a “relatively stable and liquid currency that is commonly used in local business transactions or external trade”.
- The requirements of paragraph B4.3.8 (d) (iii) of Ind AS 109, an embedded foreign currency derivative in a host contract is considered as closely related to the host contract if it is denominated in a currency that is *commonly used* in contracts in the *economic environment* in which the transaction takes place.
- For contracts entered into by the company with Indian vendors in USD or Euro, the foreign currency embedded derivative is not closely related to the host contract. Accordingly, foreign currency embedded derivatives in such contracts are required to be accounted for in terms of paragraph 4.3.3 of Ind AS 109.
- EAC 1625 16 - Accounting for Embedded Derivatives in Non-Financial Host Contracts as per Ind AS 109

EAC opinion
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Hedge Accounting

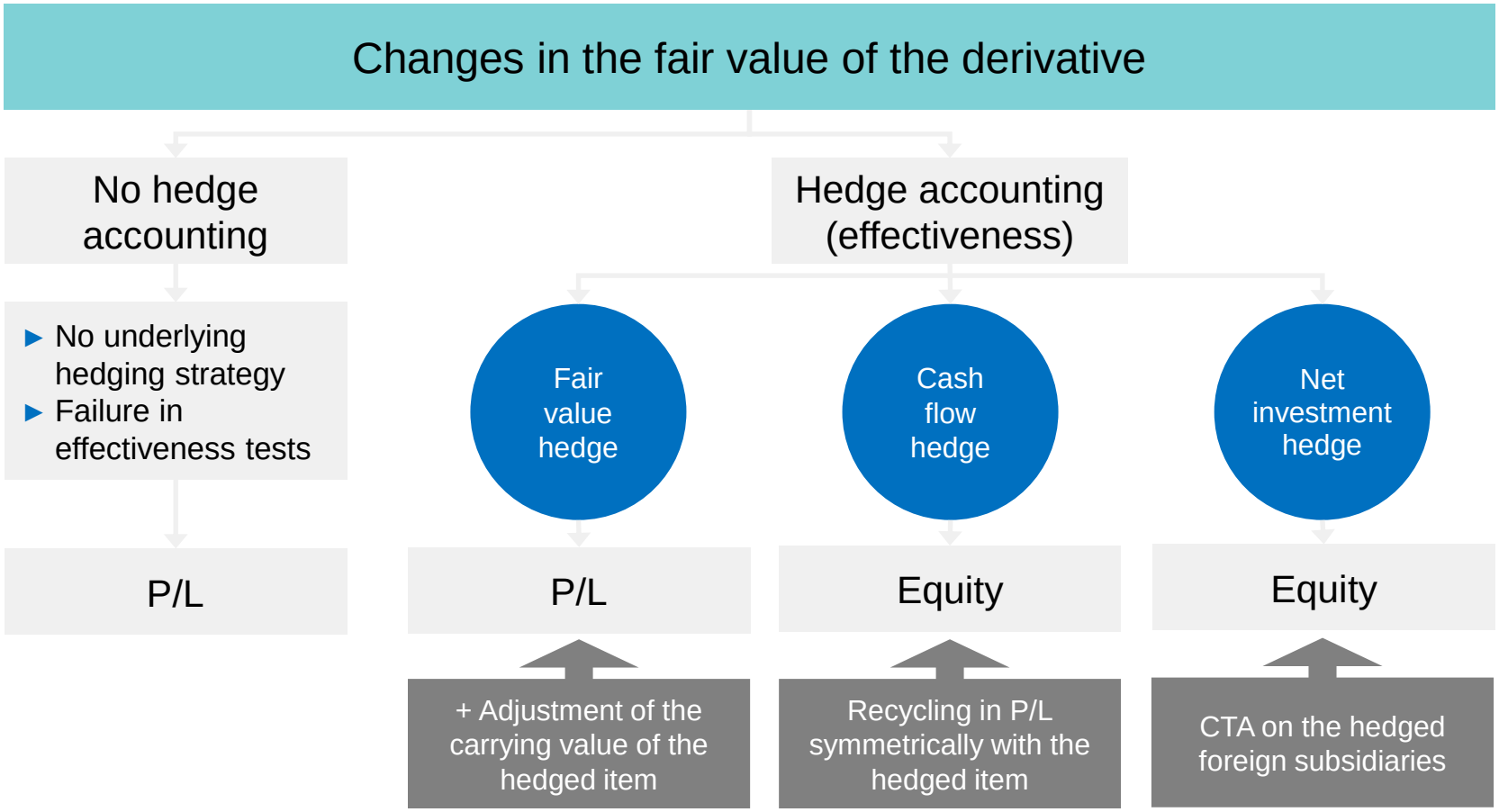
What is Hedging?

- Wikipedia
  - Hedge is an investment that is taken out specifically to reduce or cancel out a risk
  - Hedging is a strategy designed to minimize exposure to an unwanted business risk, while still allowing the business to profit from an investment activity

What is Hedge Accounting?

- Special accounting used to reflect hedge relationship
- Ind AS 109 permits an entity to apply hedge accounting in order to represent the effect of its risk management activities in its financial statements.
- Hedge accounting is voluntary and may be applied to individual transactions or a group of similar transactions
- Objective is to manage/ smoothen profit of loss
  - Matches earnings recognition of hedging instruments with that of hedged item; Normal derivative accounting does not apply
- Designated hedging relationship between hedging instrument and hedged item is required
- Ind AS 109 also lays down conditions for documentation and hedge effectiveness

General framework of hedge accounting



Cash Flow Hedge Accounting

- **Cash Flow Hedge**: A hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with all of, or a component of, a recognised asset or liability or a highly probable forecast transaction, and could affect profit or loss.
- **Fair value hedge**: A hedge of the exposure to changes in the fair value of a recognised asset or liability or an unrecognised firm commitment, or a component of any such item, that is attributable to a particular risk and could affect profit or loss or other comprehensive income (OCI) (for a hedge of an equity investment measured at FVOCI).
- **Net investment hedge**: A hedge of the foreign currency exposure arising from a net investment in a foreign operation, as defined in Ind AS 21, when the net assets of that foreign operation are translated for inclusion in the consolidated financial statements.

Case Studies on Hedge Accounting

Case Study: Cash Flow Hedge Accounting

- Company A (the entity/company) is a manufacturer in India and imports certain essential raw materials that are used in manufacturing its finished products. Approximately 95% of the imports of the company are made in USD.
- Considering the volume of foreign exchange transactions and the fluctuation in the USD-INR exchange rates, the entity has identified foreign currency risk as a key financial risk. In accordance with its documented risk management policies, the company hedges its foreign currency exposure using USD-INR forward contracts. A hedge is considered to be effective under the policy if it offsets the variability in the cash flows on the imports within a range of 95-110 per cent.
- On 1 March 2020, the company has hedged a highly probable forecast foreign currency purchase of USD 4,280,000, expected to be delivered on 15 May 2020, by entering into a forward contract to buy USD 4,280,000 on 31 May 2020 at a forward rate of INR67.53.
- The forward contract has been transacted with a reputed banking institution. Further, company A is itself a highly-rated, investment grade entity. The following are the forward rates applicable during the period of the transaction:

Case Study: Cash Flow Hedge Accounting

Date	USD/ INR Spot Rate	USD/ INR Fwd Rate for 31 May 2020 Maturity	USD/ INR Fwd Rate for 15 May 2020 Maturity	MTM Gain/ (loss) of forward contract
1 March 2020	66.58	67.53	67.22	-
31 March 2020	66.90	67.70	67.35	727,600
15 May 2020	67.44	67.82	67.44	12,41,200
31 May 2020	68.21	68.21	NA	16,69,200

Solution: Cash Flow Hedge Accounting


Thank you