

The background of the slide is a deep blue color with several bright, curved light streaks that create a sense of motion and depth. These streaks are most prominent in the upper half of the image and fade towards the bottom.

Hedge Accounting (w.r.t.) Forward Contracts

Agenda

Introduction to Hedging

Definitions

Types of hedging relationships

- Fair value hedge
- Cash flow hedge
- Net investment hedge

AS-11 V/s. AS-30 framework

Hedging Policy & Hedge Accounting

RANBAXY episode.. moving towards maturity ?

Q&A

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Types of exposures

Transaction exposure

Most common in today's business environment, this relates to foreign exchange rates fluctuation

Translation exposure

Arises from the need to “translate” foreign currency assets / liabilities into the home currency

Economic exposure

Change in the exchange rates of another currency may worsen / boost competitiveness.

Why hedge ?

Knocking the doors of global market can be an effective way of expanding business. However, success of enterprise is equally tied with volatility in foreign exchange rates thanks to constant rate fluctuations contributing to unexpected profit or loss.

Forex hedging is meant to diminish the risk associated with an enterprise's exposure to foreign currency balances and transactions.

It is in the best interest of any organisation to recognise this risk and formulate appropriate hedging strategy to safeguard against currency fluctuations with an ultimate aim to create assurance for cost and revenue.

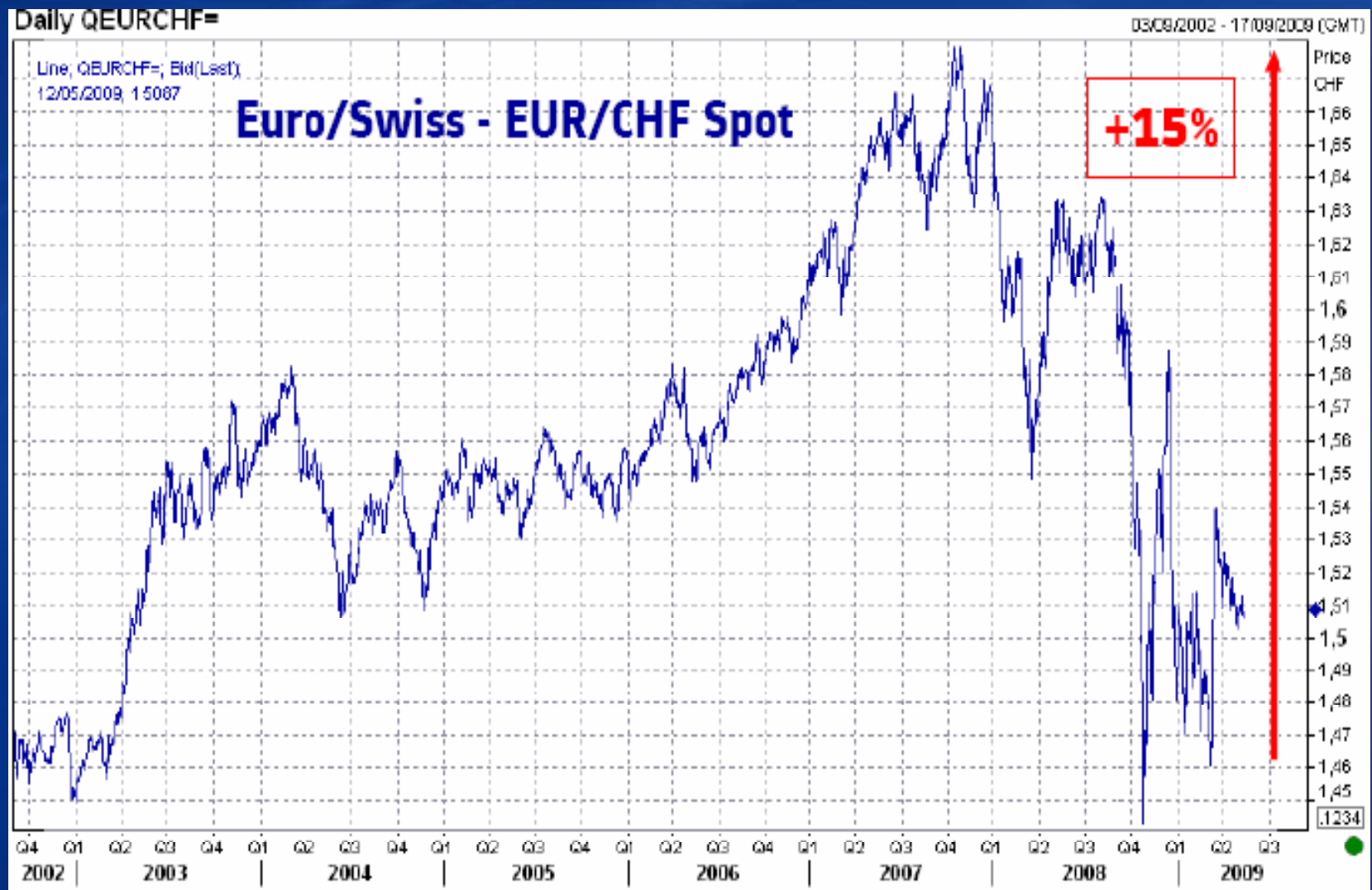
What is hedging ?

Hedging means entering into a financial contract (e.g. FX option or forward contract) with a bank in order to offset the (gain or) loss arising from FX movements (in Assets, Liabilities, firm commit. or forecast transaction)

A method, often sophisticated, employed to minimize investment risk. Holders of a given underlying (currency) might reduce risk on a relatively basic level, for instance, by entering/buying forward contracts/options; in case of an adverse currency development, the forward contracts/ options allows the holders to buy or sell the underlying at a pre-determined (fixed) level, providing a “hedge” against losses.

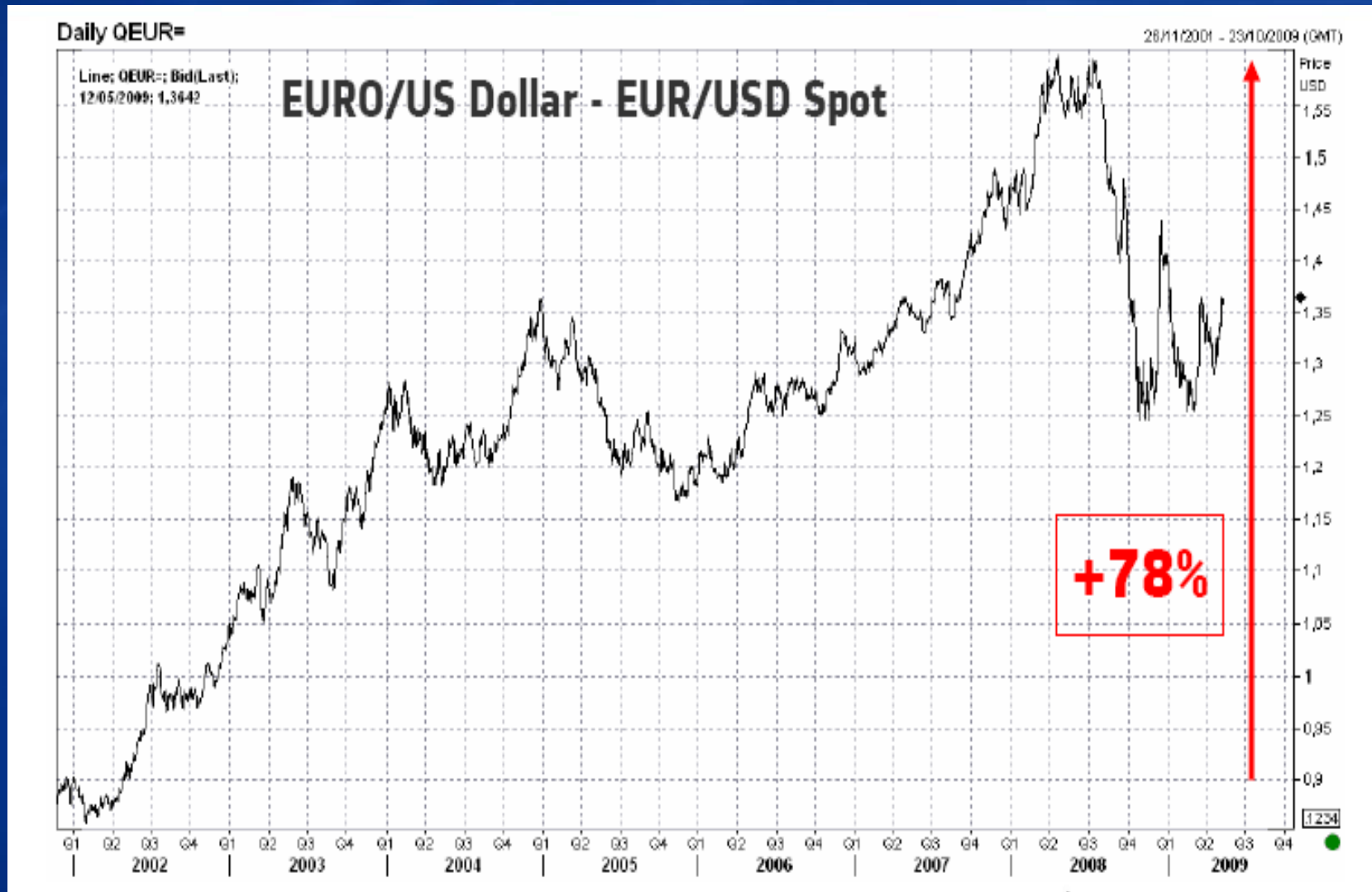
FX Environment

EUR/CHF chart



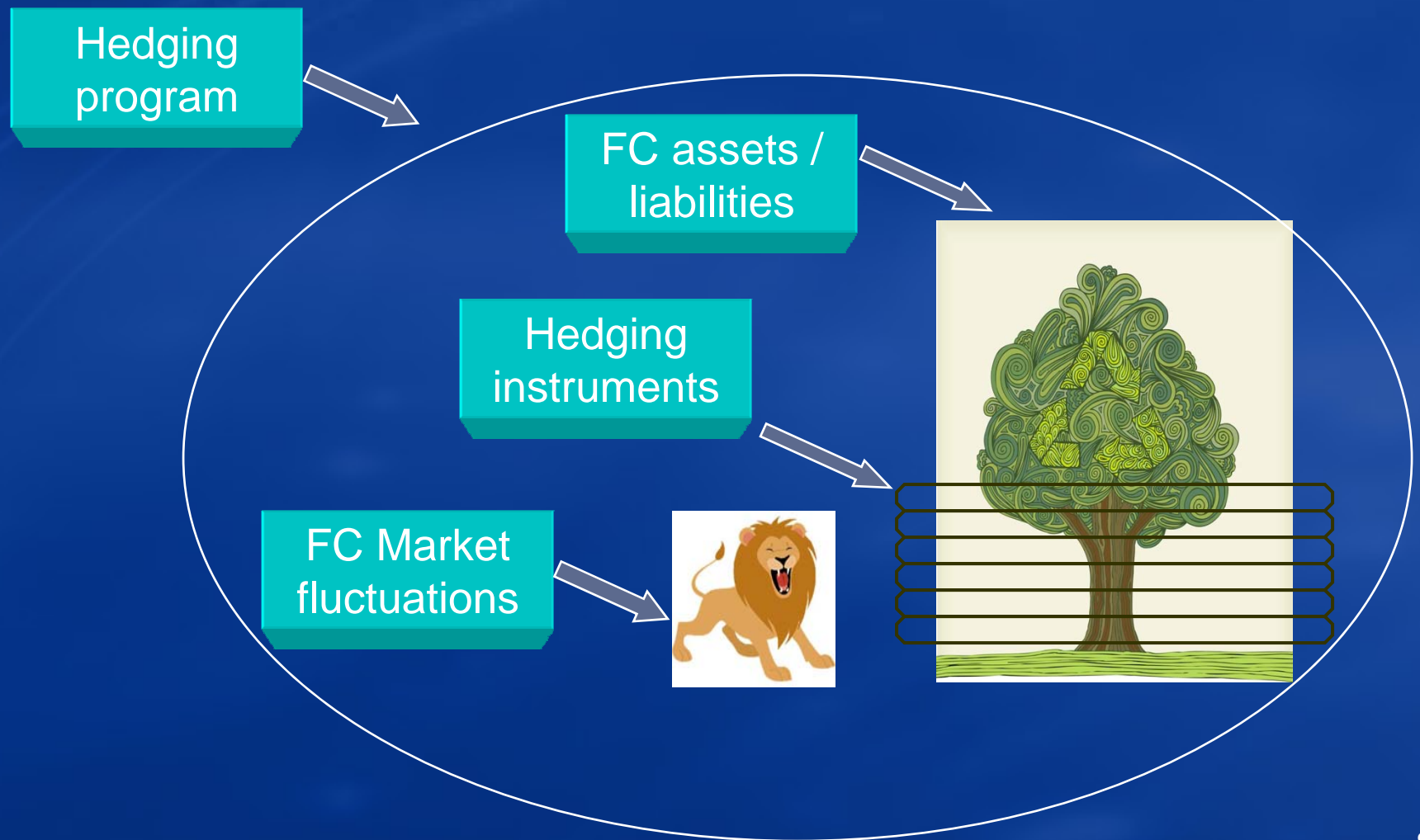
FX Environment

EUR/USD chart



What is hedging ?

Hedging is like a tree guard around the tree which protects tree from cattle / Animal



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Hedged item and Hedging instrument

Hedged item :

A hedged item is an asset, liability, firm commitment, highly probable transaction, or investment in a foreign operation that exposes an entity to changes in fair value or cash flows, and is designated as being hedged.

Hedging instrument :

A hedging instrument is a designated financial instrument whose fair value or related cash flows should offset changes in the fair value or cash flows of a designated hedged item.

Firm commitment and forecast transaction

Firm commitment :

A binding agreement for the exchange of a specified quantity of resources at a specific price on a specified future date(s)

Forecast transaction :

A transaction that is expected to occur (highly probable) for which there is not a firm commitment

Does not give an entity any present right to future benefits or a present obligation for future sacrifices

Derivatives

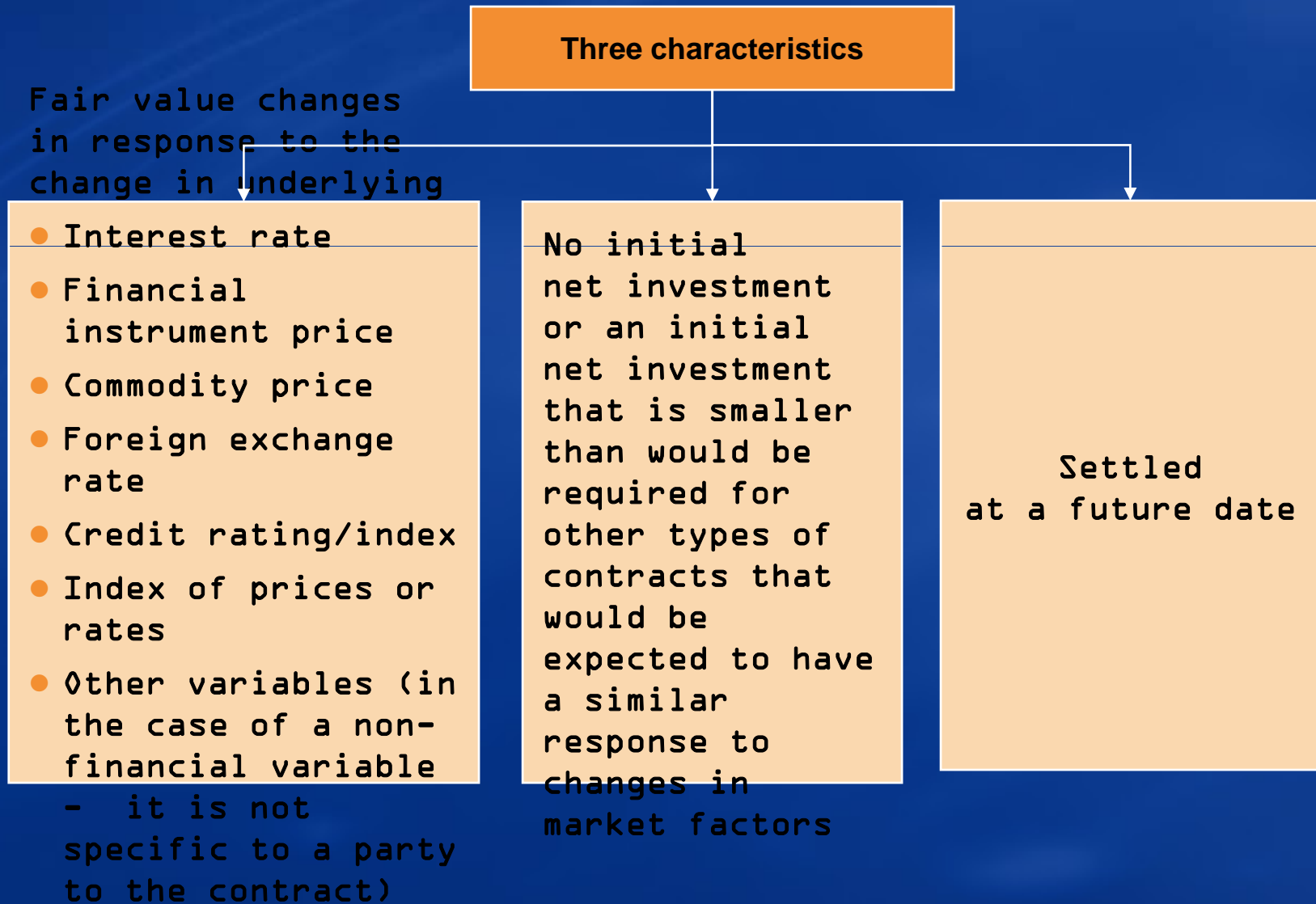
“Derivatives are weapons of mass destruction”

- Warren Buffet

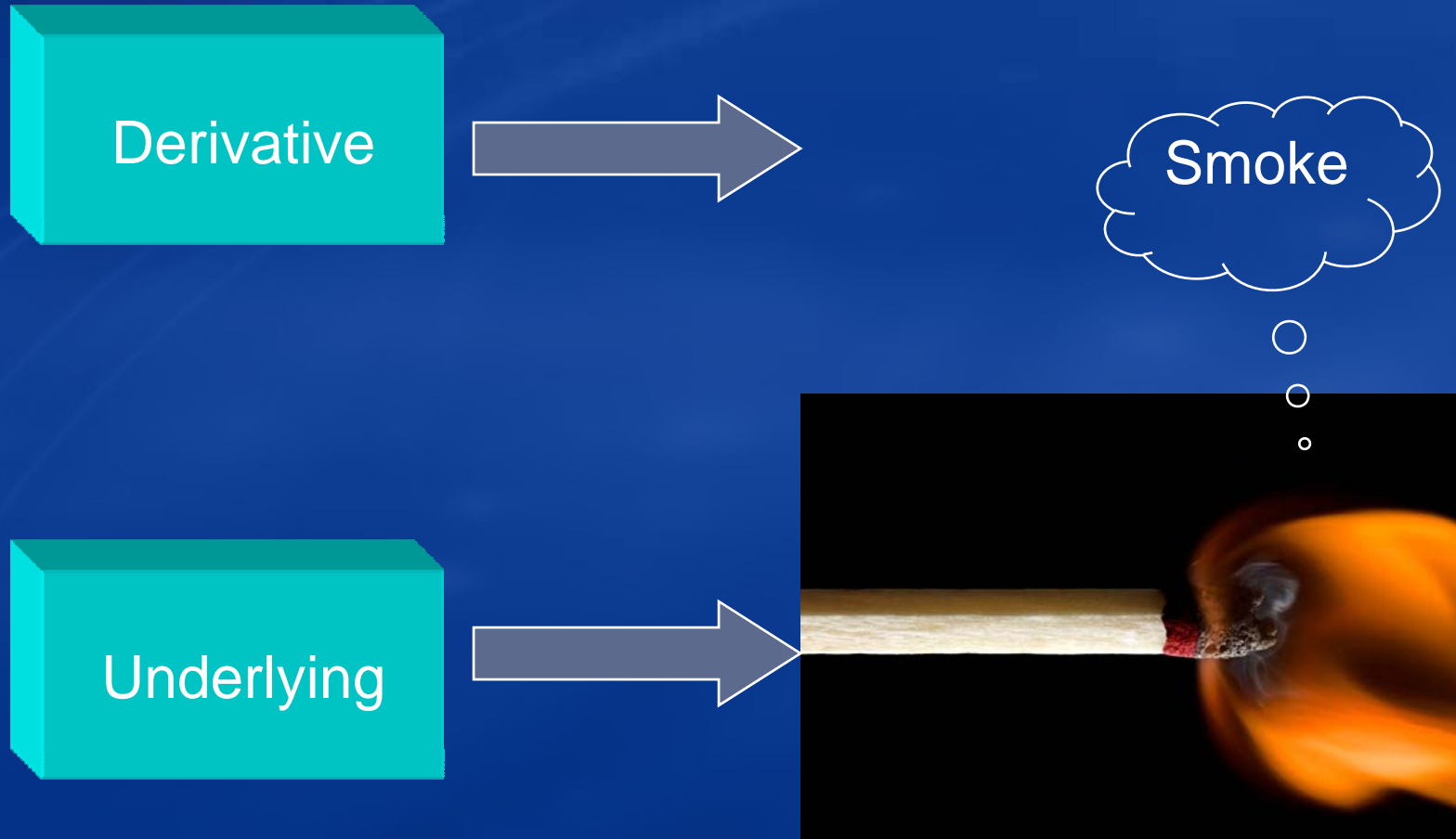
Derivatives

Derivatives are financial instruments whose value changes in response to the changes in underlying variables, requires no initial investment or initial investment that is smaller than would be required for other types of contract that would be expected to have similar response to change in market factors and it is settled at future date.

Freestanding derivatives - definitions



No derivative without underlying



Types of derivatives

- Future
- Forward
- Swap
- Option
- Contract to buy or sell a non-financial item that can be settled net in cash or another financial instrument or by exchanging financial instruments (specifically included in AS 30, although not a financial instrument)

Types of derivatives. Forward contract

Forward Contract

a contract to buy or sell an amount of a currency at a defined rate (expressed in another currency) at a future defined date, the defined rate is the Forward Rate at Inception

AS 30 excludes following derivatives

All derivatives are always marked-to-market (MTM) with changes in fair value recognised in the P&L (unless used as hedging instruments in cash flow hedge when fair value changes are in reserves) except for:

Contracts for 'normal' purchases and sales of non-financial items

- Intended to meet purchase, sale or usage requirements
- Designated for that purpose
- Will be settled by delivery

Regular way purchase or sale of a financial asset

- Delivery within a time frame established by regulation or convention in the market
- Apply trade date or settlement date accounting

Components of hedge relationship

Hedging relationship components

Hedged items

Hedgeable risks

Hedging
instruments

How perfect hedge actually works ?

Every change in the fair market value of forex hedge instrument will have an opposite impact on forex hedged item in a way to achieve certainty in cost and revenue.

Derivatives.



Reco. Assets/Liabilities, Firm Commit, Highly prob. Fore. txn.

Criteria for hedge accounting

1. Hedge relationship must be documented at inception

- Risk management objective and strategy for the hedge
- Identification of the hedging instrument
- The related hedged item or transaction
- The nature of the risk being hedged
- How hedging instrument's effectiveness will be assessed

2(a) Hedge relationship must be expected to be highly effective at inception and subsequent periods

2(b) Hedge effectiveness can be reliably measured

2(c) Actual hedge effectiveness must be measured

3. In the case of hedging future cash flows, there must be a high probability of that cash flow occurring

Qualifying hedging instruments – general rules

Few restrictions on use of derivatives as hedging instruments

- Important exception: net written options

Natural hedges of FX risk permitted in limited circumstances

- All of the derivative must be used in the hedge relationship
- Derivative cannot hedge another derivative
- More than one derivative can be used in a hedging relationship
- Permitted strategies include:
 - partial term
 - 5 year swap used to hedge part of 10 year debt as part of cash flow hedge
 - proportional hedging
- Profit related hedges not permitted

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Types of hedges

Main types of hedging relationships

Fair value hedge

- a recognised asset or liability;
- an unrecognised firm commitment; or
- an identified portion of any of the above two, that is attributable to a particular risk

Cash flow hedge

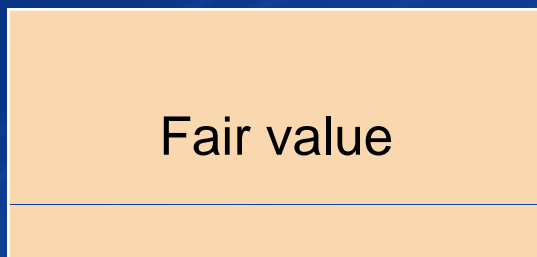
- attributable to a particular risk associated with a recognised asset or liability or a highly probable forecast transaction; and
- could affect profit or loss

Net investment hedge

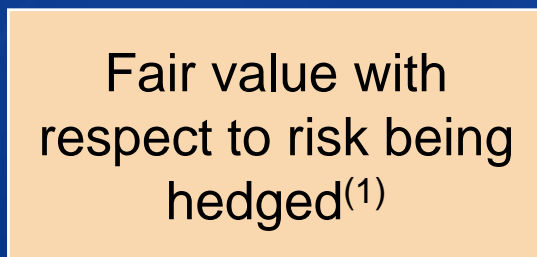
- Hedge of a net investment in a foreign operation (including a hedge of a monetary item that is accounted for as part of the net investment as per AS 13
- Hedging instruments can be foreign currency monetary items or derivatives

Fair value hedge accounting model

Measurement of derivative instrument



Measurement of hedged item



Changes in FV



(1) This applies even if a hedged item is otherwise measured at FV with FV changes recognised in equity or if hedged item is measured at cost

Cash flow hedge accounting model

Measurement of derivative instrument

Fair value

Effective

Ineffective

Changes in FV

Equity

(1)

P&L

(1) Based on timing of earnings impact of hedged item (cost of sales, depreciation, interest)

Hedging anticipated future cash flow is more difficult under AS 30

In the case of hedging future cash flows, there must be a high probability of that cash flow occurring

- Exposure to variability in cash flows
 - capex, floating interest rate, commitments and anticipated exposures
- High probability test to be satisfied on cash flow exposure
 - Generally more than 90% probability

Scale of probability of the forecasted transaction

General rule: Gain/loss on hedging instrument to P&L

Special rule: Cumulative gain and loss on hedging instrument remains in equity
“freeze mode” if test satisfied in a prior period



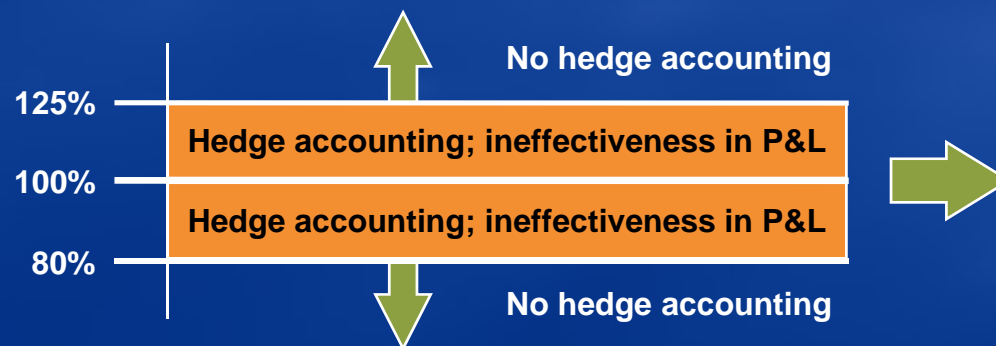
Hedges of a net investment

- Must meet criteria for hedge accounting
- Accounting treatment similar to that of cash flow hedges
- Effective portion of gain or loss on hedging instrument recorded in the same manner as the foreign currency translation gain or loss
- Ineffective portion is recognised in the profit or loss

Hedge effectiveness

Hedge relationship must be expected to be highly effective at inception and in subsequent periods

- General principles
- Hedge effectiveness criteria
 - highly effective at inception
 - satisfy 80-125% effectiveness back test



- Different notional and principal amounts for the derivative and hedged item
- Basis differentials
- Different maturity and re-set dates
- Currency differences
- Credit differences
- Inclusion of time value

any ineffectiveness must be recognized in P&L ... even if hedge relationship is effective

Hedge effectiveness.. contd.

- The effectiveness test itself must be stated upfront in the hedge documentation. This means that it must be designed and tested to ensure that it provides a suitable solution before the hedge commences
- There are two components to an effectiveness test:
 - the prospective test
 - the retrospective test
- In addition, as ineffectiveness is always required to be recorded in the profit and loss account, a calculation of ineffectiveness will be required for cash flow hedges

Hedge effectiveness.. contd.

The prospective test (fair value hedge)

- This test should be a demonstration that the hedge is expected to be offsetting over the life of the hedge (or to the next testing point, if so designated)
- It should therefore predict what will happen in say, the next three months if interest rates change
- The better the test, the more likely a pass will be the result

Tips

- Use multiple scenarios to give a number of results as to what the change in fair value of a swap and change in fair value of an asset can be. Regress the results.
- Use regression statistics (gradient and correlation) to define a pass
- Always test using clean prices
- Build in a “materiality” clause

Hedge effectiveness.. contd.

The retrospective test (fair value hedge)

- The retrospective test is designed to assess what actually happened during the last quarter
- It is a measure of the actual results

Tips

- Use of the (cumulative) dollar offset method is not recommended
- Can be mitigated by using a cumulative measure rather than a period by period assessment
- Do not include immaterial fails
- Alternatively use regression analysis for retrospective testing as well

$$\frac{\text{Change in clean fair value of asset due to interest rate risk (since inception of hedge)}}{\text{Change in clean fair value of swap (since inception of hedge)}} = 10/9 = 111\%$$

When hedge no longer is effective

If the ongoing highly effective criterion fails, hedge accounting is discontinued

- Hedge activity recorded prior to loss of effectiveness is not affected.
- The hedge does not qualify for special accounting prospectively from the last time it was proven effective.
- There is therefore a trade off between performing effectiveness testing frequently to ensure effectiveness and the administration effort into doing this frequently

Discontinuation of hedge accounting

	Fair value hedges	Cash flow hedges
Future changes in fair value of hedging instrument	<ul style="list-style-type: none"> Continue to be taken to profit or loss 	<ul style="list-style-type: none"> Recognised immediately in profit or loss
Changes in fair value of hedged item	<ul style="list-style-type: none"> Treat as if not hedged For hedges of interest bearing assets, adjustments to date is amortised to profit or loss over the period to maturity 	<ul style="list-style-type: none"> N/A
Amounts recorded to date in equity: <ul style="list-style-type: none"> a) hedged item still exist or still expected to occur b) hedged item or transaction sold or no longer expected to occur 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> a) Transferred to profit or loss at the same time as the change in the hedged cash flows is recognised in profit or loss b) Transferred to profit or loss immediately

Objective of hedge accounting: get the timing right

	1	2	Cumulative
Hedged item	0	(20)	(20)
Hedging instrument	20	0	20
	20	(20)	0



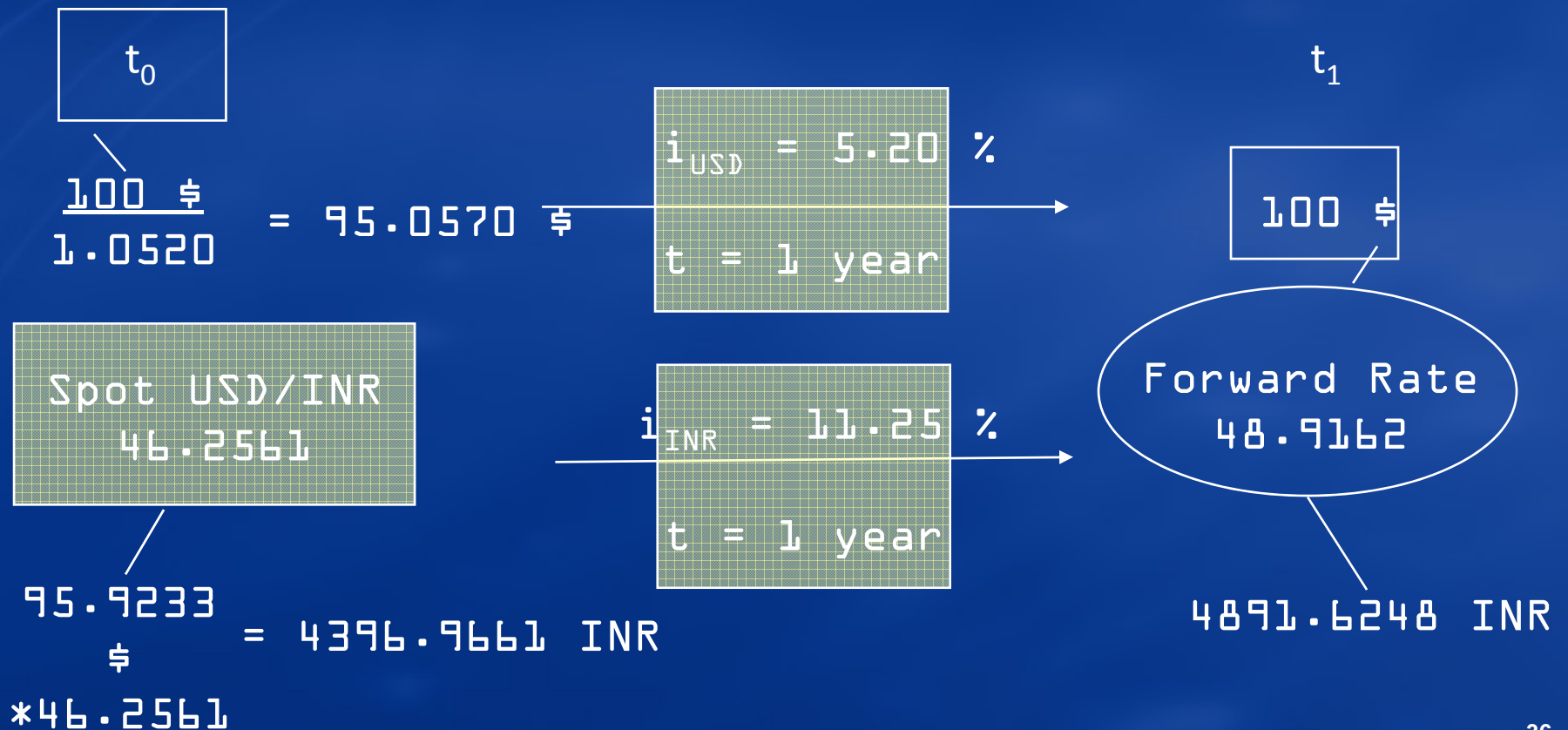
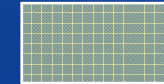
Accelerate recognition of gain or loss on hedged item (fair value hedge)



Defer recognition of gain or loss on hedging instrument (cash flow hedge)

How to calculate forward exchange rate

Factors needed to know in order to calculate fwd. rate highlighted as



How to calculate forward exchange rate

What will the bank do to offer a fixed price for the 100\$ to be received after 1 year ?

TODAY

Step 1 : The bank borrows the amount of USD that will equal 100 USD after 1 year, including interests at market rate (5.20%)

Amount borrowed : 95.0570 \$

Step 2 : The bank sells the USD borrowed into INR at spot rate (1 USD = INR 46.2561)

Amount obtained : INR 4396.9661

Step 3 : The Bank loans INR 4396.9661 for 1 year at 11.25% and will get refund for INR 4891.6248

At the end of day : No cash in hand

How to calculate forward exchange rate

The Bank know for sure that, in 1 year time,

-It will have to refund the USD debt : 100 USD

-It will collect reimbursement for the INR loan : 4892~ INR

Therefore, Bank contracts with client on the following terms :

In 1 year's time, 100 USD will be exchanged for 4892 INR,

The forward is then : 1 USD = 48.92 INR

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AS-11 V/s. AS-30 framework

Major area of differences	AS-11	AS-30
Amortisation of premium	Yes	No concept
Applicable to other derivatives	No	Yes
Time value of money	Not reco.	Recognised
Criteria for hedge accounting	No	Yes
Applicability	Limited *	Exhaustive
HE Testing	No	Yes

* As-11 is not applicable to Forward Coves for firm commitment / highly probable forecast transactions

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What is hedging policy & hedge accounting

Hedge Accounting Approach

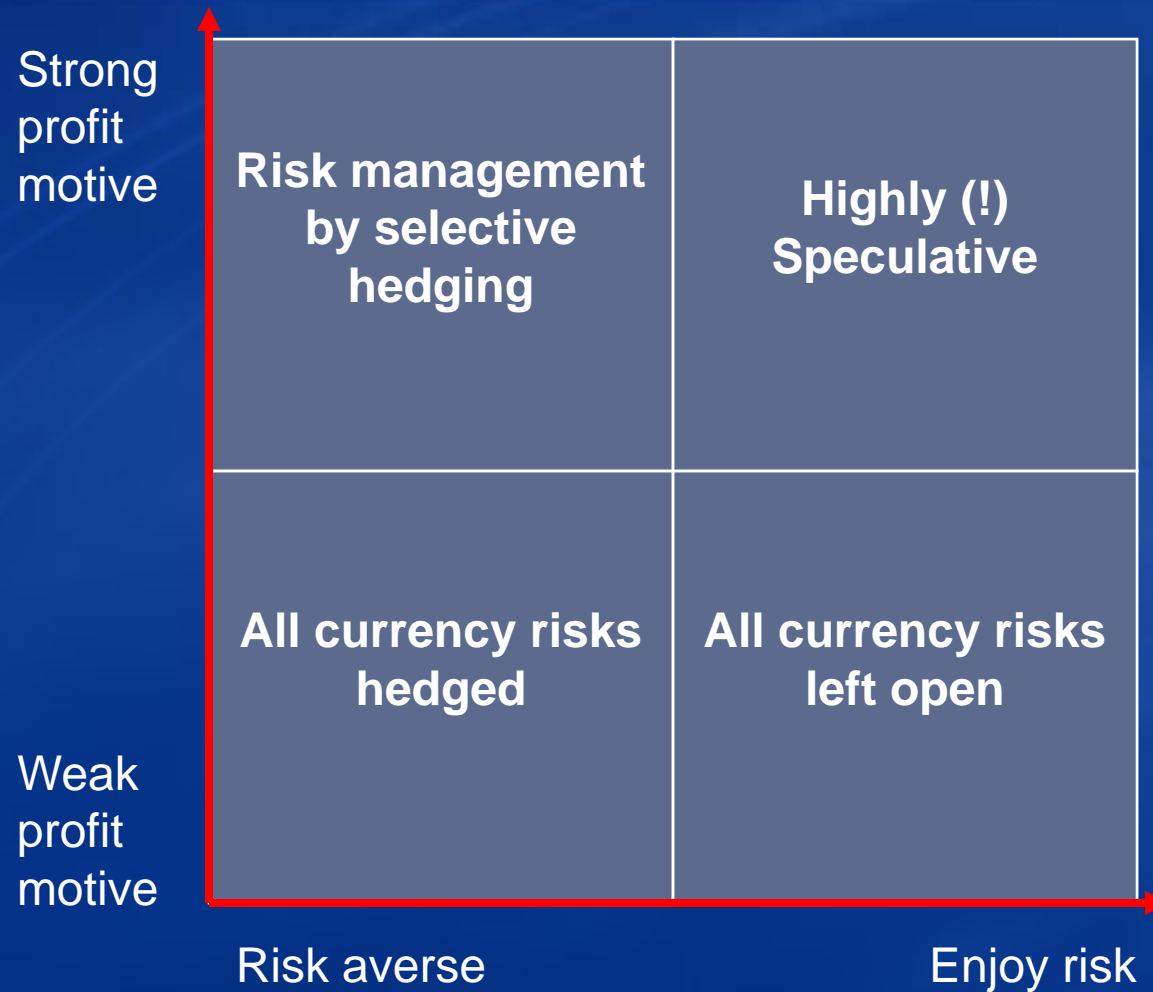
Hedge accounting is a privilege, not a right. It is a special accounting treatment for defined hedges that meet the required criteria outlined in the accounting standards which are,

- (i) Formal designation and documentation of hedging relationship.
- (ii) Hedge effectiveness is highly effective.
- (iii) Hedge effectiveness can be reliably measured
- (iv) HET is assessed on ongoing basis.

If above conditions are satisfied, then it should be accounted as follows;

- **Gain/Loss from remeasurement of hedging instruments at fair value and**
- **Gain/Loss from remeasurement of hedged item attributable to the hedged risk be recognised in the profit & loss account or hedging reserve account as the case may be.**

Spectrum of risk management



RANBAXY episode..



- Entered into FC derivative transactions with various banks
- Estimated MTM loss of over Rs. 2500 Cr. as on Feb'09



- Q4 / FY 2009 saw Ranbaxy hitting a net loss of Rs. 761 Cr.
- Ranbaxy had about \$1.4 bn in outstanding hedges and booked a loss of Rs. 9.18 bn



- Consequently, share price fell by 4.7%
- Ban on 30 products of Ranbaxy by USFDA has added to it's loss

RANBAXY episode..



- Entered into various “Forex Strip Options”.
 - A strip is like a series of options that mature over a period of time, and these contracts are set



- USD : INR exchange rates was Rs. 39.90
- Ranbaxy speculated that rupee would appreciate



- Hedged it's dollar receivables at Rs. 43.50 at
- Hence a PUT option

RANBAXY episode.. analysis of strategy



- Since the Ranbaxy had opted for a put and a call direction should have been hedged.
 - ✗ But the options are present in the ratio of has been sold and 2.5 CALLS have been purchased



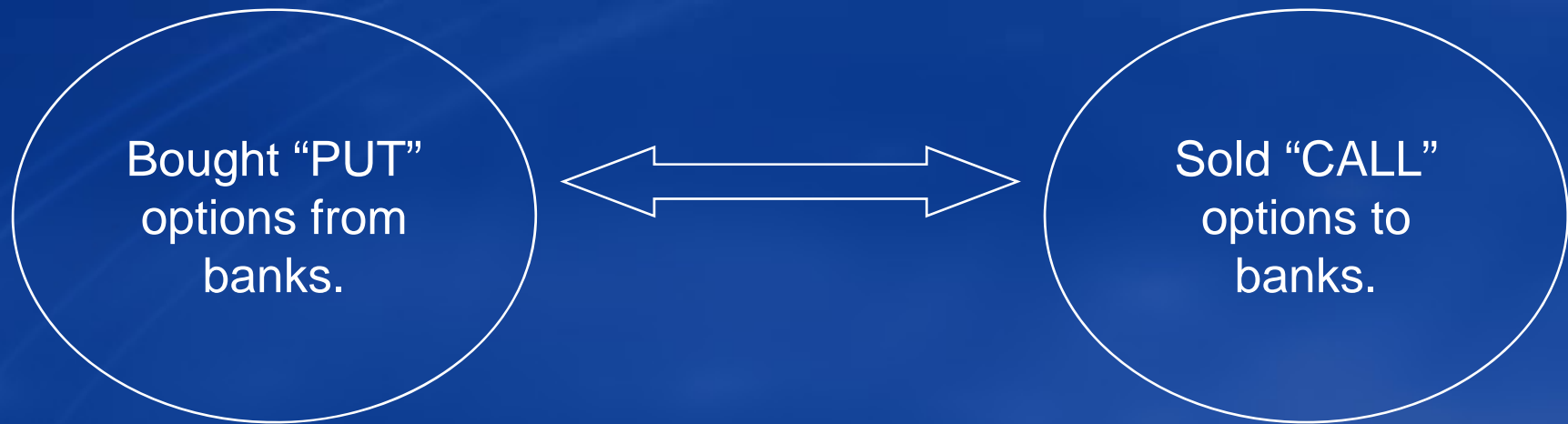
Anticipated profit for Ranbaxy -

- (i) Income from premium on writing CALL
- (ii) Profit from exercising the PUT option

Loss incurred by Ranbaxy -

- (i) Loss due to writing of CALL option
- (ii) Loss of premium amount paid to buy the PUT option

RANBAXY episode.. what went wrong?



- Dollar appreciated against Ranbaxy's expectations
- Banks exercised the "CALL" options
- Loss from fair valuations of derivatives was alone Rs. 784 Cr.

HDFC Bank (EURO/\$)



Himatsinghka, a textile firm having..

Net Sales : Rs. 174 Cr.

MTM Loss : Rs. 175 Cr.

- MTM loss large due to..

(i) Large exposure

(ii) Euro moving against \$

(iii) Longer tenure



In order to cover up above losses, entered into another structure called "Contingent Premium Paying Structure" wherein obligation to pay premium arise if EURO touches particular level of \$.

Here Quarterly premium paid was Rs. 4.5 Cr.

In addition to plain vanilla forward

Issues.

- Hedging is still seen as complex in majority of corporates,
- Sometimes “Forecasting” is considered as part of the job.
- Resort to complex derivatives in spite of little understanding.
- Exchange rate mechanism may not purely be a f of interest rate differentials.
- Sometimes hidden intent to make gain out of FOREX fluctuations

Q & A .

Thank you Q & A attentive