Ind AS 102
Share-based Payments

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Session Objectives

1. To appreciate in principle, Ind AS 102

2. To understand the implementation guidance

3. To examine the advantages and limitations of fair value models

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Today's Discussion

- Applicability and Structure
- Overview and Scope
- Appreciating Fair Value Models
- Measurement
- Recognition
- Challenges
- Question & Answers

Ind AS 102 Share Based Payments

Entity Applicability

MCA Notification dated Feb 16, 2015

FY 2016-17

Listed and unlisted companies both with net worth above Rs 500 crores

FY 2017-18

All listed companies and unlisted companies with net worth above Rs 250 crores

First-time Adoption - Ind AS 101

Paragraph D2

Encouraged, but not required to apply Ind AS 102 to options already vested or already settled.

If terms of issue of options not yet vested are modified, the entity is not required to apply Ind AS 102 paragraphs 26-29 if the modification occurred before transition date.

That is, <u>if unexpired options granted earlier are modified after transition date</u>, applying Ind AS 102 would be necessary.

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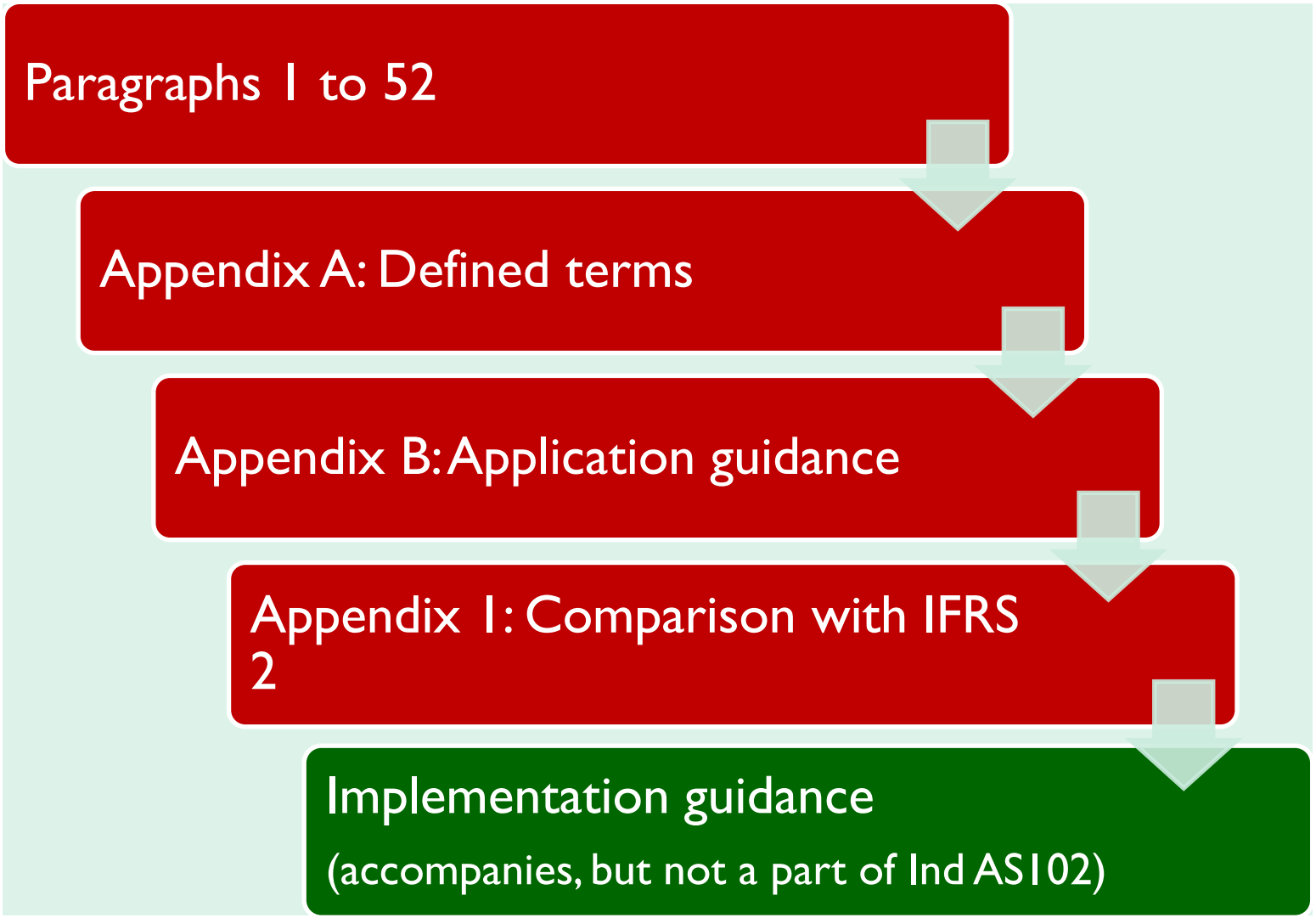
Structure of Ind AS 102



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Ind AS 102 Share Based Payments

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Overview of Ind AS 102

Scope	Applies to **all share-based payment** transactions
Types of share-based payments	**Equity settled, cash settled, or choice** between equity and cash settlement
Recognition of cost	Recognized **over vesting period**; can further be expensed or capitalized
First measured on	**Grant date** for employees **Date goods or services are received** for others
How to measure	**Fair value** basis e.g., valuation techniques for ESOP, SAR, shares or payment derived from share prices

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Ind AS 102's Scope

All share-based payment transactions even if entity can't identify specifically some or all services received, including

- Equity settled share-based payment transactions
- Cash settled share-based payment transactions
- As per terms of arrangement of receiving goods or services, the entity or supplier can settle transaction in cash or equity shares

Examples

1. Share options
2. Share based payments with cash alternatives
3. Share appreciation rights
4. Restricted shares

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Ind AS 102's Scope .. Contd.

Ind AS 102 covers share-based payment arrangements, not merely share-based payment transactions

A share-based payment arrangement is "an agreement between the entity (or another group entity as defined in Ind AS 110 or any shareholder of any group entity) and another party (includes an employee) that entitles the other party to receive …."

Ind AS 102 thus applies to share-based payment transaction settled by another group entity

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A Classification exercise

Choose from:

1. Share options
2. Share based payments with cash alternatives
3. Share appreciation rights
4. Restricted shares

A. Employees receive 100 shares after 3 years	B. Employees receive the difference between current market price and price prevailing at the end of 3 years of 100 shares	C. Employees receive 100 shares after 3 years, however shares have a lock-in of 2 more years	D. Employees can elect to receive 100 shares after 3 years, or its cash equivalent

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A Valuation Technique exercise

Choose from:

1. Option Valuation at grant date only
2. Compound financial instrument – value equity and debt separately
3. Option Valuation at each B/S date
4. Fair Value of restricted shares i.e. after allowing for opportunity lost

A. Employees receive 100 shares after 3 years	B. Employees receive the difference between current market price and price prevailing at the end of 3 years of 100 shares	C. Employees receive 100 shares after 3 years, however shares have a lock-in of 2 more years	D. Employees can elect to receive 100 shares after 3 years, or its cash equivalent

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Excluded from Scope of Ind AS 102

i. Transactions based on the holder's capacity as an equity owner (Para 4 of Ind AS 102)

ii. Instruments issued as consideration in a business combination (Para 5 of Ind AS 102)

iii. Awards in which the goods or services are within the scope of Ind AS 32, Financial Instruments: Presentation or Ind AS 109, Financial Instruments (Para 6 of Ind AS 102)

iv. Amount paid is not based on market price of entity's shares (definition of Share-based Payment Arrangement, Appendix A)

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Ind AS 102 Share Based Payments

Definition of an 'Option'

A Call (Put) Option is a right, but not an obligation, to buy (sell) an underlying security at a particular time and at a predetermined Strike Price.

The time could be at the end of the life of the option i.e. European or at any time during the life of the option i.e. American

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Binomial Model Assumptions

In the binomial model it is assumed that:

- **there are no trading costs or taxes**
- **there are no minimum or maximum units of trading**
- **stock and bonds can only be bought and sold at discrete times 1, 2, ...**
- **the principle of no arbitrage applies**

The One-Period Binomial Model

At time 1, we have two possibilities:

$$S_1 = \begin{cases} S_0 u & \text{if stock price goes up} \\ S_0 d & \text{if stock price goes down} \end{cases}$$

Here S_t represents the price of a non-dividend paying stock at discrete time intervals t {t= 0,1,2,…}. **'u' is the size of the up-jump, and 'd' of the down-jump**

In order to avoid arbitrage we must have $d < e^r < u$

I.e. the Principle of No-Arbitrage.

Pause to understand e^r!

Finding the size of jumps

The important step in the Binomial model is hence to find 'u' and 'd' i.e. the size of up and down jumps

Much theory postulates that share prices move as per a stochastic process called Geometric Brownian Motion

In that case:

$$\frac{S_{t+\delta t}}{S_t} \approx Lognormal[(r-\sigma^2/2)(\delta t), \sigma^2 \delta t)]$$

Finding Option value with Binomial model

Summary of the Binomial Option Pricing Model

Mathematically simple, but surprisingly powerful method to price options

If the volatility σ is known, the size of up and down jumps can be estimated.

The short time δt can be set up to have multiple nodes in the binomial tree

Due to the uniform size of up and down jumps at different times, the binomial tree is a recombining one

Discounting the payouts at the final nodes helps us to value the European Call or Put option.

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Directional Impact of the change in assumptions

An increase in the …	Results in a fair value estimate of a Call Option
Current price of the underlying share	Higher
Exercise price of the option	Lower
Expected volatility of the stock	Higher
Expected dividends on the stock	Lower
Risk-free interest rate	Higher
Expected term of the option	Higher

It is important to understand all the terms and conditions of a share-based payment arrangement because this enables the issuer to choose the most appropriate option pricing model.

Greeks

Critical to the replicating portfolio theory – governs option writing

Delta (Δ) measures df/dS_t or change in option price to change in share price

Rebalancing needs of writer

Gamma (Γ) measures d^2f/dS_t^2 or $d\Delta/dS_t$ change in delta to change in share price

Sensitivity to interest rate change

Rho (ρ) measures df/dr or change in option price to change in risk-free rate

Greeks … contd.

Cost of volatility

Vega or Kappa (K) measures df/dσ or change in option price to change in implied volatility

Degeneration with time

Theta (Θ) measures df/dt or change in option price to change in time to expiry

Sensitivity to company dividend

Lambda (λ) measures df/dq or change in option price to change in dividend yield

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From Partial Differential Equation B-S Option Pricing Formula

Plenty of calculus involved

Indeed characterizes returns on shares Random Walk → Geometric Brownian Motion → Lognormal distribution

To finally derive the formula

$$c_t = S_t \Phi(d_1) - K e^{-r(T-t)} \Phi(d_2)$$

Where

$$d_1 = \frac{Ln(\frac{S_t}{K}) + (r + \frac{\sigma^2}{2})(T-t)}{\sigma\sqrt{T-t}}$$

and

$$d_2 = d_1 - \sigma\sqrt{T-t}$$

Black –Scholes Formula Variables

The Black-Scholes-Merton formula is an example of a 'closed-form model' i.e. it uses an equation to produce an estimated fair value.

c_t = price of a call at time t

S_t = price of the underlying share at time t

Φ = the cumulative probability distribution function; standard normal

q = dividend yield

K = call option exercise price

r = the continuously compounded risk-free rate

σ = Annualized volatility of the returns on underlying share

T – t = time to expiration (in years)

Assumptions Setting

Expected term of the option

Vesting period — the option's expected term must be at least as long as its vesting period. The length of time employees hold options after they vest may vary inversely with the length of the vesting period

History of employee exercise and termination patterns for similar grants (adjusted for current expectations)

Price of the underlying shares — experience may indicate that employees tend to exercise options when the share price reaches a specified level above the exercise price

Employee's level within the organization — experience may indicate that higher level employees exercise options later than lower level employees

Expected volatility of the underlying share — on average, employees tend to exercise options on higher volatility stocks earlier

Assumptions Setting … Contd.

Expected volatility

Implied volatility from traded share options on the entity's shares, or other traded instruments of the entity that include option features (such as convertible debt), if any

Historical volatility of the share price over the most recent period that is generally commensurate with the expected term of the option

Length of time an entity's shares have been publicly traded — a newly listed entity might have a high historical volatility, compared with similar entities that have been listed longer

Tendency of volatility to revert to its mean (i.e., its long-term average level), and other factors indicating that expected future volatility might differ from volatility in the immediate past appropriate and regular intervals for price observations

Assumptions Setting … Contd.

Expected Dividends:

Based on current expectations about an entity's anticipated dividend policy. If an entity has never paid a dividend, but has announced that it will begin paying a dividend yielding 2% of the current share price, then it is likely that an expected dividend yield of 2% would be assumed in estimating the fair value of its options.

Risk free rate

The risk-free interest rate is the implied yield currently available on zero-coupon government issues denominated in the currency of the market in which the underlying shares primarily trade.

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Limitations of the Black-Scholes Model

Primarily, the Model identifies stock price returns to the normal distribution family! Recall $dS_t = S_t (\mu\, dt + \sigma\, dZ_t)$

Consider the extract below from Chapter 15 of Nassim Taleb's 'The Black Swan': The Bell Curve, That Great Intellectual Fraud

Measures of uncertainty that are based on the bell curve simply disregard the probability, and the impact, of sharp jumps or discontinuities and are, therefore inapplicable in Extremistan.

Using them is like focusing on the grass and missing out on the (gigantic) trees.

Indeed, share prices face extreme movements, both on the upside and the downside more frequently than the Normal/ Bell Curve models (Source: own view)

Limitations of the Black-Scholes Model … Contd.

There are other limitations, though not as significant as the assumption of normal distribution.

1. Volatility is assumed to be constant. Especially when time to expiry is long, this assumption is questionable. B-S may not be appropriate for long tenor options.
2. Risk-free rate is assumed to be constant across maturities and unlimited borrowing/ lending is possible. In practice, availability of credit is greatly dependent on several factors including rating, liquidity and regulation.
3. Taxes and transaction costs are ignored.

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Limitations of the Black-Scholes Model with regard to ESOP

Attributes of employee share options that render the Black-Scholes-Merton formula less effective as a valuation technique for employee share options are:

A) ***long term to expiration*** — An assumption of constant volatility, interest rates and dividends over the life of Employee share options that often have a long contractual term would be inappropriate.

B) ***non-transferable*** —IFRS 2 provides for the use of an 'expected term' in place of the contractual life to reflect the possibility of early exercise resulting from the non-transferability of employee share options.

Limitations of Black Scholes formula with regard to ESOP … Contd.

C) ***subject to vesting provisions*** — Employee share options often cannot be exercised prior to a specified vesting date. Vesting provisions therefore impact the valuation of share options because they affect the expected term of the options by, among other things, establishing a minimum expected term.

D) ***subject to term truncation*** — The term of an employee share option often is truncated upon termination of employment . Provisions regarding term truncation therefore will influence estimates of the expected term of the option.

E) ***subject to blackout periods*** — Black out periods during which certain employees are not allowed to trade are not readily incorporated in the Black Scholes valuation

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Binomial/ Lattice and Black Scholes Formulae – A comparison

Black Scholes Model	Binomial/ Lattice Model
Black-Scholes-Merton formula uses static assumptions and is not the best method to estimate the fair value of ESOPs	A lattice model can explicitly use dynamic assumptions regarding the term structure of volatility, dividend yields, and interest rates.
Black-Scholes-Merton formula cannot handle the additional complexity of a market based performance condition .	The lattice model, that takes into account employee exercise patterns based on the dynamics of an entity's share price may result in a better estimate of fair value.

The longer the term of the option and the higher the dividend yield, the larger the amount by which the binomial lattice model value may differ from the Black-Scholes-Merton value.

Popular Models for Stock Option Valuation

Even though many entities estimate the value of share options using the Black-Scholes-Merton formula, most valuation specialists agree that lattice models (e.g. binomial models) generally provide a better estimate of the fair value

Options may have certain features that might preclude the use of the Black-Scholes-Merton formula in estimating option fair value

But even though a lattice model is regarded as often producing a better estimate of an option's fair value, it can be considerably more complicated than using the Black-Scholes-Merton formula, and not many are familiar with how a lattice model works

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Key Parameters for Option Valuation

Whilst Ind AS 102 on Share-based Payments does not obligate any particular method, the option-pricing model used must take into account a minimum of six inputs.

These are:

1. **Current price of the underlying share**
2. **Exercise price**
3. **Expected volatility of the price of the underlying share**
4. **Expected dividends on the underlying share**
5. **Risk-free interest rate for the expected term**
6. **Expected term of the option, taking into account both the contractual term of the option and the expected effects of employees' exercise and post-vesting behavior**

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Ind AS 102 Share Based Payments

Grant Date

IG1, IG2 and IG3

The date at which:

- The entity and employee (or other party providing similar services) agree+ to a share-based payment arrangement
- A shared understanding of the terms and conditions of the arrangement exists
- The entity confers on the counterparty the right to cash, other assets, or equity instruments of the entity, provided the specified vesting conditions, if any, are met
- Approval is obtained (if subject to an approval process)

+Agree connotes both an offer and acceptance of the offer

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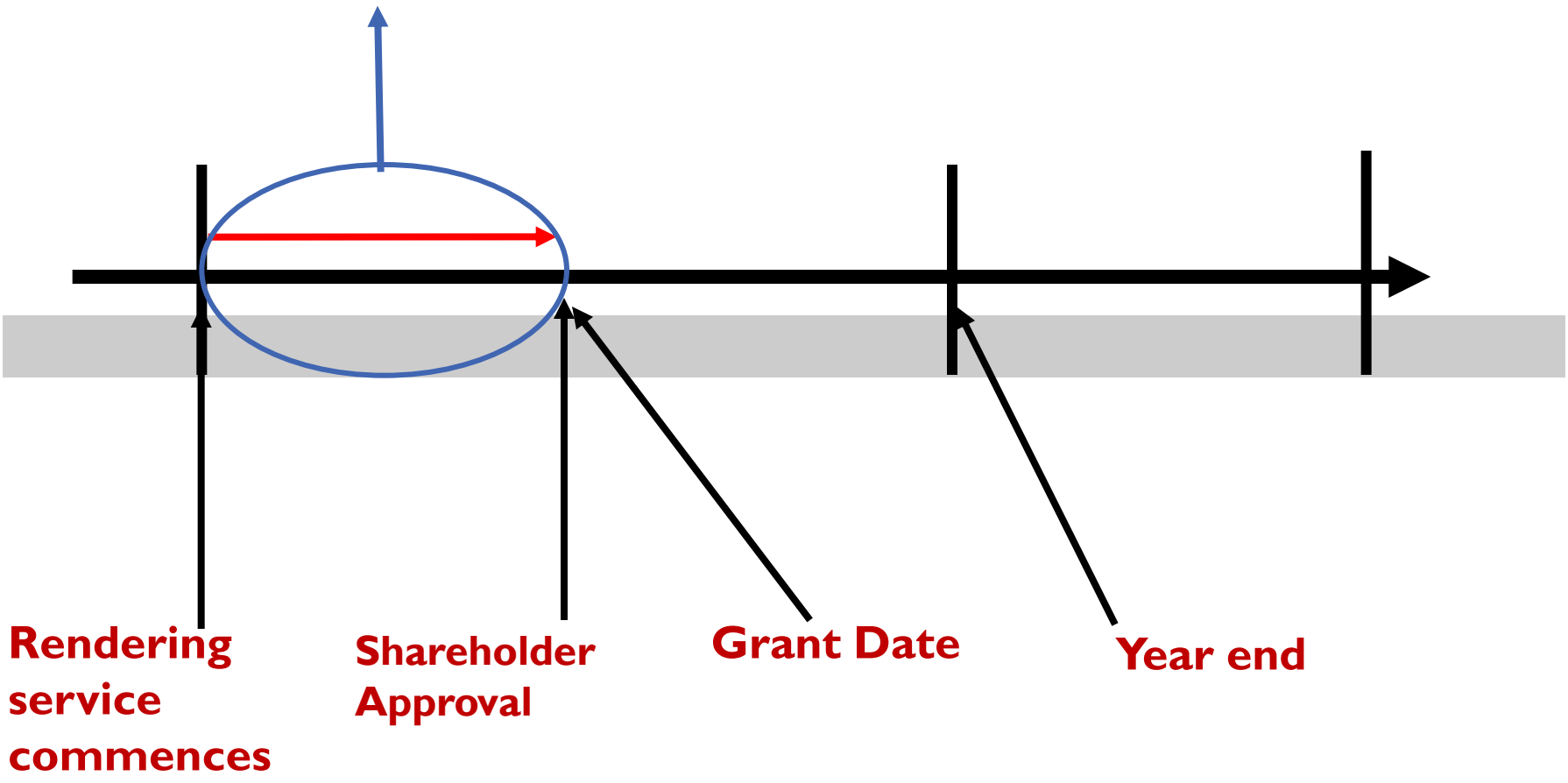
Grant date Illustration

Period of service before grant date

Offer and acceptance between Entity and Counterparty is needed



Source: K G Pasupathi, 2014 (ICAI website)

Vesting Conditions

Conditions that determine whether the entity receives the services that entitle the counterparty to receive cash, other assets, or equity instruments of the entity under a share-based arrangement (Appendix A — amended)

Vesting conditions include:

- Service Conditions — Which require the other party to complete a specified period of service
- Performance Conditions — Which require specified performance target to be met

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Market Vesting Condition

Does the condition upon which the exercise price, vesting, or exercisability of an equity instrument depends or is related to the market price of the entity's equity instruments, such as

a) attaining a specified share price or
b) specified amount of intrinsic value of a share option, or
c) achieving a specified target that is based on the market price of the entity's equity instruments related to an index of market prices of equity instruments of other entities?

No → **Non-market Condition** → Shall be taken into account by adjusting the number of equity instruments included in measurement (paragraph 19)

Yes → **Market Condition** → Shall be taken into account when estimating the fair value of equity instruments granted (paragraph 21)

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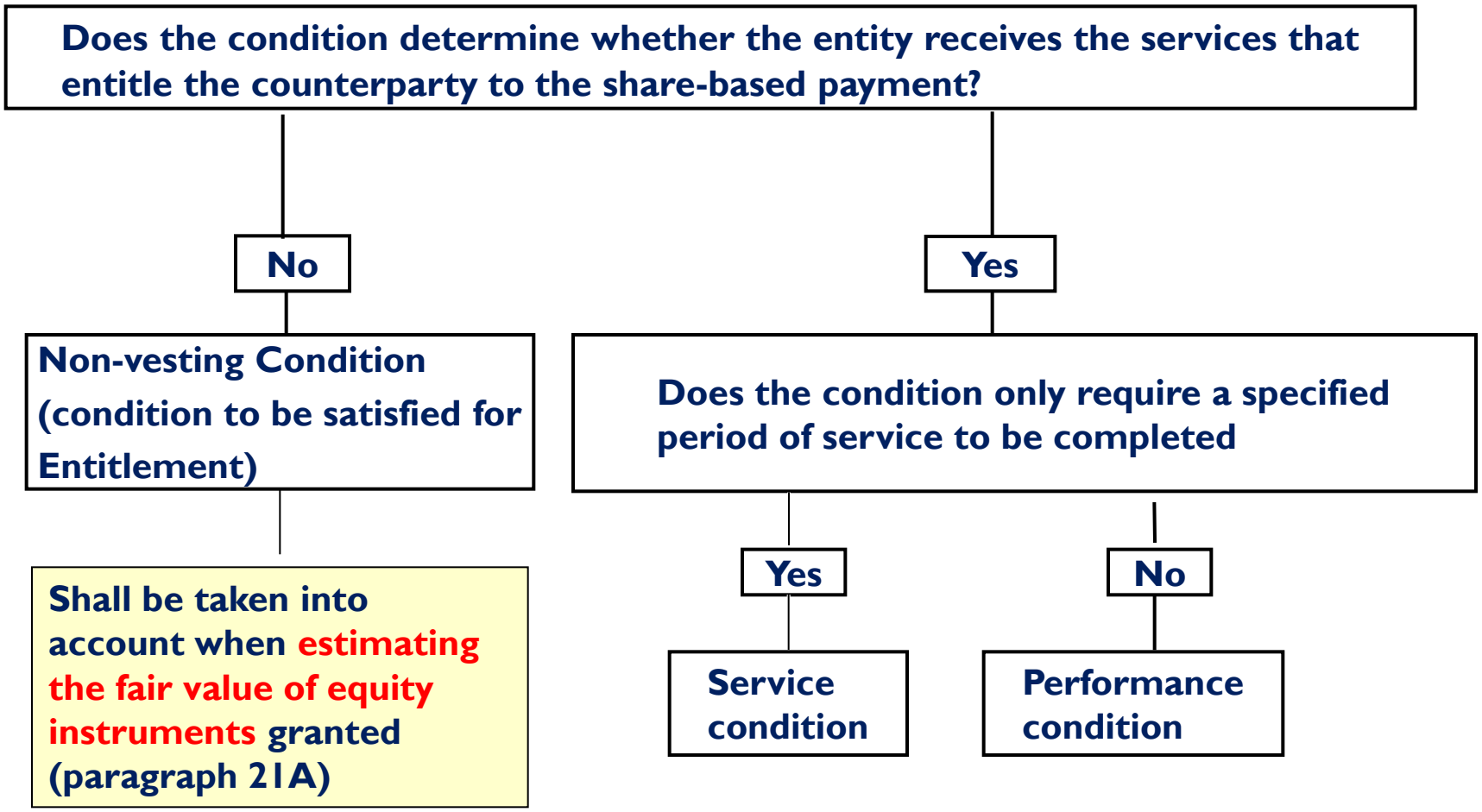
Non-market Vesting Condition



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Vesting Conditions — Other Than Market Conditions

- Vesting conditions other than market conditions are not considered in estimating the fair value (paragraph 19 of Ind AS 102).
- Taken into account by adjusting the number of equity instruments included in the calculation so compensation is recognized for only those that vest.

Non-vesting Conditions

- Taken into account when estimating the fair value of the instruments granted (paragraph 21A).
- Conditions which need to be satisfied for the counterparty to become entitled to the equity instrument.
- Conditions that do not have an implicit or explicit service requirement.
- If failure to meet a non-vesting condition is in either party's control if the condition is not met, it would be treated as a cancellation.

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Measurement of Equity-settled SBPT to Employees

In practice, it is not possible to measure fair value of services rendered by employees (and others providing similar services)

Paragraphs 11 & 12 of Ind AS 102:

1. Measure at fair value of equity instruments granted
2. Fair value measured at grant date
3. Credit recognized in equity

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Measurement of Equity settled SBPT to parties other than Employees

A rebuttable presumption exists that fair value of goods or services received from parties other than employees can be reliably estimated.

Paragraph 13 of Ind AS 102:

1. Measure at fair value of the goods or services received.
2. Fair value measured at date of receipt of goods or services.
3. Only if fair value of goods or services cannot be measured reliably would fair value of equity instruments granted be used for measurement (rarely done, i.e. when the entity rebuts the presumption).

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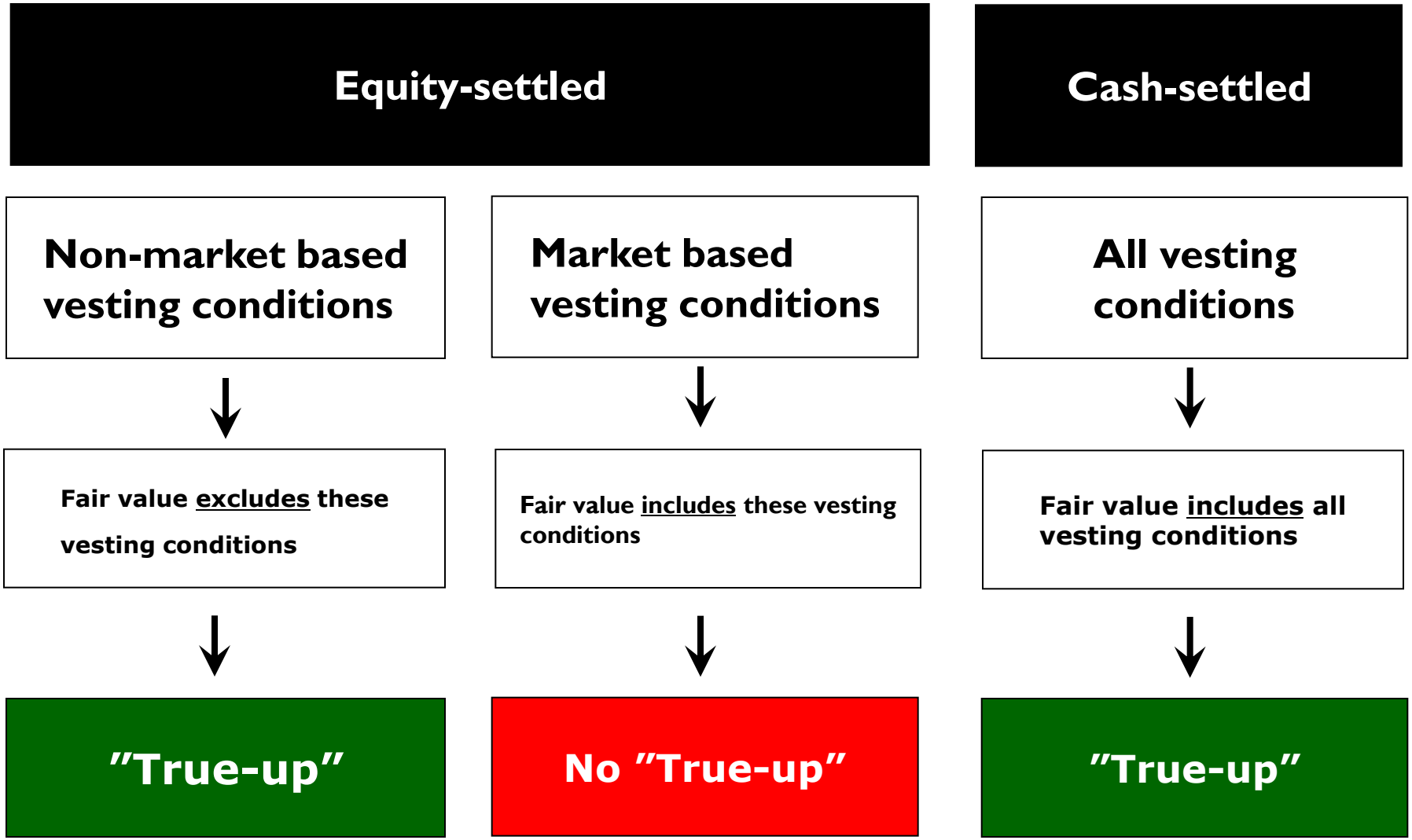
Treatment of vesting conditions



Source: K G Pasupathi, 2014 (ICAI website)

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Recognition Principles: Equity-settled and Cash-settled SBPT

Equity Settled SBPT

- Recognize the goods or services when received under SBPT (i.e. periodic cost from grant date to vesting date)
- When goods or services do not qualify for recognition as assets, recognize as expenses
- **No re-measurement, unless modification before vesting date increases fair value**
- Adjustment for other vesting conditions (e.g. service and performance conditions) to be done at each reporting period

Cash Settled SBPT

- Recognize the goods or services when received under SBPT (i.e. periodic cost from grant date to vesting date)
- When goods or services do not qualify for recognition as assets, recognize as expenses
- **Re-measurement of fair value at each reporting date**
- Adjustment for other vesting conditions (e.g. service and performance conditions) to be done at each reporting period

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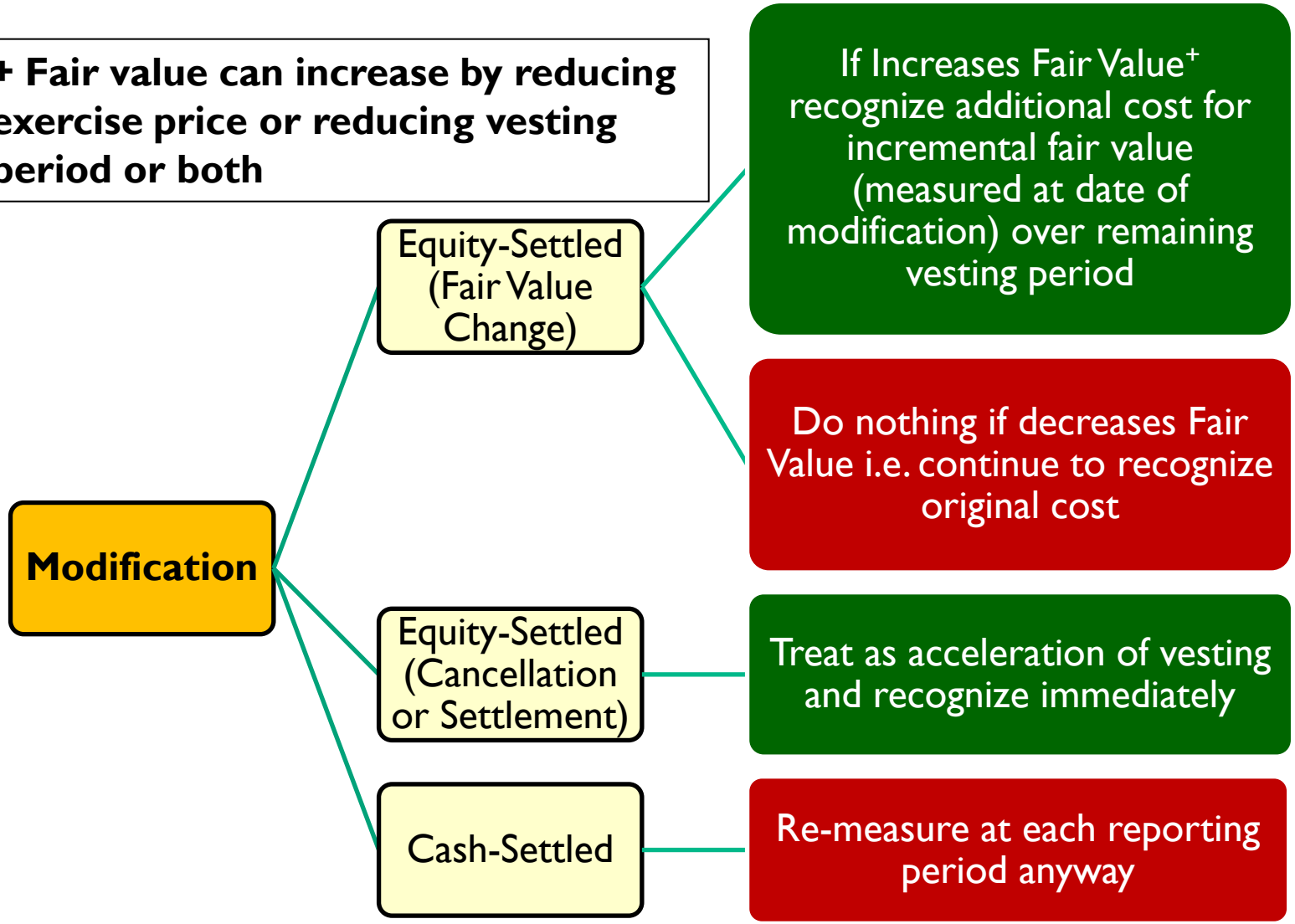
Modification to grant terms and conditions

+ Fair value can increase by reducing exercise price or reducing vesting period or both



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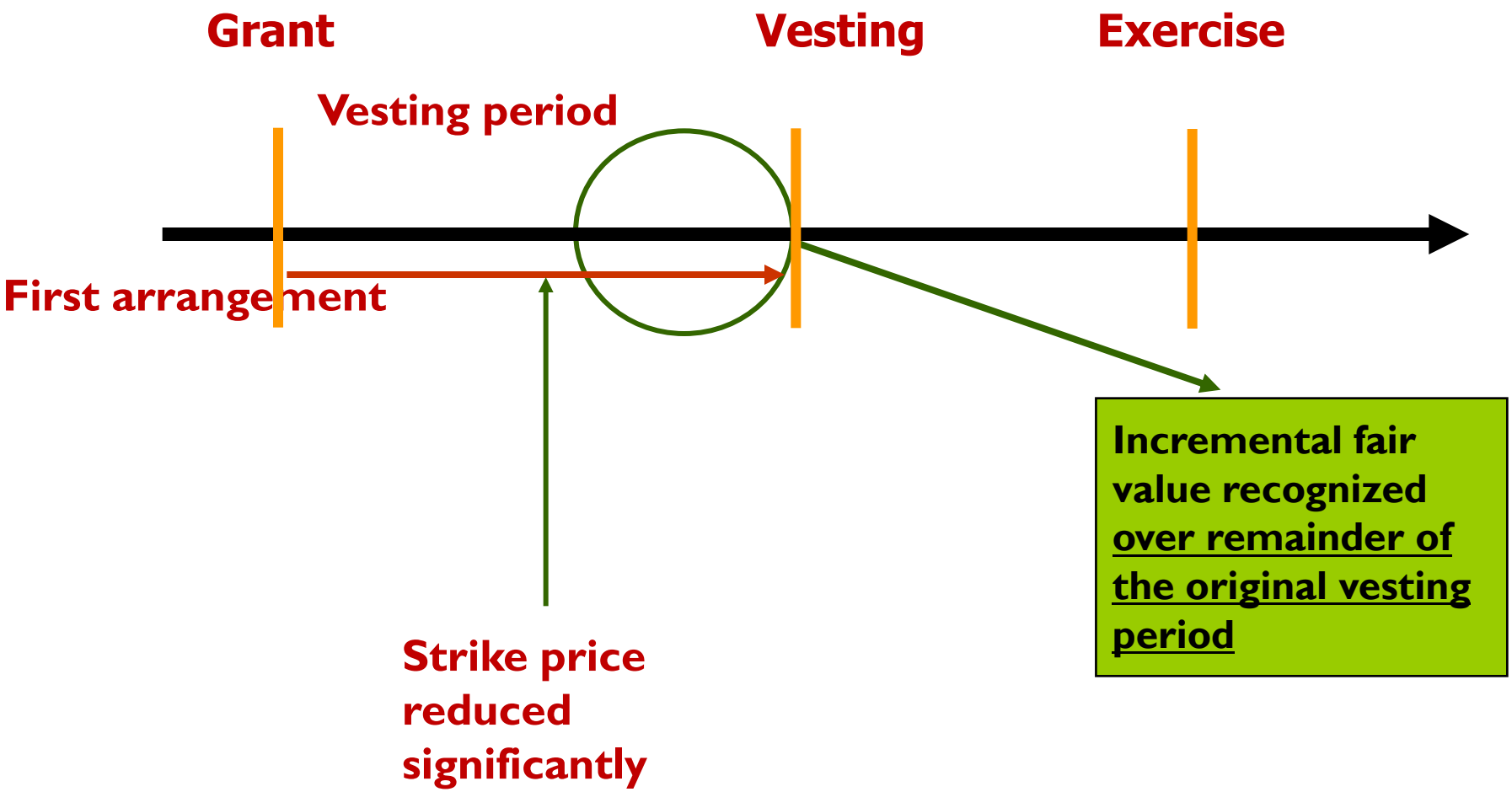
Modifications – Repricing/replacement



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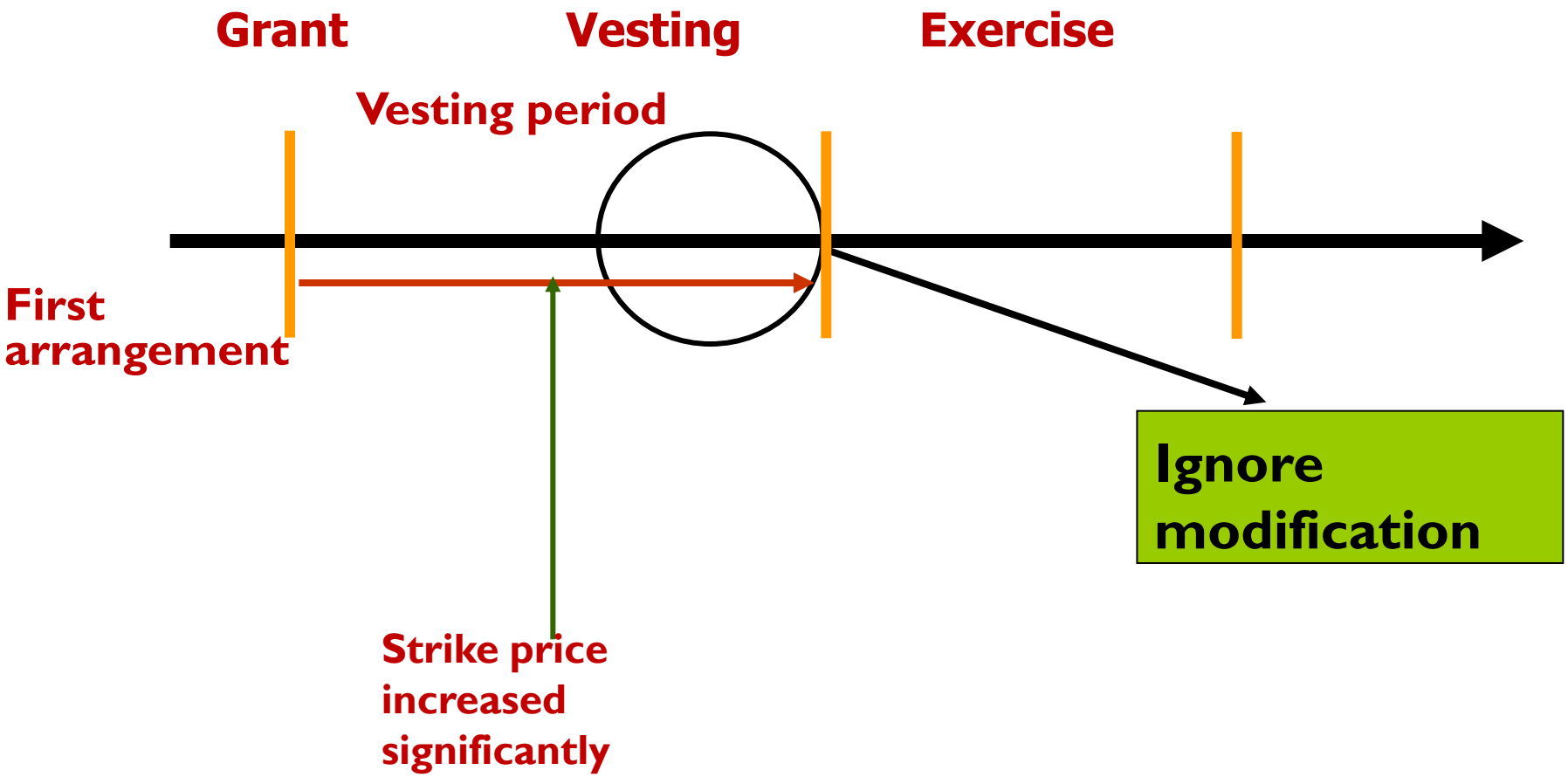

Source: K G Pasupathi, 2014 (ICAI website)

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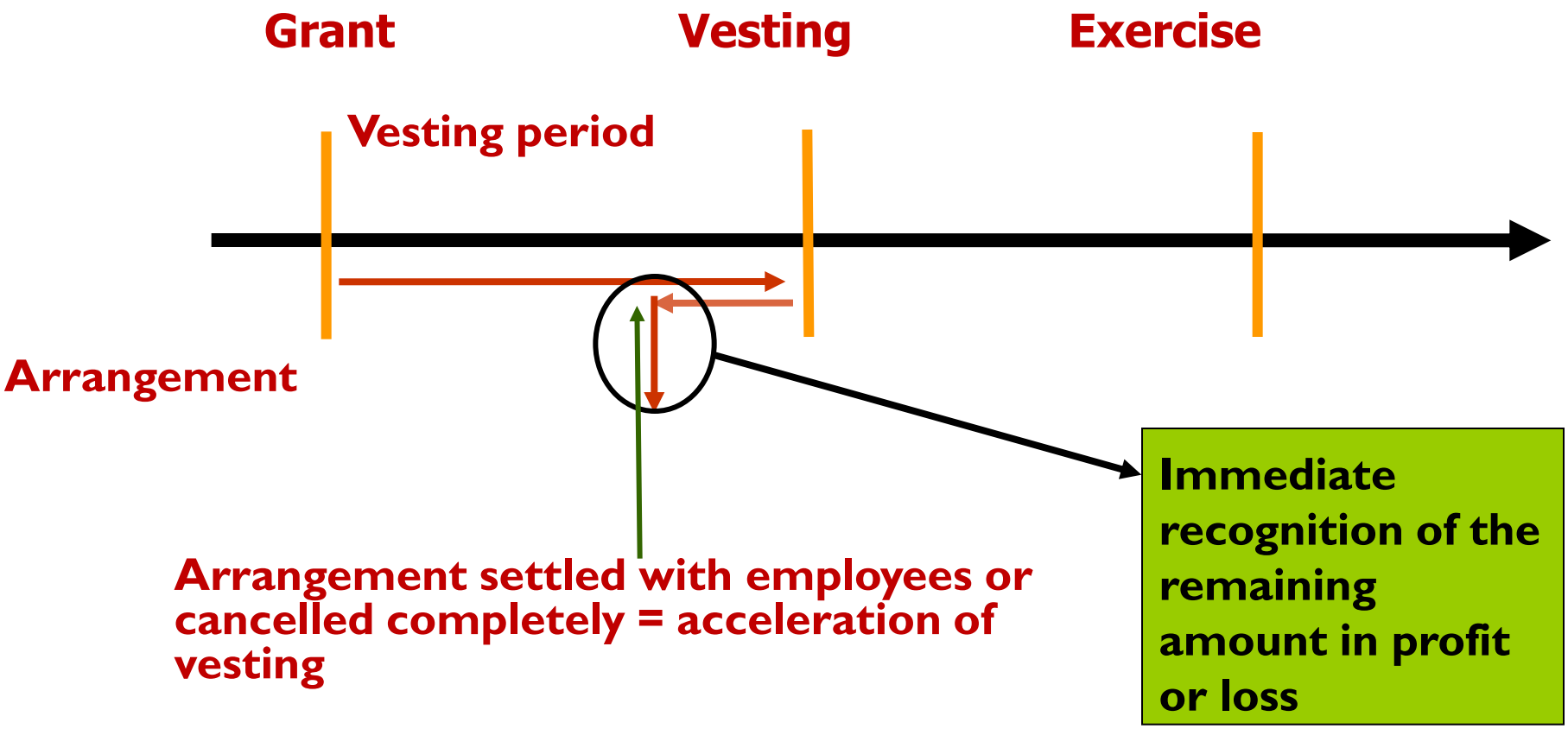
Modifications – Settlement/cancellation



Source: K G Pasupathi, 2014 (ICAI website)

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Forfeiture and Lapses of Equity-Settled Instruments

Before Vesting Date

- Reverse amount earlier recognized (paragraph 23)

After Vesting Date

- Cannot subsequently reverse amount earlier recognized (paragraph 23)

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Scheme of entries for recognition

Equity Settled

On grant and onward

Dr. Expense

Cr. ESOP o/s

(account fair value at grant date over period of vesting, reference paragraph 10)

Similar entry over future years

On vesting

Dr. ESOP o/s

Dr. Bank (cash recd)

Cr. Share Capital (face value)

Cr. Share Premium (Bal. Fig.)

Cash Settled

On grant and onward

Dr. Expense

Cr. Liability

(account fair value at measurement date over period of vesting)

Similar entry for MTM adjustment of fair value at future measurement dates (reference paragraphs 30-33)

On vesting

Dr. Liability

Cr. Bank

For actual payout

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SBPT with cash alternative to Counterparty

A compound financial instrument comprising a debt and an equity component is granted.

If counterparty is a supplier

- Calculate the fair value of debt
- Fair value of equity = Fair value of goods/ service received – Fair value of debt

If counterparty is an employee

- Calculate the fair value of debt as fair value of cash settled SAR
- Usually fair value of the equity component is Zero

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SBPT with cash alternative to Entity

Entity has to determine if the present obligation is to settle in cash or equity

Cash

- If settlement choice in equity has no commercial substance (unlisted)
- If entity usually settles in cash when counterparty insists
- Account as per cash-settled SBPT

Equity

- For listed company, the settlement choice in equity has commercial substance
- Account as per equity-settled SBPT
- If final settlement is in cash (i.e. not equity) cash payment will be accounted as repurchase of equity interest

On final settlement, the entity needs to account for the cost of settlement alternative, if higher in value than earlier accounted.

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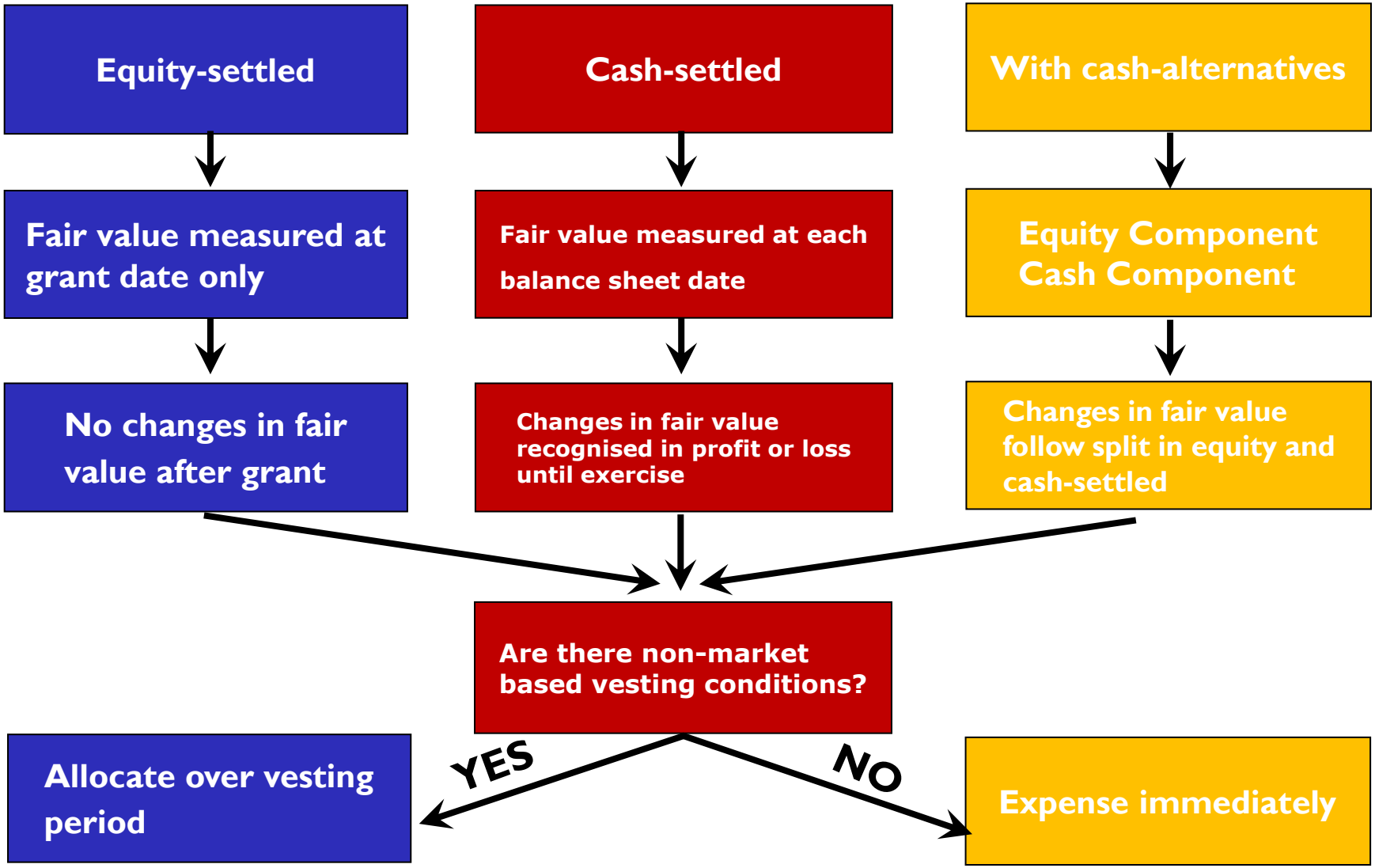
Recognition Snapshot



Source: K G Pasupathi, 2014 (ICAI website)

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Equity-settled SBPT of group entities

In the books of entity receiving goods or services

Treat as Equity-Settled if a) awards are own equity instruments or b) entity has no obligation to settle the SBPT

In the books of entity settling SBPT when another entity receives goods or services

Treat as Equity-settled only if settled in entity's own equity instruments

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Scheme of accounting entries
Equity-settled for group entities

In the books of entity receiving goods or services

Dr. Employee Expense

Cr. Parent Co.

(ongoing over period to vesting)

In the books of entity settling SBPT when another entity receives goods or services

Dr. Group Company

Cr. ESOP o/s

(ongoing over period to vesting)

<u>On close out</u>

Dr. ESOP o/s

Dr. Bank

Cr. S/Capital

Cr. S/ Premium (Bal Fig.)

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Scheme of accounting entries Cash-settled for group entities

In the books of entity receiving goods or services

Dr. Employee Expense

Cr. Liability

(ongoing with MTM over period to vesting)

On close out

Dr. Liability

Cr. Parent Company

In the books of entity settling SBPT when another entity receives goods or services

No entry over period to vesting

On close out

Dr. Group Company

Cr. S/Capital

Cr. S/ Premium (Bal Fig.)

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Deferred Taxation on SBPT expenses

- The amount of tax deduction might differ from the amount of the expense recognized in the financial statements.
- Evaluate the timing difference between charge of expenses and timing of deduction
- Deferred tax asset is re-measured at each reporting date.

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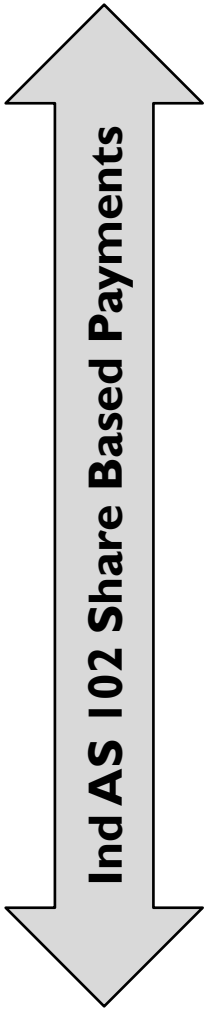

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Comprehension Challenges

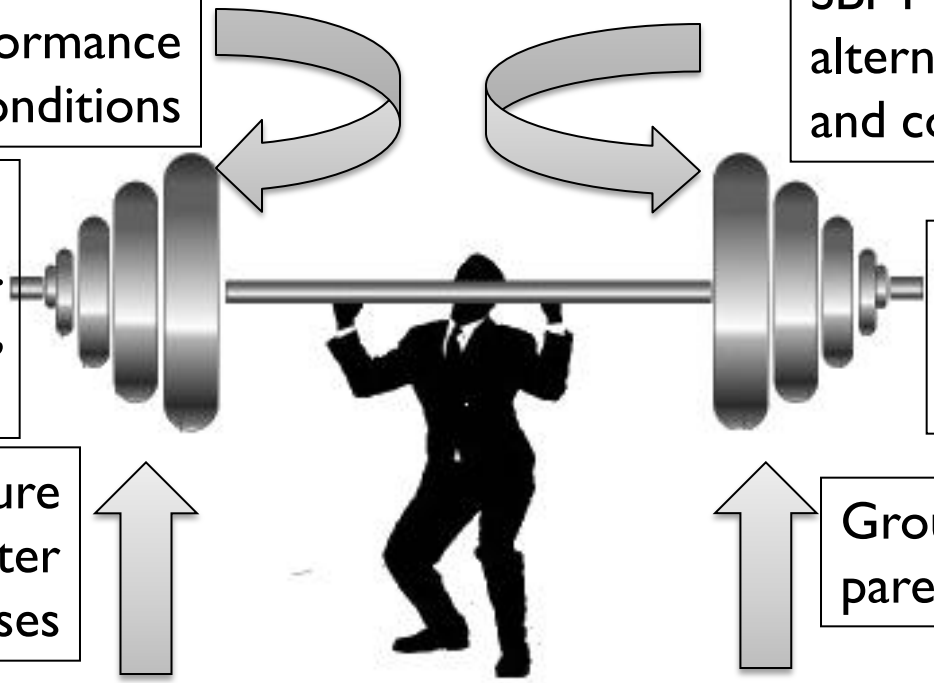
The unwieldy forces of weight

Range of Instruments: SAR, Cash based on Share Price, Restricted Shares, Normal Shares, Equity-and Cash-settled Options, Restricted Options, Reload Options

Parameters of service and performance conditions

SBPT with cash alternatives to entity and counterparty

Right fair value model esp. restriction, differential rights



Modifications, incl. cancellation and settlement

Forfeiture (before and after vesting) and lapses

Group entity issuing parent's shares

Understanding the AS with its appendices and implementation guidance

Ankolekar & Co.
Actuaries and Consultants

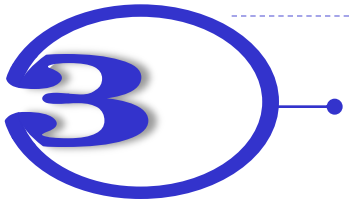
Approach Checklist

Nature of Share-based Payment

- Who's issuing (subsidiary, group company, parent)
- Whose shares
- Equity or cash-settled Options, SAR, Shares, With Cash Alternatives
- Grant date, Time to Vesting

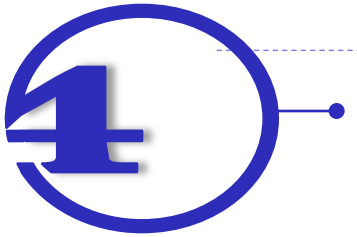
Fair Value of Instruments

- Model Parameters, particularly 'best estimate' expectations
- Using the right model
- Restriction complexities
- Compound Instruments



Non-market Vesting Parameters and Non-Vesting Parameters

- Withdrawal rate parameter
- Performance parameters
- Appropriate calculation to amortize on graded vesting basis
- Entity or counterparty exercising the non-vesting parameters



During the year: Modification, Cancellation, Settlement

- Increase or decrease in fair value on modification, account for increase
- Cancellation due to forfeiture before vesting to account
- Settlement to account as acceleration of costs

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Actuaries and Consultants

Today's Discussion

- Applicability and Structure
- Overview and Scope
- Appreciating Fair Value Models
- Measurement
- Recognition
- Challenges
- Question & Answers

Ind AS 102 Share Based Payments

Applying Ind AS 102: Q1

Estimating fair value

1. Current Market price: Rs 110
2. Exercise price: Rs 100
3. Risk-free rate: 8% pa
4. Volatility: 30% pa
5. Time to vesting: 3 yr
6. Dividend yield: 1% pa

Fair Value

Choose the likely answer

A. Rs 16

B. Rs 26

C. Rs 36

D. Rs 10

Applying Ind AS 102: Q1

Estimating fair value

1. Current Market price: Rs 110
2. Exercise price: Rs 100
3. Risk-free rate: 8% pa
4. Volatility: 30% pa
5. Time to vesting: 3 yr
6. Dividend yield: 1% pa

Fair Value

Choose the likely answer

A. Rs 16

B. Rs 26

C. Rs 36

D. Rs 10

Applying Ind AS 102: Q2

Estimating fair value of a SAR

1. Current Market price: Rs 110
2. Risk-free rate: 8% pa
3. Volatility: 30% pa
4. Time to vesting: 3 yr
5. Dividend yield: 1% pa

The Share Appreciation Right pays the difference between Rs 100 and the market price prevailing at the end of the vesting period.

Fair Value of one SAR

Choose the likely answer

A. Rs 16

B. Rs 26

C. Rs 36

D. Rs 10

Applying Ind AS 102: Q2

Estimating fair value of a SAR

1. Current Market price: Rs 110
2. Risk-free rate: 8% pa
3. Volatility: 30% pa
4. Time to vesting: 3 yr
5. Dividend yield: 1% pa

The Share Appreciation Right pays the difference between Rs 100 and the market price prevailing at the end of the vesting period.

Fair Value of one SAR

Choose the likely answer

A. Rs 16

B. Rs 26

C. Rs 36

D. Rs 10

Applying Ind AS 102: Q3

Estimating cost of Yr 1 of Equity-settled Option

1. Current Market price: Rs 110
2. Exercise price: Rs 100
3. Risk-free rate: 8% pa
4. Volatility: 30% pa
5. Time to vesting: 3 yr
6. Dividend yield: 1% pa

The option can be exercised only if the employee achieves a pre-agreed performance target

1. Withdrawal: 5% pa
2. Performance target probability: 90%

Cost of Yr 1

Choose the likely answer

A. Rs 36 x $(0.95)^3$ x 0.1 ÷3

B. Rs 36 x $(0.05)^3$ x 0.1 ÷3

C. Rs 36 x $(0.95)^3$ x 0.9 ÷3

D. Rs 36 x $(0.05)^3$ x 0.9 ÷3

Applying Ind AS 102: Q3

Estimating cost of Yr 1 of Equity-settled Option

1. Current Market price: Rs 110
2. Exercise price: Rs 100
3. Risk-free rate: 8% pa
4. Volatility: 30% pa
5. Time to vesting: 3 yr
6. Dividend yield: 1% pa

The option can be exercised only if the employee achieves a pre-agreed performance target

1. Withdrawal: 5% pa
2. Performance target probability: 90%

Cost of Yr 1

Choose the likely answer

A. Rs 36 x $(0.95)^3$ x 0.1 ÷3

B. Rs 36 x $(0.05)^3$ x 0.1 ÷3

C. Rs 36 x $(0.95)^3$ x 0.9 ÷3

D. Rs 36 x $(0.05)^3$ x 0.9 ÷3

Applying Ind AS 102: Q4

Accounting for expenses

Consider the cost for the first year at Rs 36 x $(0.95)^3$ x 0.9 ÷3 i.e. Rs 9.

The employee worked on a capital project throughout the first year.

Account for the Yr 1 expenses.

Expenses/ P&L Charge Yr 1

Choose the likely answer

A. Rs 9
B. Rs Nil
C. Rs 27
D. Can't say, information is inadequate

Applying Ind AS 102: Q4

Accounting for expenses

Consider the cost for the first year at Rs 36 x $(0.95)^3$ x 0.9 ÷3 i.e. Rs 9

The employee worked on a capital project throughout the first year.

Account for the Yr 1 expenses.

Expenses/ P&L Charge Yr 1

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 27

D. Can't say, information is inadequate

Applying Ind AS 102: Q5

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 56 due to a modification i.e. reduced exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 56 x $(0.95)^2$ x 0.9 = Rs 43. As Rs 9 is already accounted in Yr 1, Rs 16 i.e. (Rs 43 – Rs 9)/2 will have to be accounted in Yr 2.

The employee worked on a capital project throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Equity-settled option

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 16

D. Rs 32

Applying Ind AS 102: Q5

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 56 due to a modification i.e. reduced exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 56 x $(0.95)^2$ x 0.9 = Rs 43. As Rs 9 is already accounted in Yr 1, Rs 16 i.e. (Rs 43 – Rs 9)/2 will have to be accounted in Yr 2.

The employee worked on a capital project throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Equity-settled option

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 16

D. Rs 32

Applying Ind AS 102: Q6

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 56 due to a modification i.e. reduced exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 56 x $(0.95)^2$ x 0.9 = Rs 43. As Rs 9 is already accounted in Yr 1, Rs 16 i.e. (Rs 43 – Rs 9)/2 will have to be accounted in Yr 2.

The employee worked on a capital project throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Cash-settled option or SAR

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 16

D. Rs 32

Applying Ind AS 102: Q6

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 56 due to a modification i.e. reduced exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 56 x $(0.95)^2$ x 0.9 = Rs 43. As Rs 9 is already accounted in Yr 1, Rs 16 i.e. (Rs 43 – Rs 9)/2 will have to be accounted in Yr 2.

The employee worked on a capital project throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Cash-settled option or SAR

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 16

D. Rs 32

Applying Ind AS 102: Q7

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. increased exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. As Rs 9 is already accounted in Yr 1, Rs 2 i.e. (Rs 13 – Rs 9)/2 is the likely charge in Yr 2.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Equity-settled option

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 2

D. Rs 13

Applying Ind AS 102: Q7

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. increased exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. As Rs 9 is already accounted in Yr 1, Rs 2 i.e. (Rs 13 – Rs 9)/2 is the likely charge in Yr 2.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Equity-settled option

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 2

D. Rs 13

Applying Ind AS 102: Q8

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. increased exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. As Rs 9 is already accounted in Yr 1, Rs 2 i.e. (Rs 13 – Rs 9)/2 is the likely charge in Yr 2.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Cash-settled option or SAR

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 2

D. Rs 13

Applying Ind AS 102: Q8

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. increased exercise price. Exactly 5% employees left in Yr 2.

Consider the new fair value cost for the first year at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. As Rs 9 is already accounted in Yr 1, Rs 2 i.e. (Rs 13 – Rs 9)/2 is the likely charge in Yr 2.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Cash-settled option or SAR

Choose the likely answer

A. Rs 9

B. Rs Nil

C. Rs 2

D. Rs 13

Applying Ind AS 102: Q9

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. vesting period reduced from 3 yr to 2 yr. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. Rs 9 is already accounted in Yr 1. Original fair value estimate was Rs 27.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Equity-settled option

Choose the likely answer

A. Rs 9

B. Rs 18

C. Rs 4

D. Rs Nil

Applying Ind AS 102: Q9

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. vesting period reduced from 3 yr to 2 yr. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. Rs 9 is already accounted in Yr 1. Original fair value estimate was Rs 27.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Equity-settled option

Choose the likely answer

A. Rs 9

B. Rs 18

C. Rs 4

D. Rs Nil

Considered as a settlement i.e. acceleration

Applying Ind AS 102: Q10

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. vesting period reduced from 3 yr to 2 yr. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. Rs 9 is already accounted in Yr 1. Original fair value estimate was Rs 27.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Cash-settled option or SAR

Choose the likely answer

A. Rs 9

B. Rs 18

C. Rs 4

D. Rs Nil

Applying Ind AS 102: Q10

Accounting for expenses

The fair value in Yr 2 changed from Rs 36 to Rs 16 due to a modification i.e. vesting period reduced from 3 yr to 2 yr. Exactly 5% employees left in Yr 2.

Consider the new fair value estimate at Rs 16 x $(0.95)^2$ x 0.9 = Rs 13. Rs 9 is already accounted in Yr 1. Original fair value estimate was Rs 27.

The employee worked in normal operations throughout Yr 2. Account for the Yr 2 expenses.

Expenses/ P&L Charge Yr 2

Cash-settled option or SAR

Choose the likely answer

A. Rs 9

B. Rs 18

C. Rs 4

D. Rs Nil

Being cash-settled, accounted on marked to market basis over remaining vesting period

Q & A

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