Valuation of ESOPs

Determining Expected Term of Option

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Introduction

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- **Employee Stock Option Plans (ESOPs)** are required to be accounted under **IND AS 102 or Guidance Note on Share based Payments (2020),** as may be applicable to the Company.

- IND AS 102 requires determining **fair value of options** for ESOPs, which in turn requires using **option pricing models** such as Black Scholes Option Pricing Model to determine this fair value.

- Whilst Guidance Note gives Companies option to choose between intrinsic value approach or fair value approach, **disclosures are still required on fair value basis**.

- **Expected term of option** is one of the **key assumptions** required to estimate the fair value of options. It reflects the period of **time from grant date** to the date on which the **option is expected to be exercised**. It's a **relatively material assumption** in option pricing along with expected volatility.

- In this article, we discuss:

    - Why expected term of option is **important**?
    - **Guidance** available under **IND AS 102** in setting this assumption
    - **Practical framework** for setting expected term of option

- We believe this article would be useful for **all finance professionals as well as auditors** dealing with ESOP accounting as part of their work.

Why Expected Term of Option is important?

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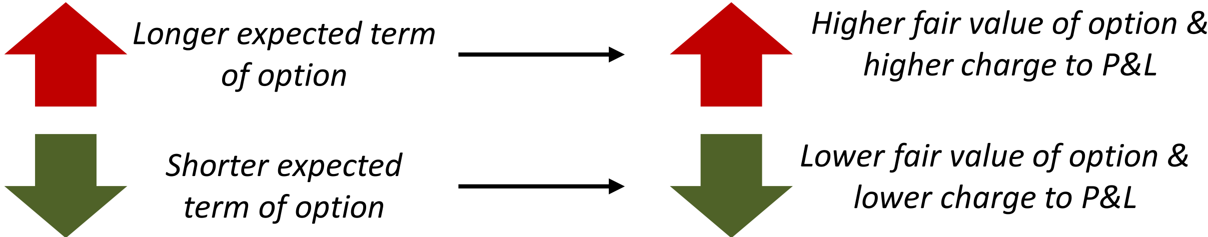
- IND AS 102 requires Fair Value accounting for ESOPs granted by Company. Under this, Companies need to recognize **total charge** equivalent to **(Option Price at date of grant * Number of options granted) in Income statement** over vesting period.

- **Expected term of the option**, in conjunction with expected volatility, influences the time value of option i.e. **longer the expected term** for given volatility, **higher** is the chance of **option being more in the money** in future, hence higher is Option Price.



Scenario	Share Price (in INR)	Exercise Price (in INR)	Expected Term (in years)	Option Price per ESOP (Black Scholes)	Increase in cost compared to base scenario
Base	100	100	4	46.0	
1	100	100	5	51.2	11%
2	100	100	6	55.8	21%
3	100	100	7	59.8	30%
4	100	100	8	63.4	38%

As the assumed expected term of option increases for a given level of volatility, the ***fair value of ESOP and consequently the charge to income statement starts going up****!*

Note: Option price has been determined using Black Scholes Option Pricing model, assuming interest rate of 6%, volatility of 40% and 0% dividend.

IND AS 102: Guidance on Expected Term of Option

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IND AS 102 requires considering following factors in setting assumption for expected term of option:

Vesting Period

- Sets the **minimum period possible** for expected term of option.
- Typically, **option term is longer** to allow for exercise window available.

Share price levels & volatility

- Generally, **shares with high volatility** may see **exercise happening earlier** compared to low volatility shares.
- Similarly, studying **historical relationship** between **share price, exercise price and consequent exercising patterns** may also help inform expected life of option.

Past Experience & trends

- Actual exercise pattern seen for past grants may be useful indicator.
- **Different trends** can be analyzed such as difference in exercising pattern of **junior vs. senior employees**, **dividend vs. non-dividend paying companies** etc.

Practical Framework

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Listed Company

- Listed companies typically **offer fixed exercise window** such as 5 years from date of vesting.
- Expected term of option is typically set:
  - **Separately for each vesting tranche**, resulting in **separate option prices** for each tranche or an **overall weighted average** option price for full grant;
  - As **average of vesting period + exercise window** available post vesting.
- In case of **market linked vesting** such as on achievement of targeted share price, expected term of option needs to be determined stochastically using **simulation method**.

Unlisted Company

- Unlike Listed Companies, **exercise window is not fixed** but typically **linked to happening of Liquidity events or corporate transactions** for the Company.
- Expected term of option is **primarily based on management input** on expected time of such events vis-à-vis considering any **scheme level constraints** such as an overall expiry period.
- Given the above, its common to have a **single expected term assumption for all tranches**, resulting in a **single overall option price** for each grant.

Conclusion

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- It is important to carefully choose the **assumptions** used in **determining the fair value** of share-based employee benefits (ESOPs, SARs etc.) as the same materially impacts the charge to Income statement on account of these instruments.
- We often see companies take arbitrary approaches in determining the assumptions, ignoring the accounting standard requirements as well as the available data / benchmarks within and outside the Company. Due considerations of these factors can help the companies in **assessing the correct charge to Income Statement** for such instruments.
- Companies may also benefit from assessing the **likely Income statement charge for future grants** as part of their **budgeting exercise** to ensure they are well aware of the level of charge in future years.
- This can ensure that the Companies are not in for a surprise when producing accounting results for the grants made during the year.

About KPAC

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Research driven

- KPAC is a research driven actuarial consulting firm **providing actuarial and consulting services** since 2013.
- Empowered by **creative thinking and research-oriented approach**, we offer solutions that go beyond ‘just-compliance’.

Going Beyond Compliance

- KPAC delivers customised solutions with use of data analytics and continuous research, which helps clients in **optimum recognition of liability and better management of expenses**.
- KPAC also helps clients in reducing volatility of expenses through ALM, better planning and budgeting, etc.

Strong Clientele

- Driven by passion to exceed expectation every single time, KPAC is providing valuation and consulting services to **more than 500 clients** (including large corporate houses and MNCs)
- KPAC’s **engagements spread across all parts of India** and in various other countries like USA, Australia, UK, Middle East, SAARC countries.

Strong Team

- KPAC has a **strong team of consultants** and domain experts, who focus on delivering excellence each time.
- Each consultant has experience of handling assignments of large corporate houses and complicated employee benefits.

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Your employees are worth more than a 'cut-copy-paste' scheme taken off the net. Invest in creating the right scheme which will truly align interests and motivate your employees.

Please hire experts who understand all that goes into creating a stock ownership plan and save yourself the hassle, time, and unwarranted risk of trying to figure this out yourself.

Reach out in case you require any further information:

Khushwant Pahwa FIAI, FIA
Founder and Consulting Actuary
Phone: +91 - 99102 67727
k.pahwa@kpac.co.in

Dribjot Singh
Associate Vice President - Actuarial
Phone: +91 – 9990414389
d.singh@kpac.co.in

Surbhi Jindal
Associate Vice President - Actuarial
Phone: +91 – 9582054132
s.jindal@kpac.co.in

Tanu Saharan
Head – Business Development
Phone: +91 – 98737 60219
t.saharan@kpac.co.in

Aarzoo Dawar
Manager – Actuarial
Phone: +91 – 88601 95272
a.dawar@kpac.co.in