

Institute of Actuaries of India
Guidance Note 30 (GN30): Share-based Payments

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1 Classification

Guidance Note – Recommended Practice.

2 Legislation or Authority

This Guidance Note is for observance by the Members under Section 19(2)(i) of the Actuaries Act, 2006. There is no direct legislation, as such, that has an impact on this Guidance Note. However, the following are examples of legislation that may apply from time to time whilst performing particular work, as it applies to the relevant piece of advice/assignment. These legislations (as amended from time to time) and any rules / regulations issued thereunder should be taken into consideration. This list is an indicative list and is not meant to be exhaustive. There may also be other legislations from time to time that will be applicable.

- The most recent Professional Conduct Standards (PCS version 4.00)
- Indian Accounting Standard (Ind AS) 102 on Share Based Payments
- Guidance Note on Share Based Payments issued by the Institute of Chartered Accountants of India
- Accounting Standard 18 Related Party Disclosures
- Regulations and guidelines issued by Securities and Exchange Board of India (SEBI) with regards to ESOPs and other share-based transactions
- The Companies Act 2013, including any rules and regulations made thereunder
- Income Tax Act 1961
- Foreign Exchange Management Act, 1999
- In case of work done for entities outside India, local laws / rules / regulations applicable in the country in which the entity is based.
- Amendments / modifications made to any of the applicable legislations from time to time.

3 Author

Advisory Group on Pension, Employee Benefits & Social Security

4 Compliance and Application

This Guidance Note lays down the principles which the Members are recommended to apply in performing valuation of share-based payment plans, whether the work is being performed in any statutory / regulatory capacity or as a consultant / advisor. In case of any certification or signing of any documents / reports, the Fellow Member certifying should ensure compliance with the requirements of this Guidance Note.

It should be noted that this Guidance Note primarily addresses the work undertaken by Members in valuation of:

- Employee Stock Option Plans (ESOPs)
- Share Appreciation Rights (SAR) Plan (both cash-settled and equity settled)
- Restricted Stock Units (RSUs)

though the principles may equally apply to all other type of share-based payment plans. The work that is largely expected to be covered under this Guidance Note includes:

- Calculation of intrinsic or fair value of option for reporting under any financial reporting standard. Please note that the estimation of the fair value of the underlying shares or the overall valuation of the Company is not within the scope of this Guidance Note;
- Assistance in calculation of charge / provision for accounting of such Plans in the books of the Company;
- Assisting in setting / recommending assumptions to be considered for calculation of fair value of options;

- Any other work related to valuation of share-based payment plans which will directly impact the reported financials of the Company.

The above list is indicative and there may be other situations where the principles may equally apply. The Member should use his / her judgement in assessing the relevance of this Guidance Note in such cases.

5 Status

Guidance Note issued in accordance with the “Principles and Procedures for issuance of Guidance Notes (GNs)”

6 Version

Version	Effective From
1	12 th July 2025

7 Purpose

The purpose of this Guidance Note is to set the key principles that the Members should follow in carrying out valuation of share-based payment plans including assisting in accounting for these plans. By doing so, the Guidance Note aims to enable the users of valuation work to be able to place a high degree of reliance on the information’s relevance, transparency of assumptions, completeness and comprehensibility, including the communication of any uncertainty inherent in the work. Please note that this **Guidance Note** does not offer specific guidance on the disclosures required for notes to accounts and the director’s report related to share-based payment instruments. However, general guidance on disclosures is provided.

The framework of this Guidance Note is not meant to be technically prescriptive or designed to interpret specific legislation or rules, especially where the actual work is governed by legislation or another authority.

8 Principles governing valuation of Share-based Payment Plans

This Part details the various principles that the Members should adhere to, in carrying out valuation of share-based payment plans, covering separately both responsibility of Member, role of judgement as well as technical considerations relating to data used, assumptions, reporting etc.

8.1 Judgement

Judgements concerning the application of this Guidance Note shall be exercised in a reasonable and justifiable manner. Judgement might be needed on matters such as:

- Whether the work impacts / will impact the financial statements of the Company, whether immediately or in future;
- Whether the work being undertaken may fall under any financial reporting standard / regulations;
- Whether the work involves assistance in setting assumptions, undertaking option pricing modelling, assessing accounting expense and preparing / certifying report.

This Guidance Note does not require documentation or disclosure of judgements concerning its application unless stated otherwise.

8.2 Responsibility of the Member

The Member should ensure that his / her role in a particular assignment is clear and understood by the user. The Member should state the capacity in which he / she is providing actuarial advice, the scope, its purpose, and for whom the actuarial work has been performed.

The Member should clearly state the extent to which any third party can rely on the actuarial work performed and its limitations for use by third parties. Such third parties may include a Company's statutory auditor or legal adviser.

It is recognized that a Member's advice may be sought by users to guide and recommend appropriate inputs, assumptions and outputs in course of any assignment. This should be taken into consideration while performing actuarial work. In other words, this Guidance Note applies to the principles of actuarial work and is not restricted to the calculation of fair value of option and associated accounting expense.

8.3 Data

In carrying out the valuation and measurement of share-based payment schemes, the Member should procure requisite information essential to carry out the assignment. This may include seeking at a minimum, the key information required for initial assessment of all types of schemes. The Member should use judgement in identifying additional information which may be required considering factors such as the nature of the scheme, scope of work of the Member, disclosure requirements under applicable reporting standards etc.

The Member should be able to specify in detail the information required to commence the assignment along with the purpose of such information. Provided below is the guidance pertaining to the data requirements that the Member may envisage while working on share-based payment schemes.

I. Assessing type of Scheme - Equity Settled or Cash Settled

This may require seeking information such as:

- Approved scheme document(s) / other document explaining benefit structure and / or sample grant letters for different category of employees covered;

- Understanding scheme structure in the form of exercise rules, settlement conditions etc.
- Understanding Management's expectation and past practice (where applicable) in settlement of such schemes to the extent relevant.
- Any other information as the Member deems necessary.

II. Data required for Option Price estimation and financial impact assessment

This may include seeking following information, which at a minimum shall be requested separately for all **distinct grant dates**. In cases where the Member is also assisting the organization with measurement of income statement / balance sheet impact of such share-based payment schemes, the below information may be required at **employee level**. This may be required to ensure appropriate treatment of scenarios such as employee-level resignation, cancellation, surrender, exercise of options etc.

- Unique grant dates, number of units of the applicable share-based payment scheme granted, exercise price or strike price, overall exercise period and expiry period, if any;
- Vesting schedule covering units vesting in each tranche, including understanding rounding rules followed by the Company, if any;
- Understanding linkage of vesting with performance metrics (if any), especially any market linkages such as linkage to share price targets, market cap targets, IRR targets etc.;
- Grant / employee level information on number of units lapsed on account of non-fulfillment of vesting conditions (e.g., due to resignation), date of lapsation, number of vested units lapsed (if any) due to employee resignation (or other reasons);
- Special attention should be given to cause of employee exit such as death or disability which under certain laws requires treating all options granted as fully vested immediately. Similarly for companies listed in India, the SEBI regulations requires continued vesting post-retirement of employee and Member may need to request such additional information on a case-by-case basis;
- Information on number of units exercised corresponding to different grant dates;
- Information on cancellation, surrender or modification of scheme including any bonus or split undertaken. Special attention should be paid to any cash compensation paid in lieu of surrender or cancellation of options as that may necessitate additional accounting considerations;
- Additional information (if any) that the Member deems necessary based on the nature of the scheme such as information on dividend units in case of Restricted Stock Units (RSUs) etc.

III. Data for assumption setting

This may include:

- Share price on date of grant or valuation date depending upon the type of scheme. Note that this Guidance Note does not require the Member to independently validate the share price provided by the Company. The Member may rely on same for his / her working and make appropriate disclosure to this effect in the report.

Where the share price is being assessed by the Member as part of the work, the Member may seek additional information as deemed necessary. This may include, but is not limited to, the financial statements of the Company, past share-price information where available, information on peer companies etc.

- In case of unlisted companies or recently listed companies, information on fair value of Company, listed peer companies in same or similar sectors to assess the volatility of the Company's share price.

- Information required to set assumptions such as data / management view relating to achievement of non-market performance targets (if any), forfeiture / attrition rate assumption etc.
- In case of market linked vesting, Member shall assess such additional information that may be required based on the nature of the condition.
- Past dividend paid information / management's estimate for future dividend yield where applicable.
- Depending upon type of scheme, management inputs may be required on expected term of options. For instance, where exercise is linked to happening of events for the Company i.e. the length of time the grant is expected to be outstanding before it is exercised or terminated.

IV. Additional information

Based on the scope of work and nature of scheme, Member should assess need for additional information, which may include but not limited to:

- Past share-based payment valuation report, where same has been undertaken by the Company;
- Under US GAAP, Member may be required to factor probability of happening of events leading to exercise, where the exercise is event based;
- Information required for disclosures based on the applicable reporting standards;

The Member may place reliance on information received from a third party as an input to perform actuarial work. The information relied upon, its source and the extent of the checks (if any) applied by the Member in order to check the accuracy and relevance of information should be disclosed in the report.

8.4 Methodology

In carrying out the valuation and measurement of share-based payment schemes, the Member should assess the methodology to be used to determine the Option price and where applicable, to assess the financial impact in the books of the Company.

The Member shall use his / her judgement in determining the appropriate methodology. The Member's choice and assessment may be contingent on several factors, including the purpose of valuation (i.e. determining option price vis-à-vis determining income statement / balance sheet impact in books of the Company, or forecasting future estimates for internal management reporting etc.), applicable reporting standard and the requirements therein, past valuation methodology adopted by the Company to the extent relevant, or any other factor as may be relevant. Below is the guidance on some of technical aspects which may influence the choice of the Member:

I. Choice of Valuation Models

Option pricing models used for determining fair value of Share Based Payment Plans can be broadly categorized into two groups:

- **Closed Form Models:**
 - **Black-Scholes Option Pricing Model:** This model provides a mathematical formula to determine the fair value of options based on factors such as the underlying asset price, exercise price, volatility, time to expiration, and risk-free interest rate.
- **Numerical Procedures:**

- **Binomial Trees / Binomial Model:** This model involves constructing a lattice to represent possible paths the stock price could take over the life of the option, offering a flexible method to handle various option features.
- **Monte Carlo Simulation Approach:** This approach uses repeated random sampling to simulate possible future paths of the stock price, accommodating complex and path-dependent options.

There may be other option pricing models that could be appropriate depending on the specific circumstances of the Share Based Payment Plan. The Guidance Note does not restrict the use of other models, and the Member should apply his / her professional judgement in selecting the most suitable model. In assessing the appropriate model, the Member should consider the following:

- **Nature of the scheme** and whether the chosen model will be able to reasonably capture the same. For instance:
 - Black Scholes Option Pricing Model is able to reasonably value most plain-vanilla Share Based Payment Plans, however it may not work in cases with complexity such as SAR-Equity settled schemes where the ultimate number of units settled is dynamic and depends upon the share price of Company at a future date;
 - Market-linked vesting criteria such as share price or market capitalization linkage may require use of Binomial or Simulation technique or other such models and closed form models such as Black Scholes Option Pricing Model should not be used in such cases;
 - Similarly, in situations that require calculation of option pricing for multiple periods with varying outcomes for each period, the Binomial model or Simulation technique may be preferred over the standard Black-Scholes model due to their ability to accommodate dynamic scenarios and provide more nuanced results.
- **Tranche-based Option Pricing vs. single option price** i.e. assessing whether the option price should be separately determined for each vesting tranche or one single option price should be determined encompassing the full vesting schedule. This choice may be influenced by factors such as:
 - Past practice of the Company or other companies in similar sector;
 - Materiality of using separate option prices versus single average or weighted average option price on the books of the Company vis-à-vis the administrative ease for the Company in handling / storing this data for future purposes;
 - Exercise / settlement rules of Company. For instance; where exercise is linked to corporate event and the same is not expected in foreseeable future, use of single option price for full vesting tranche to reflect the same may be reasonable. However, where the liquidity event is expected in a short time frame, such as during the vesting period, tranche wise option price determination may be required to reflect the expected trend.
- Where Simulation technique is being used, the Member shall also assess whether the valuation should be done using risk neutral scenarios or real-world scenarios in accordance with the requirements of the applicable standards.
- The Member should use his / her judgement in assessing the best way to determine and report the option price / intrinsic value for each unique grant date. When estimates or approximations are considered necessary, such as in case of large number of unique grants within a short period, the Member should assess how key option pricing variables—such as the underlying share price, expected volatility, risk-free interest rates, expected term of the option, and dividend yield—

may have changed between different grant dates. The impact of these changes on the fair value of the options should be evaluated to choose the most appropriate approach. Any estimation method used should be clearly disclosed in the valuation report, taking into account the materiality of the impact.

II. Accounting for share-based payment schemes

Where the Member is assisting in accounting for share-based payment schemes, whether on fair value basis or on intrinsic value basis (as permitted under Guidance Note on Share-based Payments issued by ICAI), following considerations shall be factored:

- Approach to recognize the accounting expense during the vesting period should be based on the requirements of the applicable reporting standard. For instance, in case of graded vesting, IFRS 2 / IND AS 102 / Guidance Note on Share-based Payments issued by ICAI, require treating each tranche as a separate group and recognizing proportionate expense for each group from date of grant to the vesting date. This may vary for other reporting standards and the Member should use the approach consistent with the applicable standard.
- Incorporating non-market vesting conditions (such as probability of meeting Company or individual performance targets) and assumed forfeiture rates (if any) in the overall accounting expense estimates based on assumption set.
- Requirement to re-measure option price / intrinsic value at each valuation date post vesting period in case of cash-settled schemes.
- Impact on income statement and balance sheet in case units granted are cancelled due to non-achievement of vesting conditions. Typically, this would trigger a reversal in the accounting expense already booked (if any) for these units.
- Impact on income statement and balance sheet in case units vested are cancelled due to expiry of exercise period. Typically, in case of equity settled schemes, accounting expense for vested units cannot be reversed and is transferred between equity components in the balance sheet whilst in case of cash-settled instruments, reversal of accounting expense may be permitted in certain cases.
- Treatment of exercise / settlement of units on both income statement and balance sheet.
- Treatment of modifications, surrender / cancellation of units (where applicable) including factoring any cash compensation paid in lieu of such events.
- Any other factor based on the nature of the scheme.

8.5 Assumptions

This section details the principles to be adopted where the Member is assisting any Company in setting assumptions for valuation and / or measurement of share-based payment plans. Note that this section does not apply in cases where the assumptions to be used in models have been specified in any regulations / other legal documents governing the work of the Member. Where this is the case, it should be stated explicitly in the report.

Similarly, where the assumptions are not being determined by the Member but have been received as an input from the Company (e.g., any assumptions used under the Black-Scholes modelling technique) and the Member has relied on the same / has not validated the appropriateness or adequacy of the assumptions, the same should be clearly spelt out in his/her report.

8.5.1 General considerations

The Member should ensure that the assumptions used in or proposed to be used in the models are appropriate for the purpose of the calculations for which they are used. The assumptions used in, or proposed for use in the models shall be derived from as much relevant information as is considered sufficient. What information is relevant is a matter of judgement and might depend on matters such as the purpose and the nature of the calculations for which the assumptions will be used, the extent to which data is readily available, cost of obtaining additional relevant information, the benefit that users receive from the use of additional relevant information and the degree of uncertainty that users are prepared to accept.

Typically, following assumptions / inputs are required in valuation and measurement of share-based payment plans:

- Share price at date of grant or valuation date
- Exercise Price / Strike Price as at each grant (received as input from the Company)
- Expected Volatility
- Risk free interest rate
- Expected term of options
- Expected Dividend yield
- Probability of achieving the performance criteria
- Forfeiture/lapse rate or attrition rate

Information that might be considered relevant in setting the above assumptions include matters such as:

- Historical volatility of the share price over the expected option term. For unlisted companies, assessment should be based on the similar listed peers. Where similar listed peers are not available, companies in same / similar sector shall be considered. The Member should ensure that the peer set chosen is agreed with the Company as they are best placed to assess the relevant comparison set.
- Historical trends in dividend payments and expected dividend yield in future basis management inputs / business plan of the Company.
- Historical forfeiture trends, which may be analyzed across different bands, cohorts, etc. to the extent considered relevant.
- Recent trends on performance metrics, where applicable.
- Historical trends in exercise or settlement of options, where available and relevant basis the nature of the work being undertaken.
- Correlation of volatility with exercise patterns to the extent considered relevant.
- Management inputs on the Company's expectation for a liquidity event (or a corporate transaction that provides an exit route to the employees), probability of achievement of performance targets etc .
- In cases where the Member is responsible to calculate the Company's Share Price, he/she should ensure alignment with the prevailing market standards and explicitly communicate to the Company any limitations on the use of such Share Price, restricting it to purposes directly related with Share-Based Payment transaction.

Note that emphasis should be placed on the material assumptions that can significantly impact the overall valuation. The Member should use his / her professional judgment to assess whether assumptions related to death, disability, or retirement (or any other assumption) will materially affect the share-based payment valuation and accordingly allow for same as well in carrying out the work. Similarly, special attention should be given in to those assumptions to which the Fair Value of Options is especially sensitive (i.e., depending upon if the options are in-the-money, at-the-money or out-of-the-money).

Where limited relevant information is available for setting assumptions, Member should use his / her judgement in defining the required information and using best available supplementary information as proxy as may be required.

Any opinion in a report on an assumption or a set of assumptions used shall include a statement about the appropriateness of the assumptions for the purpose of the calculations for which they will be used. The report should also mention about any known significant events that have been considered in the selection of appropriate assumptions.

8.5.2 Application

This section details specific considerations for the key assumptions. These have been developed to be consistent with the requirements of the applicable financial reporting standards in India. However, these should not be considered exhaustive and Member should refer to the requirements, if any, stipulated in the financial reporting standard under which the Member is carrying out his / her work. In case of any divergence between the principles stated below and the requirements of the applicable financial reporting standard, the latter shall supersede.

Note that where tranche wise option pricing is being undertaken, the principles stated below shall be applied separately in setting the assumptions for each tranche.

8.5.2.1 Risk-Free Interest rate

In determining the risk-free rate of interest, the Member should consider the yield currently available on zero-coupon government bonds of the country in whose currency the exercise price is expressed, with a term equal to the remaining expected term of the option being valued.

From India perspective, where zero-coupon bonds are not available, yields on government bonds may be considered. In cases where no such bonds exist or circumstances indicate that the implied yield on zero-coupon bonds (where available) are not representative of the risk-free interest rate (for example, in high inflation economies), the Member should use an appropriate substitute for a term equal to the expected term of the option being valued, if the same approach is in line with the approach considered by other market participants.

Member should ensure the approach adopted is duly disclosed in the report along with limitations of the chosen approach, judgements used, if any.

8.5.2.2 Expected Volatility

Expected volatility is typically considered a **material assumption** from option pricing perspective. The Member should give due consideration in setting this assumption. Where the same is being provided by the Company and the Member has not undertaken any work in assessing the appropriateness of the said assumption, the Member should ensure he / she discloses this fact in the report.

The measure of volatility typically used in option pricing models is the **annualised standard deviation** of the continuously compounded rates of return on the share over the specified period of time. There are **three commonly used approaches** for estimating expected volatility:

1. **Historical Volatility:** It is a backward-looking measure based on the historical price movements of a Company's stock. It calculates the standard deviation of the stock's returns over a specific past period i.e. the expected term of option.
2. **Implied Volatility:** It is a forward-looking measure derived from the market prices of traded options. It reflects the market's expectations of future volatility. It may be determined based on the volatility implied by the prices of the entity's own traded options or options on stocks of comparable entities.

3. **Volatility Forecasting Models:** These models use statistical methods to predict future volatility based on past price data. There are two types of commonly used volatility forecasting models:

- **ARCH (Autoregressive Conditional Heteroskedasticity):** This model estimates future volatility based on past squared returns, allowing for volatility clustering.
- **GARCH (Generalized Autoregressive Conditional Heteroskedasticity):** An extension of the ARCH model, GARCH incorporates lagged volatility terms to provide a more comprehensive volatility forecast.

In determination of the Expected Volatility for a Company, the Member should analyse the amount by which the underlying share price is expected to fluctuate over the remaining **expected term** of the option. In doing so, the Member should consider the following:

- Assess the appropriate approach (i.e. historical volatility, implied volatility, use of forecasting models or any other approach as deemed appropriate by the Member) for estimating expected volatility taking into account the information available, Company and scheme specific factors.
- For Listed companies, their own share price volatility over the remaining expected term of the option shall be considered using the approach deemed fit by the Member using his / her judgement.
- In case of Newly Listed companies, where sufficient share price history is not available, the Member may calculate historical volatility using the longest period for which trading activity information is available (subject to expected remaining term of option). Where the same is not sufficient or is not considered credible, the Member may consider historical / implied volatility of similar entities over the applicable period of time. Judgement may be required in using comparable Company information and setting the volatility for the Company under consideration.
- For Unlisted entities, the Member may use the historical or implied volatility of similar Listed entities, for which share price or option price information is available. This approach would be appropriate if the entity has determined the value of its shares based on the share prices of similar listed entities in the past. Where the unlisted Company has determined its own share price in the past for other purposes, the implied volatility on same shall also be considered in setting expected volatility assumption.
- The Member is also advised to examine whether an entity's share price has an exceptional volatility in the past, notably during a specific identifiable period marked by factors such as impact of a pandemic, a significant restructuring or others etc. Member should use his / her judgement in assessing where such a timeframe should be excluded from the analysis. Similarly, Member should assess whether future volatility is expected to be different from the implied volatility calculated basis historical data and if so, additional factors may be analyzed in setting the expected volatility assumption for future.
- The Member should consider a consistent approach while considering the share price from one period to another (e.g., using the closing price and the same currency as the exercise price for all the dates).
- Additional factors relating to the Company under consideration such as its size, scale, turnover, type of industry etc. shall be considered when setting the expected volatility assumption.

8.5.2.3 Expected Term to Exercise

Expected term to exercise (also referred to as remaining expected term of option in this document) is also a significant assumption from option pricing perspective, which together with expected volatility assumption, can materially influence the option price. In setting this assumption, the Member should consider the following:

- Expected term to exercise should reflect an estimate of the option's expected life. For instance, for ESOPs, it is the period of time from grant date to the date on which the option is expected to be exercised by the employee.
- Calculation of the expected term to exercise shall include the length of the vesting period, as the share option cannot be exercised until the end of the vesting period.
- Exercise period (applicable post completion of vesting period) shall be factored taking into account potential for early exercise, past exercise trends where available and considered credible, management input on expected exercise pattern etc. Any past valuation approach used by the Company or where applicable, by other peer companies and market participants, shall be factored.
- Different approach in setting expected term to exercise may be required for listed and unlisted companies. For listed companies, it is common to have expected term of option defined separately at tranche level or an overall weighted average of tranche wise assumption is taken. For unlisted companies, its common to have an overall weighted average assumption for all vesting tranches factoring management input on when the options are expected to be exercised, especially where exercise is linked to happening of corporate transactions for the Company.
- In assessing expected term of option, trends may be analyzed separately for homogeneous group of employees and where required, separate assumption may be set for such groups to reflect their exercising patterns.

8.5.2.4 Expected Dividends

The consideration of the expected dividends while assessing the fair value of options is dependent on **whether the counterparty** (such as the employee) is **entitled to dividends** or dividend equivalents **before** the options are **exercised**.

Scenario 1: Employees Entitled to Dividends or Dividend Equivalents Before Exercise

If the employees are granted options and are simultaneously entitled to dividends on the underlying shares or dividend equivalents (which might be paid in cash or applied to reduce the exercise price) **between the grant date and exercise date**, then the **expected dividends assumption** in the option pricing model should be set to **zero**. This is because the value of these dividends is already accounted for by the dividend entitlement of the employee (i.e. right of the employee to receive dividend before exercise of options).

Scenario 2: Employees Not Entitled to Dividends or Dividend Equivalents Before Exercise

If the employees are not entitled to dividends or dividend equivalents during the vesting period (or before exercise, in the case of ESOPs), the Members should take the expected dividends into account as at the grant date and factor the same in option pricing. The expected dividend yield impacts the fair value of the options and should be estimated based on:

- **Publicly available information** about the Company's dividend policy or historical / current dividend yield.
- **Company's business plan or peer Company data:** Where considered appropriate, the dividend yield may be estimated basis the Company's business plan, management input and / or peer Company data, to the extent considered relevant.

For instance,

- an entity that does not pay dividends and has no plans to do so, the expected dividend yield should be considered as zero.

- Companies with a past dividend payment history will be expected to continue paying dividend and the latest available dividend yield or past dividend yield patterns may be analysed in setting the assumption.
- For Companies with no history of paying dividends but which expect to begin paying dividends during the expected term of the option, assumption may need to be set taking into account the period by which the Company expects to start paying dividends, level of dividend yield expected, yields seen in peer companies (where available) etc.

Note that **dividend equivalents** are incentives representing the value of dividends earned on the underlying share and may be paid to the employee in the form of additional ESOPs, cash or used to reduce exercise price of ESOPs in some cases. Generally, the dividend equivalents are treated in the same manner as dividends for the purposes of option pricing. However, the Member should use his / her judgement to assess if any additional considerations are applicable, taking into account the exact nature of dividend equivalents.

8.5.2.5 Other

In cases where the schemes have certain different terms and conditions, the Member should use his / her experience of other similar schemes, current practice in the market and past Company practice to the extent considered relevant etc., and maintain consistency between different assumptions. A few of such cases may include the following:

1. Expected Probability of achieving the Performance criteria for any Performance-Based Vesting Schedule, whether linked to individual or Company performance.
2. Incorporating probability of meeting market-linked vesting conditions in determining option price.
3. Assisting the Company in calculation of the forfeiture / lapse rate on account of attrition or otherwise, wherever applicable.
4. Undertaking appropriate adjustments to incorporate the impact of corporate actions which may impact ESOPs / SARs such as bonus issue, split, consolidation etc.

8.6 Reporting

8.6.1 Introduction

This section details the aspects that a Member should document when carrying out valuation and measurement of share-based payment plans, specifically where the same is being certified by the Member. The requirements in this section have been set with the aim of increasing the understanding of the users of the work undertaken by the Member whilst also adding transparency and increasing the degree of reliance that can be placed on the work of Member actuaries. To this extent, the requirements stated therein are seen as complimentary to the information required under various financial reporting standards rather than mutually exclusive.

However, it is recognized that the purpose of the exercise may dictate the extent to which all the items below are included or the detail in which the same are reported. Further, where the formats of reporting and disclosure are specified in any regulations / other legal document governing the work of the Member, the same shall supersede the requirements of this Guidance Note.

The items in the following list are normally to be regarded as essential components of any report. Other information may often be desirable and suitable explanations of some features may be very important. The Member should apply his / her judgement in assessing the need for additional information / disclosure.

8.6.2 Key Requirement

The following are seen as key components of any report covering area of valuation and measurement of share-based payment plans:

- **Purpose of the report**, stating clearly to whom the report is addressed, the purpose for which the report has been prepared, the date / period for which the work has been undertaken and the date of the report. The Member should clearly state the financial reporting standards (if any) for which the report has been prepared and whether the report complies with this Guidance Note / any other Actuarial Practice Standard as may be applicable.
- **Data Statistics** i.e. brief summary of the data used for performing the work, including but not limited to total number of unique grants valued along with grant dates and the total number of outstanding options being valued highlighting the total number of options vested as at the valuation date. The Member may present data in such format as may help the user to understand the data covered where the grant data covered is too large to be presented in totality.
- **Scheme details** covering brief description of each type of share-based payment scheme valued in the report. This should clearly highlight whether the scheme being valued is considered equity settled or cash settled for the purposes of the valuation. Further, additional scheme related information such as general length of vesting schedules valued, market and non-market performance linkages existing which have been considered in valuation, exercise period, exercise price range etc. relating to the data being valued.

Based on the nature of the scheme, the Member may include such additional information relating to the scheme as he / she deems necessary to ensure the user of the information understands the schemes being valued. In particular, any **modification** to the scheme or any **cancellation, surrender of options, bonus / split** etc. undertaken during the financial year under consideration should be duly disclosed.

- **Methodology used to determine fair value of options** including highlighting the **option pricing model used**, reason for choice of model taking into account the nature of the scheme, a brief description of the variables typically used in the model and the inherent assumptions (such as

presence of efficient markets) underlying such mathematical models, to the extent the Member considers the same to be necessary for the user to understand.

- **Assumptions** used in determining fair value of option including highlighting how the assumptions have been set. The Member should comment on the appropriateness of the assumptions for the Company given the purpose of the report and where the Member has relied on the Company providing the assumptions, the same shall be explicitly stated. The Member should use his / her judgement in giving additional information relating to assumptions such as peer Company data used, Company data used etc. to the extent the Member deems the same necessary.

The report should highlight the assumptions to which the fair value of the option is most sensitive to, and where appropriate, also indicate the direction of this sensitivity to help the user analyze the information.

- **Methodology for measurement of financial impact** of share-based payment schemes on the balance sheet / income statement of the Company should be disclosed in brief, highlighting the key principles adopted. In doing so, the Member should clearly highlight approach taken in assessing financial impact of any scheme related transactions such as cancellation, modification, surrender of options etc. The Member should include a commentary on any material developments in the inter-investigation period which have led to a significant variation or measurement of the fair value of the equity instruments from the calculations last made and their impact on the valuation.
- **Results** should capture at a minimum:
 - Fair value of option for unique grant date under consideration;
 - Value of ESOP Outstanding or SAR Provision as at the valuation date and the income statement income for the inter-valuation period, where the Member has undertaken measurement work as well.
- **Disclosures** should be included in the report to ensure the requirements of the financial reporting standard under which the work is being performed are met, to the extent the same apply for the Member's scope of work.

In particular, the Member must sensitize the user to the fact that the output of the valuation model is highly sensitive to both the choice of the model and the estimated values of its parameters. For instance, the output of the Black-Scholes Model is particularly sensitive to changes in expected share price volatility. Similarly, when a stochastic simulation approach is used, the output is sensitive to the choice of statistical distributions used to model the stochastic variables, such as stock price, and the estimated values of these parameters. The Member is also encouraged to perform a **sensitivity analysis** to help users understand how variations in key valuation inputs and assumptions affect the model output. For instance, the Member may illustrate the impact of a +/- 5% change in the volatility parameter or +/-1 year change in expected term of option etc., on the option value derived.

Further, the Member should disclose such additional information as he / she thinks will help the user of the report such as movement of number of options during the inter-valuation period, movement of ESOP Outstanding / SAR Provision account during the year etc.

- **Reliance and Limitations** covering the areas where the Member has relied on the information, data or other inputs provided by the Company or by any third party. The Member should clearly state whether he / she has carried out any additional checks on such information.

Further, the Member should clearly highlight the purpose and the users authorized to use the contents of the report, highlighting any limitations in the work undertaken and hence the limitations on the use of the report for purposes other than the intended purpose.

- **General Statements to be included in Report** shall include the following:
 - A statement as to whether the investigation has been carried out in accordance with this Guidance Note and any other legislative/regulatory reference that the report is designed to be in accordance with the applicable regulations (e.g. Accounting Standards), as on the date of signing of the report.
 - There should be a statement indicating any departure from this Guidance Note. Members are encouraged to comply with the Guidance Note, unless convinced that full compliance would be inappropriate, in which case, an explanation and justification of departures should be given.
 - In case of exercise of actuarial judgement, the report shall include an explanation of the basis of judgement.
 - The report shall make it clear to what extent any third party can rely on the actuarial work performed and its limitations for use by third parties.
- **Certification** should clearly specify the value being certified and the date to which it relates. Any material concerns with respect to appropriateness of data, assumptions, results, work performed under the report shall be highlighted as part of the certification.

9 Glossary

Unless otherwise specified, the terms used in this Guidance Note shall carry the same definitions as those provided in **Appendix A of IND AS 102 – Share-Based Payments**.