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Stock-based compensation

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About this guide

PwC is pleased to offer our updated *Stock-based compensation* guide. This guide explains the fundamental principles of accounting for all types of stock-based compensation, including which arrangements are subject to its scope, measurement date, vesting conditions, expense attribution, and classification (i.e., liability or equity), as well as the accounting required when awards are modified. This guide also discusses the unique accounting for nonpublic companies, awards to nonemployees, employee stock purchase plans and employee stock ownership plans, as well as valuation considerations. This guide also provides our perspectives on the impact of the accounting guidance on stock-based compensation plan design, including a summary of employer and employee income tax considerations.

This guide summarizes the applicable accounting literature, including relevant references to and excerpts from the FASB's Accounting Standards Codification (the Codification). It also provides our insights and perspectives, interpretative and application guidance, illustrative examples, and discussion on emerging practice issues.

This guide should be used in combination with a thorough analysis of the relevant facts and circumstances, review of the authoritative accounting literature, and appropriate professional and technical advice. Guidance on financial statement presentation and disclosure related to stock-based compensation can be found in PwC's Financial statement presentation guide (FSP 15).

References to US GAAP

Definitions, full paragraphs, and excerpts from the FASB's Accounting Standards Codification are clearly labelled. In some instances, guidance was cited with minor editorial modification to flow in the context of the PwC Guide. The remaining text is PwC's original content.

References to other PwC guidance

This guide provides general and specific references to chapters in other PwC guides to assist users in finding other relevant information. References to other guides are indicated by the applicable guide abbreviation followed by the specific section number. The other PwC guides referred to in this guide, including their abbreviations, are:

- *Business combinations and noncontrolling interests (BCG)*
- *Derivatives and hedging (DH)*
- *Fair value measurements (FV)*
- *Financial statement presentation (FSP)*
- *Financing transactions (FG)*
- *Income taxes (TX)*
- *Revenue from contracts with customers (RR)*

Summary of significant changes

Following is a summary of the noteworthy revisions to the guide since it was last updated in March 2020. Additional updates may be made to keep pace with significant developments.

Revisions made in September 2020

SC 2, *Measurement date, vesting conditions, and expense attribution*

- **SC 2.3.2.5** was added, including **Example SC 2-2** regarding cash loans to employees in the form of a nonrecourse note secured by the employee's shares in the employer.
- **Example SC 2-4** was added regarding awards with a performance condition and employer call right.
- **Example SC 2-14** was added regarding changes to the requisite service period for an award with a vesting acceleration clause.
- **Example SC 2-21** was added regarding attribution of expense for an award with "front-loaded" vesting.

SC 5, *Employee stock purchase plans*

- **SC 5.3.1** was added regarding the grant date for ESPPs.

SC 6, *Non-public company stock-based compensation*

- **Example SC 6-1** and **Example SC 6-2** were added to illustrate the accounting for the grants of profits interest awards.

SC 7, *Stock-based transactions with nonemployees*

- **SC 7.2.9** was updated for ASU 2020-06, *Debt–Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging–Contracts in Entity's Own Equity (Subtopic 815-40)*, which eliminates the requirement to reevaluate convertible securities issued as compensation awards under other applicable accounting standards, upon the vesting date.

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Chapter 1: Stock-based compensation overview and scope

1.1 Stock-based compensation background

The guidance in ASC 718, *Compensation—Stock Compensation*, applies to various types of equity-based awards that companies use to compensate their employees (see SC 1.5 regarding terminology used in this guide). Under ASC 718, companies recognize the fair value of those awards in their financial statements, generally beginning on the date the awards are granted. This guide covers the significant accounting aspects of ASC 718, with an emphasis on awards granted by public companies to their employees. Additional considerations for employee awards granted by nonpublic companies are discussed in SC 6. The accounting for awards granted to nonemployees is addressed in SC 7.

This guide does not address the income tax, earnings per share, or cash flow implications of stock-based compensation awards nor other presentation and disclosure matters. Refer to the following PwC guide sections for guidance on those matters:

- TX 17 for guidance on income tax accounting consequences
- FSP 7.5.5.5 for earnings per share implications
- FSP 6.7.2.7 for cash flow statement considerations
- FSP 15 for guidance on the presentation and disclosure of stock-based compensation

New guidance

ASU 2018-07

In June 2018, the FASB issued ASU 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting,* to amend the accounting for share-based payment awards issued to nonemployees. Under the revised guidance, the accounting for awards issued to nonemployees will be similar to the model for employee awards, except that:

- the ASU allows an entity to elect on an award-by-award basis to use the contractual term as the expected term assumption in the option pricing model, and
- the cost of the grant is recognized in the same period(s) and in the same manner as if the grantor had paid cash.

The update is effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted, but no earlier than an entity's adoption of ASC 606.

ASU 2019-08

ASU 2019-08, *Compensation—Stock Compensation (Topic 718) and Revenue from Contracts with Customers (Topic 606),* amends ASC 606, *Revenue from contracts with customers,* to clarify that consideration payable to a customer also includes equity instruments (for example, shares, share options, or other equity instruments). SC 7.2.6 and SC 7.2.7 address the accounting for share-based payments granted to customers upon adoption of ASU 2019-08. Under the clarified guidance,

consideration paid to a customer in the form of equity instruments that is not in exchange for a distinct good or service is measured and classified following the guidance in ASC 718 for both equity- and liability-classified awards. The value determined at the grant date is reflected as a reduction of the transaction price (and therefore revenue) following the guidance in ASC 606.

ASU 2019-08 is effective for public business entities, and all other entities that have early adopted the nonemployee guidance in ASU 2018-07, for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. For all other entities that have not adopted ASU 2018-07, the guidance in ASU 2019-08 is effective for fiscal years beginning after December 15, 2019, and for interim periods within fiscal years beginning after December 15, 2020.

Early adoption, including in interim periods, is permitted in financial statements that have not yet been issued/made available for issuance, but no earlier than the adoption of the nonemployee guidance in ASU 2018-07.

1.2 IFRS for stock-based compensation

IFRS 2, *Share-based payment*, addresses the accounting under international financial reporting standards for stock-based compensation. Although the guidance in IFRS 2 and ASC 718 is similar, there are several differences. Refer to PwC's accounting and financial reporting guide, SD 4, for a summary of the key differences.

1.3 Awards within the scope of ASC 718

As described in ASC 718-10-15, ASC 718 applies to all equity-based compensation when a company acquires employee services, or nonemployee goods or services, by:

- Issuing its stock, stock options, or other equity instruments
- Incurring liabilities to pay cash, the amounts of which are based, at least in part, on the price of the company's stock or other equity instruments
- Incurring liabilities that may be settled through issuance of the company's stock or other equity instruments.

When equity instruments are provided to an individual who is both an employee/nonemployee service provider and a shareholder, management must analyze the facts and circumstances surrounding the transaction to determine whether the equity instruments were (a) remuneration for services and therefore subject to the guidance in ASC 718, or (b) a transaction with a shareholder on terms commensurate with other non-service-providing shareholders and therefore outside the scope of ASC 718.

ASC 718 addresses all forms of equity-based compensation, including:

- Stock options
  - A contract that gives the holder the right, but not the obligation, either to purchase (to call) or to sell (to put) a certain number of shares at a predetermined price for a specified period of time. Most employee stock options are call options in that they give an employee the right to purchase shares of the company.

- Restricted stock and restricted stock units
  - Restricted stock is a share of stock granted to an employee for which sale is prohibited for a specified period of time. Most grants of restricted shares to employees are better termed "nonvested shares" because the employees must satisfy certain vesting conditions to earn the rights to the shares, which are, in general, otherwise unrestricted as to transfer.
  - Restricted stock units (RSUs) represent a promise to deliver shares to the employee at a future date if certain vesting conditions are met. The difference between RSUs and restricted stock is primarily the timing of the delivery of the underlying shares. A company that grants RSUs does not deliver the shares to the employee until the vesting conditions are met.
- Stock appreciation rights (SARs)
  - A contract that gives the employee the right to receive an amount of stock or cash, the value of which equals the appreciation in a company's stock price between the award's grant date and its vesting/exercise date. SARs generally do not involve payment of an exercise price. Regardless of the form of settlement, SARs are subject to the guidance in ASC 718.
- Employee stock purchase plans (ESPPs)
  - Designed to promote employee stock ownership by providing employees with a convenient means (usually through a payroll deduction) to acquire a company's shares. Refer to SC 5 for information on ESPPs.
- Employee stock ownership plans (ESOPs)
  - A qualified stock bonus plan, or a combination stock bonus and money purchase pension plan, that is designed to invest primarily in employer stock, and that meets the requirements of the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code. Refer to SC 11 for information on ESOPs.
- Long-term incentive plans (LTIPs)
  - Generally, LTIPs are cash-settled plans that reward employees based on a company's performance over a number of years. LTIPs are within the scope of ASC 718 if the amount earned by the employees is based, even in part, on the price of the company's stock or other equity instruments. For example, an employee may be entitled to a cash payment if the company's stock price reaches a specified target price or total shareholder return at the end of five years. Cash-settled LTIPs that have payout triggers linked only to employee service (i.e., time-based vesting) or internal performance conditions (e.g., sales or EBITDA targets) are not within the scope of ASC 718 because they are not tied to the price of the company's stock.

ASC 718 applies to both public and nonpublic companies; although ASC 718 provides nonpublic companies certain alternatives that are not available to public companies (see SC 6). ASC 718 includes a definition of a public company.

Excerpt from ASC 718-10-20

Public entity: An entity (a) with equity securities that trade in a public market, which may be either a stock exchange (domestic or foreign) or an over-the-counter market, including securities quoted only

locally or regionally, (b) that makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market, or (c) that is controlled by an entity covered by (a) or (b).

This definition focuses solely on equity securities. Therefore, a company that has publicly traded debt and no publicly traded equity securities would not be a public entity for purposes of applying ASC 718. Once a company files for an initial public offering of equity securities (e.g., the date the initial prospectus is filed with the SEC), it is considered a public company. We believe this would include a company that has made a confidential submission of financial statements to the SEC under the JOBS Act in anticipation of a public offering of equity securities. A company whose equity securities are traded on "Pink Sheets" is also considered a public company. The "Pink Sheet" market is a form of over-the-counter trading. It is not an exchange, but stock price quotations are available to any investor who subscribes to the National Quotation Bureau's Pink Sheet service. Thus, an entity with equity securities traded in this manner, even if not required to make periodic filings with the SEC, would meet the ASC 718 definition of a public entity.

The following entities would also be considered a public entity under the definition in ASC 718 because they are controlled by an entity with equity securities that trade in a public market:

- A US subsidiary of a parent company whose equity securities are publicly traded in a non-US jurisdiction.

- A subsidiary (Company A) that does not have publicly-traded equity securities but is controlled by a private equity fund (Fund) that in turn is controlled by a public company (Company B) with publicly traded equity securities. Company B accounts for its investment in Fund at fair value (in accordance with the Investment Company Act of 1940) rather than consolidating Fund and its controlled subsidiaries, including Company A. In this scenario, Company A would be considered a public entity under ASC 718.

- A limited liability partnership (LLP) that does not have publicly-traded equity securities but is considered a variable interest entity under ASC 810, *Consolidation*, and is subject to consolidation by another entity (Company C) that is the primary beneficiary of the LLP and that has publicly-traded equity. Due to the LLP being consolidated by Company C under ASC 810, the LLP is considered to be controlled by a public entity. Therefore, the LLP would meet the definition of a public entity under ASC 718.

- A joint venture formed by two companies, Company X and Company Y. Company X has publicly traded equity securities; Company Y does not. If the joint venture is consolidated by Company X and accounted for under the equity method by Company Y, the joint venture would be considered a public entity under ASC 718. However, if the joint venture is consolidated by Company Y and accounted for under the equity method by Company X, the joint venture is not a public entity under ASC 718.

The FASB codification contains multiple definitions of "public entity," "public business entity," "publicly traded company," and "nonpublic entity." Each of these definitions was developed at a different time and in the context of specific standards. An entity that fails to meet the definition of a publicly traded company or public entity under the definitions in other standards may still be a "public entity" under the ASC 718 definition, and vice versa.

1.4 Awards by related parties and other economic interest holders

In addition to grants by their employer, employees may earn awards granted by other parties. To determine which awards are subject to ASC 718, companies should consider awards granted by related parties or other holders of an economic interest, which includes any person or entity that has a financial interest in the company (e.g., via equity securities or certain contractual arrangements). Under ASC 718-10-15-4, if a related party or other economic interest holder of the company grants an employee of the company an instrument that falls within the scope of ASC 718, that transaction should be accounted for by the company as stock-based compensation.

For example, if an investor transfers some of its shares to an employee for no consideration, it would be accounted for as if the investor granted the shares on behalf of the company unless the transaction is clearly for a purpose other than compensation for services provided by the employee to the company. The substance of the transaction is that the investor is making a capital contribution to the company, and the company, in turn, is making a share-based payment to its employee in exchange for services. Thus, the company would record a capital contribution from the investor and compensation cost for the value of the shares transferred to the employee.

ASC 718's definition of a related party is consistent with the definition in ASC 850, *Related Party Disclosures*. However, ASC 718's definition of other economic interest holders includes a broader array of individuals and entities whose awards to a company's employees would be subject to ASC 718 because it includes parties that hold any form of financial interest in the company.

1.5 Definition of an employee under ASC 718

Although the accounting for employee and nonemployee awards has been largely aligned under ASC 718 upon adoption of ASU 2018-07, some differences remain. In particular, the attribution of cost and measurement of instruments awarded to employees differs from instruments awarded to nonemployees. Therefore, it is important to determine whether the recipient of an award is an "employee" under ASC 718. Refer to SC 7 for further discussion of nonemployee awards. Throughout this guide, we generally refer to awards as employee awards; however, unless indicated otherwise, most of the guidance would be equally applicable to both employee and nonemployee awards given that ASU 2018-07 eliminated many of the differences.

ASC 718-10-20 defines an employee as someone over whom the grantor of a stock-based compensation award exercises or has the right to exercise sufficient control to establish an employer-employee relationship based on common law. All other individuals (aside from the exceptions described below) who receive stock-based compensation should be considered nonemployees.

1.5.1 Awards to members of a board of directors

A nonemployee who sits on the board of directors and is compensated by the company solely for the individual's role as a director will be treated as an employee under ASC 718 if the individual has been:

- Elected by the company's shareholders, or
- Appointed to a board position that will be filled by another person whom the shareholders will elect when the current term expires.

Accordingly, an award granted to a nonemployee director should be accounted for as an award granted to an employee, so long as the award to the nonemployee director is in return for services provided solely in the person's capacity as a director. However, an award granted to such a director for non-board services should be accounted for as a nonemployee transaction.

The exception for nonemployee directors does not extend to independent contractors or advisory board members (e.g., board members that function in a consulting capacity, provide legal services, or give scientific advice) because, typically, such individuals are not elected by a company's shareholders. Any instruments granted in exchange for nondirector services should be accounted for as a nonemployee transaction and disclosed as a related-party transaction in the company's financial statements, in MD&A, and in the proxy statement.

Subsidiary entities in a consolidated group may have separate boards of directors. In general, only those outside directors on the board of the parent company are considered employees. However, to the extent that nonemployee directors on the board of a consolidated subsidiary are elected by shareholders of the subsidiary that are not controlled, directly or indirectly, by the parent or another member of the consolidated group, then those directors would also be considered employees under ASC 718 (e.g., when a subsidiary of a public company is a public company itself). In the separate financial statements of the subsidiary, members of the subsidiary's board of directors elected by the subsidiary's shareholders, regardless of whether they are independent shareholders or the parent shareholder, would be considered employees.

1.5.2 Awards to leased and part-time employees

Under the ASC 718 definition of an employee, the primary consideration is whether or not the individual is considered an employee under common law. A leased individual must also be a common law employee, but the definition of an employee in ASC 718-10-20 includes additional criteria that need to be met for a leased individual to be considered an employee, including that the leased individual be eligible to participate in the lessee's employee benefit plans, the lessee has the exclusive right to determine the economic value of the services performed by the lessee, and the lessee has the right to hire, fire, and control the activities of the individual. If an individual does not meet those criteria, the individual would be considered a nonemployee.

Part-time employees generally meet ASC 718's definition of an employee because they are considered employees under common law.

1.5.3 Awards to employees of a pass-through entity

We believe that the share-based payments awards of a pass-through entity should generally be considered employee awards if the grantee qualifies as a common law employee. The fact that the pass-through entity does not classify the grantee as an employee for payroll tax purposes is generally not relevant given the combined service and ownership relationship of owners in a pass-through entity (e.g., a partnership or a limited liability company). For guidance on the determination of whether an award granted by a pass-through entity is akin to equity and therefore a share-based payment award in the scope of ASC 718, see SC 6.7.

1.6 Awards to employees of subsidiary or unconsolidated entity

Employees of a subsidiary that is included in the parent company's consolidated financial statements are considered employees of the parent company for purposes of applying ASC 718.

Under ASC 718, the employees of an unconsolidated entity's (e.g., equity method investees, joint venture) who are granted an instrument in the investor company's equity are not considered employees of the investor company. This conclusion would also apply to awards granted by a company to former employees of the company who are now employed by an unconsolidated joint venture of the company. See additional discussion in SC 7.2.8 on accounting by an investor for stock-based compensation granted to employees of an equity method investee.

When an entity grants awards of other entities' equity to its employees, including, for example, an equity method investee granting its investor's equity to the investee's employees, ASC 718 does not apply because the awards are not the equity of the granting company. The investee company would follow the guidance in ASC 815, *Derivatives and Hedging* (ASC 815-10-55-46 through ASC 815-10-55-48) for these awards.

Example SC 1-1 illustrates the accounting for awards granted to companies under common control as part of a consolidated group.

EXAMPLE SC 1-1

Awards granted to employees of companies under common control

Parent is a company with two consolidated subsidiaries, Sub Z and Sub Y. During the year, the following stock-based compensation is granted:

Scenario 1: Parent grants equity in Parent to Sub Z's employees

Scenario 2: Sub Z grants equity in Sub Z to Parent's employees

Scenario 3: Sub Z grants options to purchase Sub Z's shares to employees of Sub Y

Scenario 4: Parent grants awards that can be settled in cash (by Parent) to employees of Sub Z

How should the awards be reflected in the financial statements of Parent and its subsidiaries?

Analysis

Scenario 1: Parent grants equity in Parent to Sub Z's employees

Parent consolidated financial statements		Sub Z separate financial statements
Awards would be measured at fair value on the grant date and accounted for as awards granted to an employee, as defined by ASC 718.	→	Awards would be accounted for under ASC 718. Sub Z would recognize compensation cost at grant date fair value. If Sub Z does not provide any consideration to Parent for the awards, the value of the awards granted to Sub Z's employees would be considered a capital contribution from Parent (i.e., compensation cost with an offsetting entry to capital contribution within equity).

Scenario 2: Sub Z grants equity in Sub Z to Parent's employees

Sub Z separate financial statements		Parent consolidated financial statements
The equity grant would be measured at fair value on the grant date and recognized as a dividend to Parent because as the controlling entity, Parent could require Sub Z to grant the awards to Parent's employees, even though they are not rendering any services to Sub Z.	→	The equity grant would be accounted for as employee awards, as defined by ASC 718. Awards of subsidiary equity represent equity (non-controlling interest) in the consolidated entity.

Scenario 3: Sub Z grants options to purchase Sub Z's shares to employees of Sub Y

Parent consolidated financial statements

These awards would be accounted for in Parent's consolidated financial statements as employee awards. This is substantively the same as Scenario 2.

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Sub Z separate financial statements	Sub Y separate financial statements
The options would generally be measured at fair value on the grant date and recognized as a dividend to Parent because as the controlling entity, Parent could require Sub Z to grant the options to Sub Y's employees. Notwithstanding the general model, in certain circumstances it may be appropriate to account for such awards as nonemployee awards and recognize the expense in the grantor's standalone financial statements provided it is clear that the grantor is receiving services in exchange for the award.	The grant of Sub Z's options to the employees of Sub Y would *generally* be considered awards based on the equity of another entity. Under this view, the awards would be accounted for in accordance with ASC 815-10-55-46 through ASC 815-10-55-48 with the change in fair value measured each reporting period and recognized as compensation cost. As the awards are provided to Sub Y by Parent, the change in fair value would be considered a capital contribution and recognized as an increase or decrease in Parent's equity in Sub Y's standalone financial statements.

Scenario 4: Parent grants awards that can be settled in cash (by Parent) to employees of Sub Z.

Parent consolidated financial statements		Sub Z separate financial statements
Since the awards allow for cash settlement at the employee's election, they would be liability-classified in Parent's consolidated financial statements. Accordingly, the awards would be remeasured each reporting period by Parent until final settlement.	→	The awards would be accounted for as employee awards under ASC 718. The impact of remeasuring the awards each reporting period should be reflected ("pushed down") in Sub Z's standalone financial statements, generally as a capital contribution from Parent (i.e., compensation cost with an offsetting entry to capital contribution within equity). Sub Z would not record a liability as it is not legally obligated to make the payment.

1.7 Awards based on a tracking stock

A tracking stock is a security issued by a parent company to track the results of one (or more) of its subsidiaries or lines of business. Tracking stock is considered for legal and accounting purposes to be equity of the parent company, and not equity of the unit or subsidiary to which the stock tracks. The holders of tracking stock are considered to hold equity of the parent and not the specific entity represented by the tracking stock. As such, awards based on a tracking stock should generally be accounted for as equity awards of the parent if the tracking stock is deemed to be substantive. We believe that the following factors would be considered to determine whether a tracking stock is substantive:

- Reasons for the issuance
- Whether the shares have been issued to third parties
- Whether the voting rights of the holders of the tracking stock are similar to the rights of the holders of the parent company stock

If tracking stock is not deemed to be substantive (e.g., issued only to management for purposes of paying out cash based on certain divisions' results), it would not be considered equity for share-based payment purposes and the award should be accounted for as either a cash-based award or as a formula-based award.

1.8 Changes in employment status and share-based awards

The status of a recipient of an award may change to or from an employee while he or she continues to provide service. For example, an employee may terminate employment with a company and continue to provide service as a nonemployee consultant. As discussed above, there are differences in the accounting for awards granted to employees as compared to nonemployees.

1.8.1 Status change—awards with ongoing service after ASU 2018-07

ASC 718 does not provide specific guidance on accounting for a change in employment status when the recipient continues to provide substantive services. When the recipient of an award changes employment status and continues to provide service and vest in an award, the company should assess whether the award was modified in connection with the change in status. The company should also make an assessment as to whether the future services to be provided by the individual are substantive.

If the award was modified to allow the recipient to continue vesting in the award after the change in status and the future service was deemed substantive, the modification should be treated as a cancellation of the old award and issuance of a new award. In this scenario, the compensation cost previously recognized related to the old award would be reversed when it is no longer probable of vesting. The full amount of compensation cost related to the new (modified) award would be measured as a nonemployee award under ASC 718 (see SC 7.2.3) and recognized prospectively over the new vesting period. This is a Type III modification under ASC 718 (as discussed in SC 4.3.1) because at the modification date, the service condition of the original award is not expected to be satisfied.

After adoption of ASU 2018-07, if the award was not modified in connection with the change in status (i.e., the original terms of the award provided for continued vesting for service provided as a nonemployee consultant, such that the individual was contractually entitled to retain the award), but future substantive service is still necessary to earn the award, then the original grant date fair value of the award would continue to be recognized. Attribution of the remaining cost would follow the nonemployee guidance prospectively from the date of the change in status (see SC 7.2.5).

1.8.1A Status change—awards with ongoing service pre-ASU 2018-07

ASC 718 does not provide specific guidance on accounting for a change in employment status when the recipient continues to provide substantive services. When the recipient of an award changes employment status and continues to provide service and vest in an award, the company should assess whether the award was modified in connection with the change in status. The company should also make an assessment as to whether the future services to be provided by the individual are substantive.

If the award was modified to allow the recipient to continue vesting in the award after the change in status and the future service was deemed substantive, the modification should be treated as a cancellation of the old award and issuance of a new award. In this scenario, the compensation cost previously recognized related to the old award would be reversed when it is no longer probable of vesting. The full amount of compensation cost related to the new (modified) award would be measured as a nonemployee award under ASC 505-50 (see SC 7.2A) and recognized prospectively over the new vesting period. This is a Type III modification under ASC 718 (as discussed in SC 4.3.1) because at the modification date, the service condition of the original award is not expected to be satisfied.

Prior to adoption of ASU 2018-07, if the award was not modified in connection with the change in status (i.e., the original terms of the award provided for continued vesting for service provided as a nonemployee consultant, such that the individual was contractually entitled to retain the award), but future substantive service is still necessary to earn the award, then compensation cost should be measured as if the outstanding award was newly granted at the date of the change in status as a nonemployee award. For example, if an employee becomes a nonemployee consultant and continues to vest in an equity-classified award (under the original terms of the award), the unvested portion of the award should be measured under the nonemployee guidance on the date of the change. Compensation cost for the remaining proportion of the vesting period should be measured and

recognized prospectively from the date of the change in status over the remaining vesting period, following the guidance in ASC 505-50 (see SC 7.2A). No adjustment should be made to any compensation cost recognized prior to the change in status unless the award is forfeited prior to vesting. In essence, the total compensation cost recognized for the award is measured partially under ASC 718 (i.e. the proportion of the vesting period prior to the date of the change in status) and partially under ASC 505-50 (i.e. the proportion of the vesting period subsequent to the date of the change in status).

1.8.2 Changes in status and awards with no future services

As described in SC 1.8.1, when an employee becomes a nonemployee and is allowed to continue to vest in existing awards, an assessment should be made as to whether future services to be provided by the individual are substantive.

If the services are not substantive, the compensation cost would be accounted for as a severance arrangement with no future service requirement (i.e., recognized immediately). All of the relevant facts and circumstances should be considered to determine whether an individual is providing substantive services, including whether the individual's compensation is reasonable in relation to the services to be provided and whether there is a clear understanding of the individual's role and responsibilities, supervision of the individual's performance, and monitoring of hours worked.

Example SC 1-2 illustrates the accounting for an award that is modified to allow continued vesting upon a separation when no substantive future service is required.

EXAMPLE SC 1-2

Change in status – no substantive future service

On December 31, 20X6, SC Corporation enters into a separation agreement and consulting arrangement with an executive. In accordance with the agreements:

- The executive will be "on call" for one hour per month through June 30, 20X8 as a consultant to the Company, and
- The executive's outstanding unvested options on the date of the agreement are modified so that they will continue to vest through June 30, 20X8, at which time the executive will have 90 days to exercise the options.

How should the Company account for the stock options?

Analysis

The accounting should be based on the substance of the separation agreement and not the form. The substance of the agreement is that the executive does not have to provide future services to SC Corporation (except for a non-substantive amount of "on call" time) in order to continue vesting in the unvested options. The unvested options should therefore be viewed as immediately vested with a delayed exercise date. The modification is a Type III modification (as discussed in SC 4.3.1) and incremental compensation cost should be recognized immediately.

Chapter 2: Measurement date, vesting conditions, and expense attribution

2.1 Measurement date, vesting, and expense attribution overview

This chapter discusses the measurement and recognition of compensation cost for employee stock-based awards. Employee awards are measured at fair value on the grant date and the resulting compensation cost is recognized over the requisite service period. Awards typically include vesting conditions, which could impact the amount of compensation cost recognized or the timing of recognition.

This chapter generally addresses the accounting for equity-classified awards; however, many of the concepts discussed also apply to liability-classified awards (e.g., the impact of vesting conditions). Refer to SC 3 for further discussion of liability-classified awards.

2.2 Stock-based compensation measurement basis and objective

ASC 718 principally requires the use of the "fair-value-based method" for measuring the value of stock-based compensation. Employee stock options generally are not tradeable in the financial markets and also generally have features and restrictions that differ from those of publicly traded options. Those features and restrictions affect the fair value of employee stock options (e.g., nontransferability and nonhedgeability). Therefore, ASC 718 requires that, in applying the "fair-value-based method," companies use an option-pricing model adjusted to accommodate the unique characteristics of employee stock options.

For the sake of convenience, however, ASC 718 generally refers to the required measure of stock-based compensation as fair value; that term also distinguishes the measure from other measures, such as intrinsic value and calculated value. In ASC 718 and in this guide, references to fair value mean the "fair-value-based measure" that is determined in accordance with the requirements of ASC 718, rather than the term "fair value" as used in ASC 820, *Fair Value Measurement*.

ASC 718's measurement objective is to determine the fair value of stock-based compensation at the grant date assuming that employees fulfill the award's vesting conditions and will retain the award. The fair value of an award is the cost to the company of granting the award and should reflect the estimated value of the instruments that the company would be obligated to provide to an employee when the employee has satisfied the service conditions. For most awards, the cost will be measured once at the grant date fair value and will not be adjusted for subsequent changes in fair value.

When determining fair value (in accordance with ASC 718-10-55-10 through ASC 718-10-55-12), companies should take the following steps:

- **Step 1:** Consider observable market prices of **identical** instruments (if available), taking into consideration the terms of the instruments and the conditions upon which they were granted.

- **Step 2:** Consider observable market prices of **similar** instruments (if available), taking into consideration the terms of the instruments and the conditions upon which they were granted. Management should assess whether an instrument is similar to marketplace instruments, basing its conclusion on an analysis of the instrument's terms, along with an evaluation of other relevant facts and circumstances.

- **Step 3:** If identical or similar instruments are not available in the marketplace, use a valuation technique, such as an option-pricing model (e.g., Black-Scholes, lattice/binomial). The valuation technique should be:
  - Consistent with ASC 718's fair value measurement objective.
  - Based on established principles of economic theory.
  - Generally accepted by experts (i.e., broadly acknowledged and supported by valuation experts in both academia and practice).
  - Capable of reflecting any and all substantive characteristics of the award (except for characteristics that are explicitly excluded by ASC 718, such as reload features, as discussed in SC 2.4).

2.2.1 Use of market instruments to value employee stock options

Although ASC 718 suggests that employee stock options may be valued by reference to similar instruments in the marketplace, this approach is uncommon in practice. Most employee awards have unique features that are difficult, if not impossible, to replicate in a third-party arrangement. Some companies have tried to create a marketplace in which they can trade instruments that are similar to employee stock options so that they can use observable market prices instead of an option-pricing model to estimate the fair value of their employee stock options.

In September 2005, the SEC's Office of Economic Analysis (OEA) issued a memorandum that discusses potential instrument designs that may be used in developing a market instrument to estimate the fair value of employee stock options. The OEA memorandum identifies three key elements of a market-instrument approach: (1) instrument design, (2) a credible information plan that enables prospective buyers and sellers to price the instrument, and (3) a market pricing mechanism through which the instrument can be traded to establish a price. The OEA memorandum does not discuss information plans and market pricing mechanisms in detail, but discusses two possible approaches to instrument design, referred to as the "tracking approach" and the "terms and conditions approach." In general, OEA concludes that an instrument designed under the tracking approach could produce a fair value estimate that reflects the cost to the company of granting the stock option. However, it concludes that an instrument designed under the terms and conditions approach will likely not produce a reasonable estimate of the fair value of employee stock options consistent with the measurement objective of ASC 718.

There are significant issues that a company needs to address in order to successfully implement a market instrument approach, including the development of an information plan that is easily accessible to all market participants and enables prospective buyers and sellers to price the instrument, as well as a market pricing mechanism that has adequate participation by willing buyers and sellers. Based on the views expressed by the SEC staff, a market instrument approach that results in a fair value that is significantly different from the fair value obtained from an option pricing model could face skepticism from the SEC staff, especially in the early stages of the development of market instruments.

2.2.2 *Option-pricing models*

The option-pricing model used to measure fair value of an award and the specific assumptions input into the model have a direct effect on the amount of compensation cost recognized for the award. SC 8 provides an overview of how to select an option-pricing model and the supporting financial theory, discusses the required assumptions, and explains the differences between the various types of models.

2.2.3 *Inability to estimate fair value of a stock-based award*

A company should be able to reasonably estimate the fair value of stock-based compensation awards on the grant date. When, in rare circumstances, the complexity of an award's terms makes it impossible to reasonably estimate the award's fair value on the grant date, a company will measure compensation cost by using the award's intrinsic value each reporting period through the date of exercise or other settlement. Even if the company were to later conclude that it can reasonably estimate the fair value of the award (e.g., if a new valuation technique was developed), the company would continue using the intrinsic-value method until the award is settled.

Remeasuring awards at their intrinsic value each reporting period may result in significant fluctuations to compensation cost, especially if the underlying stock price were to increase.

2.2.4 *Restricted stock award*

The term "restricted stock" is commonly used to describe two different arrangements: (1) shares that are legally restricted as to transfer and may be held by any shareholder, including shares issued to employees and (2) "nonvested shares" that are share awards issued to employees and subject to vesting conditions. ASC 718 distinguishes between "nonvested shares" and "restricted shares." This guide generally refers to nonvested shares as restricted stock.

2.2.4.1 *Nonvested share award*

The fair value of restricted stock and restricted stock units (RSUs) is generally measured as the grant-date price of the company's shares. If employees are not entitled to dividends declared on the underlying shares while the restricted stock or RSU is unvested, the grant-date fair value of the award is measured by reducing the grant-date price of the company's shares by the present value of the dividends expected to be paid on the underlying shares during the requisite service period, discounted at the appropriate risk-free interest rate. Conversely, if dividends are paid during the vesting period or accumulated and paid to the employee upon vesting, the grant-date fair value of the award should not be reduced.

See SC 2.9 for guidance on accounting for dividends received by holders of restricted stock or RSUs.

2.2.4.2 *Restricted share award*

As the term is used in ASC 718, "restricted shares," as distinguished from nonvested shares discussed in SC 2.2.4.1, refer to shares that are owned by the employee that contain restrictions on sale or transfer, such as a share whose sale is contractually or governmentally prohibited for a specified period of time after the employee has a vested right to it. These types of restrictions are often referred to as "post-vesting restrictions." A restricted share is measured at its fair value, which is the same amount at which a similarly restricted share would be issued to third parties. In other words, the effect of the post-vesting restriction is considered in determining the fair value of the award; however, ASC

718-10-55-5 notes that if shares are traded in an active market, post-vesting restrictions may have little, if any, effect on the value of the shares.

The definition of a restriction in ASC 718 is a prohibition on resale, rather than a limitation on resale. For example, securities laws may prohibit the sale of a security to other than qualified institutional buyers or in other exempt transactions (e.g., a Rule 144A exempt offering). Such a limitation does not represent a prohibition as contemplated by the definition of a restriction in ASC 718. Therefore, a limitation such that the shares can be transferred only to a limited population of investors should not be considered in the estimate of fair value.

Example SC 2-1 illustrates the definition of restricted shares.

EXAMPLE SC 2-1

Share award with sale restrictions

SC Corporation grants a vested share award that restricts an employee from selling the shares until the employee terminates employment.

Are the shares considered "restricted shares"?

Analysis

No. ASC 718-10-20 defines a restricted share as "a share for which sale is contractually or governmentally prohibited for a specified period of time." If the restrictions lapse on a voluntary termination then the shares are not subject to a contractual or governmental prohibition on sale, as the employee could leave employment and sell the shares. SC Corporation should determine fair value of the award based on the price of SC Corporation's shares on the grant date and recognize compensation cost immediately, as the shares are fully vested.

2.3 Recourse and nonrecourse notes to purchase stock

Entities may allow employees to purchase stock or exercise stock options in exchange for a note payable to the company. The accounting for these arrangements depends on whether the note is a recourse or nonrecourse loan.

2.3.1 Recourse notes to purchase stock

A recourse loan is an enforceable obligation under which a default by the borrower (employee in this context) entitles the lender (employer in this context) to pursue recovery from any and all of the assets of the employee. A recourse loan may or may not be collateralized. A collateralized loan simply means that specified assets of the borrower have been identified to provide specific security to the lender (e.g., the shares of stock that the employee purchased with the loan) or other investment assets of the employee have been placed in an escrow account. A collateralized loan may or may not be a full recourse obligation. An uncollateralized loan may still legally provide for full recourse against the assets of the employee upon default. Generally, an exercise of a stock option or purchase of stock with a recourse note from a company to an employee is considered to be a substantive exercise or purchase. However, a company will need to determine whether a loan that is in the form of a recourse note is in substance that of a nonrecourse note.

In general, we believe the legal form of a recourse note should be respected (i.e., the stock option is considered to be exercised) unless any one of the following conditions exist:

- Although the employer has legal recourse to the employee's other assets, it does not intend to seek repayment beyond the shares issued,
- The employer has a history of not demanding repayment of loan amounts in excess of the fair value of the shares,
- The employee does not have sufficient assets or other means (beyond the shares) to justify the recourse nature of the loan, or
- The employer has accepted a recourse note upon exercise and subsequently converted the recourse note to a nonrecourse note in the past.

If any of the above conditions exist, the recourse note should generally be considered to be nonrecourse. In addition to the criteria above, all other relevant facts and circumstances should be evaluated when determining whether the note should be considered to be nonrecourse in nature.

If the loan is recourse in nature, the loan generally should be reported as a deduction from shareholders' equity; the shares relating to the loan should be included in the earnings and dividends per share computations, dividends paid on the shares relating to the loan should be charged to retained earnings, and interest on the loan should be credited to income as it accrues.

If the loan is considered nonrecourse in nature, the substance of the arrangement is that the stock option remains unexercised. Nonrecourse notes are discussed in more detail in SC 2.3.2.

2.3.1.1 Non-market interest rate on recourse note to buy stock

A company may permit an employee to purchase stock with a recourse note that is noninterest bearing or has a below-market interest rate. The issuance of such a note results in a purchase price that is below fair value. Therefore, compensation cost will be recognized by the company for the difference between the fair value of the stock and the estimated present value of the note. The determination of the note's present value should be based on a market rate of interest that would be required for the employee.

2.3.1.2 Forgiveness of a recourse note to purchase stock

A company may subsequently decide to forgive a note and accrued interest that was initially presumed to be recourse. On the date of forgiveness, the company should record compensation cost for the amount of the note and accrued interest forgiven, offset by any recoveries. This event may also require the company to re-evaluate whether there was an intention to forgive the note when it was originally issued and whether other outstanding notes are, in substance, nonrecourse notes.

2.3.1.3 Extension of the term of recourse notes to purchase stock

A company may extend the payment terms on the principal of a recourse note. Such an extension of the terms of a recourse note does not necessarily result in the conversion of the recourse note to a nonrecourse note. However, the company would need to consider the reason for the term extension and whether the note is still, in substance, with recourse. Accordingly, on the date of the extension, the company should reconsider if any one of the four conditions found in SC 2.3.1 are met. If any of the conditions are present at the date of the extension, the recourse note should generally be considered to

have been converted to a nonrecourse note (see SC 2.3.1.4 for more guidance). Further, a company should consider whether additional compensation cost should be recorded if the extension of the payment terms included the conveyance of additional value to the employee. This may occur, for example, if the new term includes an interest rate that is below-market for the employee at the time of the extension.

2.3.1.4 Conversion of a recourse note to a nonrecourse note

A company may legally change a recourse note to a nonrecourse note or determine that a recourse note has substantively changed to a nonrecourse note. Such conversions should be accounted for as the repurchase of the shares previously received by the employee upon exercise of the stock option or stock purchase and the grant of a new award in exchange for a nonrecourse note. The repurchase should be accounted for as a treasury stock transaction and the company should recognize compensation cost for any excess of the repurchase amount over the fair value of the shares. The repurchase amount is equal to the sum of (a) the then current unpaid principal balance of the recourse note, (b) the unpaid accrued interest and (c) the fair value of the new option (i.e., the nonrecourse note to purchase stock). Any compensation cost to be recognized should be recognized over the requisite service period of the new award, if any.

2.3.2 Nonrecourse note to purchase stock

A nonrecourse note issued by an employee to a company to satisfy the exercise price of an option or to purchase stock is neither collateralized by nor provides the company recourse to the assets of the employee, other than the stock issued. A nonrecourse note received by a company as consideration for the issuance of stock is considered a stock option for accounting purposes—i.e., it remains subject to settlement/exercise—as the substance is similar to a stock option. Similarly, exercising an option with a nonrecourse note essentially means that the option remains unexercised. In either case, the employee is effectively deferring the decision to “exercise” the “stock option” until they repay the loan. If the value of the shares declines below the loan amount, the “stock option” is underwater and the employee would generally not be expected to repay the loan since there is no recourse to the employee’s assets other than the shares.

In these arrangements, the exercise price of the “stock option” is the principal and interest due on the note. The fair value of the “stock option” is recognized in a company’s financial statements over the requisite service period through a charge to compensation cost and a corresponding credit to APIC or to a liability, depending on the classification of the award. The requisite service period is the period the employee is required to perform service in order to retain the shares, which may differ from the term of the note. For example, it is common for a company to have the right to repurchase the shares at the loan amount if an employee leaves within a specified period of time, which establishes a service period. The maturity date of the note reflects the contractual term of the option for purposes of valuing the award. If the employee is not required to provide future service (i.e., the employee can repay the note at any time and keep the shares), the company should recognize the fair value of the award as compensation cost on the grant date, rather than over the term of the note.

When a nonrecourse note is used to fund the exercise of a stock option, the stock option is not considered “exercised” for accounting purposes until the employee repays the loan. Prior to repayment of a nonrecourse loan, the outstanding shares received in exchange for the loan are excluded from the denominator of basic earnings per share. Additionally, the nonrecourse loan itself is not recorded on the company’s balance sheet since the arrangement is, in substance, a stock option.

2.3.2.1 Nonrecourse note—interest linked to a third-party index

A company may permit an employee to exercise a stock option or purchase stock with a nonrecourse note that has a variable rate of interest that is linked to a third party index over the term of the note (e.g., a nonrecourse note that has an interest rate tied to LIBOR). Given the nonrecourse nature of the loan, the company should account for the transaction as a stock option and the exercise price of the "option" should include the principal and interest due on the note. Because the exercise price is linked to a third-party index, the award is indexed to a factor that is not a market, performance or service condition and the award would be classified as a liability (ASC 718-10-25-13).

2.3.2.2 Nonrecourse note to purchase stock with recourse interest

Typically, the interest on a nonrecourse note executed for the purchase of stock or exercise of a stock option is also nonrecourse. However, in certain circumstances, a company may receive a nonrecourse note that includes recourse interest. In such a case, the company should account for the transaction as a stock option. However, the company should not include the interest as part of the option's exercise price as it is subject to full recourse. As a result, the price of the option equals the principal amount of the note.

2.3.2.3 Dividends paid on nonrecourse notes to purchase stock

A company may pay dividends to an employee who purchased stock or exercised a stock option with a nonrecourse note. Because a nonrecourse note received as consideration for the issuance of stock is considered an outstanding stock option until the note's principal and interest are paid in full, any dividends paid by the company during the period the note is outstanding would be charged to retained earnings for the equity-classified awards that are expected to vest. For the equity-classified awards that are not expected to vest or do not ultimately vest, dividends paid would be recognized as an additional compensation cost.

See SC 2.9 for more guidance on accounting for dividends received by holders of options or shares issued.

2.3.2.4 Forgiveness of a nonrecourse note to purchase stock

A company may accept a nonrecourse note for the purchase of stock or the exercise of stock options but subsequently decide to forgive the nonrecourse note and accrued interest and not require the employee to return the shares. As the note was initially nonrecourse, the issuance of stock was considered a stock option for accounting purposes. Therefore, the forgiveness of the note is in effect a repricing of the options' exercise price to zero. As a result, on the forgiveness date, the company would apply modification accounting under ASC 718-20-35-3 through ASC 718-20-35-4 and calculate any incremental compensation cost to be recognized.

If a company forgives a nonrecourse note and accrued interest and requires the employee to return the shares, then the company should treat the forgiveness as a cancellation without the concurrent grant of a replacement award (i.e., a settlement with no consideration). Refer to SC 4.9 for the accounting related to cancellations without the concurrent grant of a replacement award.

2.3.2.5 Cash loans through a nonrecourse note secured by shares

An employer may provide an employee with a nonrecourse cash loan collateralized by the employee's shares in the employer. In this case, there is both an accounting and economic event that need to be reflected in the financial statements. As described in SC 2.3.2, the cash received by the employee in exchange for the nonrecourse loan is treated as an option for accounting purposes. The employee no

longer has downside risk on the shares below the loan balance and must pay off the loan–akin to exercising the option–to "reobtain" full rights to the shares. Thus, the employee has effectively received cash and an option in exchange for giving up the full rights to the shares that the employee previously owned "free and clear."

While this transaction is not explicitly addressed in ASC 718, we believe it is economically similar to the guidance for converting a full recourse note to a nonrecourse note. As described in SC 2.3.1.4, such conversions should be accounted for as the repurchase of the shares previously held by the employee and the grant of a new award in exchange for a nonrecourse note. The repurchase should be accounted for as a treasury stock transaction, and the company should recognize compensation cost for any excess of the repurchase amount over the fair value of the shares.

In the case of issuing cash in return for a nonrecourse loan secured by shares, the consideration issued to the employee is the amount of the cash loan plus the fair value of the option represented by the nonrecourse loan.

Example SC 2-2 illustrates the accounting for cash loaned to an employee in return for a nonrecourse note.

EXAMPLE SC 2-2

Cash loaned to an employee in exchange for a nonrecourse note secured by shares

SC Corporation, a nonpublic company, loans its CEO $1,000,000 for personal use. The loan has a fixed annual interest rate, and principal and accrued interest are due in full in five years. The loan is secured only by 100,000 common shares of SC Corporation that the CEO acquired through a stock option exercise a year earlier. The loan provides no recourse to any other assets held by the CEO. The current fair value of the pledged shares is $1,500,000. During the term of the loan, the CEO is not permitted to sell or otherwise transfer the pledged shares.

How should SC Corporation account for the loan?

Analysis

Although the loan proceeds are not being used to exercise stock options or purchase stock, the nonrecourse nature of the loan secured by the shares pledged as collateral essentially provides the CEO with rights similar to that of a stock option (as described in ASC 718-10-25-3). Similar to an option, the CEO could choose not to repay the loan and surrender the pledged shares or pay the loan in full and retain the rights to the shares. In other words, the CEO is protected from downside risk but retains unlimited upside potential (whereas prior to the transaction, the CEO was subject to both the upside and downside risk of share ownership). SC Corporation has effectively repurchased the pledged shares and issued the CEO an option to buy back the shares with a strike price equal to the loan principal plus accrued interest.

The repurchase should be accounted for as a treasury stock transaction, and SC Corporation should recognize compensation cost for any excess of the repurchase amount over the fair value of the shares pledged. The repurchase amount is the consideration exchanged for the pledged shares, which in this case is equal to the sum of the cash loaned and the fair value of the in-substance option to buy back the pledged shares. For purposes of this example, assume the company estimated the fair value of the option to be $800,000. The option is the right to buy back the pledged shares at an exercise price

equal to the loan principal plus accrued interest. The expected term of the option would equal the term of the loan (considering prepayment terms, if applicable). SC Corporation would calculate total compensation cost as follows:

Loan proceeds	$1,000,000
Fair value of option	$800,000
Total repurchase price	$1,800,000
Fair value of pledged stock	($1,500,000)
Total compensation cost to be recognized	$300,000

SC Corporation would recognize the compensation expense over the requisite service period, if any, which may differ from the term of the loan. Depending on the circumstances, there may not be a service period associated with the option, in which case compensation cost would be recognized immediately.

SC Corporation would record the following journal entries:

Dr. Treasury stock	$1,500,000	
Cr. Cash		$1,000,000
Cr. Additional paid-in capital		$ 500,000
To recorded issuance of the loan		

Dr. Compensation expense	$300,000	
Cr. Additional paid-in capital		$300,000
To record compensation expense over the requisite service period associated with the arrangement, if any		

2.3.3 *Part recourse and part nonrecourse note to purchase stock*

Within superseded stock compensation literature (Issue 34 of EITF Issue 00-23), there was a discussion on loans that were part recourse and part nonrecourse. Such notes are occasionally used to obtain favorable tax consequences to the employee. Such notes should be accounted for as nonrecourse in their entirety if the note is not aligned with a corresponding percentage of the underlying shares (i.e., the note is not related to a pro-rata portion of the shares).

2.4 *Reloads and clawback features of stock compensation awards*

A reload feature and reload option is defined in the ASC Master Glossary and generally provides for the automatic grant of additional options whenever an employee exercises previously granted options using shares, instead of cash for the exercise price. A clawback typically requires that an employee return the award (or underlying assets) if certain conditions are met (ASC 718-10-55-8). Companies

should not consider those features when determining an award's grant-date fair value. As required by ASC 718-10-30-23 through ASC 718-10-30-24 and ASC 718-20-35-2, those features would only be considered when relevant transactions occur pursuant to those features. As a result, a subsequent option grant under a reload feature would be considered a new and separate award when granted. See also SC 10.2.4 for further discussion on awards with clawback features.

2.5 Vesting conditions for stock-based compensation awards

In order to motivate and retain employees, companies typically require that employees fulfill certain conditions to earn and retain stock-based compensation awards. These are commonly called vesting conditions. An award is legally vested when an employee's right to receive or retain the award is no longer contingent on satisfying the vesting condition.

Exercisability refers to the date when an option may be exercised by the employee. In most cases, the vesting date and the exercisability date are the same. However, option plans sometimes specify conditions in which vesting occurs before the employee is allowed to exercise the option. In that case, an employee who is vested will be able to retain the option after termination of employment even though it cannot be exercised until some future date. Compensation cost is generally recognized from the grant date through the vesting date, but exercisability provisions may affect the expected term assumption and therefore, fair value. See SC 9.3.

While most stock-based compensation awards contain time-based vesting conditions, the terms of some awards contain provisions specifying that vesting, exercisability, or some other factor (e.g., the exercise price) depends on the achievement of an established target, as described in SC 2.5.2 and SC 2.5.3.

2.5.1 Definitions of vesting conditions for stock-based awards

ASC 718 defines three types of vesting conditions:

- Market condition
- Performance condition
- Service condition

The accounting for an award will depend on which conditions are included in the award's terms. If the award is indexed to a factor other than a market, performance, or service condition, the award should be classified as a liability. In some circumstances, awards could have multiple conditions (see SC 2.5.4). Figure SC 2-1 defines and gives examples of each condition.

Figure SC 2-1

Types of vesting/exercisability conditions

	Market condition	Performance condition	Service condition
Definition [Excerpted from ASC 718-10-20, as updated by ASU 2018-07]	A condition affecting the exercise price, exercisability, or other pertinent factors used in determining the fair value of an award under a share-based payment arrangement that relates to the achievement of (a) a specified price of the issuer's shares or a specified amount of intrinsic value indexed solely to the issuer's shares or (b) a specified price of the issuer's shares in terms of a similar (or index of similar) equity security (securities).	A condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that relates to both (a) rendering service or delivering goods for a specified (either explicitly or implicitly) period of time and (b) achieving a specified performance target that is defined solely by reference to the grantor's own operations (or activities) or by reference to the grantee's performance related to the grantor's own operations (or activities). A performance target also may be defined by reference to the same performance measure of another entity or group of entities.	A condition affecting the vesting, exercisability, exercise price, or other pertinent factors used in determining the fair value of an award that depends solely on an employee rendering service to the employer for the requisite service period or a nonemployee delivering goods or rendering services to the grantor over a vesting period. A condition that results in the acceleration of vesting in the event of a grantee's death, disability, or termination without cause is a service condition.
Examples	A stock option that becomes exercisable when the underlying stock price exceeds the exercise price by a specified amount (e.g., $10 above the exercise price).	Award that vests if a sales target of $3 million is achieved. Award that vests as a result of achievement of a defined EPS target.	Award that vests if the employee provides three years of service.
	Award for which vesting depends on the movement of the underlying stock or total shareholder return (TSR) relative to a market index of peer companies. Award that vests based upon a specified rate of return to a controlling shareholder (e.g., internal rate of return, multiple of invested capital). An award that vests when the company achieves a specified market capitalization.	Award that vests as a result of an initial public offering, some other financing event, a change in control, or the company's achieving a specified growth rate in its return on assets.	Award that vests upon an employee's death, disability, or termination without cause.

2.5.2 Market conditions of stock-based compensation awards

An award with a market condition is accounted for and measured differently from an award that has a performance or service condition. The effect of a market condition is reflected in the award's fair value on the grant date (e.g., using an advanced option-pricing model, such as a lattice model). That fair value will be lower than the fair value of an identical award that has only a service or performance condition because the effect of the market condition results in a discount relative to the fair value of an award without a market condition. All compensation cost for an award that has a market condition should be recognized if the requisite service period is fulfilled, even if the market condition is never satisfied (i.e., even if the award never vests). This is because the likelihood of achieving the market condition is incorporated into the fair value of the award.

2.5.3 Performance and service conditions that affect vesting

For an award with a performance and/or service condition that affects vesting, the performance and/or service condition is not considered in determining the award's fair value on the grant date. For companies that elect to estimate forfeitures (see SC 2.7.1), service conditions should be considered when a company is estimating the quantity of awards that will vest (i.e., the pre-vesting forfeiture assumption). Compensation cost will reflect the number of awards that are expected to vest and will be adjusted to reflect those awards that do ultimately vest.

A company should recognize compensation cost for awards with performance conditions if and when the company concludes that it is probable that the performance condition will be achieved. ASC 718's use of the term probable is consistent with that term's use in ASC 450, *Contingencies*, which refers to an event that is likely to occur (ASC Master Glossary). If there are multiple potential outcomes of the performance conditions that can affect the quantity or terms (e.g., exercise price or contractual term) of an award, the company should calculate a grant-date fair value for each potential outcome, and recognize compensation cost based on the value associated with the probable outcome, consistent with ASC 718-10-30-15. A company should reassess the probability of vesting at each reporting period for awards with performance conditions and adjust compensation cost based on its probability assessment. A company should recognize a cumulative catch up adjustment for such changes in its probability assessment in subsequent reporting periods, using the grant date fair value of the award whose terms reflect the updated probable performance condition, consistent with the guidance in ASC 718-10-55-78 and ASC 718-10-55-79.

In certain situations, a company may not be able to determine that it is probable that a performance condition will be satisfied until the event occurs. For example, a company typically cannot conclude it is probable that a liquidity event, such as a change in control of the company, will occur until the date of consummation of the liquidity event because such an event is outside the company's control. Accounting for the related compensation expense at the time the event occurs is also consistent with the guidance in ASC 805-20-55-50 through ASC 805-20-55-51, which states that termination benefits triggered by the consummation of a business combination should be recognized when the business combination is consummated.

A distinction, however, should be made between the sale of an entire entity (i.e., a change in control) and the sale of a portion of an entity that is a business (e.g., a business unit). When considering probability for the sale of a business unit, the threshold for the sale is analyzed differently than for the sale of the entity. If the sale of a business unit were to meet the "held for sale" criteria of ASC 360, *Property, Plant and Equipment*, the sale may be considered probable because meeting the held-for-sale criteria creates the presumption that management controls the sale.

Example SC 2-3 illustrates the accounting for awards with performance conditions.

EXAMPLE SC 2-3

Award with performance conditions

On January 1, 20X1, SC Corporation grants stock options to employees that vest in three tranches based on achieving a defined EBITDA target in each of the next three years (20X1, 20X2, and 20X3). The employees must also provide service for the entire three years to vest in the options. For example, the first tranche of options vests based on achieving a defined EBITDA target in 20X1 and the employees providing service through the end of 20X3. No employees are expected to terminate employment during the three-year period and SC Corporation estimates forfeitures.

As of the grant date, SC Corporation believes the 20X1 and 20X2 EBITDA targets are probable of achievement, but the EBITDA target for 20X3 is not.

How should the SC Corporation account for the performance conditions?

Analysis

SC Corporation should measure the fair value of the awards at grant date without regard to the vesting condition and should recognize compensation cost for the awards that are expected to vest—i.e., the tranches with an EBITDA target that is probable of being achieved. In this example, SC Corporation should begin recognizing compensation cost for the first and second tranches. SC Corporation should reassess the probability of achieving the performance conditions at each reporting period and record a cumulative catch-up adjustment for any changes to its assessment (which could be either a reversal or increase in expense).

2.5.3.1 *Performance conditions satisfied after the service period*

Generally, an award with a performance condition also requires the employee to provide service for a period of time. The service period can either be explicitly stated in the award or implied such that the award is forfeited if employment is terminated prior to satisfying the performance condition. In some circumstances, however, an employee is entitled to vest in and retain an award regardless of whether the employee is employed on the date the performance target is achieved. In other words, the employee is not required to provide continued service through the satisfaction of the performance condition to retain the award.

An example is an award that vests if an employee provides four years of service *and* the company completes an IPO. In this example, the employee is not required to be employed at the date of the IPO. In other words, the employee could terminate his or her employment after four years, but still retain the right to vest in the award if the company completes an IPO at a later date prior to the expiration of the award.

Another example is an award with a performance condition granted to an employee who is eligible for retirement, when the award allows for continued vesting if the performance target is achieved post-retirement. As discussed in SC 2.6.7, in this fact pattern, the service period ends on the date the employee is eligible to retire because no further service is required to retain the award.

Performance targets that affect vesting and could be achieved after the service period should be accounted for similar to other performance conditions. Therefore, such a condition should not be reflected in estimating the fair value of the award on the grant date. Rather, compensation cost should be recognized over the requisite service period (i.e., only the period the employee must provide service) if it is probable that the performance target will be achieved.

In periods subsequent to the service period, compensation cost is adjusted if the probability assessment changes. For example, if during the service period, it is not probable the performance target will be achieved, no compensation cost is recognized. If after the service period is completed, it becomes probable that the target will be achieved, compensation cost should be recognized immediately.

Similar to other awards with performance conditions, entities should consider whether the condition is a substantive vesting condition. For example, if a mechanism exists for the employees to receive value from the award even if the performance target is never achieved (e.g., through rights to dividends or dividend equivalents, put or call rights, transferability provisions or other features), the condition may not be a substantive vesting condition. A condition that is not substantive does not affect recognition of compensation cost.

Example SC 2-4 illustrates the accounting for an award with a performance condition and an employer call right.

EXAMPLE SC 2-4

Award with performance condition and employer call right

SC Corporation grants stock options to certain top-level executives that are only exercisable after a triggering event, such as an IPO (performance condition). However, SC Corporation may call the option at the intrinsic value upon an employee's termination. If SC Corporation does not call the option, the individual can continue to hold the option post-termination through the original contractual term and exercise it if an IPO occurs during that time.

How should SC Corporation account for this award?

Analysis

Typically, the value of an award with a performance condition is recognized when it is probable of being achieved. A performance condition, such as a successful IPO, is generally not considered probable until it actually occurs. This would suggest that the expense for these awards would not be recognized until an IPO occurs. However, the existence of the company's call right upon termination of employment raises questions about whether the employee's right to receive value from the award or "vesting" is truly contingent upon the performance condition, or if, in substance, the award always provides value, either upon termination through the employer call right or upon the trigger event. While the employee has no rights to demand value from the company (i.e., it is not a put right), the employee will eventually terminate employment, which would trigger SC Corporation’s call right, and terminating employment is within the employee's control.

If SC Corporation's intention is to exercise the call feature and pay the departing employee for the awards (e.g., if SC Corporation does not want any former employees to hold shares and is willing to provide former employees with liquidity for their awards upon their departure), the award would be

classified as a liability (as it is probable that SC Corporation will prevent the employee from bearing the risks and rewards associated with share ownership for a reasonable period of time) and it would in substance be fully vested upon grant. See SC 3.3.3 for further discussion.

If, however, SC Corporation does not intend to exercise the call feature and can support its intention not to exercise the call feature, then the grant date fair value of the award would be recognized only when the performance condition becomes probable, consistent with ASC 718-10-30-28. This would be appropriate if, for example, SC Corporation does not intend to exercise its call feature and is comfortable with former employees continuing to hold options. Award holders, whether they are employees or former employees, will only receive value upon an IPO, if one occurs during the contractual term of their award.

2.5.4 Performance and service conditions affecting other factors

For performance and service conditions that affect factors other than vesting (e.g., exercise price, number of shares, conversion ratio, or contractual term), companies should compute a grant-date fair value for each possible outcome on the grant date. For example, consider an award that has four different exercise prices based on whether an employee achieves one of four targeted sales thresholds. Each outcome would have a different grant-date fair value and the company should recognize compensation cost for the outcome that is probable. This probability assessment should be updated each reporting period and the company should record a cumulative catch-up adjustment for changes to the probability assessment. If a company concludes that none of the outcomes are probable, no compensation cost should be recognized until such time that an outcome becomes probable. The final measure of compensation cost should be based on the grant-date fair value for the outcome that actually occurs.

ASC 718 provides guidance on and examples of accounting for awards that have market, performance, and service conditions that affect factors other than vesting and exercisability (see ASC 718-10-55-64 through ASC 718-10-55-65 and Example 3, Example 4, and Example 6 in ASC 718-20-55-41 through ASC 718-20-55-67).

Figure SC 2-2 summarizes the key differences among all of the conditions, including certain awards with common multiple conditions, and their effect on fair value.

Figure SC 2-2

Differences among conditions and their effect on fair value

Condition	Effect on grant-date fair value	Effect on compensation cost
Market condition affects vesting	Condition considered in the estimate of fair value on the grant date.	Compensation cost is not adjusted if the market condition is not met, so long as the requisite service is provided.
Performance or service condition affect vesting	The performance or service conditions are not reflected in the estimate of fair value on the grant date.	Compensation cost is recognized only for the awards that ultimately vest.

Condition	Effect on grant-date fair value	Effect on compensation cost
Performance and market condition affect vesting	If both conditions must be met for the award to vest, the market condition is reflected in the estimate of fair value on the grant date.	Compensation cost is not adjusted even if the market condition is not achieved, so long as performance condition is met and the requisite service is provided.
Performance or market condition affects vesting	The fair value recognized depends on whether the performance condition is achieved. The performance condition would not be reflected in the estimate of the fair value, but the market condition would be. Both amounts should be calculated at the grant date.	Compensation cost is adjusted depending on whether or not the performance condition is achieved. If the performance condition is not probable of being achieved, then compensation cost for the value of the award incorporating the market condition is recognized, so long as the requisite service is provided. If the performance condition is probable or becomes probable of being achieved, the full fair value of the award (i.e., without regard for the market condition) would be recognized.
Market condition affects something other than vesting	The market condition is reflected in the estimate of fair value on the grant date.	Compensation cost is not adjusted if the market condition is not met, so long as the requisite service is provided.
Performance or service condition affect something other than vesting	The fair value on the grant date is determined for each potential outcome.	Compensation cost is based on the grant-date fair value of the award for which the outcome is achieved.
Performance and market condition affect something other than vesting	The fair value on the grant date is determined for each potential outcome of the performance condition and the market condition is reflected in the estimate of fair value for each potential outcome.	Compensation cost is based on the grant-date fair value of the award for which the performance condition outcome is achieved and is not adjusted if the market condition is not met, as long as the performance condition is met.

2.6 *Grant date, requisite service period and expense attribution*

Under ASC 718, the fair value of stock-based compensation is recognized over the employee's requisite service period. This section discusses the determination of the grant date, service inception date, and requisite service period, expense attribution and how to account for changes in the requisite service period.

2.6.1 Grant date for stock-based compensation awards

The fair value of an award is measured on the grant date. For equity awards, the fair value is generally not remeasured unless there is a modification. For liability-classified awards, the fair value is remeasured each period until settlement. This difference is summarized in Figure SC 2-3. Refer to SC 3 for further discussion of liability-classified awards.

Figure SC 2-3
Balance Sheet classification

Award classification	Measurement effect
Liability	Variable—Remeasured at the end of each reporting period, at fair value, until settlement
Equity	Fixed—Measured at fair value on the grant date and not remeasured unless the award is modified

A grant date is established when the following criteria are met:

- The employer and its employees have reached a mutual understanding of the award's key terms and conditions.
- The company is contingently obligated to issue shares or transfer assets to employees who fulfill vesting conditions.
- An employee begins to benefit from, or be adversely affected by, subsequent changes in the employer's stock price (e.g., the exercise price for an option is known at the grant date). However, this criterion would not apply if the award does not ultimately depend on subsequent changes in the stock price, such as fixed dollar awards settleable in a variable number of shares. See SC 3.3.2.3.
- Awards are approved by the board of directors, management, or both if such approvals are required, unless perfunctory.
- The recipient should meet the definition of an employee (i.e., grant date cannot be established prior to first day of employment) if the award is for employee service.

Awards offered under a plan that is subject to shareholder approval are not considered granted until the approval is obtained, unless such approval is essentially a formality (or perfunctory). That is, if management and board members control enough votes to approve the plan, the vote may be considered perfunctory (i.e., approval may be automatically assumed).

In some situations, the board of directors approves a pool of awards and delegates authority to management to allocate the pool to individual employees. The awards are not considered "approved," as required by the grant date criteria, until management approves the allocation of the pool to individual employees.

A mutual understanding of the key terms and conditions of an award exists at the date the award is approved by the board of directors or other management with relevant authority if the following conditions are met (ASC 718-10-25-5):

- The award is a unilateral grant and, therefore, the recipient does not have the ability to negotiate the key terms and conditions of the award with the employer.
- The key terms and conditions of the award are expected to be communicated to an individual recipient within a relatively short time period from the date of approval.

ASC 718-10-25-5(b) provides that "a relatively short time period" should be determined based on the period during which an entity could reasonably complete the actions necessary to communicate the terms of an award to the recipients in accordance with the entity's customary human resource practices. We believe that "a relatively short time period" should generally be measured in days or weeks, not months. Companies should consider their individual facts and circumstances to define a reasonable period of time for communicating to employees, which may be impacted by factors such as the method of communication (e.g., in person or via e-mail) and the number and geographical location of employees receiving awards.

Example SC 2-5, Example SC 2-6, and Example SC 2-7 illustrate the determination of the grant date. These examples do not address whether the service inception date might precede the grant date, as discussed in SC 2.6.4.

EXAMPLE SC 2-5

Determining grant date – stock options

On January 1, 20X1, SC Corporation approves a stock option award with a vesting period that begins on February 1, 20X1. All of the recipients are employees that are already providing service as of January 1, 20X1. All of the terms and conditions of the award are approved on January 1, 20X1 and communicated to the employees within a relatively short time period, except that the exercise price of the options will be equal to the market price of SC Corporation's stock on February 1, 20X1.

What is the grant date of the award?

Analysis

The grant date is February 1, 20X1 because the exercise price of the options is not established until that date. As a result, the employees do not begin to benefit from, or be adversely affected by, subsequent changes in the employer's stock price until February 1, 20X1.

EXAMPLE SC 2-6

Determining grant date – restricted stock

On January 1, 20X1, SC Corporation approves a restricted stock award with a vesting period that begins on February 1, 20X1. The board of director's approval states that the award is "granted" as of February 1, 20X1. All of the recipients are employees that are already providing service as of January 1, 20X1. All of the terms and conditions of the award are approved on January 1, 20X1 and communicated to the employees within a relatively short time period.

What is the grant date of the award?

Analysis

The grant date is likely January 1, 20X1. Even though the board of director's approval states that the grant date is February 1, the grant date should be determined based on the grant date requirements in ASC 718. As of January 1, 20X1, the requirements for establishing a grant date appear to be met as all of the key terms and conditions have been approved and were communicated within a relatively short time period. Additionally, because it is a restricted stock award (as opposed to an option with an unspecified exercise price), the employees begin to benefit from, or be adversely affected by, subsequent changes in the employer's stock price on January 1, 20X1.

EXAMPLE SC 2-7

Determining grant date – award authorized prior to first day of employment

SC Corporation offers the position of CEO to an individual on April 1, 20X1, which has been approved by the board of directors. In addition to offering a salary and other benefits, SC Corporation offers 10,000 shares of restricted stock that the prospective CEO would vest in upon completing five years of service. The CEO begins vesting in the award on the date that he begins work.

The individual accepts the CEO position on April 2, 20X1, but does not begin providing services until June 2, 20X1.

What is the grant date of the award?

Analysis

The grant date is June 2, 20X1, when the individual begins employment because the award is for employee service.

2.6.1.1 Grant date for awards with performance conditions

A mutual understanding of the terms and conditions does not exist if the award has a performance condition, but the performance target has not yet been defined. For example, if the performance target has not yet been approved or the target is based on a budget that is not yet approved, the grant date requirements are not met until such approval is obtained. The performance targets also must be communicated to employees (or communicated within a "relatively short time period," as discussed in SC 2.6.1).

To establish a grant date, performance targets should be objectively determinable and measurable. For example, a mutual understanding of the terms and conditions might not exist if the compensation committee has the ability to adjust, at its discretion, how performance against the performance target will be measured. When assessing if the discretion by the compensation committee (or others with authority over the compensation arrangement) impacts the grant date determination, a company should consider:

- How often the compensation committee has made adjustments in the past and the nature of those adjustments

- Whether there are objective criteria for making adjustments to an award
- Whether the holders of the award have an understanding of when and how the terms of the award will be adjusted

Conditions based on the employee's individual performance also need to be clear and objective. If targets are based on employee evaluations and performance ratings, the evaluation process should be well-controlled and understood by the employee, be reasonably objective, and serve as a basis for promotion and other compensation decisions. Otherwise, the grant date criteria would not be met until the performance evaluation is completed.

Example SC 2-8 and Example SC 2-9 illustrate the determination of a grant date for awards with performance conditions.

EXAMPLE SC 2-8

Determining grant date for an award with a performance condition

On January 1, 20X1, SC Corporation grants options to employees that vest in three tranches based on achieving an EBITDA target in each of the next three years (20X1, 20X2, and 20X3). The target for each year will be approved by the board of directors on January 15 of the respective year. For example, the EBITDA target for 20X1 (the first tranche) is approved on January 15, 20X1. The EBITDA target will be communicated to employees shortly after the approval date. Assume all other terms and conditions of the award are approved as of January 1, 20X1.

What is the grant date of the award?

Analysis

Each tranche of the award has a separate grant date, which is the date the EBITDA target is approved by the board of directors. While there may be a process in place to approve EBITDA targets, because the board of directors has discretion in determining and approving the target, a mutual understanding of the terms and conditions does not exist until the target is approved. The first, second, and third tranches will have a grant date of January 15, 20X1, January 15, 20X2, and January 15, 20X3, respectively.

EXAMPLE SC 2-9

Determining grant date – award with multiple performance targets

On January 1, 20X2, SC Corporation grants restricted stock to an executive that vests at the end of the year based on continued service and achieving the following performance targets:

- 50% of the shares vest if total revenue growth for 20X2 exceeds 10% as compared to 20X1
- 50% of the shares vest if the holder of the award achieves “satisfactory progress in developing new products” for the executive’s business unit

SC Corporation’s process for evaluating “satisfactory progress in developing new products” is highly subjective and the executive is not provided clear guidelines or objective criteria for meeting the target. The decision about whether the target is met will be made by the compensation committee.

What is the grant date of the award?

Analysis

Based on the facts provided, the grant date for the 50% portion of the award that vests based on revenue growth is January 1, 20X2. Even though the executive does not yet know the actual dollar amount of revenue required to achieve the target (as the financial statements for 20X1 have not yet been prepared and total revenue for the year is not yet known), how revenue growth will be calculated is known and objectively determinable and therefore, there is a mutual understanding of the terms and conditions.

However, a grant date for the 50% portion of the award for which vesting depends on satisfactory progress in developing new products will not occur until the compensation committee determines whether the target has been met. This is because there is not a mutual understanding of the terms and conditions of this portion of the award given the highly subjective process for evaluating whether the target has been met.

2.6.2 Requisite service period for stock compensation awards

The fair value of stock-based compensation is recognized in a company's financial statements over the requisite service period through a charge to compensation cost and a corresponding increase to additional paid-in capital or to a liability, depending on the classification of the award. The requisite service period is the period during which an employee is required to provide service in exchange for stock-based compensation. It could be explicit, implicit, or derived, depending on the terms of the award.

The requisite service period generally commences on the grant date. However, initial recognition of compensation cost may precede the grant date or begin after the grant date in certain circumstances (as discussed in SC 2.6.4 and SC 2.6.5). Additionally, if an award requires future service, the requisite service period is presumed to be only for the future service and expense is recognized prospectively. Therefore, a company cannot conclude that a period before the earlier of the service inception or grant date is part of an award's requisite service period. However, for an award that is fully vested on the grant date, all compensation cost would be recognized on the grant date.

The requisite service period should be based on an analysis of the award's terms, as well as other relevant facts and circumstances (e.g., employment agreements, company prior practice). ASC 718-10-55-109 through ASC 718-10-55-115 provides additional details on determining the requisite service period and includes several examples.

Figure SC 2-4 provides definitions and examples of the terms used in ASC 718 to assist in determining the requisite service period.

Figure SC 2-4

Definitions and examples of a requisite service period

Definitions	Examples	Requisite service period
Explicit service period is stated in the terms of the stock-based compensation award.	An award will vest after four years of continuous service that starts on the grant date.	The award has an explicit service period and a requisite service period, comprising four years.
Implicit service period is inferred from an analysis of other terms in the award, including explicit performance or service conditions.	An award will vest upon the completion of a new product's design that is expected to be finished in 36 months.	The implicit requisite service period is 36 months.
Derived service period is determined based on certain valuation techniques that are used to estimate fair value. This principally applies to awards that have market conditions.	An award will become exercisable if the stock price increases by 100% at any time during a five-year period.	The requisite service period can be derived from a lattice model that is used to estimate fair value.

The requisite service period for an award with a market condition may be derived through certain valuation techniques (e.g., a lattice model). See SC 8.5 for a description of a lattice model. The valuation technique is summarized below:

- In a lattice model, the derived service period represents the duration of the median (as defined in the next two bullets) of the distribution of stock-price paths on which the market condition is satisfied.
- The duration is the period of time from the service inception date to the expected date that the market condition will be satisfied (as inferred from the valuation technique).
- The median is the middle stock-price path (the mid-point of the distribution of paths) on which the market condition is satisfied.

The requisite service period for an award with a service condition may be a derived service period if the award is deep out-of-the-money on the grant date. In that situation, the explicit service period of the award may not be substantive because the employee may be required to provide service for some period of time in order to obtain any value from the award (if retention of the award is effectively contingent on employment because it has a short period of time during which it can be exercised after termination). If a deep out-of-the-money award is determined to also have a derived service period, the requisite service period should be based on the longer of the explicit service period and the derived service period. Generally, the derived service period of a deep out-of-the-money award would be determined by using a lattice model because the award effectively contains a market condition.

Figure SC 2-5 summarizes how an award's requisite service period may be determined based on the nature of the vesting condition that the award contains.

Figure SC 2-5

Determining requisite service based on an award's condition

Nature of condition	Potential type of requisite service period
Service condition	Explicit or derived
Performance condition	Explicit or implicit
Market condition	Explicit or derived

Throughout this guide, the terms "vested" and "partially vested" are generally used to describe awards for which the employee has completed the requisite service period or partially completed the requisite service period, respectively. As used within this guide, "vested" or "partially vested" may not be equivalent to legally vested, which represents the date or event upon which the employee has fulfilled the vesting condition and can terminate service from the employer and retain the award.

2.6.3 Expense attribution for stock-based compensation awards

Under ASC 718-10-35-2, compensation cost for an award of share-based compensation is recognized over the requisite service period. This is generally referred to as the "attribution of expense."

Example SC 2-10 illustrates the attribution of expense.

EXAMPLE SC 2-10

Expense recognition when vesting begins before the grant date

On April 1, 20X1, SC Corporation's compensation committee approves a stock option award for certain members of management. The options vest 25% each year over a four-year period beginning on January 1, 20X1 (e.g., the first tranche will vest on December 31, 20X1) based only on continued service. The grant date of the options is April 1, 20X1 because approval of the options was obtained and all terms and conditions were known on that date. The service inception date is also April 1, 20X1 because the requirements to establish a service inception date prior to the grant date have not been met. Accordingly, SC Corporation did not record any compensation cost related to the options prior to April 1, 20X1.

The total grant-date fair value of the award is $100,000 and the options are equity-classified. SC Corporation's policy is to use the straight-line attribution approach to recognize compensation cost for options with graded vesting features and only service conditions.

Should SC Corporation record a "catch-up" entry on April 1, 20X1 to account for the shortened vesting period in the first year (i.e., the vesting "credit" given for the three months prior to the grant date)?

Analysis

No. SC Corporation should record compensation cost prospectively beginning on the grant date. ASC 718 requires compensation cost to be recognized over the requisite service period. The definition of requisite service period states that if an award requires future service for vesting, a company cannot define a prior period as the requisite service period. Therefore, SC Corporation should not record a "catch-up" entry on April 1, 20X1.

However, SC Corporation will need to consider the requirement in ASC 718-10-35-8 that the amount of compensation cost recognized at any date must at least equal the portion of the grant-date value of the award that is legally vested (the "floor" concept). When the first tranche of options vests on December 31, 20X1, SC Corporation should ensure it has recorded at least $25,000 ($100,000 x 25%) of compensation cost related to the award. Therefore, it would be appropriate for SC Corporation to anticipate the "floor" before the legal vesting "trigger" is met and recognize $25,000 of compensation cost ratably over the period from April 1, 20X1 through December 31, 20X1. The remaining $75,000 of compensation cost would be recognized over the period from January 1, 20X2 through the final vesting date.

2.6.4 Service inception date – prior to grant date

The “service inception date” is the first day of the requisite service period and the date on which a company would begin to recognize compensation cost. If the following criteria are satisfied, the service inception date could precede the grant date (ASC 718-10-55-108 through ASC 718-10-55-109):

- An award is authorized.
- Service begins before there is a mutual understanding of the key terms and conditions of a stock-based compensation award (e.g., an employee providing service is granted an award where the exercise price will be set at a future date).
- Either of the following conditions exist:
  - The plan or award’s terms do not include a substantive future requisite service condition on the grant date (e.g., at the grant date the award is vested).
  - The plan or award contains a market or performance condition that if not satisfied during the service period preceding the grant date and following inception of the arrangement results in forfeiture of the award (refer to ASC 718-10-55-114).

For example, an award’s service inception date may precede the grant date when a vested award is issued to an employee but the exercise price is set at a later date. The award’s grant date would be the first date on which the exercise price and the current stock price are known to provide a sufficient basis for the employee to understand and bear the risks and rewards of equity ownership.

In contrast, if an unvested award with only a service condition is awarded with an exercise price to be determined at a later date and the award requires the employee to provide future service after the date the exercise price is determined, the service inception date would not precede the grant date because the award requires substantive future service. In this scenario, both the service inception date and the grant date would be the date on which the exercise price is known.

If it is determined that the service inception date precedes the grant date, a company should accrue compensation cost beginning on the service inception date. The company should estimate the award’s

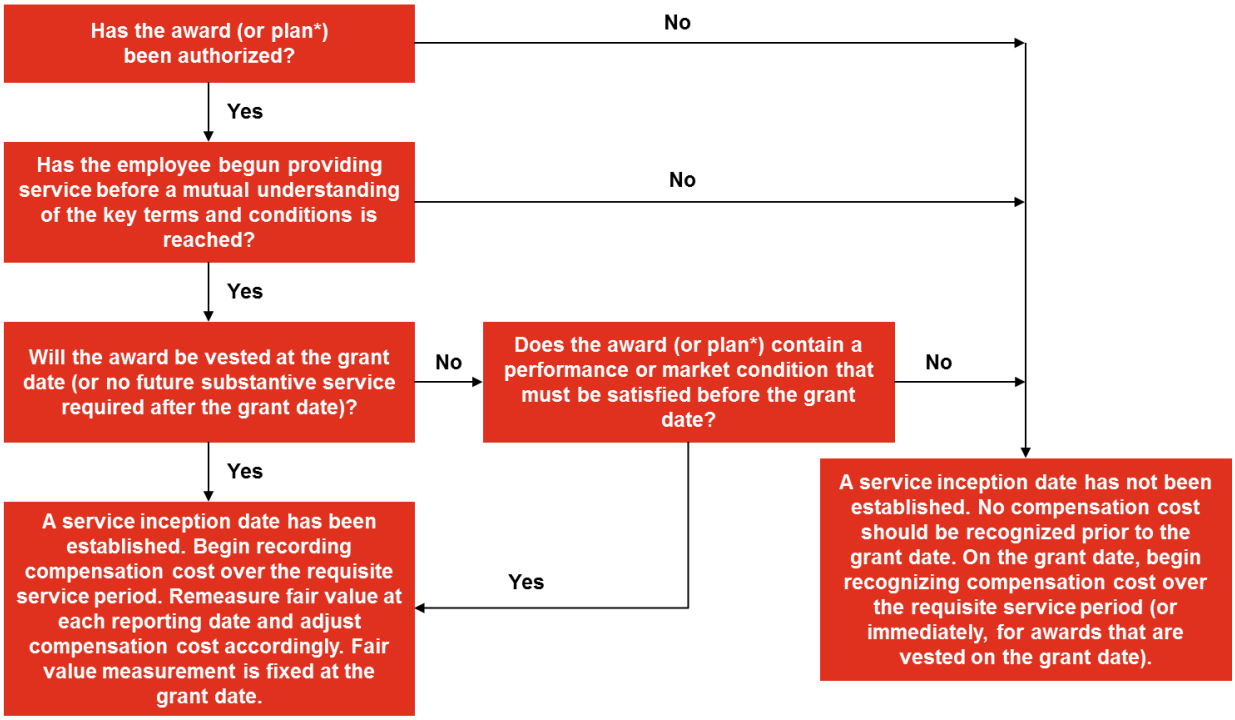
fair value on each subsequent reporting date (i.e., remeasure each period at fair value) until the grant date. On the grant date, the estimate of an equity-classified award's fair value is fixed; therefore, the cumulative amount of previously-recognized compensation cost should be adjusted to the grant date fair value, and the company would no longer remeasure the award. If the award is liability classified, it would continue to be marked to fair value each reporting period until settlement.

If an award is cancelled and replaced with a new award during the period prior to the grant date, the company would remeasure fair value as of the issuance of the new award and adjust the cumulative amount of previously-recognized compensation cost.

Figure SC 2-6 summarizes the criteria for establishing the service inception date prior to the grant date.

Figure SC 2-6

Summary of service inception date criteria



* The reference to the plan in ASC 718-10-55-108 is based on our view that a company could elect to interpret these criteria in the context of the plan as a whole, as opposed to individual awards.

Example SC 2-11 illustrates the determination of whether the service inception date criteria are met.

EXAMPLE SC 2-11

Service inception date – assessing whether the award is authorized

On January 1, 20X1, SC Corporation's board of directors approves an overall compensation plan that includes terms of performance awards to be granted to employees. The performance awards are based on SC Corporation achieving an EBITDA target during 20X1. The employees will vest in the awards if the target is achieved and the employees provide service for two additional years (i.e., through

December 31, 20X3). At the time of board approval, the employees are aware of the compensation plan, and that if the EBITDA target is achieved an award will be granted. However, other key terms and conditions, such as the number of awards allocated to each employee, will not be communicated until the end of 20X1. As a result, the grant date criteria are not met until December 31, 20X1.

Are the service inception date criteria met as of January 1, 20X1?

Analysis

It depends. The employees are beginning to provide service and the award contains a performance condition (EBITDA target) that must be achieved prior to the grant date. However, the assessment of whether the award has been authorized requires judgment and careful assessment of the facts and circumstances. A broad interpretation of "authorization" could result in a conclusion that the awards are authorized as of January 1, 20X1 even though the number of awards allocated to each employee has not yet been finalized. This interpretation is based on the fact that (1) the board of directors has approved an overall compensation plan that includes the stock-based compensation awards, and (2) the employees broadly understand the compensation plan, including an awareness that if certain goals are met, there is an expectation that awards will be granted.

Additional factors that may be important to the analysis might include:

- Whether the compensation plan summarizes the process of how awards will be allocated to the employees and how the number of awards or monetary amount of the awards will be determined (e.g., based on certain performance metrics that are defined or understood either through formally authorized policy or established practices).

- The substance of the approval process to finalize the award, including the amount of discretion that the board of directors has to deviate from the previously-approved compensation plan.

Under a narrow interpretation, SC Corporation might conclude that the awards have not been authorized as of January 1, 20X1 because the number of awards granted to individual employees has not yet been authorized.

Although each set of facts and circumstances is unique, in general, we believe that the use of the broad or narrow interpretation described in Example SC 2-11 is an accounting policy and should be applied consistently to all similar awards.

2.6.5 *Service inception date–after grant date*

The service inception date can also occur after the grant date. Typically, as of the grant date, an employee has begun providing service toward earning an award and therefore, a company should begin recording expense. However, ASC 718-10-55-94 provides an example of a situation when the service inception date is after the grant date. In that example, there is an award consisting of four tranches with the same grant date and four separate annual performance targets. The employee vests in each tranche based on achieving the annual performance target and providing service during the respective year. The example concludes that each tranche should be accounted for as a separate award with its own service inception date as of the beginning of the year to which the performance condition relates. The conclusion is based on the following factors:

- Each tranche contains an independent annual performance condition that relates to service during the respective separate annual period.
- The employee's ability to vest in each tranche is not dependent on service beyond the related year.
- The failure to satisfy the performance condition in any one particular year has no effect on the vesting of any preceding or subsequent period's tranche.

We believe this conclusion should only be applied to fact patterns in which all of the above factors are present.

2.6.6 Service completion date for stock-based compensation awards

The requisite service period generally ends on the service completion date. The service completion date occurs when an employee completes the requisite service period (i.e., the employee is no longer required to provide any additional service to retain the award). For example, for an award with an explicit service condition, the service completion date is the final date that an employee is required to be employed by the company in order to retain the award. In contrast, the service completion date for an award with an implicit performance condition would be the date that an employee achieves the target specified in the award's terms while being employed by the company. The service completion date of an award with a market condition is usually the earlier of (1) the date on which the market condition is satisfied or (2) the date on which the derived service period is completed, even if the market condition is not satisfied.

2.6.7 Awards with accelerated vesting upon retirement

Many companies have plans with terms that provide for the immediate vesting of an employee's awards when the employee retires (e.g., defined parameters for eligible retirements, such as the sum of age and years of service), sometimes with immediate exercisability or alternatively, with exercisability following the original vesting schedule. In those cases, the service completion date is the date that the employee is eligible to retire, not the probable or actual date of retirement, because the employee is not required to provide any future service beyond that eligibility date in order to retain the award.

For awards granted to retirement-eligible employees where no service is required for the employee to retain the award, application of ASC 718-10-55-87 through ASC 718-10-55-88 results in the immediate recognition of compensation cost at the grant date because the employee is able to retain the award without continuing to provide service. This may also be relevant in assessing whether a service inception date has been achieved prior to grant date (see SC 2.6.4). For employees near retirement eligibility, attribution of compensation cost should be over the period from the grant date to the retirement eligibility date.

A company should consider other terms of an award that could impact the date the employee is eligible to retire, such as a required notice period. For example, if a retirement-eligible employee must provide six months' notice before their retirement date, the initial service period is six months. We believe a company could recognize all of the compensation expense over six months in this fact pattern. Alternatively, the company could continuously update its estimate of the service period each reporting period if the employee has not yet given notice (i.e., the revised estimate would extend six months from the reporting date), with updates to the estimate accounted for on a prospective basis. A company should apply its policy consistently to similar awards. It would not be appropriate for a

company to estimate when they expect the employee to retire and recognize compensation expense over that estimated period.

Unlike the attribution of compensation cost, when estimating the probable retirement date would be inappropriate, the expected vesting (i.e., retirement) date, as well as expected exercise behavior, will be necessary to determine the expected term assumption in measuring the fair value of the award.

2.6.8 Noncompete provisions in stock-based compensation awards

In some situations, compensation arrangements may contain noncompete provisions. Under a typical noncompete provision, the employee may be required to return the award (or the cash equivalent) if the employee terminates employment with the company and is subsequently employed by a competitor during the term of the noncompete agreement. Examples 10 and 11 of ASC 718-20-55-84 through ASC 718-20-55-92 illustrate the accounting for stock-based compensation awards that include noncompete provisions.

In Example 10, the FASB concluded that the noncompete provision does not compel the employee to provide service and therefore does not affect the requisite service period. This noncompete provision is treated as a clawback feature, which is accounted for if and when the employee violates the noncompete provision and the award or the cash equivalent are returned. Thus, the compensation cost associated with the award is recognized based on the stated vesting terms, without consideration of the noncompete agreement. If the award is fully vested upon issuance, or if the recipient is retirement-eligible, compensation cost is recognized immediately.

Conversely, in Example 11, the FASB concluded that the noncompete provision essentially creates an in-substance requisite service period because the facts and circumstances indicate that the employee was essentially in the same position as they would have been if an explicit vesting period had existed. In other words, the noncompete provision functions as an in-substance vesting condition. In this example, even if the award was fully vested, or the recipient was retirement eligible, compensation cost would be recognized over the term of the noncompete agreement.

A noncompete provision creates an in-substance requisite service period if it compels the employee to continue providing service to the company in order to receive the award. The fact that the noncompete provision is substantive is not, by itself, sufficient to conclude that the provision compels the employee to remain in active service.

When assessing the impact of noncompete provisions, companies should consider:

- The amount of the stock-based compensation award as compared to the employee's other compensation. In Example 11 of ASC 718-20-55-87 through ASC 718-20-55-92, the stock-based compensation award has a value that is four times greater than the employee's annual cash compensation. The greater the relative value of the stock-based compensation award, the more likely it is that the employee would continue to provide service to the company in order to receive the award.

- The severity of the effect of the noncompete agreement on the employee's ability to gain employment elsewhere.

- The company's intent and ability to enforce the noncompete and the company's past practice of enforcing noncompete agreements.

- The ability of the employee to obtain access to the award (e.g., whether the award is subject to a delayed-transfer schedule that coincides with the period of the non-compete agreement).
- Employer's past practice with respect to employees who may have violated the noncompete agreements (if relevant).
- Circumstances specific to the individual employees.

In our experience, most noncompete provisions do not create an in-substance service condition. This may be an appropriate presumption unless there is persuasive evidence that the provision compels the employee to remain in active service to receive the award. We expect that instances when a noncompete provision creates an in-substance service condition will be rare.

2.6.9 Multiple service periods in stock-based compensation awards

Awards with multiple market, performance, or service conditions may have terms that specify multiple service periods. For accounting purposes, however, an award can have only one requisite service period.

A company should develop its estimate of the requisite service period based on an analysis of (1) all vesting and exercisability conditions, (2) all explicit, implicit, and derived service periods, and (3) the probability that performance or service conditions will be satisfied (ASC 718-10-55-72). Figure SC 2-7 summarizes this analysis.

Figure SC 2-7

Determining a requisite service period for an award with multiple explicit, implicit, or derived service periods

Conditions	Requisite service period
▫ Market condition **and** ▫ Either performance or service conditions that are probable of being satisfied	**Longest** of the explicit, implicit, or derived service periods, because all of the conditions need to be satisfied.
▫ Market conditions **or** ▫ Either performance or service conditions that are probable of being satisfied	**Shortest** of the explicit, implicit, or derived service periods, because vesting occurs upon satisfaction of any of the award's conditions.

If an award contains both a market and a performance condition, but the performance condition is not probable of being satisfied, compensation cost is not recognized until the performance condition becomes probable. An example is an award granted by a nonpublic company that vests only upon a liquidity event (performance condition — e.g., an initial public offering or change in control) and the achievement of a specified internal rate of return (IRR) to the existing principal shareholder (typically, a private equity firm) (market condition). As discussed in SC 2.5.3, the liquidity event would not be considered probable until the date it occurs. Therefore, no compensation cost would be recognized related to this award until the liquidity event occurs. At that date, compensation cost equal to the

grant-date fair value (assuming all criteria for equity classification are met) would be recorded, regardless of whether the market condition is satisfied.

2.6.10 Changes to the requisite service period of awards

A company may change its initial estimate of the requisite service period based on the original terms of the award. See SC 4.3.6 for a discussion of modifications to an award that may affect the award's requisite service period.

Figure SC 2-8 summarizes when a company can change its estimate of the requisite service period for an equity-classified award, as described in ASC 718-10-55-77 through ASC 718-10-55-79.

Figure SC 2-8

Changes to the requisite service period for an equity-classified award

Basis for initial estimate of the requisite service period	Required change to the requisite service period
Performance or service condition	Change the requisite service period if subsequent information indicates that: □ It is probable that the performance condition will be achieved within a different time period **or** □ Another performance or service condition becomes the probable outcome
Market condition	Do not change the requisite service period unless the market condition is satisfied before the end of the initially estimated requisite service period
Market condition and a performance or service condition [The initial estimate of the requisite service period is based on the market condition's derived service period.]	Do not change the requisite service period unless: □ The market condition is satisfied before the end of the derived service period **or** □ Satisfying the market condition is no longer the basis for determining the requisite service period

The requisite service period for a liability-classified award is generally updated each reporting period in conjunction with the remeasurement of the award.

We believe that for liability-classified awards with market conditions that have a derived service period, there are two acceptable alternatives that can be applied:

- Periodic update method: Revise the remaining service period each reporting period in conjunction with the remeasurement of the award.

- Grant date method: Do not update the service period; in other words, the estimate of the requisite service period at the grant date (or service inception date if that date precedes the grant date) is not changed in future periods when the lattice model is updated for changes in measuring the fair value of liability-classified awards.

The choice of an approach is an accounting policy election that must be applied consistently.

2.6.11 Recognition effect of changes to requisite service period

As Figure SC 2-8 describes, a company may change its initial estimate of requisite service period in certain circumstances. However, not all such changes are treated the same:

- If either the quantity or grant-date fair value of an award changes because another performance or service condition becomes probable of satisfaction (e.g., the performance condition affects exercise price), that change will be accounted for as a "cumulative effect" (for the portion of the requisite service period that has been rendered) on both current and prior periods in the period of the change.

- If an initially estimated requisite service period changes solely because another market, performance, or service condition becomes the basis for the requisite service period, any unrecognized compensation cost at that date will be recognized prospectively over the revised requisite service period, if any (i.e., no "cumulative effect" adjustment recognized).

Example SC 2-12, Example SC 2-13 and Example SC 2-14 illustrate how a company should consider necessary adjustments to the requisite service period over the life of the award, based on the type of vesting condition.

EXAMPLE SC 2-12

Changes to the requisite service period for an award with service and performance conditions

On January 1, 20X1, SC Corporation grants two executives a total of 100,000 stock options. The grant-date fair value is $10 per option. The terms of the award specify that the award will vest if both of the following conditions are satisfied: (1) the completion of a new product design (i.e., a performance condition) and (2) the executive is employed on the date the new product design is completed (i.e., a service condition). At the grant date, SC Corporation determines that it is probable that the new product design will be completed two years from the grant date. SC Corporation also believes the executives will be employed on that date.

What is the appropriate requisite service period?

Analysis

When determining the requisite service period, SC Corporation must assess the probability that the performance condition will be satisfied. As it is probable both of the conditions will be met, the requisite service period would be two years. SC Corporation would recognize $500,000 ($10 fair value × 100,000 options = $1,000,000 ÷ 2-year service period) of compensation cost each year.

Because the award has a performance condition, SC Corporation must reassess the probability of satisfaction of the performance condition each reporting period. If a year after the grant date, SC Corporation determines that it is now probable that the performance condition will be satisfied in three years (i.e., two years from the current date and one year longer than originally estimated), SC Corporation must adjust its accounting for the awards.

Assuming it is probable that the executives will employed for the next two years, the remaining requisite service period would be two years, as compared to the one year remaining requisite service period based on SC Corporation's original estimate.

The change in the requisite service period affects only the attribution of expense. The fair value of the award is not remeasured. Therefore, SC Corporation should account for the change in estimated requisite service period prospectively. SC Corporation should record the remaining unrecognized compensation cost of $500,000 over the remaining two years of the updated requisite service period ($250,000 each year).

EXAMPLE SC 2-13

Changes to the requisite service period for an award with service and market conditions

On January 1, 20X1, SC Corporation grants two executives a total of 100,000 stock options. The terms of the award specify that the award will vest upon the earlier of (a) the stock price reaching and staying at a minimum of $100 per share for 60 consecutive trading days (i.e., a market condition) or (b) the completion of five years of service (i.e., a service condition).

What is the appropriate requisite service period?

Analysis

Because the award has a market condition, the company uses a lattice model to estimate the award's fair value and determine if the derived service period is shorter than the explicit service condition. The company derives its estimate of the award's service period from the lattice model's results, which in this case is three years. Therefore, the requisite service period over which compensation cost should be attributed is the market condition's derived service period of three years (rather than the five-year service period) because it is the shorter requisite service period.

Because the award has a market condition, the requisite service period is not revised unless the market condition is satisfied before the end of the derived service period. If the market condition is satisfied in only two (not three) years, the company should immediately recognize any unrecognized compensation cost, because the executives do not have to provide any further service to earn the award. Alternatively, if the market condition is not satisfied but the executives render the three years of requisite service, compensation cost should not be reversed.

EXAMPLE SC 2-14

Changes to the requisite service period for an award with a vesting acceleration clause

On January 1, 20X1, SC Corporation grants an executive 40,000 stock options. The grant-date fair value is $10 per option. The terms of the award specify that the award will cliff vest if the executive is employed at the end of a four-year service period. Vesting will also be accelerated if the executive is terminated by the company without cause. At the grant date, it is probable that the four-year service

condition will be achieved. However, at the beginning of 20X2, SC Corporation determines that it will terminate the executive without cause by June 30, 20X2.

What is the appropriate requisite service period? What is the impact of the decision to terminate the executive?

Analysis

The four-year vesting provision is a service condition. Additionally, as described in ASC 718-10-20, acceleration of vesting in the event of an employee's death, disability, or termination without cause is also considered a service condition. Since there are two potential service conditions (only one of which needs to be satisfied), SC Corporation would evaluate the different conditions and determine which one(s) are probable of achievement, and then use the shortest of those periods as the initial requisite service period. As of the grant date, SC determined that it was probable that the four-year service condition would be achieved, and it was not probable that an involuntary termination would occur. Therefore, SC Corporation began to recognize the grant-date fair value over the initial four-year requisite service period.

As required by ASC 718-10-55-77, SC Corporation should reassess the probability of the different vesting conditions and adjust its estimate of the requisite service period as those assessments change. When it becomes probable that SC Corporation intends to terminate the executive (which will trigger the automatic acceleration feature), the service condition associated with the termination without cause becomes probable of being satisfied. As the remaining period until this vesting date (estimated to be 6 months) is shorter than the remaining 3 years in the original four-year vesting period, the requisite service period should be changed to the shorter period. Consistent with ASC 718-10-55-78 and ASC 718-10-55-79, SC Corporation would recognize any remaining unrecognized compensation cost for the award prospectively over the revised requisite service period (i.e., no "cumulative effect" adjustment is recognized). The fair value of the award is not remeasured. The change in the requisite service period affects only the attribution of expense going forward. Therefore, SC Corporation would record the remaining unrecognized compensation cost of $300,000 over the remaining 6-month estimated requisite service period.

2.7 Estimates and adjustments for forfeitures

Companies should make an accounting policy election to either estimate forfeitures or to account for them when they occur.

For purposes of this guide, "pre-vesting forfeiture" describes the circumstance when an award is forfeited prior to vesting, for example due to termination or failure to satisfy a performance condition. A "post-vesting cancellation" describes the circumstance when an employee terminates after vesting and does not exercise their vested award or if a vested award expires unexercised at the end of its contractual term. This distinction is important because a pre-vesting forfeiture results in reversal of compensation cost whereas a post-vesting cancellation would not. Additionally, as discussed in SC 9.3, the development of the expected term assumption does not consider pre-vesting forfeitures but does consider post-vesting cancellations.

2.7.1 Estimating forfeitures

Companies may make a company-wide accounting policy election to estimate forfeitures of employee awards. Under ASC 718, if a company has a policy to estimate forfeitures, then it is required to develop an assumption regarding the pre-vesting forfeiture rate beginning on the grant date. The forfeiture estimate impacts the estimated amount of compensation expense to be recorded over the requisite service period. Companies are required to true-up forfeiture estimates for all awards with performance and service conditions through the vesting date so that compensation cost is recognized only for awards that vest (ASC 718-10-35-3). For awards with market conditions, a forfeiture rate assumption is applied to adjust compensation cost for those employees that do not complete the requisite service period. However, compensation cost is not reversed if the company fails to satisfy the market condition.

Under ASC 718-10-35-3, companies that estimate forfeitures will (1) estimate the number of awards for which it is probable that the requisite service will be rendered and (2) update that estimate as new information becomes available through the vesting date. A company should also review its forfeiture-rate assumption for reasonableness at least annually and potentially on a quarterly basis, considering both forfeiture experience to date and a best estimate of future forfeitures of currently outstanding unvested awards. It should also review its forfeiture-rate assumption when significant events occur which could affect the likelihood of employees vesting in outstanding awards, such as planned restructuring actions.

Under ASC 718-10-35-8, the amount of compensation cost that is recognized on any date should at least equal the grant-date fair value of the vested portion of the award on that date. If a company applies a forfeiture-rate assumption that assumes more forfeitures than actually occur, the company may not be recognizing enough compensation cost to meet this requirement. Accordingly, for awards that vest in separate tranches, companies should assess, as each tranche vests, whether the compensation cost recognized for the award at least equals the vested portion of that award.

2.7.1.1 Election to account for forfeitures as they occur

Companies may also make a company-wide accounting policy election to account for forfeitures of employee awards as they occur. The policy election only relates to the service condition aspects of awards; entities will still need to assess the likelihood of achieving performance conditions each reporting period.

A company that elects to account for forfeitures as they occur will record compensation cost assuming all option holders will complete the requisite service period. If an employee forfeits an award because they fail to complete the requisite service period, the company will reverse compensation cost previously recognized in the period the award is forfeited. Thus, the total cumulative amount of compensation cost recognized for an award will be the same regardless of whether the company elects to estimate forfeitures or account for forfeitures as they occur.

There are certain circumstances where it will still be necessary to estimate forfeitures:

- If an award is modified, the company should assess whether the performance or service conditions of the original award are expected to be satisfied when measuring the effects of the modification (refer to SC 4). The company should apply its accounting policy to account for forfeitures when they occur upon subsequent accounting for the modified award.

- If an award is exchanged or replaced in connection with a business combination, forfeitures must be estimated to attribute the acquisition date fair value of the replacement awards between pre-combination service (which is included as part of the consideration exchanged in a business combination), and the amount attributable to post-combination service (which is recorded as compensation cost). The amount attributed to precombination service is reduced for awards that are expected to be forfeited. See BCG 3.4.1 for further discussion of the fair value attributable to pre- and post-combination service in the exchange of share-based awards in a business combination.

Example SC 2-15 illustrates the recognition of forfeitures as they occur.

EXAMPLE SC 2-15

Recognition of forfeitures as they occur

On January 1, 20X1, SC Corporation grants a restricted stock award to its CEO that vests on December 31, 20X3 based on providing continued service over that period. SC Corporation has elected a policy to account for forfeitures as they occur.

On December 1, 20X2, the CEO informs the board of directors of her intent to voluntarily terminate her employment effective January 31, 20X3.

When should SC Corporation reverse previously recognized compensation cost for the award?

Analysis

SC Corporation should reverse previously-recognized compensation cost in the period the award is forfeited, which is January 20X3. Although as of December 31, 20X2 it is expected the award will be forfeited, SC Corporation has elected to account for forfeitures as they occur. Therefore, SC Corporation should not adjust compensation cost in its 20X2 financial statements. Further, compensation cost should continue to be recognized through the date of actual forfeiture. SC Corporation should consider whether disclosure of the anticipated termination and the related financial statement impact is warranted in the 20X2 financial statements.

2.7.2 Forfeitures and liability-classified awards

For companies that elect to estimate forfeitures, a forfeiture assumption (considering forfeiture experience to date and estimating future forfeitures) should be applied to awards that are classified as liabilities as well. Liability awards are remeasured at fair value each reporting period, and any impact of forfeitures or updates to the forfeiture estimate, although not affecting the fair value measurement of the awards, should be reflected at that time as well.

2.7.3 Applying a forfeiture-rate assumption

For companies that elect to estimate forfeitures, the forfeiture-rate assumption is typically expressed as the estimated annual rate at which unvested awards will be forfeited during the next year, which may or may not differ significantly by employee group. Some companies estimate the total forfeitures for the entire grant or for each vesting tranche. The forfeiture-rate assumption can be based on a company's historical forfeiture rate if known. However, management should assess whether it is necessary to adjust the historical rate to reflect its expectations. For example, adjustments may be

needed if, historically, forfeitures were affected mainly by turnover that resulted from business restructurings that are not expected to recur.

Companies could use separate pre-vesting forfeiture assumptions for different employee groups when they believe those groups will exhibit different behaviors. For example, based on its history and expectations, a company may develop a 5% annual forfeiture estimate for senior executives and a 10% annual forfeiture estimate for all other employees.

Example SC 2-16 illustrates how a company could apply its estimated annual forfeiture rate to an option grant.

EXAMPLE SC 2-16

Estimated annual forfeiture rate applied to an option grant

SC Corporation grants to its employees a total of 400 stock options that (1) vest upon the employees' completion of a service condition and (2) have a four-year graded vesting schedule (25% or 100 awards per year). SC Corporation estimates a 5% annual forfeiture rate, based on its historical forfeitures. SC Corporation uses the following calculations to determine the number of options that are expected to vest:

Year	Number of options eligible for vesting	Number of options expected to vest	Calculation
1	100	95	= 100 × .95
2	100	90	= 100 × .95 × .95
3	100	86	= 100 × .95 × .95 × .95
4	100	81	= 100 × .95 × .95 × .95 × .95
Totals	**400**	**352**	

How much compensation expense should SC Corporation recognize in year 1?

Analysis

In this example, 88% of the options are expected to vest (352 options expected to vest/400 options granted). As discussed in SC 2.8, for awards with graded vesting features, companies will use either a graded vesting (accelerated) or straight-line attribution approach to recognize compensation cost over the vesting period. If a company uses an annual forfeiture rate for awards with graded vesting, as illustrated above, and the straight-line attribution approach to recognize compensation cost, there could still be some compensation cost that is front-loaded to the beginning of the requisite service period. In this case, SC Corporation would begin expensing 95 options in year 1 under the straight-line attribution approach, rather than 88 options, because of the requirement to expense at a minimum the number of awards actually vested at each vesting date.

As each tranche vests, a company should assess the actual number of awards vested in order to comply with the requirement that the amount of compensation cost that is recognized on any date should at least equal the grant-date fair value of the vested portion of the award. For example, if all 100 options vest in the first year in the above scenario (i.e., no awards are forfeited in the first year), the company should recognize compensation cost for those 100 awards. Additionally, the company will need to re-

evaluate the number of unvested options remaining and the reasonableness of the forfeiture-rate assumption used for the remaining requisite service period.

Other approaches for determining and applying a forfeiture rate in the above scenario may be acceptable; however, a company should comply with the requirement that the amount of compensation cost recognized on any date equals at least the compensation cost associated with the vested portion of the award.

2.7.4 Segregating and analyzing pre-vesting forfeitures

For companies that elect to estimate forfeitures, the forfeiture estimate should generally start with an analysis of the company's historical data covering several years. The group of the employee and terms of an award could affect the likelihood of the award being forfeited; therefore, companies should evaluate the pre-vesting forfeiture rate of awards by employee group and grouping awards with similar terms and using a specific forfeiture rate for each group of similar awards. For each grant, actual forfeitures should be compiled by period (e.g., one year from the grant date, two years from the grant date, etc.), and the percentage of the remaining outstanding unvested award forfeited each year should be computed. The company should then average those forfeiture rates to compute an average historical annual forfeiture rate.

When analyzing forfeitures, companies should segregate forfeitures into two categories: (1) pre-vesting forfeitures and (2) post-vesting cancellations, as defined earlier. Assume, for example, that a company grants 500 options and that 100 of the options vest each year, over a five-year requisite service period. The employee terminates employment after two years. His vested options are underwater, and thus, are not exercised. Accordingly, the 200 vested options are not pre-vesting forfeitures but, instead, post-vesting cancellations; the 300 unvested options are pre-vesting forfeitures.

Some software packages used to track stock option activity do not differentiate between pre-vesting forfeitures and post-vesting cancellations and, therefore, this data in some cases may be difficult to obtain. Additionally, startups and other companies that do not have a sufficient history to estimate the expected pre-vesting forfeiture rate might have to rely on surveys of, or disclosures by, other similar companies. However, ASC 718 does not require disclosure of the forfeiture-rate assumption; therefore, the ability to obtain public information on forfeiture rates may be limited.

Another factor that may be considered in developing a forfeiture assumption, or in adjusting historical forfeiture rates, is current human resources or industry near-term forecasts of anticipated employee turnover by employee group. An annual employee turnover rate and an annual forfeiture rate assumption may be comparable for this purpose.

Without proper recordkeeping, it will be difficult to accurately compute a historical pre-vesting forfeiture rate. Making accurate true-up adjustments to recognize actual forfeitures may also be difficult. Companies should review their recordkeeping systems to assess whether pre-vesting forfeitures can be separated from post-vesting cancellations; separating the two will ensure that companies sort the appropriate data to develop an accurate estimate regarding the pre-vesting forfeitures.

2.7.5 *Examples of the impact of forfeiture policies*

Example SC 2-17 illustrates how estimated forfeitures and actual forfeitures interrelate with different vesting conditions.

EXAMPLE SC 2-17

Accounting for actual and estimated forfeitures for each type of vesting condition

Assumptions for all three scenarios:

SC Corporation grants its employees 5,000 stock options on January 1, 20X1. The grant-date fair value is $8 per option.

Scenario 1: Service condition

All of the options cliff vest after three years of service. The company has elected a policy to estimate forfeitures. In 20X1 and 20X2, SC Corporation estimates that 95% of the options will vest. In 20X3, SC Corporation completes a significant restructuring, which results in only 45% of the options vesting because 55% of the options are forfeited prior to vesting. Because the actual pre-vesting forfeiture rate differs dramatically from management's prior expectations, the company will recognize a credit to compensation cost in 20X3 as shown below.

	20X1	20X2	20X3
Number of options	5,000	5,000	5,000
Fair value per option	$8.00	$8.00	$8.00
Fair value of total options	$40,000	$40,000	$40,000
Percentage expected to vest	95%	95%	45%
Total expected compensation cost	$38,000	$38,000	$18,000
Portion of service period completed at year-end	33%	67%	100%
Cumulative compensation cost recognized at year-end	$12,540	$25,460	$18,000
Cumulative compensation cost previously recognized	$—	$12,540	$25,460
Current-period expense/ (income) (pre-tax)	$12,540	$12,920	$(7,460)

Scenario 2: Performance and service condition

The options are subject to a three-year service condition and a performance condition based on each employee achieving a specific cumulative sales target over the period from 20X1 through 20X3. In 20X1, SC Corporation estimates that 90% of its employees will achieve their targets and remain employed through 20X3 (i.e., 90% of the options will vest). At the end of year 2, however, SC Corporation reassesses the likelihood that the targets will be achieved and determines that 95% of the employees will achieve their targets by the end of 20X2 and remain employed through 20X3. Due to a new competitor's product that is launched in 20X3, only 75% of employees actually achieve the cumulative sales targets.

	20X1	20X2	20X3
Number of options	5,000	5,000	5,000
Fair value per option	$8.00	$8.00	$8.00
Fair value of total options	$40,000	$40,000	$40,000
Percentage expected to vest	90%	95%	75%
Total expected compensation cost	$36,000	$38,000	$30,000
Portion of service period completed at year-end	33%	67%	100%
Cumulative compensation cost recognized at year-end	$11,880	$25,460	$30,000
Cumulative compensation cost previously recognized	$—	$11,880	$25,460
Current-period expense (pre-tax)	$11,880	$13,580	$4,540

Scenario 3: Market and service conditions

The options become exercisable only if the employee remains employed by SC Corporation for three years and SC Corporation's stock price outperforms the S&P 500 Index by 10% during that three-year vesting period. The requisite service period is three years because that is the explicit period for the market condition and the date that the employee must be employed in order to vest in the award. As a result of the market condition, the fair value of these options is $4.50. Ninety-five percent of the employees are expected to complete the requisite service period at the end of both 20X1 and 20X2.

At the end of the three-year period, SC Corporation's stock price has outperformed the S&P 500 Index by only 3%. Therefore, no awards are exercisable. Additionally, 10% of employees did not complete the three-year requisite service period as compared to the estimated forfeiture rate of 5%. In this scenario, the compensation cost should be adjusted to reflect actual forfeitures; however, compensation cost should not be reversed for the 90% of the employees who fulfilled the requisite service period of three years, even though the market condition was not met.

	20X1	20X2	20X3
Number of options	5,000	5,000	5,000
Fair value per option	$4.50	$4.50	$4.50
Fair value of total options	$22,500	$22,500	$22,500
Percentage expected to complete requisite service period	95%	95%	90%
Total expected compensation cost	$21,375	$21,375	$20,250
Portion of service period completed at year-end	33%	67%	100%
Cumulative compensation cost recognized at year-end	$7,054	$14,321	$20,250
Cumulative compensation cost previously recognized	$—	$7,054	$14,321
Current-period expense (pre-tax)	$7,054	$7,267	$5,929

Scenario 4: Accounting for forfeitures as they occur

Assume the same facts as in Scenario 1, except that the company has elected to account for forfeitures as they occur. In 20X1, 20X2, and 20X3, actual forfeitures are 0, 750, and 500, respectively.

	20X1	20X2	20X3
Number of options not yet forfeited - beginning of year	5,000	5,000	4,250
Number of options forfeited during the year	0	750	500
Number of options not yet forfeited - end of year	5,000	4,250	3,750
Fair value per option	$8.00	$8.00	$8.00
Fair value of unforfeited options	$40,000	$34,000	$30,000
Portion of service period completed at year end	33%	67%	100%
Cumulative compensation cost recognized at year end	$13,200	$22,780	$30,000
Cumulative compensation cost previously recognized	0	13,200	22,780
Current period expense	$13,200	$9,580	$7,220

2.7.6 *"Last man standing" arrangements*

A "last man standing" arrangement is an agreement with more than one employee whereby if the employment of one of the employees is terminated prior to the end of a defined vesting period, the stock-based compensation awards granted to that employee will be reallocated among the remaining employees who continue employment. Because each employee has a service requirement, each individual grant of stock-based compensation awards should be accounted for separately. Generally, the accounting for a reallocation under a "last man standing" arrangement is effectively treated as a forfeiture of an award by one employee and regrant of options to the other employees. Therefore, if and when an employee terminates his or her employment and options are reallocated to the other employees, the reallocated options should be treated as a forfeiture of the terminated employee's options and a new option grant to the other employees.

2.8 *Awards with graded vesting features*

Some stock-based compensation awards include graded vesting features such as the award described in Example SC 2-16. Graded vesting is defined as an award that vests in stages (or tranches). This is in contrast to cliff vesting, in which an award vests in its entirety on a specific date. In concept, an award

that vests in tranches can be thought of as a series of individual awards with different cliff-vesting dates.

Economically, an award with graded vesting is different than a single award with a single cliff-vesting date for the entire award.

However, for an award with graded vesting that is subject only to a service condition (e.g., time-based vesting), ASC 718-10-35-8 provides an accounting policy choice between either graded vesting attribution or straight-line attribution:

- **The graded vesting method:** A company recognizes compensation cost over the requisite service period for each separately-vesting tranche as though each tranche of the award is, in substance, a separate award. This will result in an accelerated recognition of compensation cost.

- **The straight-line method:** A company recognizes compensation cost on a straight-line basis over the total requisite service period for the entire award (i.e., over the requisite service period of the last separately-vesting tranche of the award).

A company should apply its policy consistently for all awards with similar features.

Under either attribution method, the amount of compensation cost that is recognized as of any date should at least equal the grant-date fair value of the vested portion of the award on that date. That is, if a company elects the straight-line method and the expense recognized to date is less than the grant-date fair value of the award that are legally vested at that date, the company will need to increase its recognized expense to at least equal the fair value of the vested amount. This is generally referred to as the "floor" concept. If a company estimates forfeitures, but actual forfeitures are less than the estimate, that may also affect the analysis of when the floor will require an increase to the compensation cost recognized to date.

For awards with graded vesting, a company can either estimate separate fair values for each tranche based on the expected term of each tranche or estimate fair value using a single expected term assumption for the entire grant (see SC 9.3). ASC 718-20-55-26 permits a company to choose either attribution method for awards with only service conditions, regardless of the company's choice of valuation technique. If a company estimates separate grant-date fair values for each tranche of the award, the fair value estimates specific to the tranche should be utilized in determining the minimum amount of compensation cost to be recognized.

If awards with market or performance conditions include graded vesting features, the graded vesting method should be used and the straight-line method should not be used. Additionally, if an award includes both a service condition and a market or performance condition, the graded vesting method should be used. Companies that grant awards with market or performance conditions and use the graded vesting method and then modify such awards to remove the market or performance conditions, should attribute the remaining compensation cost in accordance with its attribution policy for awards with only service conditions. Therefore, if the company's attribution policy for awards with only service conditions is the straight-line approach, following modification of the award, the remaining compensation cost should be attributed using the straight-line approach.

The application of the graded vesting method of attribution is illustrated in Figure SC 2-9.

Figure SC 2-9

Award with four tranches that vests 25% each year over four years

	Percent of compensation cost recognized each year			
Tranche	Year 1	Year 2	Year 3	Year 4
1	100%	0%	0%	0%
2	50%	50%	0%	0%
3	33%	33%	34%	0%
4	25%	25%	25%	25%
Entire award	52%	27%	15%	6%

Example SC 2-18, Example SC 2-19, Example SC 2-20, Example SC 2-21 and Example SC 2-22 illustrate the accounting for awards with various vesting conditions as well as graded vesting provisions.

EXAMPLE SC 2-18

Awards with vesting that accelerates upon a change in control or IPO

SC Corporation grants stock options to employees that vest 25% each year over a four-year period. The stock options include a provision under which vesting will immediately accelerate upon a change in control of the company or an IPO. SC Corporation's accounting policy is to attribute expense using the straight-line method for awards with graded vesting features and only service conditions.

Can SC Corporation apply the straight-line method of attribution to recognize compensation cost for the options?

Analysis

Yes. Although the change-in-control or IPO provision is a performance condition, the presence of which would ordinarily disqualify the use of the straight-line method for graded vesting awards, we believe this particular type of performance condition does not preclude the use of the straight-line method. This is because events such as an IPO or change in control are generally considered to be outside the control of the company and are not considered probable until they occur, as well as the fact that the IPO is not a vesting contingency (i.e., the award will vest even without an IPO), but rather just accelerates vesting.

If this award had contained other types of performance conditions that accelerate vesting, such as achievement of a performance target, the straight-line method could not be utilized.

EXAMPLE SC 2-19

Attribution of expense for an award with "back-loaded" vesting

SC Corporation grants 100,000 stock options to employees that vest based on the following schedule:

- Year 1 - 10%
- Year 2 - 20%

- Year 3 - 30%
- Year 4 - 40%

The options are equity classified and vest based only on continued service. The grant-date fair value per option is $10. SC Corporation's accounting policy is to attribute expense using the straight-line method for awards with graded vesting features and only service conditions.

How much compensation cost should SC Corporation record each year, excluding the impact of forfeitures?

Analysis

For a four-year service period, the straight-line method results in recognizing 25% of the total compensation cost, or $250,000 ((100,000 options x $10 fair value) ÷ 4 years), each year, excluding the impact of forfeitures. Even though only 10% of the awards are legally vested as of the end of Year 1, it would not be appropriate to recognize only 10% of the compensation cost because SC Corporation's accounting policy is to use the straight-line method of attribution. The straight-line method requires recognizing the total compensation cost evenly over the total vesting period (the requisite service period of the last separately-vesting tranche of the award).

EXAMPLE SC 2-20

Application of the "floor" concept to a graded vesting award

SC Corporation grants 100,000 stock options to employees that vest 25% each year over a four-year period based only on continued service. The options are equity classified and have a grant-date fair value per option of $10 (total compensation cost of $1,000,000). SC Corporation's accounting policy is to attribute expense using the straight-line method for awards with graded-vesting features and only service conditions. SC Corporation elects to estimate forfeitures and therefore, begins recognizing $970,000 of compensation cost ratably over the four-year service period based on its forfeiture estimate.

At the end of Year 1, none of the employees have terminated employment; however, SC Corporation still believes its estimate of total compensation cost for the award, including estimated forfeitures, is reasonable.

How much compensation cost should SC Corporation record in Year 1?

Analysis

SC Corporation must recognize $250,000 ($1,000,000*25%) of compensation cost in Year 1 because 25% of the awards are legally vested. Applying the straight-line attribution method results in recording only $242,500 ($970,000*25%) of compensation cost in Year 1 based on SC Corporation's estimate of total compensation cost; however, SC Corporation must consider the "floor" concept and record an additional $7,500 of expense for a total of $250,000 in Year 1.

EXAMPLE SC 2-21

Attribution of expense for an award with "front-loaded" vesting

On July 1, 20X1, calendar year SC Corporation grants restricted stock with a fair value of $300. The award contains a three year service condition that vest based on the following schedule:

- 50% vests after year 1 (June 30, 20X2)
- 25% vests after year 2 (June 30, 20X3)
- 25% vests after year 3 (June 30, 20X4)

SC Corporation elects the straight-line attribution method as permitted under ASC 718-10-35-8.

ASC 718-10-35-8 requires "the amount of compensation cost recognized at any date must at least equal the portion of the grant-date fair value of the award that is vested at that date" (i.e., the "floor"). Therefore, SC Corporation must recognize at least $150 of compensation cost at June 30, 20X2 (50% of the original $300 grant date fair value), rather than $100 which would result from a simple 3-year straight-line calculation.

For attribution purposes, should the "floor" imposed by ASC 718-10-35-8 be anticipated before the legal vesting 'trigger' is met?

Analysis

Yes. SC Corporation should anticipate the floor before the legal vesting 'trigger' is met. SC Corporation should begin to recognize the year 1 expense (contemplating the $150 floor) ratably since the terms of the arrangement call for 50% to vest during that period. Thus, SC Corporation would begin recognizing $37.50 ($150/4 quarters) each quarter during the first year of service.

EXAMPLE SC 2-22

Attribution of expense for awards with performance and service conditions

On January 1, 20X1, SC Corporation grants 100,000 stock options to employees that vest based upon service and achieving an IPO (a performance condition). Under the service condition, 25% of the stock options vest each year over a four-year period. SC Corporation does not record compensation cost during 20X1 due to the IPO performance condition. During 20X2, SC Corporation completes an IPO. After achieving the performance condition, the options continue to vest based only on service according to the graded vesting schedule.

Can SC Corporation apply the straight-line method of attribution to recognize compensation cost in 20X2 and future years?

Analysis

No. The award contains a performance condition in addition to the time-based graded vesting service condition; therefore, the straight-line method cannot be used. Although only the service condition remains after the performance condition is satisfied in 20X2, the use of the straight-line method is not permitted for this award because the award contains both conditions. SC Corporation should begin recognizing compensation cost for the options using the graded vesting method once the IPO occurs with a cumulative catch-up for the service period completed to date.

Note that this example differs from Example SC 2-18 in that both the performance and service condition are required for vesting. In Example SC 2-18, the change-in-control performance condition accelerated vesting, but is not a vesting requirement.

2.9 Accounting for dividends paid on stock-based awards

Some awards stipulate that the employee will receive the dividends paid on the underlying shares while the option award is outstanding or restricted stock award (or RSU) is unvested. The guidance in this section applies when employees receive dividends on a recurring basis; for example, when a dividend is declared annually and the award holders are entitled to the dividend each year. Large, non-recurring dividends are accounted for as an equity restructuring (refer to SC 4.5). In some circumstances, judgment may be required to determine whether a dividend payment should be accounted for as an equity restructuring, as the guidance does not define "large" or "non-recurring."

2.9.1 *Effect of dividends on grant date fair value*

If an option award or an RSU is entitled to participate in dividends, that entitlement should be incorporated in the measurement of the grant date fair value. For an RSU, the grant date fair value (i.e., the stock price) would already contemplate the expectation of future dividends. However, for an option that is entitled to participate in dividends, the expected dividend yield assumption would be set to zero so as not to reduce the value of the option.

2.9.2 *Dividends paid on liability-classified awards*

All dividends paid on awards classified as liabilities are accounted for as additional compensation cost.

2.9.3 *Dividends paid on equity-classified awards*

The accounting for dividends paid on awards classified as equity depends on whether the dividends are forfeitable or nonforfeitable.

2.9.3.1 *Nonforfeitable dividends on stock-based awards*

Nonforfeitable dividends (i.e., those that recipients may keep once paid, even if they forfeit the underlying stock award) paid on awards classified as equity are accounted for as follows:

- For awards that are expected to vest, nonforfeitable dividends paid on equity-classified awards are recognized as reductions in retained earnings.
- For awards that are not expected to vest or do not ultimately vest, nonforfeitable dividends paid are accounted for as additional compensation cost.

For companies that elect to estimate forfeitures, the accounting treatment of nonforfeitable dividends paid on equity-classified awards should be based on the company's estimate of the awards expected to vest. The estimate of the awards expected to vest should be adjusted when the forfeiture rate assumption is adjusted and trued up for actual forfeitures. For example, a reclassification from retained earnings to compensation cost would be necessary to account for dividends paid on awards originally expected to vest that are ultimately forfeited.

Companies that elect to account for forfeitures when they occur should initially record all dividends paid on equity-classified awards to retained earnings and then reclassify the amount of non-forfeitable dividends previously charged to retained earnings relating to awards that are forfeited to compensation cost in the period the forfeitures occur.

2.9.3.2 *Forfeitable dividends on stock-based awards*

Dividends paid on equity-classified awards are often subject to the same vesting conditions as the underlying awards. An example is a dividend on an unvested restricted stock award that is not paid to the employee until the restricted stock vests. Such dividends are forfeited if the award is forfeited. These dividends are forfeitable (as opposed to nonforfeitable) and therefore, would not result in the recognition of additional compensation cost as long as the award is equity-classified.

When the dividend is declared, companies that elect to account for forfeitures when they occur should recognize a debit to retained earnings and a credit to dividend payable for all awards (see FG 4.4.2). If an award (and the associated dividend) is ultimately forfeited, that entry is reversed with a debit to dividends payable and a credit to retained earnings. The reversal entry would be made in the period in which the forfeitures occur.

Companies that elect to estimate forfeitures should record the dividend payable and corresponding charge to retained earnings based on the company's estimate of the awards expected to vest. This estimate should be adjusted when the forfeiture rate assumption is adjusted and trued up for actual forfeitures.

2.9.4 *EPS considerations for stock awards with dividend rights*

Unvested awards that contain nonforfeitable rights to dividends are considered participating securities for purposes of computing earnings per share. Refer to FSP 7.4.2.5 for further discussion.

2.10 *Capitalized compensation cost*

When describing stock-based compensation, ASC 718 uses the term "compensation cost" rather than "compensation expense" to emphasize that stock-based compensation may be capitalized similar to the treatment of cash compensation or other employee benefit costs. When it is appropriate for an entity to capitalize the cost of employee benefits paid in cash, stock-based compensation paid to those employees should generally be treated in a similar manner. For example, employee costs may require capitalization as part of the cost of:

- Inventory
- Deferred loan origination costs
- Costs to fulfil a contract
- Self-constructed fixed assets
- Capitalized internal-use software
- Capitalized software costs

Once capitalized, compensation cost becomes part of the cost of the respective asset and subject to the requirements of the applicable GAAP that required its capitalization. When determining the amount of compensation cost to capitalize, companies should consider the effects of pre-vesting forfeitures and the potential reversal of capitalized compensation cost if the pre-vesting forfeiture rate assumption is trued-up (or upon actual forfeitures for those that elect to account for forfeitures when they occur).

ASC 718 does not provide specific guidance regarding compensation cost that qualifies for capitalization under other GAAP. SAB Topic 14 includes an interpretation on the capitalization of compensation cost as part of inventory. The SEC staff believes that a company may record a period-end adjustment to reflect the changes for capitalized compensation cost instead of recording the changes through the inventory-costing system. A company would need to establish appropriate controls surrounding the calculation and recording of this period-end adjustment, similar to any other period-end adjustment.

ASC 718 provides limited guidance on the income tax effects related to capitalized compensation cost. See TX 17.15 for more guidance on the income tax effects of capitalized compensation cost.

2.11 Illustrations

Example SC 2-23 further illustrates the concepts discussed in this chapter.

EXAMPLE SC 2-23

Accounting for the award using graded vesting and straight-line attribution

For simplicity, the following assumptions have been made:

- Only annual periods are illustrated; quarterly information is not presented
- None of the compensation cost is subject to capitalization under other GAAP
- Income tax considerations are ignored. Refer to TX 17 for guidance on the income tax implications of stock-based compensation awards

Facts and background

- SC Corporation is a US public company with a calendar year end
- All of the awards granted in the following examples are equity classified
- SC Corporation's common stock has a par value of $0.01 per share
- The award is granted on January 1, 20X0 and has only a service condition
- SC Corporation has elected to estimate forfeitures and the pre-vesting annual forfeiture assumption on the grant date is 5%

Number of options granted	100,000
Grant date	Jan. 2, 20X0
Stock price on grant date	$100
Exercise price	$100
Vesting	1/3 each year for 3 years
Contractual term	10 years
Expected term	6 years
Expected volatility of the underlying common stock	30%
Expected dividend yield on stock	0%
Risk-free interest rate (continuously compounded)	3%
Estimated fair value per option under the Black-Scholes model	$35.29

Upon termination of employment, unvested options are forfeited and the contractual term of vested options truncates to 90 days from the termination date.

Scenario 1

On January 1, 20X0, SC Corporation grants 100,000 options with an exercise price of $100. Options vest evenly over three years. The grant-date fair value is $35.29 per option. Employees are given 90 days to exercise options in the event of termination.

Under the graded vesting attribution approach, each annual vesting tranche has a different requisite service period over which employees earn the awards. At the end of 20X0, employees will have vested in 100% of Tranche 1, will have completed 50% of the requisite service period for Tranche 2 and will have completed 33% of the requisite service period for Tranche 3. SC Corporation applies an annual forfeiture rate assumption of 5% to each tranche, which means that, at the grant date, SC Corporation expects that 95% of Tranche 1, 90.25% (.95 × .95) of Tranche 2, and 85.74% (.95 × .95 × .95) of Tranche 3 will vest.

The following tables present the number of options expected to vest and the related compensation cost estimated from the grant date through the end of the requisite service period.

		Proportion of grant date fair value recognized as compensation cost		
Tranche	**Number of options expected to vest**	**20X0**	**20X1**	**20X2**
1	31,667	95%		
2	30,083	45%	45%	
3	28,579	28.6%	28.6%	28.6%
Totals	90,329	62.3%	27.2%	10.5%

Tranche	Number of options expected to vest	Compensation cost recognized each year		
		20X0	20X1	20X2
1	31,667	$1,117,528		
2	30,083	530,815	$530,815	
3	28,579	336,184	336,184	$336,184
Totals	90,329	$1,984,527	$866,999	$336,184

The following schedule summarizes option activity through 12/31/20X4, showing the number of options each year that legally vested and the number of options exercised and cancelled.

Date	Vested	Exercised	Post-vesting cancellations
12/31/20X0	31,667	–	–
12/31/20X1	30,083	–	–
12/31/20X2	28,579	–	–
12/31/20X3	–	–	(6,000)
12/31/20X4	–	(50,000)	–
Totals	90,329	(50,000)	(6,000)

Note that from 20X0 to 20X2, actual forfeitures were 5% annually, which was exactly as expected. As a result, SC Corporation did not have to adjust its expected compensation cost.

How should SC Corporation account for the awards using graded vesting attribution?

Analysis

Based on the above activity, SC Corporation would record the following journal entries.

Dr. Compensation expense	$1,984,527	
Cr. Additional paid-in capital		$1,984,527
To recognize 20X0 compensation expense		

Dr. Compensation expense	$866,999	
Cr. Additional paid-in capital		$866,999
To recognize compensation expense in 20X1		

Dr. Compensation expense	$336,184	
Cr. Additional paid-in capital		$336,184
To recognize compensation expense in 20X2		

On October 1, 20X3, employees with collectively 6,000 options terminated their employment. The options remain underwater through December 31, 20X3 and are then cancelled in accordance with the term truncation. Previous compensation expense is not reversed because the terminated employees completed the three-year service condition.

On December 31, 20X4, employees exercised 50,000 options when the market price of SC Corporation's common stock was $140 per share.

SC Corporation would record the following journal entry.

Dr. Cash	$5,000,000	
Cr. Common stock		$500
Cr. Additional paid-in capital		$4,999,500
To recognize the exercise of 50,000 options at an exercise price of $100		

Scenario 2

Assume the same facts as Scenario 1 except that in Scenario 2 SC Corporation uses straight-line attribution.

The following table presents the number of options expected to vest and the related compensation cost.

	Total	20X0	20X1	20X2
Number of options expected to vest	90,329	31,667	30,083	28,579
Compensation cost	$3,187,710	$1,117,528	$1,061,629	$1,008,553

How should SC Corporation account for the awards using straight-line attribution?

Analysis

The annual forfeiture-rate assumption is applied to each tranche to determine the total number of awards expected to vest and, therefore, the total compensation cost. As SC Corporation elected the straight-line attribution method, the total compensation cost is recognized on a straight-line basis over the requisite service period for the entire award (i.e., over 3 years—the requisite service period of the last separately vesting portion of the award). However, ASC 718-10-35-38 requires that the amount of compensation cost recognized at any date must at least equal the portion of the grant-date value of the award that is vested (i.e., the "floor"). Therefore, in the first year, the minimum amount of cost that must be recognized in this fact pattern is the amount that legally vests. Assuming the forfeiture

estimate was accurate, then 95% of the cost of the first tranche of awards must be recognized, or $1,117,528. The estimate of expected forfeitures would need to be updated each period based on actual experience. Other approaches for determining and applying the forfeiture rate to the attribution approach in this scenario may be acceptable.

SC Corporation would record the following journal entries.

Dr. Compensation expense	$1,117,528	
Cr. Additional paid-in capital		$1,117,528
To recognize compensation expense in 20X0		

Dr. Compensation expense	$1,061,629	
Cr. Additional paid-in capital		$1,061,629
To recognize compensation expense in 20X1		

Dr. Compensation expense	$1,008,553	
Cr. Additional paid-in capital		$1,008,553
To recognize compensation expense in 20X2		

Dr. Cash	$5,000,000	
Cr. Common stock		$500
Cr. Additional paid-in capital		$4,999,500
To recognize the exercise of 50,000 options at an exercise price of $100 on December 31, 20X4		

Chapter 3: Liability-classified awards

3.1 Liability-classified awards chapter overview

This section addresses the recognition and measurement principles and the criteria for determining whether an award is a liability. In particular, it discusses the accounting for (1) awards with conditions or features indexed to something other than a market, performance, or service condition, (2) obligations based on a fixed monetary amount, and (3) awards with repurchase features. This section also provides flowcharts summarizing the criteria for determining liability or equity classification.

3.2 Recognition and measurement principles for liability awards

The basic measurement principle for liability-classified awards is fair value, the same as it is for equity-classified awards. As discussed in SC 6.2.2, a nonpublic company may make an accounting policy election to use intrinsic value to measure its liability-classified awards. However, a liability-classified award differs from an equity-classified award, which is generally measured at fair value on the grant date, in that it is remeasured to an updated fair value at each reporting period until the award is settled. For a liability-classified award, a company would do the following:

- Measure the fair value of the award on the grant date.
- Recognize compensation cost over the requisite service period.
- Remeasure the fair value of the award each reporting period until the award is settled.
- True up compensation cost each reporting period for changes in fair value pro-rated for the portion of the requisite service period rendered.
- Once vested (i.e., the requisite-service period is complete), immediately recognize compensation cost for any changes in fair value until settlement.

As discussed in SC 8.2, the fair value of a share-based payment is measured using an option pricing model and includes both the intrinsic value and time value of the award. As employees vest in liability-classified awards and the remaining time until settlement or expected settlement of the award decreases, the time value of these awards will decrease and approach zero until, on the settlement date, the awards' fair value will equal intrinsic value.

Example SC 3-1 illustrates the accounting for liability-classified awards.

EXAMPLE SC 3-1

Initial measurement and subsequent measurement of a liability award

On January 1, 20X1, SC Corporation grants 100 of its employees 100 cash-settled stock appreciation rights (SARs) for a total of 10,000 SARs. Each SAR entitles the employee to receive cash equal to the increase in value of the underlying stock over $20 (the current stock price). The SARs will cliff-vest when the employees complete three years of service. SC Corporation determines that, based on the awards' service condition, the requisite service period is three years.

Using an option-pricing model, SC Corporation determines that the grant-date fair value of each SAR is $5. Because the awards were granted with no intrinsic value (i.e., "at the money"), the SAR's fair value of $5 consists entirely of time value. The SARs' aggregate fair value is $50,000 on January 1, 20X1, the grant date.

On December 31, 20X1, the end of the first year of the requisite service period, SC Corporation determines that the SAR's fair value is $6 per SAR ($60,000 in total).

For simplicity, consideration of forfeitures has been excluded.

How much compensation cost should SC Corporation record in the first year related to the SARs?

Analysis

Because the employees completed one-third of the requisite service period by December 31, 20X1, SC Corporation would recognize $20,000 (10,000 SARs × $6 fair value of each SAR × 1/3 portion vested) of compensation cost.

At the end of each subsequent reporting period over the next two years, SC Corporation will continue to remeasure the current fair value of the award and adjust cumulative compensation expense to the appropriate portion of the total fair value in relation to the portion of the requisite service period that has been completed.

For reporting periods after the requisite service period is completed, SC Corporation would continue to remeasure the SAR's fair value, recognizing the entire change in fair value (positive or negative) immediately in the income statement because the SAR is fully vested. That remeasurement process continues until settlement.

On the settlement date, SC Corporation would remeasure the SARs' fair value (which should be equal to the intrinsic value) and recognize the change in fair value as an adjustment to compensation cost.

3.2.1 Awards with performance and market conditions

Accounting for vesting conditions of liability-classified awards follows the same principles as equity-classified awards (discussed in SC 2). Assuming all conditions for a grant date have been met, a company should begin recognizing compensation cost for liability-classified awards with performance conditions when it becomes probable that the performance condition will be met. The measurement of compensation cost, however, would be based on the fair value of the award at each reporting date (i.e., remeasured each period) and the portion of the requisite service period completed.

For liability-classified awards with a market condition, the same periodic remeasurement approach applies, with the impact of the market condition incorporated into the determination of fair value each period. However, if the market condition is not satisfied, the fair value on the settlement date will be zero; therefore, on a cumulative basis, the company would recognize no compensation cost. This is in contrast to an equity-classified award with a market condition, for which the minimum amount of compensation cost to be recognized is the grant-date fair value even if the market condition is not satisfied (subject to satisfaction of the requisite service period).

3.3 Criteria for determining whether an award is a liability

The criteria for determining whether an award should be classified as a liability or as equity are outlined in ASC 718-10-25-6 through ASC 718-10-25-18. The following are the types of awards that companies should classify as liabilities:

- An award with conditions or other features that are indexed to something other than a market, performance, or service condition.
- An award that meets certain criteria of ASC 480, *Distinguishing liabilities from equity*.
- A share award with a repurchase feature that permits an employee to avoid bearing the risks and rewards normally associated with equity ownership for a reasonable period of time by allowing the employee to put shares to the company within six months after the employee vests in the shares

  or

  A share award where it is probable that the employer would prevent the employee from bearing the risks and rewards normally associated with stock ownership within six months after share issuance.
- An option or similar instrument that could require the employer to pay an employee cash or other assets, unless cash settlement is based on a contingent event that is (a) not probable and (b) outside the control of the employee.
- An option or similar instrument in which the underlying shares are classified as liabilities.

3.3.1 Other than market, performance, or service condition awards

In some cases, an award's vesting or exercisability may be indexed to a factor that is in addition to the company's stock price (e.g., dual-indexed awards). If the factor is not a market, performance, or service condition, the award should be accounted for as a liability, in essence a derivative. Also, an award would be dual-indexed if it contains a performance condition that is measured against a different measure of performance of another entity or group of entities. A condition other than a market, performance, or service condition should be reflected in estimating the fair value of the award. The following are examples of awards that are indexed to something other than a market, performance, or service condition:

- A stock option with an exercise price that is indexed to the market price of a commodity (e.g., platinum, soybeans, live cattle).
- An award that vests based on the appreciation in the price of a commodity (e.g., natural gas) and the company's shares and is thus indexed to both the value of that commodity and the company's shares.
- A stock option with an exercise price that is indexed to the Consumer Price Index, some other measure of inflation, or another external index.

- An award that vests based on the company's EBITDA growth exceeding the average growth in net income of peer companies over the next three years.
- An award that vests based on the company achieving a specified level of growth in revenue in excess of the increase in inflation (i.e., "real" growth).

Note that in the first two examples above, the award would be liability-classified even if the entity granting the share-based payment award is a producer or user of the commodity whose price changes affect the entity's results of operations and overall entity value. In other words, there is no exception to the liability-classification guidance for an index that is "clearly and closely related" to the entity's operations.

3.3.2 *Certain criteria in ASC 480 applicable to stock awards*

ASC 480 provides guidance for determining whether certain freestanding financial instruments are classified as liabilities and generally excludes stock-based compensation from its scope. However, ASC 718 requires companies to apply the classification criteria in ASC 480-10-25 and paragraphs ASC 480-10-15-3 through ASC 480-10-15-4 when determining whether stock-based compensation awards should be classified as a liability unless ASC 718-10-25-6 through ASC 718-10-25-18 require otherwise.

3.3.2.1 *Overview of ASC 480 and related stock award examples*

ASC 480 specifies that financial instruments within its scope embody obligations of the issuer and should be classified as liabilities. Figure SC 3-1 summarizes three types of freestanding financial instruments that companies should classify as liabilities by reference to ASC 480-10-25 and paragraphs ASC 480-10-15-3 through ASC 480-10-15-4.

Figure SC 3-1

Examples of freestanding financial instruments classified as liabilities

Instruments classified as liabilities	Examples
Mandatorily redeemable financial instruments ASC 480 defines "mandatorily redeemable" as an unconditional obligation requiring the issuer to redeem the instrument by transferring its assets at a specified or determinable date (or dates) or upon an event that is certain to occur	▫ Preferred stock that must be redeemed on a specified date ▫ Common stock that must be redeemed upon the employee's death or termination of employment (unless the instrument is issued by a nonpublic non-SEC registrant and is excluded from the scope of ASC 480)
Obligations to repurchase a company's equity shares by transferring assets	▫ A written put option on the company's equity shares that requires physical or net-cash settlement ▫ A forward purchase contract for the company's equity shares that requires cash settlement ▫ Compound instruments, other than outstanding shares, such as a collar that includes a written put option

Instruments classified as liabilities	Examples
Certain obligations to issue a variable number of the company's shares A financial instrument that meets both of the following conditions: (1) the company must or could settle the obligation by issuing a variable number of its shares, and (2) the obligation's monetary value is based solely or predominantly on any of the following factors at the obligation's inception: □ A fixed monetary amount that is known at the obligation's inception (e.g., a fixed dollar amount settled in a variable number of shares) □ Variations in something other than the fair value of the company's shares (e.g., the price of silver or corn or the free cash flow of the company) □ Variations in the fair value of the company's equity shares, but moves in the opposite direction	□ An arrangement under which the company will settle a bonus that is a fixed dollar amount by issuing a variable number of shares based on the stock price at the time of settlement

3.3.2.2 *ASC 480 scope exceptions on stock awards*

The FASB excluded from the scope of ASC 480 nonpublic, non-SEC registrants' financial instruments that will be mandatorily redeemable upon the occurrence of an event that is certain to take place (e.g., the death or termination of service of the holder). For additional guidance, refer to SC 6.3, which discusses how this scope exception specifically impacts nonpublic companies.

3.3.2.3 *Obligations based on a fixed monetary amount*

As noted in Figure SC 3-1 one of the types of instruments subject to liability accounting under ASC 718 (by reference to ASC 480) is an obligation that is based solely or predominantly on a fixed monetary amount that is known at the obligation's inception. A straightforward example of this type of instrument is a bonus based on a fixed dollar amount that will be settled by issuing shares on the vesting date, with the number of shares to be determined based on the company's stock price on the settlement date. In this example, the company would generally record compensation cost for the fixed dollar amount of the award over the vesting period, with a corresponding liability. Note that while recognition and measurement of compensation cost for these awards are subject to the general grant date criteria described in SC 2.6.1, the criterion that the employee must begin to benefit from, or be adversely affected by, subsequent changes in the employer's stock price does not apply to this type of award. This is because the award is based on a fixed monetary amount; its value will never be affected by changes in the stock price.

More complex instruments will need to be carefully analyzed to determine whether the obligation is based predominantly on a fixed monetary amount. For example, a company grants an equity-settled award that vests based on a market condition; however, the company also establishes a dollar-value cap on the award that may limit the number of shares to be issued upon settlement. As a result, in certain outcomes, the value of the award on the settlement date will vary based on the company's stock price (i.e., if the value of the equity is less than the cap), while in other outcomes, the value of the

award will be based on a fixed dollar amount (i.e., if the value of the equity exceeds the dollar-value cap). In this scenario, the company should assess whether the dollar-value cap is a predominant feature of the award. To accomplish this, one approach is to use a lattice model to determine the percentage of possible outcomes that would result in the award being settled in the amount of the dollar cap. If the company concludes that the dollar cap feature is predominant, the award should be classified as a liability. See FG 5.5.1.1 for further discussion on the meaning of "predominant."

Example SC 3-2 and Example SC 3-3 illustrate awards that have a range of potential payouts, and the impact on the classification of the award.

EXAMPLE SC 3-2

Awards with a range of potential payouts based on increase in EBITDA

SC Corporation grants its CEO an award of restricted stock on January 1, 20X1. The ultimate dollar value of the award depends on the percentage increase in SC Corporation's EBITDA during 20X1. SC Corporation will issue the following value of common stock on December 31, 20X1 based on the specified increases in its EBITDA during 20X1.

Increase in EBITDA	Dollar amount of award
greater than 20%	$1.0 million
between 15% and 20%	$0.8 million
between 10% and 15%	$0.5 million
between 5% and 10%	$0.2 million
less than 5%	$0

The award will be settled only in shares of SC Corporation common stock valued based on the stock price on December 31, 20X1 (the date the shares will be issued). In other words, the dollar amount of the award will be divided by the stock price on December 31, 20X1 to yield the number of shares that will be issued to the CEO.

How should SC Corporation account for the performance award to the CEO?

Analysis

The award should be accounted for as a liability award with a performance condition. An award based on a fixed dollar amount is a liability in accordance with ASC 480-10-25-14. Liability classification is also appropriate for an award that has several possible fixed dollar amount settlements that are not solely or predominantly based on the value of the company's shares. In this case, the monetary value of the award fluctuates based on changes in EBITDA, not stock price. The award will be settled with a variable number of shares based on the then-current stock price, and therefore is a liability award.

Expense would not be recognized until achievement of one of the performance targets is deemed probable. The expense to be recognized would be based on SC Corporation's best estimate of the ultimate outcome at the end of each reporting period. Once the number of shares has been fixed (in this case when the shares are issued), the award would be reclassified to equity.

EXAMPLE SC 3-3

Awards with a range of potential payouts based on increases in stock price

SC Corporation grants its CEO an award of common stock on January 1, 20X1. The value of the award depends on the percentage increase in SC Corporation's stock price during 20X1. SC Corporation will issue the following amount of common stock on December 31, 20X1 based on the specified increases in its common stock price during 20X1.

Increase in stock price	Dollar amount of award
greater than 20%	$4 million
between 15% and 20%	$3.5 million
between 10% and 15%	$3 million
between 5% and 10%	$2.5 million
less than 5%	$0

The award will be settled only in shares of SC Corporation common stock valued based on the stock price on December 31, 20X1 (the date the shares are issued). In other words, the dollar amount of the award will be divided by the stock price on December 31, 20X1 to yield the number of shares that will be issued to the CEO.

How should SC Corporation account for the award to the CEO?

Analysis

The award should be accounted for as an equity award with a market condition. An award based on a fixed dollar amount (or a dollar amount predominantly based on changes other than in the company's stock price) is a liability; however, given the number of potential outcomes within the range, which increase directionally with the value of the stock, the award given to the CEO is more akin to a stock-settled SAR than to stock-settled debt (described in ASC 480-10-25-14(a)).

When evaluating if an award is akin to a stock-settled SAR, a company should consider the range of potential settlement values, not just the number of scenarios. The potential outcomes should not be so close together that, in substance, there is only one outcome. Also, the outcomes should not be so far apart that all but one of the outcomes are non-substantive.

3.3.3 Shares with repurchase features

A repurchase feature gives the employee the ability to put (redeem) the shares to the company for cash or gives the company the ability to call (repurchase) the shares for cash. Under ASC 718, companies should evaluate the terms of their share awards that contain repurchase features in order to determine whether liability classification of an award is required, as described below.

A company should classify a share that is puttable by the employee or callable by the employer as a liability if either of the following conditions is met:

- The employee can avoid bearing the risks and rewards normally associated with equity ownership (as a result of the repurchase feature), for a reasonable period after the share's issuance.
- It is probable that the employer will prevent the employee from bearing the risks and rewards normally associated with equity ownership for a reasonable period after the share's issuance.

An employee begins to bear the risks and rewards of stock ownership when, for example, an employee receives shares upon exercise of an option or vests in a restricted stock award. ASC 718 defines a reasonable period as a minimum of six months.

An employee put right would allow the employee to avoid bearing the risks and rewards of stock ownership for a reasonable period if the employee can put shares to the company (1) at fair value within six months after the employee vests in the shares (or exercises a vested option) or (2) either before or after six months, at a fixed redemption amount or another amount that is not based on variations in the company's stock price. The probability of the employee exercising the put right is not a relevant factor. If the repurchase price is an amount other than fair value (e.g., derived using a formula), the share-based arrangement should generally be classified as a liability because the price is not based on variations in the company's stock price, and, therefore, the employee is not bearing the risks and rewards of stock ownership (regardless of how long the employee holds the shares). There is a limited exception for certain nonpublic company plans that qualify as book value plans. Refer to SC 6.4 for a discussion of book value plans. If a repurchase feature gives the employee the right to put shares back to the company after six months for the fair value of the shares at the date of repurchase plus a fixed amount, the repurchase feature would not cause the award to be classified as a liability; however, ASC 718-10-55-85 provides that the fixed amount over the fair value should be recognized as additional compensation cost over the requisite service period with a corresponding liability.

An employer call right may require liability classification of an award if it is probable that the employer will exercise the call right (1) within six months of the issuance of a vested share (or exercise of a vested option) or (2) either before or after six months at a fixed redemption amount or another amount that is not based on variations in the company's stock price. When assessing whether it is probable that an employer will prevent the employee from bearing the risks and rewards of stock ownership, we believe the following factors should be considered:

- How the repurchase price will be calculated.
- Management's stated representation regarding its intent to call the shares.
- The frequency with which the employer has called shares in the past.
- The circumstances under which the employer has called shares in the past.
- The existence of any legal, regulatory, or contractual limitations on the employer's ability to repurchase shares.
- Whether the employer is a closely held, private company with a policy that shares cannot be widely held, which would indicate an increased likelihood that the employer will repurchase the shares.

If a share award is classified as a liability because of a repurchase feature and either (a) the put or call feature expires unexercised or (b) at least six months have passed since the employee began bearing the risks and rewards of stock ownership, the award should be reclassified as equity (assuming it meets all other requirements for equity classification). A change in classification to an equity award should be accounted for as a modification (see guidance in SC 4.4).

If a share award with repurchase features is classified as equity, SEC registrants should also consider whether classification of the award as temporary equity is appropriate. See SC 3.3.10 for further guidance.

Example SC 3-4 illustrates the accounting for an award that has an in-substance put option exercisable by the employee immediately upon vesting.

EXAMPLE SC 3-4

Classification of an award that may be deferred upon vesting and placed in a rabbi trust

SC Corporation grants an employee nonvested stock that vests in three years. Upon vesting, the employee may choose to take delivery of the stock, or defer receipt of the stock and have the shares placed in a rabbi trust.

The terms of the rabbi trust permit the employee to immediately diversify by exchanging the shares into investments in nonemployer securities held by the rabbi trust. In that circumstance, the arrangement will ultimately be settled in the future in cash in relation to the value of the diversified investments.

Prior to vesting and deferral in the rabbi trust, should the nonvested stock award be classified as a liability under ASC 718?

Analysis

Yes. Because the employee has the ability, immediately upon vesting, to elect to diversify the stock into nonemployer securities, which will ultimately be settled in cash, we believe the stock compensation arrangement should be classified as a liability. While this fact pattern is not technically an employee put feature, we believe the substance is the same, in that it allows the employee to elect cash settlement from SC Corporation without bearing the risks and rewards of share ownership for six months from the vesting date.

Conversely, if the employee must hold the employer stock within the rabbi trust for six months prior to diversifying, the employee is subject to risk and rewards of share ownership for a reasonable period of time after the share is issued. In that fact pattern, the nonvested stock award would not be classified as a liability prior to its deferral in the rabbi trust. However, public companies would recognize the award in temporary equity, following the guidance in ASC 480-10-S99-3A.

3.3.3.1 Share repurchase upon occurrence of a contingent event

ASC 718 also provides guidance regarding shares with repurchase features that can be exercised only if a contingent event occurs. Under ASC 718-10-25-9, an award with a repurchase feature that can only be exercised upon a contingent event that is (1) not probable and (2) outside the control of the employee would be equity classified. The probability of the contingent event occurring should be

reassessed each reporting period. For example, a put feature that an employee can exercise upon an initial public offering would not require liability accounting until and unless it becomes probable that the initial public offering will occur prior to the employee bearing the risk and rewards of stock ownership for at least six months. Because an initial public offering is not probable until it occurs (i.e., until the offering closes), liability accounting would begin on the date of the initial public offering.

It is common for employer call rights to exist that are exercisable only upon termination of an employee's employment (for any reason). Although the employee may have the ability to voluntarily terminate (and thus control the contingent event), in the case of an employer call right, the company should consider the probability of whether the call is expected to be exercised prior to the employee bearing the risks and rewards of ownership for a reasonable period of time (six months).

Example SC 3-5 illustrates the determination of the classification for an award that has a call feature exercisable upon employee termination.

EXAMPLE SC 3-5

Classification of an award with a call feature upon employee termination

SC Corporation grants a nonvested stock award to an employee with a two year vesting period. The award contains a call feature that permits the company to repurchase any vested shares at fair value in the event the employee terminates employment. The company has stated it would likely exercise the call in the event the employee terminates, even if termination is within six months of vesting (though the company would make this ultimate assessment if and when the termination occurs). The company does not currently believe it is probable the employee will terminate while holding immature shares, and likewise does not believe it is probable the call will be exercised before the employee has borne the risks and rewards of equity ownership for at least six months.

Should SC Corporation classify this award as a liability?

Analysis

While it is probable that the employee will ultimately terminate employment at some point, and the company has acknowledged its likely intent to exercise the call if the employee were to terminate, since it is not currently probable that the employee will terminate (and the call right exercised) within 6 months of vesting, it is acceptable to classify the award as an equity instrument. In the event it becomes probable that the employee will terminate and the company will exercise the call within six months of vesting, the award would be reclassified as a liability, following the guidance for equity-to-liability modifications in ASC 718-20-55-144 (refer to SC 4.4.1). Note that this analysis may be different if the repurchase price was based on a formula that did not result in the holder bearing the risks and rewards of equity ownership, as the six-month holding period may not apply in that case.

3.3.4 Options settled in cash or other assets

An option or similar instrument that is required to be settled in cash or other assets is classified as a liability. For example, the awards in Example SC 3-1 (cash-settled SARs) are classified as liabilities because the awards will be settled in cash. A stock-settled SAR would be classified as equity (assuming the award meets all other requirements for equity classification). Similarly, a feature that allows an option to be net-share settled (i.e., shares are issued equal to the difference in value between the fair

value of the shares and exercise price of the option on the exercise date) does not on its own cause the option to be classified as a liability.

If a company grants an award that offers a choice of settlement in stock or in cash (sometimes referred to as a tandem award), the classification of the award depends on whether the employee or the company has the choice of the form of settlement. If the employee can choose the form of settlement and can potentially require the company to settle the award in cash, the award should be classified as a liability. If the company has the choice of settlement, it can avoid transferring assets by electing to issue stock. In that case, as long as the company has the ability to deliver shares (i.e., sufficient authorized shares) the award would be classified as equity. ASC 718-10-25-15(a) clarifies that when assessing the company's ability to deliver shares, a requirement to deliver registered shares should not, on its own, result in liability classification of the award.

The written terms of a stock-based compensation award are generally the best evidence to indicate that the award is a liability. However, a company's past practice of settlement may outweigh the written terms, resulting in a conclusion that an award that in form appears to be equity is, in substance a liability. For example, if a company's past practice has been to settle options in cash or it settles in cash whenever an employee asks for cash settlement, this would likely indicate that the options are in substance liabilities, even when the company retains the choice of settling the option in shares.

Additionally, when considering the company's ability to settle in shares, the company should consider the amount of shares currently authorized and available for issuance in its stock option plan. The number of shares that the company needs to have available for issuance may depend on whether it has the ability to settle stock options on a net basis (i.e., net of the exercise price). If the company does not have sufficient shares authorized and available for issuance to settle its outstanding awards, the amount that the company could not settle in shares should be accounted for as a liability.

Example SC 3-6 and Example SC 3-7 illustrate the considerations in evaluating a company's ability to deliver shares.

EXAMPLE SC 3-6

Grant of more than the current number of authorized shares

SC Corporation currently has one million shares authorized and unissued for its stock option plan. If additional authorized shares were needed to settle stock compensation awards, shareholder approval would be required.

SC Corporation granted two million at-the-money stock options on January 1, 20X1, which under the terms of the option plan, may be settled in any of the following ways at SC Corporation's election:

- Gross settlement—by physical delivery of two million shares in exchange for the aggregate exercise price
- Net-share settlement— delivery of shares with a value equal to the difference between the market price at the date of exercise and the exercise price
- Net-cash settlement— delivery of cash equal to the difference between the market price at the date of exercise and the exercise price

As SC Corporation does not have a sufficient number of authorized shares to satisfy the gross settlement alternative, should some or all of the award be classified as a liability?

Analysis

Not necessarily. The analysis will depend on SC Corporation's intent. In this scenario, although SC Corporation may not currently have the ability to deliver shares to satisfy gross settlement of all of the options, the terms of the plan permit net share settlement at SC Corporation's election. Thus, we believe it would be appropriate to determine whether SC Corporation intends to settle the awards net and if sufficient shares are authorized to satisfy net settlement.

If at some point the number of shares needed to net share settle the award exceeds the total shares authorized, the incremental portion would be accounted for as a liability, as the only other alternative is to cash settle the award. In that circumstance, equity to liability modification accounting should be applied; refer to SC 4.4.1.

EXAMPLE SC 3-7

Grant of awards subject to shareholder approval

SC Corporation grants awards to employees. In order for SC Corporation to settle the awards in equity, SC Corporation's shareholders must annually approve the release of the appropriate number of shares to satisfy the equity settlement. Although this generally occurs on or near the vesting date of the awards, management and the Board do not control enough votes to ensure this outcome. In the absence of shareholder approval, SC Corporation would be obligated to deliver cash to settle the awards.

On the grant date, does SC Corporation have the ability to deliver shares to support equity classification?

Analysis

No. In this fact pattern, SC Corporation’s ability to deliver shares to satisfy the equity settlement is contingent upon shareholder approval; accordingly, SC Corporation would not be able to support equity classification on the grant date. Therefore, on the grant date, SC Corporation would classify the awards as liabilities until such time as they have the ability to deliver shares (in this case, upon shareholder approval).

3.3.4.1 Options with contingent cash settlement features

A stock option or award that has a cash settlement feature only upon the occurrence of a contingent event does not result in liability classification under ASC 718-10-25-11 if the contingent event is (1) not probable and (2) outside the control of the employee. For example, if an employee could force the company to settle stock options in cash upon a change in control, this feature would not result in liability accounting until the change in control event becomes probable. Generally, a change in control event is not considered probable until it occurs.

The probability of the contingent event occurring should be reassessed each reporting period. If the contingent event becomes probable, the stock option should be classified as a liability, and the change

in classification should be accounted for as a modification from an equity award to a liability award (see guidance in SC 4.4).

SEC registrants should also consider whether the classification of awards with contingent cash settlement features as temporary equity is appropriate. See SC 3.3.10 for further guidance.

3.3.4.2 Awards settled partially in cash and partially in equity

Certain awards may be structured such that a portion of the award will be settled in equity and a portion will be settled in cash. Generally, it is appropriate to account for each part of the award separately.

An example of an award that is settled partially in cash and partially in equity is an option that includes a cash bonus feature designed to reimburse the employee for a portion of his or her personal income tax liability related to the exercise of the options. In this particular fact pattern, it would generally be appropriate to account for the option and the cash bonus as separate awards. The option would be equity-classified, assuming all other requirements for equity classification are met. The cash bonus is within the scope of ASC 718 because the amount of the bonus is based on changes in the company's stock price; therefore, the cash bonus should be accounted for at fair value and classified as a liability, similar to a cash-settled SAR.

Example SC 3-8 illustrates the accounting for a combination award with a guaranteed minimum value.

EXAMPLE SC 3-8

Grant of awards with a guaranteed minimum value

SC Corporation grants an award of nonvested shares that cliff vest in five years. The award is structured, such that if the value of the shares does not exceed $1 million, cash will be paid for the difference between the value of the shares and $1 million on the date the award vests. In other words, the holder of the shares is guaranteed to receive at least $1 million in value at the date of vesting.

For example, if at vesting the shares have a value of $700,000, the holder would also receive $300,000 in cash. However, if at vesting the shares have a value of $1.2 million, the holder will receive no cash.

How should SC Corporation account for this award?

Analysis

This arrangement is effectively a share grant and a written put. The award should be considered a "combination award," as defined in ASC 718-10-20, and accounted for in a manner similar to Example 7 in ASC 718-10-55-116 through ASC 718-10-55-130.

The share component should be accounted for as an equity-classified award measured at grant-date fair value, and the cash-settled put should be liability classified and marked to fair value each reporting period. Compensation cost for the shares is fixed on the date of grant and recognized over the vesting period. Compensation cost associated with the cash-settled put liability should be recognized over the vesting period based on the remeasured fair value at each reporting period until settlement.

3.3.5 Options with underlying shares classified as liabilities

Options or similar instruments are also classified as liabilities when the underlying shares would be classified as liabilities. Therefore, if the shares underlying an option have repurchase features, a company should first consider whether the underlying shares would be classified as liabilities. For example, a public company may grant an option that it would settle by issuing a mandatorily redeemable share that is not subject to the scope exception in ASC 480. Because the underlying shares would be classified as a liability, options on those shares would also be classified as a liability in accordance with ASC 718.

3.3.6 Tax withholding on stock awards

A stock-based compensation plan may permit shares that would otherwise be issued upon an employee's exercise of an option or vesting of a restricted stock award to be "withheld" as a means of meeting the employer's tax withholding requirements for the income the employee will be deemed to have earned in the period of exercise/vesting. This is effectively an immediate repurchase of the withheld shares for cash; however, instead of remitting cash to the employee, the employer remits the cash to the taxing authority on behalf of employee.

Ordinarily, an immediate repurchase of shares would result in liability classification of an award. However, ASC 718-10-25-18 permits continued equity classification when shares are withheld for this purpose as long as (a) the employer has a statutory obligation to withhold taxes on the employee's behalf and (b) the amount withheld does not exceed the maximum statutory tax rates in the employee's applicable jurisdictions. If those requirements are not met, the entire award would be classified as a liability, not just the amount withheld for tax purposes. This assessment should be done on a jurisdiction-by-jurisdiction basis rather than using a "blended" rate across jurisdictions for all employees. If a company used a blended rate, then in those jurisdictions in which that rate exceeds the maximum statutory tax rate, the associated awards would be classified as a liability.

For jurisdictions that do not have any withholding requirement (certain non-US jurisdictions), or recipients for which no withholding is required (which could apply to non-executive members of the board of directors in the US), any withholding will cause the award to be liability-classified. Additionally, the employee cannot have the ability to require the employer to withhold more than the allowable amount. The maximum statutory tax rates are based on the applicable rates of the relevant tax authorities, including federal, state, and local authorities, including the employee's share of payroll or similar taxes.

We believe that a company's convention of rounding up shares to the next whole share for purposes of meeting the net share settlement requirements does not alter equity classification if the convention is applied consistently and is not significant in relation to the withheld amount. For example, if the stock price per share is unusually high, the cash payment for the fractional share may substantively reflect a cash settlement of the award.

There are further complexities associated with employees who move from one jurisdiction to another ("mobile" employees). For these employees, companies will need to carefully assess the withholding requirements in each jurisdiction to determine the amount that represents the maximum statutory tax rate.

3.3.7 Awards exercised through broker-assisted cashless exercise

Many public companies offer their employees broker-assisted cashless exercise programs to help the employees exercise their stock options without having to use their personal funds to pay for the exercise price. A broker-assisted cashless exercise is the simultaneous exercise of a stock option by an employee and a sale of the shares through a broker.

A broker-assisted cashless exercise generally occurs as follows:

- The employee exercises the stock option and authorizes the immediate sale of the shares that result from the option's exercise. On the same day that the option is exercised, the company notifies the broker of the sale order.
- The broker executes the sale and notifies the company of the sales price.
- By the settlement date (typically three days later), the company delivers the stock certificates to the broker.
- On the settlement date, the broker (a) pays the company the exercise price plus the withholding taxes and (b) remits the net of the sales proceeds less the withholding taxes to the employee.

A broker-assisted cashless exercise of an employee stock option does not result in liability classification for the award if both of the following criteria in ASC 718-10-25-16 through ASC 718-10-25-17 are satisfied:

- The cashless exercise requires an exercise of the stock options.
- The company concludes that the employee is the legal owner of all the shares that are subject to the option (even though the employee did not pay the exercise price before the sale of the shares that are subject to the option).

Employees can sell shares from the exercise of options or vesting of restricted stock through a broker into the market and remit proceeds from the sale to the company in an amount that exceeds the amount permitted to be withheld for tax purposes without causing the award to become classified as a liability (see SC 3.3.6). In this situation, the company has not cash settled the awards; rather the company has delivered shares to settle the award and the employee has sold those shares in the market and remitted cash back to the company to settle the tax liability.

3.3.8 Award with exercise prices denominated in other currencies

ASC 718 requires that an award that is indexed to a factor that is not a market, performance, or service condition, should be classified as a liability (refer to SC 3.3.1). However, ASC 718-10-25-14 provides an exception to allow equity classification of certain awards with an exercise price denominated in currencies other than the currency in which the shares trade. This exception would apply to a company that grants an award to its employees resident in foreign jurisdictions with an exercise price that is denominated in either (1) the functional currency of the company's foreign operation; (2) the currency in which the employee is paid; or (3) the currency of a market in which a substantial portion of the entity's equity securities trades. If one of these exceptions is met, then the award would not be considered dual-indexed for purposes of ASC 718 and equity classification would be appropriate, assuming all other criteria for equity classification were met.

3.3.9 Repurchase features that function as forfeiture provisions

In some instances, companies grant awards to employees that are exercisable at the grant date, but contain a repurchase feature that enables the company to reacquire the shares for an amount equal to the original exercise price (or the lower of the current fair value and the original exercise price) if the employee terminates employment within a specified time period. The purpose of the repurchase feature is often to permit the employee to "early exercise" an option so that the employee's holding period for the underlying stock begins at an earlier date to achieve a more favorable tax position.

The repurchase feature described above may be equivalent to a forfeiture provision and would not automatically be analyzed as a call right. This feature would not, on its own, require liability classification of the award. However, the repurchase feature creates an in-substance service period because the employer can repurchase the shares at the original purchase price if the employee terminates within the specified time period. Therefore, the requisite service period for such an award would include the period until the repurchase feature expires. The "early exercise" of an option during this period would not be considered substantive for accounting purposes and any cash received upon "early exercise" would be recognized as a deposit liability. Companies should assess the terms of an award and the surrounding facts and circumstances when determining whether a repurchase feature such as the one described above represents a forfeiture provision.

3.3.10 Temporary equity classification of redeemable securities

SEC registrants should also consider the requirements of SEC Accounting Series Release No. 268, Presentation in Financial Statements of "Redeemable Preferred Stocks," ("ASR 268") when determining the appropriate classification of an award. The SEC staff clarified in SAB Topic 14E (codified in ASC 718-10-S99-1) that ASR 268 (codified in ASC 480-10-S99-1) and related guidance (including ASC 480-10-S99-3A) are applicable to stock-based compensation. Under this guidance, SEC registrants with outstanding equity instruments that are redeemable (1) at a fixed or determinable price on a fixed or determinable date, (2) at the option of the holder, or (3) upon the occurrence of an event that is not solely within the control of the issuer are required to classify these securities outside of permanent equity (i.e., as temporary equity in the mezzanine section of the balance sheet).

Although non-SEC registrants (i.e., nonpublic companies) are not explicitly subject to the requirements of ASC 480-10-S99-1 and ASC 480-10-S99-3A, we believe the most appropriate classification for these types of instruments for all entities is outside of the equity section.

Certain awards that qualify for equity classification under ASC 718 may require classification as temporary equity under ASC 480-10-S99-3A, including:

- Shares that are redeemable at the employee's discretion after a six month holding period or based on contingent events.
- Options with underlying shares that are redeemable at the employee's discretion after a six month holding period or based on contingent events.
- Options with cash settlement features based on contingent events.

SAB Topic 14E clarifies that companies should present as temporary equity an amount that is based on the redemption amount of the instrument, but takes into account the portion of the award that is vested. The redemption amount would differ if an award is an option (which generally requires an

exercise price) compared to a restricted share (which generally has no exercise price). Intrinsic value is the redemption amount of an option because when an option is settled, the holder receives the difference between the fair value of the underlying shares and the exercise price of the option. If the shares underlying an option are redeemable, the holder pays the exercise price upon exercise of the option and then, upon redemption of the underlying shares, the holder receives the fair value of those shares. The net cash to the holder from the award, in either scenario, equals the stock option's intrinsic value. For a restricted stock award, the redemption amount is fair value, which is generally equal to intrinsic value because restricted stock does not have an exercise price.

Awards that are subject to the classification requirements of ASC 480-10-S99-3A should be presented as follows on the grant date:

- **Shares:** Begin presenting the grant-date fair value of the share as temporary equity based on the portion of the vesting period that has passed. If the share is unvested on the grant date, then no amount is presented as temporary equity on the grant date.

- **Options:** Begin presenting the grant-date intrinsic value of the option as temporary equity based on the portion of the vesting period that has passed. If the option is unvested on the grant date, then no amount is presented as temporary equity on the grant date.

Under ASC 480-10-S99-3A, if the award is not redeemable currently (e.g., because a contingency has not been met), and it is not probable that the award will become redeemable, adjusting the amount recognized in temporary equity is not required until it becomes probable that the award will become redeemable. However, for such awards that are unvested on the grant date, the redemption amount of the award as of the grant date (i.e., intrinsic value for options and fair value for restricted stock) should be reclassified to temporary equity over the requisite service period as the award vests. After the award is vested, the amount presented as temporary equity should be equal to the redemption amount of the award as of the grant date. For options that are granted at-the-money (no intrinsic value on the grant date), no amount will be presented as temporary equity as long as it is not probable that the option or underlying shares will become redeemable.

Once it becomes probable that the share or option will be redeemed, ASC 718 may require liability classification of the award. For example, shares and options with redemption features based on contingent events could be classified as equity under ASC 718 if the contingent event is not probable of occurring. Once the occurrence of the contingent event becomes probable, the award generally becomes a liability and, therefore, ASC 480-10-S99-3A is no longer applicable.

If the award is redeemable currently or it is probable that the award will become redeemable and the award would still be equity-classified under ASC 718 (e.g., a share that is redeemable at the employee's discretion after a six-month holding period), the redemption amount presented as temporary equity should be adjusted at each reporting date by reclassifying the change in the award's redemption amount from permanent equity to temporary equity without consideration of the amount of compensation cost previously recognized in equity. For example:

- If a restricted stock award that qualifies for equity classification under ASC 718 is redeemable at fair value more than six months after vesting, and the restricted stock is 75% of the way through the vesting period at the balance sheet date, 75% of the current fair value of the stock at the balance sheet date should be presented as temporary equity. The redemption amount presented as temporary equity for restricted stock, which is based on the current fair value at each reporting

period, generally will not be equal to the grant-date fair value that is recorded to APIC over the requisite service period.

- If a redeemable option (or an option on redeemable stock) that qualifies for equity classification under ASC 718 is 75% of the way through the vesting period at the balance sheet date, 75% of the current intrinsic value of the option at the balance sheet date should be presented as temporary equity. The redemption amount presented as temporary equity for an option, which is based on the current intrinsic value at each reporting period, generally will not be equal to the grant-date fair value that is recorded to APIC over the requisite service period.

Figure SC 3-2 summarizes the amounts that should be presented as temporary equity for four different stock-based compensation awards. The examples assume that the awards meet the criteria for equity classification under ASC 718.

Figure SC 3-2

Impact of ASC 480-10-S99-3A on four different stock-based compensation awards

Award	Amount presented as temporary equity on the grant date	Subsequent adjustments to temporary equity
- At-the-money option - Underlying shares are puttable at fair value by the employee after a six-month holding period - Option cliff vests in four years - Grant-date fair value is $50,000. - One year after grant, the intrinsic value is $100,000.	No amount is presented as temporary equity on the grant date because the option is unvested and has no grant-date intrinsic value.	Because it is probable that the underlying shares will become redeemable, the company should present the current intrinsic value at each reporting date as temporary equity as the option vests. At the end of the first year, 25% of the intrinsic value, or $25,000, would be reclassified from permanent equity to temporary equity even though only $12,500 (25% of the option's grant-date fair value) has been credited to equity as compensation cost.
- At-the-money option - Cash settlement feature that permits the employee to put the option to the company at fair value upon a change in control. - Option cliff vests in four years. - Grant-date fair value is $50,000 - One year after grant, the intrinsic value is $100,000.	No amount is presented as temporary equity on the grant date because the option is unvested and has no grant-date intrinsic value.	The company will not present any amount as temporary equity until the change in control occurs, because the option had no intrinsic value on the grant date and it is not probable that the option will become redeemable. If it becomes probable that the options will be cash settled (i.e., the change in control occurs), the award would become a liability (accounted for as an equity-to-liability modification).

Award	Amount presented as temporary equity on the grant date	Subsequent adjustments to temporary equity
◻ In-the-money option ◻ Intrinsic value of $30,000 on the grant date ◻ Underlying shares are puttable at fair value by the employee after a six-month holding period. ◻ 100% vested on the grant date. ◻ Grant-date fair value is $50,000. ◻ One year after grant, the intrinsic value is $100,000.	The intrinsic value of the option, or $30,000, is presented as temporary equity on the grant date because the option is vested and was granted in-the-money.	Because it is probable that the underlying shares will become redeemable, the company should continue to adjust the amount presented as temporary equity to the current intrinsic value at each reporting date. At the end of the first year, an additional $70,000 would be reclassified from permanent equity to temporary equity, for a cumulative total of $100,000 presented as temporary equity, even though only $50,000 was credited to equity as compensation cost at the grant date fair value.
◻ Restricted stock ◻ Cliff vests in four years. ◻ Immediately vests and becomes puttable at fair value by the employee upon a change in control. ◻ Grant-date fair value is $150,000 ◻ One year after grant, the fair value is $200,000.	No amount is presented as temporary equity on the grant date because the restricted stock is unvested.	Over the vesting period, the company should present the grant-date fair value as temporary equity. At the end of the first year, 25% of the grant-date fair value, or $37,500, would be reclassified from permanent equity to temporary equity. Because it is not probable that the stock will become redeemable (change in control is not probable until it occurs), the company should not adjust the amount presented as temporary equity to the current intrinsic value (redemption amount, which also happens to be the fair value of the shares) at each reporting date. If a change in control becomes probable and the put becomes active within six months of vesting, the award would become a liability under ASC 718 (accounted for as an equity-to-liability modification). If a change in control becomes probable more than six months after the vesting date of the stock, the company should adjust the amount presented in temporary equity to the current fair value in each subsequent period as long as the put is active.

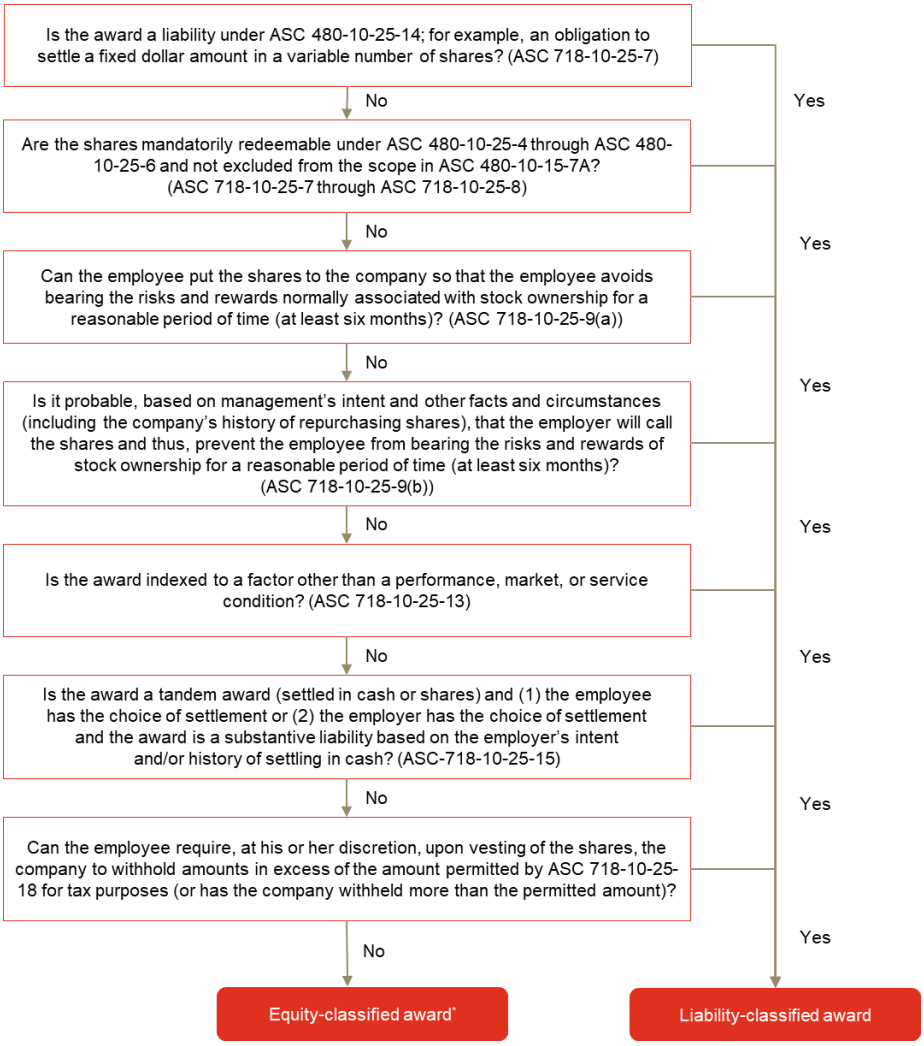
Application of the guidance in ASC 480-10-S99-3A does not affect the amount or timing of recognition of compensation cost in the financial statements. Rather, application of this guidance could result in the reclassification of amounts from permanent equity to temporary equity to highlight the company's redemption obligations. Additionally, as long as the redemption amount is at fair value (or for an option, the market price of the stock less the exercise price of the option), we believe that the redemption right does not represent a preferential distribution under ASC 480-10-S99-3A, and, therefore, the company would not be required to apply the two-class method of calculating earnings per share described in ASC 260-10-45-60B.

3.3.11 Liability or equity classification criteria for awards

Figure SC 3-3 and Figure SC 3-4 summarize the basic criteria for determining the appropriate classification of a share award and a stock option, respectively. These flowcharts may not address the appropriate classification of awards with complex or unusual terms.

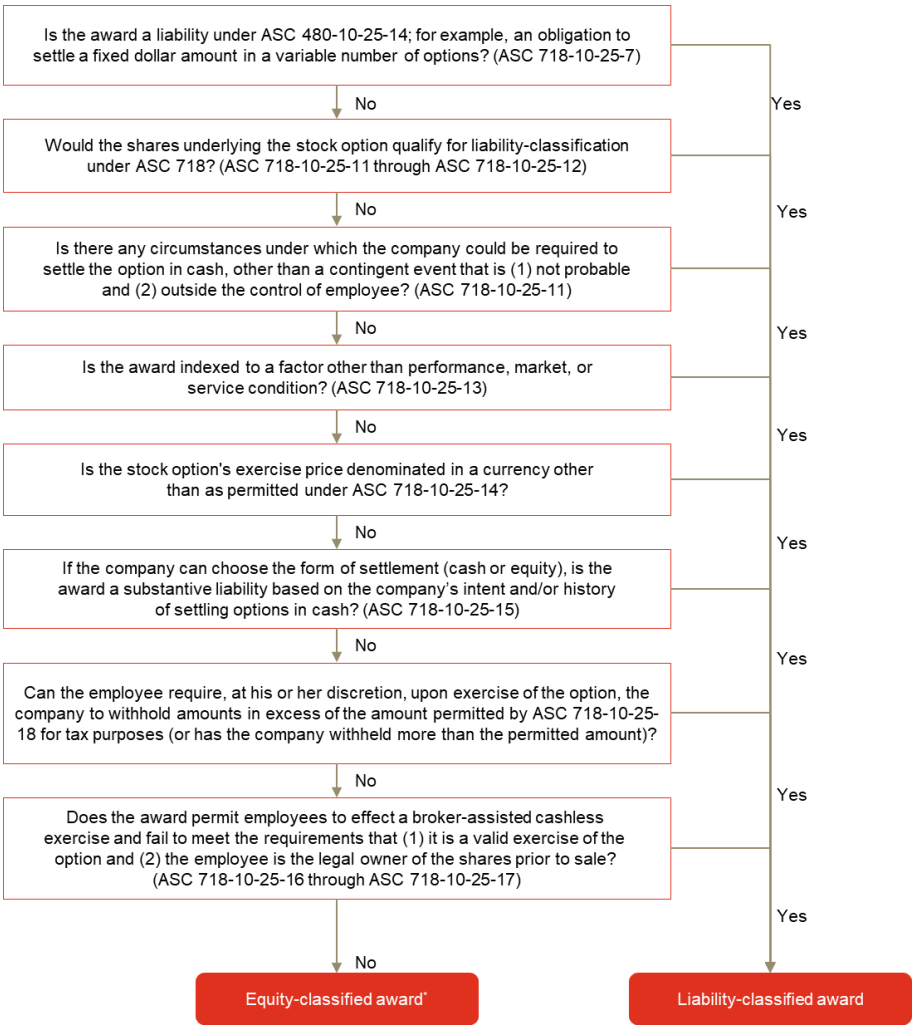
Figure SC 3-3

Liability and equity classification of a share award



* Companies should also apply the classification and measurement provisions of ASC 480-10-S99-1 and ASC 480-10-S99-3A, which may require classification of certain amounts outside of permanent equity.

Figure SC 3-4
Liability and equity classification of a stock option



* Companies should also apply the classification and measurement provisions of ASC 480-10-S99-1 and ASC 480-10-S99-3A, which may require classification of certain amounts outside of permanent equity.

3.4 *Illustration of a liability-classified award*

Example SC 3-9 illustrates the accounting for a common liability-classified award. For the sake of simplicity, long-term versus short-term classification of balance sheet amounts is not considered; quarterly information is not presented; nor is any of the compensation cost subject to capitalization under other GAAP.

Refer to TX 17 for guidance on the tax-related aspects of the examples.

EXAMPLE SC 3-9

Cash-settled SARs with service and performance conditions

On January 1, 20X1, SC Corporation, a calendar year-end company, grants 100,000 cash-settled SARs with service and performance conditions to five vice presidents (20,000 SARs each). The cash-settled SARs will cliff vest if each vice president's department achieves a cumulative revenue total of $3 million over a three-year period that ends on December 31, 20X3 and the vice president is still employed at that date (i.e., the SARs have a performance condition with a three-year requisite service period). Historical results lead management to believe that the targets will be achieved and that none of the vice presidents will cease working for SC Corporation before vesting. All five employees continue employment for the three-year requisite service period and achieve their targets for vesting in the SARs. SC Corporation's common stock has a par value of $0.01 per share.

SC Corporation calculates cumulative compensation cost by taking the total number of SARs that it granted, multiplied by the percentage of the requisite service period that has been completed, multiplied by each SAR's fiscal year-end fair value. The cumulative compensation cost represents the ending liability balance of the outstanding SARs at the end of the fiscal year and expense is recognized or reversed each year to adjust the liability to the appropriate ending balance.

The following table summarizes the SARs activities. For simplicity, all SARs are assumed to be exercised at the beginning of the fiscal year.

(Abbreviations: O/S = Outstanding)

Fiscal year	Granted	SARs O/S	Fair value per SAR at 12/31	% Requisite service provided	Ending liability balance	Annual compensation cost*
20X1	100,000	100,000	$12	33%	$400,000	$400,000
20X2	—	100,000	$14	67%	$933,333	$533,333
20X3	—	100,000	$17	100%	$1,700,000	$766,667

* Ending liability balance (i.e., the cumulative compensation cost) = the number of SARs outstanding × percentage of requisite service provided × the fair value per SAR at the end of the fiscal year. Annual compensation cost is the change in the liability balance during the year.

			Fair value per SAR				
Fiscal year	SARs exercised	SARs O/S	At 1/1	At 12/31	Exercised SARs: cash settlement	Liability balance**	Annual compensation cost
20X4	60,000	40,000	$17	$21	$(1,020,000)	$840,000	$160,000
20X5	20,000	20,000	$21	$18	$(420,000)	$360,000	$(60,000)
20X6	20,000	—	$18		$(360,000)	$0	$0

** Liability balance is the beginning balance less cash payouts for exercised SARs of $1,020,000 (60,000 * $17), $420,000 (20,000 * $21), and $360,000 (20,000 * $18) in 20X4, 20X5, and 20X6, respectively, plus or minus changes in the stock price for SARs that remain outstanding of $160,000, ($30,000), and nil for 20X4, 20X5, and 20X6 respectively. Since the awards are fully vested, the ending liability for each year equals the number of SAR's outstanding at the end of each year multiplied by the fair value per SAR at the end of the year.

How should SC Corporation account for cash-settled SARs with service and performance conditions?

Analysis

SC Corporation records the following journal entries:

Dr. Compensation expense	$400,000	
Cr. SBC liability		$400,000
To recognize compensation expense in 20X1 for the 20X1 award		

Dr. Compensation expense	$533,333	
Cr. SBC liability		$533,333
To recognize compensation expense in 20X2 for the 20X1 award		

Dr. Compensation expense	$766,667	
Cr. SBC liability		$766,667
To recognize compensation expense in 20X3 for the 20X1 awards		

On January 1, 20X4, 60,000 SARs are exercised at a fair value of $17 per SAR, resulting in a cash payment of $1,020,000 (60,000 × $17).

Dr. SBC liability	$1,020,000	
Cr. Cash		$1,020,000
To recognize exercise of 60,000 SARs at a fair value of $17 in 20X4		

On December 31, 20X4, the fair value of each SAR is $21 for the 40,000 SARs that are outstanding. SC Corporation should recognize additional compensation expense for the $4 increase in the fair value.

Dr. Compensation expense	$160,000	
Cr. SBC liability		$160,000
To recognize compensation expense in 20X4 for the 20X1 awards		

On January 1, 20X5, 20,000 SARs are exercised at a fair value of $21 per SAR, resulting in a cash payment of $420,000 (20,000 × $21).

Dr. SBC liability	$420,000	
Cr. Cash		$420,000
To recognize exercise of 20,000 SARs at a fair value of $21 in 20X5		

On December 31, 20X5, the fair value of the 20,000 SARs that remain outstanding is $18 each. SC Corporation adjusts its compensation expense to reflect the $3 decrease in the fair value. Therefore, an adjustment of $60,000 reduces the SBC liability to $360,000.

Dr. SBC liability	$60,000	
Cr. Compensation expense		$60,000
To adjust the SBC liability to its fair-value amount at the end of 20X5		

On January 1, 20X6, the final 20,000 SARs are exercised at a fair value of $18 per SAR, resulting in a cash payment of $360,000 (20,000 × $18).

Dr. SBC liability	$360,000	
Cr. Cash		$360,000
To recognize exercise of 20,000 SARs at a fair value of $18 in 20X6		

Chapter 4: Modifications to stock-based compensation awards

4.1 Overview of modifications to stock-based compensation awards

ASC 718 defines a modification as a change in the terms or conditions of a stock-based compensation award. Examples of a modification include a repricing, an extension of the vesting period, changes in the settlement terms, and changes in the terms of a performance condition. In addition, a change in circumstances that results in a change in the classification of the award (e.g., equity to liability), even if there is not a legal modification, may result in a modification. For example, a company may cash settle awards, which it concludes causes the remaining awards to become in substance liabilities and, therefore, causes the awards to be modified from equity awards to liability awards.

ASC 718-20-35-2A clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Modification accounting is required only if (1) the fair value, (2) the vesting conditions, or (3) the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. Regardless of whether the change to the terms or conditions of the award requires modification accounting, the existing disclosure requirements and other aspects of GAAP associated with modifications continue to apply. For example, the earnings per share guidance requires treating a modification as if there was a cancellation and new issuance of an award in computing diluted EPS as described in FSP 7.5.5.5. Throughout this chapter it is assumed that changes to the award's terms or conditions meet one of the above three conditions and, therefore, require modification accounting.

As discussed further in this chapter, a company modifying an award under ASC 718 will, generally, (1) calculate the incremental fair value of the modified award and (2) assess the effect of the modification on the number of awards expected to vest, including a reassessment of the probability of vesting (for awards with service and/or performance conditions).

Under ASC 718, the assumptions that a company uses to determine the original award's fair value immediately before the modification should reflect the current facts and circumstances on the modification date. For example, a company should update its volatility and expected term assumptions to reflect conditions as of the modification date.

4.2 Overall principle for modifications to stock-based awards

A modification is viewed as the exchange of the original award for a new award. When measuring the compensation cost of a modification of an equity-classified award with a performance or service condition, a company should perform the following steps at the modification date:

1. Calculate any incremental fair value based on the difference between the fair value of the modified award and the fair value of the original award immediately before it was modified. To accomplish this, a company would review the stock price and other pertinent factors (e.g., assumptions used in its option-pricing model) as of the modification date, and revise its assumptions to reflect circumstances on the modification date. As part of this step, the company should also determine whether the modification changes the estimate of the number of awards that are expected to vest. See SC 4.3.1.

2. Immediately recognize the incremental value as compensation cost for vested awards. For awards with graded-vesting features, the incremental compensation cost related to tranches

that are legally vested should be recognized immediately regardless of whether the company is applying the graded-vesting or straight-line attribution method to recognize compensation cost.

3. Recognize, on a prospective basis over the remaining requisite service period, the sum of the incremental compensation cost and any remaining unrecognized compensation cost for the original award on the modification date.

Typically, total compensation cost that is recognized for a modified equity-classified award should, at a minimum, equal the grant-date fair value of the original award. If, on the modification date, management does not expect the original performance or service condition to be achieved, the compensation cost that the company recognizes might be lower than the award's grant-date fair value. If management expects that the original award would not vest and, after the modification, believes that the modified award also will not vest, the company should not recognize any compensation cost until it becomes probable that the modified award will vest. For further details, see SC 4.3.1.

4.2.1 Modifications of liability-classified awards

The general principle of exchanging the original award for a new award also applies to a modification of a liability-classified award. Unlike an equity-classified award, however, a liability-classified award is remeasured at fair value at the end of each reporting period. Therefore, a company simply recognizes the fair value of the modified award by using the modified terms at the modification date. There is no "floor" or requirement to recognize at least as much as the grant date fair value of a liability classified award; the total compensation expense will equal the fair value on the settlement date.

4.2.2 Measurement date for modifications of awards

Although there is limited guidance on determining the modification date, we believe it is generally appropriate to apply the concepts used for determining the grant date of an award. In other words, the modification date is typically the date that the modified award is approved and there is a mutual understanding of the modified terms and conditions. A company should account for the modification, and measure the incremental fair value of the modified award, on the modification date. Refer to SC 2.6.1 for further discussion of determining the grant date.

In some situations, a modification may result in two measurement dates: (1) the date the terms of the award are modified in anticipation of a future event and (2) the date the event occurs that triggers modification of the award. An example of a modification with two measurement dates is included in Example 13 of ASC 718-20-55-103 through ASC 718-20-55-106. In this example, an award that does not originally contain antidilution provisions is modified on July 26 to add antidilution provisions in contemplation of an equity restructuring. On September 30, the equity restructuring occurs. As a result, the company effectively modified the award on both July 26 and September 30. The company should compare the fair value of the award immediately before and after the modifications on both July 26 and September 30. See SC 4.5.3 for additional information.

4.3 Modifications of awards classified as equity

Modifications of equity-classified awards may take many forms. Some of the more common modifications are a change in vesting conditions or a repricing of options.

4.3.1 Modifications of performance or service conditions

Under ASC 718-20-35-3 through ASC 718-20-35-4, a modification of an equity-classified award should be accounted for as follows:

- A company should recognize compensation cost in an amount at least equal to the award's grant-date fair value, unless the company's expectation on the modification date is that the employee will fail to meet the original award's performance or service condition.

- Compensation cost should be recognized if the award ultimately (1) vests under the modified vesting conditions or (2) would have vested under the original vesting conditions. If the award was expected to (and does) vest under the original conditions, the company would recognize compensation cost regardless of whether the employee satisfies the modified condition. This is consistent with ASC 718's use of the modified-grant-date model whereby compensation cost is not reversed for awards that vest, even if an employee does not exercise the option or does not realize any value from the exercise of the option.

Whether it is probable that an award will vest is an important factor in the recognition of compensation cost before and on the modification date. ASC 718 uses the term probable in a manner consistent with its definition in ASC 450, *Contingencies*, which refers to an event that is likely to occur (ASC Master Glossary). On the modification date of an equity-classified award, management should assess the probability that either the original or modified vesting condition will be satisfied. For awards with performance conditions, a probability assessment is already required each reporting period. Bearing in mind that an element of subjectivity goes into interpreting the terms probable and improbable, management should develop, document, and consistently apply a methodology for assessing the probability of achieving vesting conditions, which should be based on reasonable assumptions and all available objective evidence.

Modifications of equity-classified awards that have performance and/or service conditions can be categorized into four types. Examples of the four types of modifications can be found in ASC 718-20-55-107 through ASC 718-20-55-121.

Type I: Probable-to-probable: This type of modification does not change the expectation that the award will ultimately vest. The cumulative amount of compensation cost that should be recognized is the original grant-date fair value of the award plus any incremental fair value resulting from the modification. A Type I modification will result in incremental fair value if terms affecting the estimate of fair value have been modified (e.g., a repricing or a modification that affects expected term). The original grant-date fair value represents the minimum or "floor" amount of compensation to be recognized if either the original or the modified conditions are satisfied.

Type II: Probable-to-improbable: This type of modification changes the expectation that the award will ultimately vest. Specifically, a condition that the company anticipates will be satisfied is replaced with a condition that the company expects will not be satisfied. Type II modifications are relatively uncommon because employees are unlikely to accept this kind of change unless they receive other compensation or the company also changes other terms of the award. For Type II modifications, no incremental fair value would be recognized unless and until vesting of the award under the modified conditions becomes probable. If the original vesting conditions are satisfied, compensation cost equal to the award's original grant-date fair value would be recognized, regardless of whether the modified conditions are satisfied.

Type III: Improbable-to-probable: This type of modification changes the expectation that the award will ultimately vest. Specifically, a condition that the company expects will not be satisfied is changed to a condition that the company expects will be satisfied. In this fact pattern, the cumulative compensation cost recognized for the original award should be zero immediately prior to the modification as none of the awards are expected to vest. The incremental fair value is therefore equal to the fair value of the modified award (the value of the modified award compared to its prior zero value). The incremental compensation cost is recognized over the remaining requisite service period, if any. A Type III modification could result in the recognition of total compensation cost less than the award's grant-date fair value because at the modification date, the original vesting conditions are not expected to be satisfied.

Type IV: Improbable-to-improbable: This type of modification does not change the expectation that the award will ultimately not vest. The company would not recognize additional compensation cost on the modification date because it continues to expect that the award will not vest. Therefore, no cumulative compensation cost should be recognized for the award. If, at a future date, the company determines it is probable the employees will vest in the modified award, it should recognize compensation cost equal to the fair value of the award at the modification date. Similar to a Type III modification, because the original vesting conditions are not expected to be satisfied as of the modification date, the grant-date fair value is no longer relevant. In other words, a Type IV modification effectively establishes a new measurement date for the award (the modification date).

4.3.2 Modifications in connection with termination of employment

Companies often decide to modify awards concurrent with an employee's termination of employment. For example, this might occur because the employee is a senior executive and a modification is agreed to in connection with a resignation or involuntary termination in order to avoid an acrimonious separation. Two common modifications made in connection with termination of employment are: (1) acceleration of the vesting of unvested awards and (2) extension of the award's post-termination exercise period for vested options.

For unvested awards, the company needs to assess whether it expects the original vesting conditions to be satisfied as of the modification date. If the employee would have forfeited the awards upon termination according to the awards' original terms, the awards would not be expected to vest under the original vesting conditions (i.e., vesting was improbable).

If the employee would have forfeited the awards upon termination under the original terms, and the company chooses to accelerate vesting or allow continued vesting, the modification is a Type III modification (improbable to probable). Therefore, incremental fair value is equal to the fair value of the modified awards on the modification date. This incremental compensation cost is recognized over the requisite service period, which may result in immediate recognition if the awards do not require further service, or over the period through a defined date if the employer requires the individual to work through a specified separation date in order to earn the award. This accounting treatment applies regardless of the company's accounting policy for forfeitures (as described in SC 2.7).

In some instances, the original terms of an award provide for automatic acceleration of vesting upon involuntary termination of employment. When involuntary termination becomes probable, the accelerated vesting is not treated as a modification (assuming it is consistent with the award's original terms) since it is not a discretionary action; however, the requisite service period may have changed. The change in requisite service period should be recognized on a prospective basis (see SC 2.6.10 for additional information).

A modification to extend the exercise period of a vested option is treated as a Type I modification because it does not change the expectation that the award will vest (i.e., it is already vested). Incremental fair value is equal to the difference between the fair value of the modified award and the fair value of the original award (immediately before it was modified). The expected term of the option prior to the modification should take into account any truncation of term that would occur pursuant to the option's original terms upon termination of employment. For example, option plans typically provide for a 30- to 90-day exercise period after termination of employment. The expected term of the modified option should consider the new exercise period. An extension of the exercise period generally results in some amount of incremental compensation cost, assuming no other terms were modified. Incremental compensation cost is recognized immediately because the options are vested.

Example SC 4-1, Example SC 4-2, Example SC 4-3, and Example SC 4-4 illustrate the accounting for modifications in connection with termination of employment.

EXAMPLE SC 4-1

Modification to awards in connection with termination of employment – no ongoing service

SC Corporation enters into an agreement with its CFO in connection with the termination of the CFO's employment. Under the original terms of the CFO's stock option award, the CFO would forfeit all unvested options upon termination of employment and would be permitted a period of 90 days from the termination date to exercise their vested options. Pursuant to the termination agreement, the CFO's outstanding stock options are modified as follows:

- The exercise period of vested options is extended to one year
- All unvested options are immediately vested, with an exercise period of one year

The CFO will immediately cease providing services to SC Corporation upon signing of the termination agreement.

How should SC Corporation account for the modification of the options?

Analysis

The modification of the vested options is a Type I (probable to probable) modification and the modification of the unvested options is a Type III (improbable to probable) modification.

The modification of the vested options is a Type I modification because the options are already vested (i.e., the modification does not change the expectation that the awards will vest; the awards are probable of vesting both before and after the modification). The incremental fair value is calculated as of the modification date. The fair value of the options before the modification is based on the current stock price and an exercise period of 90 days, since the original terms of the award permitted only 90 days to exercise upon termination of employment. The fair value after the modification is also based on the current stock price, but the exercise period should be determined considering the revised one-year exercise period. This will result in some incremental compensation cost due to the longer expected term, which should be recognized immediately because the options are vested.

The modification of the unvested options is a Type III modification because prior to the modification, the unvested options are not probable of vesting as the CFO would have otherwise forfeited the award

upon termination of employment. Accordingly, any compensation cost previously recognized for the unvested options should be reversed. The incremental fair value is equal to the fair value of the modified award, which is measured based on the current assumptions determined as of the modification date (e.g., the current stock price and an expected term based on a one-year exercise period). The resulting compensation cost is recognized immediately because the CFO is no longer providing any service to SC Corporation to earn the options.

EXAMPLE SC 4-2

Modification to awards in connection with termination of employment – continuing service period

SC Corporation granted stock options to its CFO that vest in five equal tranches; one tranche fully vests at the end of each of the five years. Upon termination of employment, any unvested options are forfeited and the CFO would be permitted a period of 90 days from the termination date to exercise their vested options.

Halfway through year three, SC Corporation and the CFO agree to a separation agreement. Pursuant to the termination agreement, SC Corporation and the CFO agree to the following modifications to the CFO's outstanding stock options:

- The exercise period of vested options is extended from the original 90-day period to one year from the date of termination
- All unvested options are immediately vested, with the same one-year exercise period

The CFO will continue to provide service during a transition period of three months from the date the separation agreement was reached. None of the original awards that were not yet vested would vest during the three-month transition period based on their original terms. The CFO must complete the transition period in order to be eligible for the accelerated vesting of unvested options (i.e., outstanding unvested options will be forfeited unless the CFO provides service for three additional months). Assume the compensation cost recognized to date is $700,000 and the fair value of the modified award is $1,000,000.

How should SC Corporation account for the modification of the options?

Analysis

The calculation of incremental fair value resulting from the modification is the same as described in Example SC 4-1. The incremental compensation cost calculated for the vested options would be recognized immediately, consistent with Example SC 4-1.

For the unvested options, the recognition of compensation cost will depend on whether SC Corporation elects to estimate forfeitures or to account for forfeitures when they occur. If SC Corporation's policy is to estimate forfeitures, it would reverse the compensation cost previously recognized and recognize the entire fair value of the modified award over the remaining three-month service period. If SC Corporation's policy is to account for forfeitures when they occur, we believe there are two acceptable views:

- View A: Assume a substantive forfeiture of the original award occurs on the modification date as it was exchanged for the modified award at a time when it was not probable of vesting. Therefore,

the guidance for a Type III (improbable-to-probable) modification should be followed. The cumulative compensation cost recognized for the original award should be reversed ($700,000) and the fair value of the modified award ($1,000,000) should be recognized over the remaining service period. This is the same as the accounting outcome for a company that elects to estimate forfeitures.

- View B: Assume forfeiture of the original award does not occur until the CFO terminates employment. Under this view, the original award is not yet forfeited; therefore, expense should not be reversed at the time of the modification. Over the remaining three-month service period, SC Corporation would recognize compensation cost equal to the difference between the modified award's fair value (on the modification date) and the previously recognized amount of the grant-date fair value of the original award ($1,000,000 fair value of the modified award less $700,000 previously recognized compensation cost or $300,000 "incremental compensation cost"). If the modified award's fair value is less than the previously recognized compensation cost, SC Corporation would not recognize any further compensation cost and the difference between the previously recognized amount and the modified award's fair value would be reversed upon the CFO's termination of service. For example, if the modified award's fair value was $500,000, no cost would be recognized over the remaining service period and $200,000 ($700,000 previously recognized compensation cost less $500,000 fair value of modified award) would be reversed at termination.

Under either View A or View B, the cumulative amount of recognized compensation cost for the award will be the same, which is equal to the fair value of the modified award on the modification date.

EXAMPLE SC 4-3

Modification of awards to extend the post-termination exercise period

SC Corporation's option plan includes terms that allow employees a 30-day period to exercise vested options upon termination of employment. On January 1, 20x9, SC Corporation modifies the terms of the plan to extend the post-termination exercise period to 90 days. Assume that all of the options are probable of vesting and none of the employees are currently expected to terminate employment.

How should SC Corporation account for the modification?

Analysis

The modification is a Type I (probable to probable) modification because the options are probable of vesting both before and after the modification. SC Corporation should calculate any incremental fair value resulting from the extension of the post-termination exercise period and the resulting impact, if any, to the expected term assumption. Because the modification is not being done in connection with an employee's termination, the expected term would not necessarily increase by 60 days as a result of the 60-day increase in the post-termination exercise period. The fair value before the modification would be based on an expected term for an option with a 30-day post-termination exercise period, while the fair value after the modification would be based on an expected term for an option with a 90-day post-termination exercise period.

The determination of the extent to which this modification impacts the expected term assumption will depend on the relevant facts and circumstances. Any incremental compensation cost would be

recognized immediately for vested options and over the remaining requisite service period for unvested options.

EXAMPLE SC 4-4

Modification of awards in connection with termination of employment – WARN Act

SC Corporation announces on September 15 that it will be restructuring its business operations, resulting in the shutdown of one of its facilities and the termination of 300 employees. The restructuring, shutdown, and terminations were not probable prior to September 15. SC Corporation's restructuring plan falls under the WARN Act, which requires employers with 100 or more employees to notify affected employees 60 days in advance of a plant closing or mass layoff. Also under the Act, all employees are legally employed and paid by SC Corporation until the end of the 60-day notification period (in this case, November 14). The terminated employees will cease providing services immediately on September 15.

Employees affected by this layoff have unvested options that will legally continue to vest through November 14 based upon the above provisions, even though no further service is required. Awards that do not vest by November 14 will be forfeited according to their original terms.

Has SC Corporation modified the terms of the options that will vest between September 15 and November 14?

Analysis

No. A modification to the terms of the award has not occurred because the continued vesting of the awards through November 14 pursuant to the WARN Act is deemed to be an original term of the award. That is, SC Corporation was required to allow vesting of these options under the original terms of the award, which implicitly included the requirements of the WARN Act. However, SC Corporation should adjust the requisite service period for these options since further service will not be required beyond September 15 in order to retain the awards. Accordingly, any unrecognized compensation cost for options that will vest between September 15 and November 14 should be recognized on September 15.

4.3.3 Modification of stock options during blackout periods

At times, a company will impose blackout periods that suspend employees' ability to exercise their stock options. These blackout periods are generally planned in advance to coincide with a company's quarterly and annual earnings releases. However, a company may also impose unplanned temporary or indefinite blackout periods for other reasons.

During these blackout periods, there are circumstances where employees may have outstanding vested stock options that are due to expire prior to the end of the blackout period. As a result, the employees will not have the ability to exercise their options prior to the awards being forfeited. For example, a company may impose a blackout period that is anticipated to be in place for several months. During that indefinite period, the company may terminate an employee whose vested options expire 30 days after termination. As a result, the employee will not have the ability to exercise the options prior to the end of the 30-day post-termination exercise window (i.e., the awards will expire).

A company may determine that based on the terms of its option plan, certain employees will not have the ability to exercise their options prior to expiration and the company is under no legal obligation to deliver any value (e.g., cash) to the employees in lieu of exercising the options. As a result, a company may decide to extend the options' term for a period of time to provide their employees with the ability to exercise their options after the blackout period has been lifted. In these cases, if the holders cannot exercise and there is no obligation to deliver value to the employee, then the modification to extend the term beyond the blackout period is considered a Type I modification as the options are already vested and the modification only impacts the employee's ability to exercise and not the probability of vesting. However, when calculating the fair value of the options immediately before the modification, the fair value is zero because the option holder cannot exercise the option and receive value. Accordingly, the value transferred to the employee (that is, the incremental fair value) is the full fair value of the modified option on the date of the modification. Further, because the award was fully vested prior to the modification, no amount of previously recognized compensation cost (associated with these options) should be reversed.

When evaluating fact patterns similar to the one described above, careful consideration should be applied to the particular facts and circumstances, including whether the holders have an ability to exercise, whether the holder can exercise but not sell the underlying shares, the vesting status of the options, any legal obligation to deliver value to the employee, and other considerations. Any of these considerations could impact the accounting result.

At times, the modifications discussed above occur when the holders of the outstanding options are no longer employees of the company. Pursuant to ASC 718-10-35-10, a share-based award granted to an employee that is subject to ASC 718 shall continue to be subject to the recognition provisions of ASC 718 throughout the life of the share-based award, unless its terms are modified when the holder is no longer an employee. As such, once post-employment modifications occur, the modification of the award should be accounted for pursuant to the modification guidance in ASC 718, but after the modification, the recognition and measurement of the award should be determined by reference to other GAAP (e.g., ASC 480 and ASC 815). Application of either of those sections of the codification could subject the award to liability classification.

We believe modifications that are concurrent with an employee's termination (for example, extension of exercise term upon termination of employment) are generally made in consideration of past employment. Therefore, the award should continue to be accounted for under ASC 718 after the modification. Judgment may be required in determining whether a modification is concurrent with an employee's termination. See SC 4.10 for more information on transitioning from ASC 718 to other GAAP.

4.3.4 Repricing of unvested options

The repricing of unvested options with a performance or service condition is a modification that should be accounted for under ASC 718-20-35-3 through ASC 718-20-35-4. A repricing, however, would not impact the probability of vesting. Assuming the award is otherwise probable of vesting, a company that makes such a modification should:

- Measure compensation cost for the difference between the fair value of the modified award and the fair value of the original award on the modification date

- Recognize, over the remaining requisite service period, the sum of the incremental compensation cost and the remaining unrecognized compensation cost for the original award on the modification date

Example SC 4-5 illustrates the accounting for repricing of unvested options.

EXAMPLE SC 4-5

Accounting for a repricing of unvested options

On October 1, 20X1, SC Corporation grants its employees 1,000,000 stock options that have an exercise price of $60 and a three-year cliff-vesting service condition. The options' exercise price equals the fair value of the stock on the grant date. The award's fair value is $35.29. SC Corporation recognizes compensation cost using the straight-line attribution method. On October 1, 20X2, which is one year into the three-year requisite service period, the market price of the company's stock declines to $40 per share, prompting the company to reduce the options' exercise price to $40 (no other changes to the award's terms were made). SC Corporation calculates the incremental fair value by calculating the fair value of the award immediately before and immediately after the modification. The fair value of the award immediately before the repricing is based on assumptions (e.g., volatility, expected term, etc.) reflecting the current facts and circumstances on the modification date and therefore, differs from the fair value calculated on the grant date. For simplicity, no pre-vesting forfeitures were assumed. Other significant information is as follows:

	Original award	Modified award
Fair value on modification date	$18.36	$24.59
Exercise price	$60.00	$40.00
Unrecognized compensation cost per option on October 1, 20X2 ($35.29 * 2 years remaining / 3-year vesting period)	$23.53	n/a

The additional compensation cost stemming from the modification is $6.23 per option ($24.59 fair value of modified award less $18.36 fair value of original award on modification date) and the total compensation cost to recognize prospectively per option is $29.76 ($23.53 remaining unrecognized compensation cost + $6.23 incremental fair value).

The total remaining compensation cost of $29,760,000 ($29.76 * 1,000,000 options) would be recognized ratably over the modified award's two-year requisite service period. Accordingly, SC Corporation's compensation cost would be $14,880,000 per year from October 1, 20X2 through September 30, 20X4.

4.3.5 Modifications of awards to accelerate vesting upon certain events

Many stock-based compensation awards contain provisions that provide for vesting to automatically accelerate upon a change in control event. Companies also sometimes modify an outstanding award to add this type of "change in control" provision. As discussed in SC 2.5.3, a change in control of the company is generally not viewed as probable until it occurs. Thus, a modification to add a change in control provision does not change the expectation of whether the awards will vest and does not change the attribution of expense (until the change in control occurs). If the original vesting conditions are expected to be satisfied as of the modification date, a modification to add a change in control provision

does not result in any incremental fair value. This is because the awards are expected to vest both before and after the modification (since the change in control is not yet probable), and the change in control provision itself does not change the fair value of the award. When the change in control occurs, the company will recognize the remaining grant-date fair value because the requisite service period has been completed.

In other instances, companies modify awards to accelerate vesting in anticipation of the sale of a business unit. For example, a company might accelerate the vesting of awards held by employees of a business unit that will be sold (who will be terminating employment) because those employees otherwise would have forfeited the awards. In this scenario, the company should assess whether the sale of the business is probable at the time the awards are modified. Unlike a change in control, we believe a sale of a business unit could be probable before it occurs. A company should consider its assessment of when the business unit meets the held for sale criteria in ASC 360 as that assessment also involves assessing whether the sale transaction is probable. If the sale is determined to be probable, the modification to accelerate vesting would likely be a Type III modification (improbable to probable).

4.3.6 Modifications to the requisite service period of awards

The modification of an award may affect the award's requisite service period. If the modified requisite service period is equal to or shorter than the original requisite service period, compensation cost should be recognized over the remaining portion of the modified requisite service period. For example, a company grants an award with a performance condition and a four-year requisite service period. One year after the grant date, the company modifies the original performance condition and replaces it with a new performance condition that has a two-year requisite service period. The award was expected to vest both before and after the modification; therefore, it is a Type I (probable to probable) modification. The company would recognize compensation cost over the modified requisite service period of two years (as opposed to the remaining portion of the original requisite service period of three years), starting from the modification date.

If the modified requisite service period is longer than the original requisite service period and, at the modification date, the original vesting terms are expected to be satisfied, the company should track whether the employees complete the original requisite service period. ASC 718-20-55-107 requires a company to recognize compensation cost at least equal to the original grant-date fair value if the awards ultimately would have vested under the original vesting conditions.

For example, a company grants options with a grant-date fair value of $9 per option and a three-year service period. Two years after the grant date, the company reduces the options' exercise price and increases the service period from the remaining one year of the original vesting requirement to three years (i.e., requiring two additional years of service). The incremental fair value of the award, as a result of the modification, is $4 per option. Therefore, the total remaining compensation cost that the company should recognize is $7 (unrecognized compensation cost for original option of $3 plus incremental fair value of $4). We believe, there are two approaches to address this issue:

- **Pool approach:** Under this approach, the company would recognize $7 over the remaining three years of the modified requisite service period.

- **Bifurcated approach:** Under this approach, the company would recognize (1) the $3 of unrecognized compensation cost over the original award's remaining one-year requisite service period and (2) the $4 of incremental value over the three-year modified requisite service period.

Under either approach, if an employee does not complete the three-year modified requisite service period, some or all compensation cost related to the employee's awards should be reversed depending on when the employee leaves. If the employee completes one year of service, the compensation cost related to the original award ($3) should not be reversed, because the employee would have vested under the original vesting conditions. Either approach is acceptable, and the choice is an accounting policy decision which should be disclosed in the financial statements, if material, and consistently applied.

4.3.7 Modifications of awards with market conditions

As discussed in SC 2.5.2, awards with market conditions are measured and accounted for differently than awards with performance or service conditions. At the grant date, a company does not assess (or reassess after the grant date) whether it is probable that a market condition will be satisfied, because the effect of the market condition is reflected in the fair value of the award. Instead, the recognition of compensation cost is solely dependent upon the employee completing the requisite service.

ASC 718 does not provide specific guidance on how to account for the modification of an award with a market condition. However, the general principles of modification accounting also apply to awards with market conditions, except that the accounting is not based on whether the company expects the market condition to be satisfied as of the modification date. Instead, the market condition is reflected in the fair value measurements used to calculate incremental fair value on the modification date.

If the employee is expected to complete the requisite service at the time of the modification, a company will recognize compensation cost equal to the unrecognized grant-date fair value of the original award plus any incremental fair value (if any) arising from the modification over the remaining requisite service period.

4.3.8 Modifications of awards by nonpublic companies

Nonpublic and public companies follow the same principles for modification accounting. However, in some cases, nonpublic companies can elect to use alternative measurement methods, such as calculated value or intrinsic value, for certain awards (see SC 6). If a nonpublic company is applying an alternative measurement method, that method should be used instead of "fair value" when calculating incremental value resulting from a modification.

For example, if a nonpublic company modifies an award measured using calculated value, it should measure incremental value based on the difference between the calculated value of the modified award and the calculated value of the original award at the modification date.

Another example is the modification of a liability award measured using intrinsic value. If the modification causes the award to become equity-classified, intrinsic value is no longer an acceptable measurement method (except in unusual situations described in SC 2.2.3). Nonpublic companies generally must use fair value or calculated value to measure equity-classified awards. In this situation, we believe the incremental compensation cost should be based on the difference between the fair value (or calculated value) of the modified equity-classified award and the intrinsic value of the original liability award at the modification date.

4.4 Modifications that change an award's classification

As noted earlier, modifying an award may cause an equity-classified award to become a liability-classified award or vice versa.

4.4.1 *Equity-to-liability modification of awards*

When accounting for a modification that changes an award's classification from equity to liability, a company should do the following:

- Determine the portion of the requisite service period that the employee has completed.
- Recognize a liability that equals the modified award's modification-date fair value, multiplied by the percentage of the requisite service period completed at the date of the modification. If the liability equals the amount recognized in equity for the original award, the entry to recognize the liability is simply a credit to liability and a debit to equity. If the liability exceeds the amount recognized in equity for the original award, the incremental amount is recognized as compensation cost currently. If the liability is less than the amount recognized in equity, the residual amount simply remains in equity, generally as additional paid-in capital.
- For each reporting period after the modification date, adjust the liability so that it equals the portion of the requisite service provided multiplied by the modified award's fair value at the end of the reporting period. Changes in the liability are recorded as increases or decreases to compensation cost, except that the amount of compensation cost is subject to the floor of the original equity award's grant date fair value. If the liability value declines below the amount that represents the portion of the requisite service period multiplied by the original equity award's grant date fair value, that difference is credited to equity rather than compensation cost. In that case, compensation cost is being recognized based on the grant date fair value of the original equity award (rather than the liability value).

An example of a modification that causes an award's classification to change from equity to liability, including illustrating the "floor principle," can be found in ASC 718-20-55-123 through ASC 718-20-55-133. Example SC 4-6 illustrates the accounting for an equity-to-liability modification.

EXAMPLE SC 4-6

Accounting for a modification that results in a change to an award's classification

On October 1, 20X1, SC Corporation grants its employees 1,000,000 stock options that have an exercise price of $60 and a three-year cliff-vesting service condition. The options' exercise price equals the fair value of the stock on the grant date. The award's fair value is $35.29. SC Corporation recognizes compensation cost using the straight-line attribution method. On October 1, 20X2, which is one year into the three-year requisite service period, the company decides to issue cash-settled stock appreciation rights (SARs) to replace the options. The fair value of the SARs (and the original stock options) is $45 on the modification date.

How should SC Corporation account for the exchange of stock options for SARs?

Analysis

Because the original award had three-year cliff-vesting provisions, the SC Corporation would have recognized compensation cost of $11.76 per year per option (1/3 × $35.29). On the modification date (October 1, 20X2), the fair value of each cash-settled SAR is $45. The company should have recognized $15 in compensation cost for each SAR (1/3 of the $45 fair value). Because the pro rata fair value of the liability ($15) is more than the pro rata grant-date fair value of the original award ($11.76), an adjustment would be made to cumulative compensation cost at the time of the modification. The company would record the following journal entries:

Through September 30, 20X2:

Dr. Compensation expense	$11,760,000	
Cr. Additional paid-in capital		$11,760,000
To recognize stock-based compensation cost for the first year of the award's service period		

On October 1, 20X2 (the modification date):

Dr. Compensation expense (($15.00 – $11.76) × 1,000,000)	$3,240,000	
Dr. Additional paid-in capital	$11,760,000	
Cr. Stock-based compensation liability		$15,000,000
To recognize the effect of the modification		

4.4.2 *Liability-to-equity modification of awards*

The floor principle does not apply to a modification that results in a company reclassifying an award from a liability to equity. To account for such a modification, a company should do the following:

- Reclassify the liability as of the modification date to additional paid-in capital
- Recognize compensation cost equal to the excess, if any, of the modified award's fair value over the original award's fair value immediately prior to the modification. Generally, the equity-classified award will not be remeasured after the modification date
- Account for the award as equity, going forward, so long as there are no further changes

An example of a modification that causes the award's classification to switch from liability to equity can be found in ASC 718-20-55-135 through ASC 718-20-55-138.

4.5 *Modifications to awards in an equity restructuring*

Changes that awards undergo as a result of an equity restructuring (e.g., large non-recurring cash dividend, stock split, spin-off, etc.) are modifications under ASC 718.

Often, companies will adjust an award's terms to preserve its value after such an equity restructuring. Some awards may contain terms that require or allow for the adjustment of an award to protect the holder from changes in the award's value following an equity restructuring, commonly referred to as "antidilution provisions." For example, to offset the decrease in the per-share price of the stock underlying an option after a stock split or spin-off, a company may adjust the exercise price, the number of shares, or both. To determine whether these changes result in incremental compensation cost under ASC 718, companies will first need to assess whether the adjustments were required by the award's existing terms.

An adjustment to the terms of a stock-based compensation award to preserve its value after an equity restructuring may result in significant incremental compensation cost if there was no requirement to make such an adjustment based on the award's existing terms. Plan terms that merely permit adjustment of an award at the discretion of management or the compensation committee will not prevent a company from incurring additional compensation cost because such a provision does not require an adjustment if an equity restructuring event occurs.

4.5.1 Modifications of awards without an antidilution provision

If the adjustment of an award's terms in an equity restructuring was not required by its existing terms, the modification will likely result in incremental fair value because the award's fair value immediately before the modification contemplates the equity restructuring occurring but does not contemplate antidilution protection (i.e., protection against a decline in the value of an award upon restructuring). The fair value immediately after modification reflects the "equitable" (antidilution) adjustments to the award's terms, which will increase its value relative to the award that is not adjusted.

Equity restructurings in which award holders receive a cash payment in lieu of modifying the award are also treated as a modification. Similar to the illustration in Example SC 4-7, the value of the award without the cash payment (i.e., the immediately before value) is compared to the value of the unmodified option together with the cash payment (i.e., the immediately after value of the entire award provided the holder). Any incremental fair value transferred to holders of vested awards would be recorded as compensation cost. For those awards that have not vested upon modification, the recognition of compensation cost for the portion of the arrangement that was settled in cash is accelerated (assuming the cash received by the employee is fully vested and does not need to be returned if the underlying award never vests). In equity restructurings, any change in the exercise price or other terms of the option, as well as the cash payment, should be included in the assessment of whether incremental fair value has been provided to the award holders.

Example SC 4-7 illustrates the accounting for the modification of stock options to preserve their value after a 2-for-1 stock split, assuming that the options do not contain an antidilution provision.

EXAMPLE SC 4-7

Modification of stock options without an antidilution provision for a stock split

On June 1, 20X1, SC Corporation grants 10,000 "at-the-money" equity-classified stock options with an exercise price of $20 and a grant-date fair value of $9.03. The options cliff-vest in four years based on a service condition. The options' original terms do not include antidilution protection (i.e., the plan is silent on the subject of preserving the options' value upon a future equity restructuring event).

One year after the grant date, SC Corporation completes a 2-for-1 stock split of its common stock when the market price of its stock is $50. Concurrent with the stock split, SC Corporation modifies the options so that the exercise price is adjusted to $10 and the number of options outstanding is increased to 20,000. The modification is intended to preserve the value of the options after the stock split.

All valuation assumptions remain constant before and after the modification: expected volatility of 40%, expected term of 6 years, dividend yield of 0%, and risk-free interest rate of 4%.

How should SC Corporation account for the stock split?

Analysis

Because the options' terms do not contain an antidilution provision, the estimated fair value of the options immediately before the modification should be based on the assumption that the market price of SC Corporation's stock will be reduced to $25 as a result of the stock split and the exercise price of the options will remain at $20. Using a Black-Scholes model and a stock price of $25, an exercise price of $20, and the other assumptions noted above, the fair value per option immediately before the modification is $13.05. The total compensation cost for the options outstanding immediately before the modification is $130,500 ($13.05 × 10,000 options).

Immediately after the modification, the value of the options is based on the new exercise price of $10 and the number of options increases to 20,000. Using a Black-Scholes model, the stock price of $25 and an exercise price of $10, the fair value per option is $17.88. The total fair value of the award immediately after the modification is $357,600 ($17.88 × 20,000 options).

Thus, this modification, which was intended only to make the option holders "whole," results in incremental fair value, and, in turn, compensation cost of $227,100 ($357,600 – $130,500). The following table summarizes the effect of the modification:

	Immediately before the modification	Immediately after the modification
Market price of SC Corporation's stock	$25*	$25
Exercise price	$20	$10
Fair value per option	$13.05	$17.88
Number of options	10,000	20,000
Total award fair value	$130,500	$357,600

* Although the market price of SC Corporation's stock is $50 prior to the 2-for-1 stock split, the market price is assumed to be $25 immediately before the options' modification as it is assumed that market participants would anticipate the stock split when determining the options' fair value.

SC Corporation would recognize the remaining original grant-date fair value plus the incremental fair value at the date of the stock split as compensation cost over the remaining requisite service period.

4.5.2 Modifications of awards with an antidilution provision

If awards are adjusted based on an existing antidilution provision that requires the adjustment in the event of an equity restructuring, and is properly structured to preserve the value of the awards upon completion of the equity restructuring, incremental fair value generally should not result from the modification. In this situation, the fair value of the award immediately before the modification will reflect the required adjustment to the award's terms in accordance with the antidilution provision. Thus, the fair value of the award immediately before the contractually-required modification should be equal to its fair value immediately after the contractually-required modification. However, this calculation should be performed to confirm that no incremental fair value is generated by the modification. As described in SC 4.5.4.3, the value used in keeping an award holder "whole" may not be the fair value of the award for accounting purposes and, as a result, modifications may inadvertently result in incremental fair value that would need to be recognized.

In order for a company to conclude that a modification is required, we believe the terms of the award need to, at a minimum, specify that an "equitable" or "proportionate" adjustment is required (not just that the company "may" make such an adjustment). In our view, it is not necessary for an antidilution provision to specify exactly how the awards will be adjusted. When assessing whether an antidilution provision is discretionary, consideration should be given to whether the employees could require the company to make "equitable" adjustments to an award's terms if an equity restructuring event occurs. In some cases, input from legal counsel may be necessary.

4.5.3 Awards modified to add an antidilution provision

A modification also occurs when an antidilution provision is added to an award's terms. However, ASC 718 provides that if an award is modified to add an antidilution provision and the provision is not added in contemplation of an equity restructuring event, then the company is not required to calculate the incremental fair value of the modified award.

If an antidilution provision is added in contemplation of an equity restructuring event, modification accounting is required and would likely result in incremental fair value and, in turn, additional compensation cost. Similar to Example SC 4-7, the fair value immediately before the modification to add the antidilution provision would reflect the anticipated effect of the equity restructuring and assume no antidilution protection. ASC 718 does not define "in contemplation," but Case B of Example 13 of ASC 718-20-55-105 indicates that once an equity restructuring event has been publicly announced, a modification would be considered "in contemplation." Prior to the announcement of an equity restructuring event, judgment will be required to determine whether the antidilution provision was added in contemplation of that event.

4.5.4 Modifications of awards in a spin-off transaction

In a spin-off, a company distributes shares of a subsidiary to its shareholders, thereby reducing the parent company's share value. Consider a situation in which the parent company's market value was $30 per share immediately before the spin-off. The parent company distributes one share of the subsidiary's stock for each parent company share outstanding. Immediately after the spin-off, the parent company's shares trade at $25 per share, and the subsidiary's shares trade at $5 per share.

Companies will generally modify outstanding awards to keep employees in an equitable position after the spin-off. For example, employees holding options to purchase shares of the parent may receive options to purchase shares of the entity that has been spun off, or the exercise price and number of

options on the parent company shares may be adjusted to reflect the decline in value of the parent company stock. Companies can use a variety of methods to keep employees "whole" upon the spin-off. Regardless of the method used, any exchange of awards or adjustment in connection with a spin-off transaction is accounted for as a modification in accordance with ASC 718. A spin-off generally creates a number of complex stock-based compensation issues. In this section, the following aspects of a stock-based compensation modification involving a spin-off are addressed:

- Nature of the modification
- Impact of a mandatory antidilution provision
- Stock prices used in the incremental fair value calculation
- Attribution of stock-based compensation cost

4.5.4.1 Nature of award modifications in a spin-off transaction

Understanding the form of the transaction and how share-based awards will be modified in connection with a spin-off is important to appropriately account for the modification. The fair value of the award immediately prior to the modification will be compared to the fair value of the award(s) immediately after the modification. Common examples of how companies modify awards to preserve the pre-spin value include providing employees with incremental awards in the parent company stock, providing awards in the former subsidiary's stock, or adjusting the exercise price of the existing awards. Different information is required to account for the modification depending on its nature. For example, if the company provides existing option holders with options of the former subsidiary, it will be necessary to estimate the fair value of the subsidiary in order to measure the fair value of those options.

Options granted on the equity of another entity are derivatives under ASC 815. However, a company that grants an option on its subsidiary as an equitable adjustment pursuant to an antidilution provision would still be subject to ASC 718 at the time of grant. If the parent company grants awards in the former subsidiary after the spin-off, those awards would be derivatives subject to ASC 815-10-55-46 through ASC 815-10-55-48.

4.5.4.2 Impact of a mandatory antidilution provision

Antidilution provisions are designed to equalize the value of awards before and after the spin-off. Whether awards contain an antidilution provision will impact the assumptions used to measure the fair value of the awards upon modification. The fair value immediately before the spin-off for awards that include an antidilution provision will reflect the required adjustment in accordance with the antidilution provision (e.g., an increase in the number of awards). The absence of an antidilution provision will usually result in significant incremental fair value. See SC 4.5.1 through SC 4.5.3 for further guidance.

4.5.4.3 Stock prices used in calculating incremental fair value

If the equitable adjustment for the spin-off will result in the parent company distributing stock options in the former subsidiary to the parent's employees based on the spin-off ratio received by all shareholders, then the measurement of incremental compensation cost to be recorded by the parent company is based upon the fair value of the parent company stock options immediately prior to the

spin-off as compared to the fair value of the parent company stock options plus the former subsidiary stock options to be distributed upon the spin-off.

The fair value of the parent company awards immediately prior to the spin-off should generally be based on the parent company's closing stock price on the day of the spin-off transaction, also known as the "record date." In many spin-offs, the parent company's shares will begin trading on an "ex-dividend" basis three business days before the record date, (i.e., the parent company's shares will trade excluding the fair value of the subsidiary's shares). After the subsidiary's registration statement is declared effective, the subsidiary's shares will generally begin trading on a "when issued" basis. In this situation, in order to determine the fair value of the parent company's shares immediately prior to spin-off, the fair value of the parent company's shares traded on an "ex-dividend" basis should be added to the fair value of the dividend of the subsidiary's shares traded on a "when issued" basis immediately prior to the spin-off.

The fair value of the parent company awards immediately after the modification should generally be based on one of the following:

- The parent company's opening stock price on the day after the spin-off (assuming the parent company shares were not traded on an "ex-dividend" basis);
- The difference between the closing price of the parent company's stock on the day of the spin-off ("before" the spin-off) and the closing price of the subsidiary's stock (either actual or "when issued") on the day of the spin-off; or
- The parent company's shares if traded on an "ex-dividend" basis (it would not be necessary to deduct the closing price of the subsidiary's stock on the day of the spin-off, because it will already be reflected in the fair value of the parent company's shares).

The fair value of the subsidiary's options immediately after the modification should generally be based on either:

- The subsidiary's opening stock price on the day after the spin-off (assuming the subsidiary's shares were not traded on a "when issued" basis), or
- The closing price of the subsidiary's stock on the day of the spin-off (assuming the subsidiary's shares were traded on a "when issued" basis).

The use of an average price over a period of time, while perhaps deemed "equitable" for purposes of determining the terms of the modified awards, is not appropriate for purposes of determining fair value as of the modification date because the use of such averages introduces effects from market conditions or events other than the equity restructuring itself. The other assumptions used to estimate fair value (e.g., volatility, expected term, etc.) would also be determined based on the facts and circumstances immediately before and immediately after the spin-off transaction; however, the fair value of the awards immediately before the modification should generally include the effects of the contemplated transaction. Furthermore, volatility and dividend yield assumptions should be determined separately for the options to purchase parent and subsidiary shares. These assumptions may differ for the parent and subsidiary depending on the facts and circumstances.

4.5.4.4 *Attribution of stock-based compensation cost*

In connection with a spin-off and as a result of the related modification, employees of the parent company may receive stock-based compensation awards of the former subsidiary, or employees of the former subsidiary may retain stock-based compensation awards of the former parent company. The parent company and the former subsidiary would recognize compensation cost related to the modified awards that had been granted to employees who provide service to each respective entity. In other words, after the spin-off, each employer would recognize expense only for the stock-based compensation awards that are held by its employees, regardless of which company originally issued the awards.

Awards held by parent company employees would continue to be recognized in the financial statements of the parent company, including any incremental fair value created as a result of the modification.

If the employees of the former subsidiary were to retain their unvested awards of the parent company, the former subsidiary would recognize in its financial statements the remaining unrecognized compensation cost (with an offsetting credit to equity) pertaining to those awards over the remaining requisite service period. If the former subsidiary issued new awards in connection with the spin-off (for example, to keep the holder "whole" as a result of the decline in value of the former parent company awards upon the spin-off), the aggregate fair value of the awards immediately before and after the spin-off would be calculated, as described in SC 4.5.4.1. Any incremental fair value would be recognized prospectively in the financial statements of the former subsidiary for unvested awards. Incremental fair value for vested awards would be recognized immediately in the financial statements of the former subsidiary.

After the spin-off, the parent company would not recognize any compensation cost related to its unvested awards that are held by former employees who now work at the former subsidiary, because those employees will provide services solely to the former subsidiary post-spin. However, in this scenario, any incremental fair value arising from the spin modification for vested awards would also be recognized immediately in the parent company's consolidated financial statements.

A parent company, in contemplation of a spin-off, may also arrange with its current employees, who are going to work exclusively for the former subsidiary (upon completion of the spin-off), to exchange unvested parent company options for unvested options to purchase the new shares of the former subsidiary pursuant to antidilution provisions. The employees will be terminated from the parent company following the spin-off, but the service they are providing to the former subsidiary will not be interrupted. In this situation, the parent company would not reverse the compensation cost recorded for the options prior to the date of the spin-off (that is, there will not be forfeiture of awards). Rather the parent company is effecting an exchange of awards pursuant to antidilution provisions in connection with the transaction. Following the spin-off, the parent company would no longer record compensation cost related to the unvested awards of the former employees. The remaining fair value of the unvested awards would be recognized by the former subsidiary.

4.6 *Modifications in a business combination*

In connection with a business combination, the acquirer may agree to assume existing stock-based compensation arrangements with employees of the acquiree or may establish new stock-based compensation arrangements to compensate those employees for postcombination services. These

arrangements may involve cash payments to the employees or the exchange (or settlement) of stock-based awards. These replacement awards, in many cases, include the same terms and conditions as the original awards and are intended to keep the employees of the acquiree "whole" (i.e., preserve the value of the original awards at the acquisition date) after the acquisition. In other situations, the acquirer may change the terms of the stock-based awards, often to provide an incentive to key employees to remain with the combined entity.

Other than providing that the exchange of stock-based compensation awards in a business combination should be accounted for as a modification (ASC 718-20-35-6), ASC 718 does not provide specific guidance on the accounting for awards exchanged in a business combination. However, ASC 805, *Business Combinations*, does include specific guidance on the accounting for awards exchanged in a business combination; for example, it includes guidance as to whether the fair value of the exchanged awards should be included as part of the purchase price paid and how to account for the tax effects of exchanged awards.

For accounting guidance on the effects that a business combination may have on stock-based compensation arrangement, refer to BCG 3.

4.7 Inducements to exercise stock-based compensation awards

Inducements are offers that are generally designed to encourage holders of stock-based compensation awards to exercise their awards early and are considered modifications. The accounting treatment for the modification depends on whether the inducement is short-term (i.e., available for a limited period of time) or long-term. Although ASC 718 does not specify a time-frame for either category of inducement, we believe that a limited period of time is generally measured in weeks, not months.

- **Short-term inducements**
  A short-term inducement is an offer by the entity that would result in modification of an award to which an award holder may subscribe for a limited period of time. The modification guidance under ASC 718 applies to short-term inducements only if the employee accepts the inducement offer. Generally, the modification would be accounted for when the employee accepts the offer. However, if the employee has the option to withdraw acceptance prior to the end of the offer period, the modification should be accounted for on the last day of the offer period.

- **Long-term inducements**
  A long-term inducement is any inducement other than a short-term inducement. In the case of a long-term inducement, the modification guidance should be applied to all outstanding awards that are subject to the inducement offer, regardless of whether employees accept the offer.

The ASC 718 definition of a short-term inducement excludes an offer to repurchase or settle an award for cash. Therefore, a limited time offer to repurchase or settle an award for cash is not a modification. Rather, the repurchase of an award for cash would be accounted for in accordance with ASC 718-20-35-7. Refer to SC 4.8.

4.8 Repurchases and settlements of equity awards

The cash settlement of an award (which could be a share, a stock option, or another share-based payment instrument) is the repurchase of an outstanding equity instrument. An equity-classified award that is settled in cash should be accounted for as follows (as per ASC 718-20-35-7):

- If the award is unvested and probable of vesting, the company should recognize the cash settlement as the repurchase of an equity instrument concurrent with the acceleration of vesting of the award. Any unrecognized compensation cost based on the grant-date fair value of the award would be accelerated and recognized on the settlement date.
- If the award (vested or unvested) is cash settled at its current fair value as of the settlement date, no incremental compensation cost should be recognized. If the award is cash-settled for an amount greater than its fair value, additional compensation cost for the difference should be recognized along with any remaining unrecognized compensation cost. If the award is settled for an amount less than its fair value, the entire amount of cash transferred to repurchase the award should be charged to equity and any remaining unrecognized compensation cost should be recognized.
- If the award was not probable of vesting as of the cash settlement date, the fair value of the award immediately prior to the cash settlement is zero, and any amounts previously recognized as compensation cost would be reversed (or would have already been reversed). The entire amount paid to settle the award should be charged to compensation cost.

It is important to distinguish between an award that has been repurchased or settled and an award that has been modified to change its classification to a liability. If the award has been modified, the modification is accounted for following the approach described in SC 4.4.1, which could have a significantly different accounting impact.

The repurchase of an award that is an infrequent transaction, negotiated after the award is granted, and not pursuant to a pre-existing right of the company, is generally accounted for as a repurchase of equity in accordance with ASC 718-20-35-7. However, a history of cash settlements may indicate that the substantive terms of outstanding awards include a cash settlement feature, which could result in liability classification of those awards. Refer to SC 3 for additional information.

If a company has a pre-existing right to settle an award in cash and had previously intended to settle it in equity (or a pre-existing call right that it did not previously intend to exercise prior to the holder bearing the risks and rewards of equity ownership for at least six months) but subsequently changes its intention, then, even absent any change to the terms of award, the award is considered to have been modified to a liability-classified award and the accounting described in SC 4.4.1 would apply. Another example of an award that has been modified is an equity award that is converted to a fixed cash payment that is earned over a future service period. ASC 718-20-55-144 provides an example of this type of modification.

4.8.1 Repurchase of stock held by an employee

When a company (or a related party or other holder of an economic interest) repurchases stock held by employees, it is important to consider the accounting requirements in ASC 718-20-35-7. This guidance indicates that any excess of repurchase price over the fair value of the instrument repurchased should be recognized as compensation cost.

We believe the repurchase guidance in ASC 718 should generally be applied even if the shares repurchased from employees are vested and were not originally issued as compensation (e.g., founder's stock). In some fact patterns, judgment may be required to determine whether the repurchase of stock results in compensation expense, including whether the price paid is greater than fair value.

4.8.2 Sale of employee stock in the secondary market

The market for private company equity securities, often referred to as the "secondary market," continues to expand. Sales of employee shares to a third party in a secondary market transaction can introduce unique accounting challenges.

A purchase by a third party of shares from an employee, at fair value, is typically a transaction among shareholders, with no accounting recognition by the company. However, if the transaction price paid by the third party exceeds the fair value of the shares, the company will need to evaluate whether there is a compensatory element to the arrangement. In particular, if the company is involved in facilitating the transaction, it is likely that compensation expense will arise. Consideration of the extent of the company's involvement should include whether the company helped to arrange the transaction and whether it was concurrent with (or a condition for) a sale of other financial instruments by the company to the third party.

It is also important to understand the relationship between the company and the third party in the transaction. If the third party has a pre-existing economic interest in the company, the third party is presumed to be acting on behalf of the company as described in SC 1.4. In such a situation, unless the payment is clearly for another purpose, the excess of the purchase price over the fair value of the shares would be considered compensation for employee services. In that case, the company would reflect the transaction as a contribution of the excess purchase price from the economic interest holder and payment of compensation to the employee.

Secondary market transactions often have other complexities. For example, a history of repurchasing unexercised options or "immature" shares (shares in which the employee has not yet vested or has vested but which have been held for less than six months) could create a presumption that the company intends to settle future awards in cash, which would require liability classification for those awards.

4.9 Cancellation and replacement of equity awards

If a company chooses to cancel an existing equity-classified award along with a concurrent grant of a replacement award, the transaction should be accounted for as a modification as described in ASC 718-20-35-8 (see SC 4.2). However, the transaction should only be accounted for as a modification if the two events occur concurrently. If an award is cancelled without the concurrent grant of a replacement award, the cancellation should be treated as a settlement for no consideration and all remaining unrecognized compensation cost should be accelerated. When assessing whether the cancellation and replacement of awards is a modification, a company should consider the transaction from the viewpoint of the employee (i.e., whether the employee would view the new award as a replacement of the cancelled award).

The replacement awards associated with these cancellations may take a number of forms. For example, a company may choose to cancel an existing equity classified stock option and replace the

award with cash, vested stock or re-priced options. In cases where the replacement award is vested stock, the total compensation cost to be recognized by the company is equal to the original grant date fair value plus any incremental fair value calculated as the excess of the fair value of the stock over the fair value of the original award on the cancellation date.

In cases in which the company cancels an award and replaces it with an award that includes cash, there are additional complexities that the company must consider before concluding on the appropriate accounting for the cancellation and replacement. For example, the replacement of an unvested equity award for an unvested equity award and vested cash would likely result in the acceleration of some compensation expense as the cash payment is effectively a settlement for a portion of the unvested award.

The incremental compensation cost in the examples above should be recognized prospectively over the remaining service period in addition to the remaining unrecognized grant date fair value.

Example SC 4-8 illustrates the accounting for the cancellation of an equity award that is not probable of vesting.

EXAMPLE SC 4-8

Cancellation of an equity award that is not probable of vesting

SC Corporation grants equity-classified stock options on January 1, 20x8 to employees that vest based on achieving a performance target. As of December 31, 20x8, SC Corporation concludes that it is not probable the performance target will be achieved and, therefore, does not record any compensation cost. In January 20x9, the board of directors decides to cancel the stock options without a concurrent grant of a replacement award. The stock options are not probable of vesting on the date of cancellation.

How should SC Corporation account for the cancellation?

Analysis

Because the award was cancelled without the concurrent grant of a replacement award, SC Corporation would recognize any remaining unrecognized compensation cost; however, in this example, the award effectively has no value because it is not probable of vesting. Therefore, we believe the cancellation of the award has no accounting implications. That is, SC Corporation is not required to recognize any compensation cost upon cancellation.

4.10 *Modifications after an award is earned or after employment*

Under ASC 718-10-35-10, an award originally granted as employee compensation will remain subject to the provisions of ASC 718 throughout the life of the award, unless the award's terms are modified when the holder is no longer an employee. At that time, an award may become subject to other applicable GAAP. Such a modification is accounted for under ASC 718; however, following the modification, the award would cease to be accounted for under ASC 718 and would become subject to the recognition and measurement requirements of other applicable GAAP (e.g., ASC 480 or ASC 815). ASC 718 and other GAAP provide differing guidance for determining whether a freestanding financial

instrument should be classified as a liability or as equity and in some cases, differing fair value measurement guidance (e.g., use of contractual term as opposed to expected term). Therefore, the accounting for the instrument may change once it becomes subject to other GAAP.

Pursuant to ASC 718-10-35-10A, changes to the terms of an award to reflect an equity restructuring (see SC 4.5) would not cause the award to become subject to other applicable GAAP if the following conditions are met:

- There is no increase in the fair value of the award or the ratio of intrinsic value to the exercise price remains the same (the holders are made "whole"); and
- The equity restructuring affects all of the holders of the same class of awards in the same manner.

We believe that a modification to accelerate vesting or extend the contractual term of an award on a discretionary basis concurrent with an employee's termination would generally be a modification made in consideration of past employment and therefore, the award would generally continue to be accounted for under ASC 718. Modifications that take place when the holder is no longer an employee (other than as described in ASC 718-10-35-10A) may result in the award becoming subject to other applicable GAAP. For example, the repricing of the exercise price or extension of the contractual term of a vested award held by a former employee would result in the award becoming subject to other GAAP. As noted in SC 4.3.3, judgment may be required to determine whether a modification is concurrent with an employee's termination.

After the adoption of ASU 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting,* similar guidance will apply to awards granted to nonemployees. That is, nonemployee awards will be subject to the guidance in ASC 718 throughout the life of the award unless the terms are modified after the nonemployee earns the award and is no longer providing goods or services to the company.

After the adoption of ASU 2019-08, *Compensation—Stock Compensation (Topic 718) and Revenue from Contracts with Customers (Topic 606): Codification Improvements—Share-Based Consideration Payable to a Customer*, similar guidance will also apply to awards granted to customers. That is, awards issued to customers will be subject to the guidance in ASC 718 throughout the life of the award unless the terms are modified after the grantee earns the award and is no longer a customer of the company. See SC 7.2.7.4 for further discussion.

Prior to adoption of ASU 2018-07, nonemployee awards (including those issued to customers) cease being subject to the guidance in ASC 505-50 and ASC 718 after performance occurs, and from that point forward are in the scope of other applicable GAAP. See SC 7.2.11A for further discussion.

Chapter 5: Employee stock purchase plans

5.1 Employee stock purchase plans overview

This chapter addresses the accounting treatment for employee stock purchase plans (ESPPs) under ASC 718, *Compensation—Stock Compensation*. The impact of shares issued through ESPPs on EPS is discussed in FSP 7.4.3.8 and FSP 7.5.5.5. ESPPs generally do not result in a tax benefit to the employer unless there is a disqualifying disposition. See TX 17.4.1 for guidance addressing the tax accounting consequences of disqualifying dispositions.

A typical ESPP in the United States is designed to promote broad-based employee ownership of a company's stock. By using payroll withholding and avoiding brokers' commissions, ESPPs give employees a convenient and economical means of acquiring company shares (usually at a discount). ESPPs provide favorable tax treatment if the plan meets the tax-qualification conditions of Internal Revenue Code Section 423.

5.2 Compensatory vs. non-compensatory ESPPs

All ESPPs are considered compensatory (i.e., compensation cost is recognized), unless they satisfy certain conditions specified by ASC 718-50-25-1.

An ESPP is considered non-compensatory if it meets all of the following conditions:

Condition 1:

The ESPP has:

- terms that are no more favorable than those that are available to all holders of the same class of stock; or

- a purchase discount that (a) does not exceed the per-share issuance costs that would be incurred through a public offering of stock (a discount of 5% or less is a safe harbor) and (b) if greater than 5%, is reassessed at least annually to confirm that it continues to meet condition (a).

Under ASC 718-50-25-1 and ASC 718-50-55-35, if the purchase discount is greater than 5%, then at least annually and by no later than the time of first purchase of shares under an ESPP in a given year, a company should assess whether its ESPP purchase discount rate is greater than estimated issuance costs per share as a percentage of the stock price at the grant date. If there is no stock offering, the company should determine a hypothetical amount of issuance costs that would have been incurred (i.e., the costs avoided by the company by issuing the shares through the ESPP) had there been a stock offering. The data used to support a discount in excess of 5% should be based on comparable companies. Consideration should be given to size, industry, stage of business lifecycle, and other factors that would be considered by the underwriter in pricing an underwritten offering.

The results of each assessment should be applied prospectively. In other words, if the results of a company's annual assessment reflect that the ESPP discount is now greater than the company's third-party per-share issuance costs, any subsequent grants made through the ESPP should be considered compensatory. Prior purchases under that ESPP that, at the time of grant met the criteria to be considered non-compensatory, would continue to be considered non-compensatory.

Condition 2:

Substantially all eligible employees may participate in the ESPP on an equitable basis.

Generally a non-compensatory plan must be open to substantially all of the company's full-time employees. However, restricting eligibility on a country-by-country or entity-by-entity basis would not result in a compensatory plan as long as all employees within each restricted country or entity are treated in the same manner.

Condition 3:

The ESPP does not incorporate option features, including any feature that permits the employee to purchase shares at the lower of the share price on the grant date or at a later purchase date (a "look-back feature"). The following features would not be considered option features:

- Employees are given a short time (not more than 31 days) after the purchase price has been fixed to enter the ESPP.
- Employees are allowed to cancel their participation in the ESPP before the purchase date and obtain a full refund of amounts paid.

A plan would be considered compensatory under ASC 718 if the purchase price is not based solely on the market price of the shares at the date of purchase. For example, if a plan met all other non-compensatory criteria under ASC 718-50-25-1, but includes a feature whereby employees can acquire shares at the average trading price of the last five days, the plan would be considered compensatory because it is not based solely on the market price at the date of purchase.

If an ESPP is considered compensatory, the entire purchase discount from fair value represents employee compensation. For example, if a company estimated the per-share issuance costs for a third-party offering at 7% and offered a 15% purchase discount to employees, the entire 15% purchase discount (as opposed to just the 8% difference) is employee compensation.

For shares purchased by employees under a compensatory ESPP, companies should recognize compensation cost over the requisite service period. In general, the requisite service period begins on the enrollment date (i.e., the start of the offering period) and ends on the purchase date. See SC 5.3.2 for further discussion.

5.3 *Recognition and measurement of compensation cost for ESPPs*

Consistent with other forms of share-based payments, compensation cost for equity awards is measured as the fair value of the award at grant date.

However, for ESPPs that incorporate some form of a look-back feature, determining the fair value of the award can be complex. While this guide does not provide comprehensive fair value measurement guidance, ASC 718 provides some examples of typical ESPP features and implementation guidance for measuring compensation cost in those cases.

Notwithstanding the recognition and measurement of compensation cost, any cash withheld from employees over the course of the purchase period is recorded as a liability on the company's books, until such time that the cash is either returned to the employee (either at their election or upon their termination of employment prior to the end of the purchase period, if allowed or required by the terms of the ESPP) or used to purchase shares at the end of the purchase period. The cash withheld from employees' salaries is viewed as an advance payment of the exercise price of the ESPP award, which is not viewed as a substantive purchase of stock.

5.3.1 Grant date for ESPPs

The definition of grant date used in ASC 718-50 for ESPPs is consistent with the definition used for other forms of share-based payments. As such, the grant date for ESPP awards is when (i) the employer and employee reach a mutual understanding of the key terms and conditions of the award, (ii) the employer becomes contingently obligated to issue equity instruments or transfer assets to an employee who renders the requisite service, (iii) the award has been approved by all necessary parties, and (iv) the employee begins to benefit from, or be adversely affected by, subsequent changes in the price of the employer's equity shares.

Most of these criteria are evaluated in the same fashion as described in SC 2.6.1. However, given the nature of ESPPs, certain of the criteria can be more complex. For example, in an ESPP with a look-back feature (as described in SC 5.3.4), the final exercise price may be based on the stock price at the end of the purchase period, which might call into question whether criterion (iv) is met at the start of the purchase period. However, ASC 718-10-55-83 notes that while the ultimate exercise price in an award with a look-back feature is not known up-front, it cannot be greater than the share price at the start of the purchase period. Therefore, the relationship between the exercise price and the current share price provides a sufficient basis to understand both the compensatory and equity relationship established by the award. The recipient begins to benefit from subsequent changes in the price of the grantor's equity shares as of the beginning of the purchase period; therefore, this criterion is met at the beginning of the purchase period. Similarly, in a typical ESPP award, all of the terms are made available to employees in order for them to choose whether to enroll in the plan and elect a withholding amount as a percentage of salary, often subject to a maximum amount. Employees then have a short period of time in order to make such elections prior to the start of purchase period. As referred to in ASC 718-50-35-1, only when the employees have initially agreed to the offer and have chosen a withholding rate is there a mutual understanding of the key terms and conditions of the award.

Accordingly, in most circumstances, the grant date will be the start of the purchase period, as all of the above criteria will typically be met at this date.

There are scenarios when the grant date criteria will not be met until a later date or, conversely, where a new grant date will subsequently occur. For example:

- ASC 718-50-55-32 through ASC 718-50-55-33 describe a type of ESPP (a "Type I plan") where employees can change their withholding rate and make a catch-up contribution based on the amount that would have been withheld had the new rate been in effect during the entire purchase period. While most changes in withholding rates are applied prospectively and accounted for as modifications (see SC 5.3.6), a Type I plan is economically different because it allows an employee to elect not to participate (or to participate at a minimal level) in the plan until just before the exercise date, making it difficult to determine when there truly is a mutual understanding of the terms of the award. In this case, there may not be a mutual understanding of the terms (and,

therefore, a grant date) until shortly before the end of the purchase period when the employee has to make a substantive decision about how much to participate in the plan.

- A company that undertakes an IPO may establish a new ESPP after completion of the offering, and allow employees to enroll in the plan during a short period of time after completion of the IPO, using the IPO date as the start of the purchase period (i.e., a look back feature) and the IPO price as the look-back price. Employees may also change their election any time within that enrollment period. While the IPO date may be defined as the beginning of the purchase period of the ESPP, it is not until the employees are committed to their withholding elections that there is a mutual understanding of the key terms and conditions of the award. Therefore, the grant date will be established on that date, and the fair value of the award must be determined incorporating the company's stock price on that date and the formulaic terms of the ESPP. If the stock price on that date is higher than the IPO price, the fair value of the ESPP award will be higher as the award will be further in the money on the grant date.

- A company may determine during the purchase period that it will not have a sufficient number of remaining shares authorized to satisfy all the shares that may be issued under the ESPP through the end of the purchase period. This could occur, for example, if the stock price declined significantly during the purchase period and the ESPP has a look-back feature. The lower stock price at the end of the purchase period would be used to determine the purchase price, leading to a larger number of shares necessary to satisfy the withholding liability at the end of the purchase period than initially anticipated. This could be accentuated in the case of ESPPs with multiple purchase periods and/or reset features, as described in SC 5.3.5 and SC 5.3.6. If the company authorizes additional shares (including obtaining shareholder approval, if required) as a result, that would lead to a new grant date for the awards which are dependent upon the newly authorized shares to be fulfilled.

  In this fact pattern, the company may also need to evaluate the terms of the plan to determine what legal obligation the company has to employees if there are insufficient authorized shares available to satisfy all of the amounts withheld from employees during the purchase period. If the company is only required to deliver authorized shares on a pro rata basis in relation to employee purchase requests, and any excess amounts withheld are simply returned to employees, no further accounting may be required as this withholding liability is already reflected on the company's books (as described in SC 5.3). However, if the company must make the employees "whole" for any purchase discounts "foregone" as a result of not being able to deliver all of the shares under the terms of the ESPP, there may be a share-based payment liability for this additional value that would need to be recognized on a mark-to-market basis until such time as the company can authorize additional shares in order to be able to settle the obligation in equity.

5.3.2 Requisite service periods for ESPPs

Most ESPPs require participants to be employed on the purchase date and therefore, employees are required to provide service during the offering period. As a result, the requisite service period for an ESPP will generally be the time between the start of the offering period and the date the employee purchases the shares.

Typical ESPPs have shorter requisite service periods than typical employee stock options because of the constraint on the maximum purchase period required for tax-qualified status under IRC Section 423. The most common purchase period for ESPPs is 6 or 12 months.

5.3.3 *Forfeitures for ESPPs*

The ultimate expense for ESPP awards should reflect only those awards for which the requisite service period is completed. Companies can make an entity-wide accounting policy election for all share-based payment awards to employees, including ESPPs, to account for forfeitures only when they occur, as described in ASC 718-10-35-3. If a company makes the policy election to estimate forfeitures, an estimated forfeiture rate (i.e., the percent of withholdings expected to go unused and revert to the employee due to termination of employment prior to the purchase date) should be applied in determining compensation expense when it can be reasonably estimated. In practice, a minimal forfeiture rate may be appropriate when the ESPP purchase periods are short and anticipated employee turnover is minimal. The forfeiture rate should be updated for any changes in estimate throughout the requisite service period and updated for actual forfeitures upon completion of the requisite service period.

5.3.4 *Measurement of ESPPs with look-back features*

ASC 718-50-55-2 identifies nine different types of look back features found in ESPPs, and provides guidance for measuring compensation cost for ESPPs with those characteristics. A typical ESPP award is granted under a Type B plan. This is a plan in which the number of shares an employee can purchase depends solely on the employee's withholding election. The fair value of these types of awards generally consists of the following:

- A purchase discount (e.g., 15% of the enrollment/grant-date stock price)
- The fair value of the look-back feature on the enrollment/grant date (which consists of a call option on 85% of a share of stock and a put option on 15% of a share of stock)

Compensation cost for awards under Type B plans should be calculated based on the number of employees that enroll in the ESPP and the amount of payroll withholdings initially elected by those employees, along with the application of the specific terms of the ESPP plan to determine the number of shares of stock that can be purchased with those withholding amounts as of the grant date. Subsequent changes in withholding rates are discussed in SC 5.3.6 and forfeitures are discussed in SC 5.3.3.

See ASC 718-50-55-2 for details on the other types of look-back features in ESPPs.

5.3.5 *ESPPs with multiple purchase periods*

Some ESPPs provide for multiple purchase periods during the plan's offering period. In that case, each purchase period essentially constitutes a separate tranche of awards for which a separate fair value and separate expense attribution schedule may be determined, as described in SC 5.3.5.1 and SC 5.3.5.2.

5.3.5.1 *ESPPs with a look back to enrollment date*

The fair value of an award under an ESPP with multiple purchase periods that all have a look-back feature based upon the stock price at the beginning of the offering period enrollment date should be determined at the enrollment date in the same manner as a stock option award with graded-vesting (i.e., with a different estimated "option life" for each purchase period). The attribution of expense

(accelerated or straight-line) should be consistent with a company's accounting policy for other awards with graded vesting and service conditions only (see SC 2.8).

Under the accelerated attribution approach, awards under a plan with a two-year offering period with purchase dates at the end of each six-month period would be accounted for as having four separate tranches starting on the same initial enrollment date. The requisite service periods for the four tranches would be 6, 12, 18, and 24 months. Under the straight-line attribution approach, a company recognizes compensation cost on a straight-line basis over the 24-month requisite service period, while ensuring that the amount of compensation recorded at each reporting date is at least equal to the grant-date fair value of the vested portion of the award.

5.3.5.2 ESPPs with a look back to each start period

The measurement and attribution approach for an ESPP with a two-year offering period that includes four separate six-month purchase periods, each of which has a look-back feature to the stock price at the beginning of the respective purchase period, differs from the approach when the look back is to the initial enrollment date that is described in SC 5.3.5.1. When the look back is to the beginning of the purchase period, compensation cost would be measured and recognized separately and sequentially (i.e., measured at the beginning of each six-month purchase window and recognized starting at that date, as that would be the grant date for such tranche) for each of the six-month offering periods. The fair value of each award would be recognized over its 6-month requisite service period; accelerated attribution would not be applicable.

5.3.6 Changes in withholding elections and reset features of ESPPs

ASC 718-50-55 provides implementation guidance and examples for a variety of features that may be found in an ESPP, including resets, rollovers, and changes in withholdings:

- Reset mechanism: If the market price of the stock at the end of any purchase window is lower than the stock price at the original grant date (initial enrollment date), the plan resets so that during the next purchase period an employee may purchase stock at the stipulated discount in relation to the lower of (a) the stock price at the beginning of the purchase period (rather than the original grant date price) or (b) the exercise date.

- Rollover mechanism: If the market price of the stock at the end of any purchase window is lower than the stock price at the original grant date (initial enrollment date), the plan is immediately cancelled and a new plan is established using the then-current stock price as the base purchase price.

- Variable or semifixed withholdings: Variable withholding features permit an employee to change the amount of payroll withholdings throughout the purchase period to any amount. Semifixed withholding features permit an employee to change his or her withholding election at the beginning of each purchase window.

When or if these plan features occur or are elected by an employee, the changes in the award's terms are considered to be modifications, and modification accounting described in ASC 718-20-35-2A through ASC 718-20-35-9 should be applied. See SC 4 for further guidance on modification accounting.

In an ESPP with a reset feature, the look-back purchase price will "reset" if the stock price at a future purchase date is lower than the stock price on the first day of the offering period. On the date that a reset feature is triggered, the terms of the award have been modified. As a result of the reset feature, the employee now has the ability to purchase more shares with the same amount of salary withholdings as a result of the decrease in exercise price. When determining the amount of incremental compensation cost, companies should consider the impact of changing both the number of shares and the exercise price.

If the ESPP permits employees to change their payroll withholdings during the offering period and an employee elects to do so, the change is accounted for as a modification. If an employee elects to *increase* his/her payroll withholdings, compensation cost should be recognized for the additional shares that the employee will be permitted to purchase.

However, if an employee elects to *decrease* his/her payroll withholdings or withdraw completely from the plan (but does not terminate employment), the amount of compensation cost is not decreased. The accounting for decreases in withholdings is consistent with the requirement in paragraph 718-10-35-3 that the total amount of compensation cost that must be recognized for an award be based on the number of instruments for which the requisite service has been rendered (that is, for which the requisite service period has been completed). If an employee does not complete the requisite service period (i.e., terminates employment prior to the purchase date), the award is forfeited and any compensation cost related to that employee's awards would be reversed, as described in SC 5.3.3.

5.4 Classification of ESPPs – liability versus equity

An ESPP with a fixed discount percentage off the purchase date price, no look-back feature, and fixed withholdings would be liability classified under ASC 718-10-25-7 and ASC 480-10-25-14 until settlement because it is essentially an award that embodies an unconditional obligation to issue a variable number of shares for a fixed monetary amount known at inception. Upon settlement, the liability would be reclassified to equity.

The compensation element of an ESPP with a look-back feature would be equity classified under ASC 718-10-25-7 and ASC 480-10-25-14 as the monetary value of the award is not fixed at the grant date and the holder is subject to the risks and rewards of equity ownership. As noted in SC 5.3, any cash withheld from employees during the purchase period would be reflected as a withholding liability until the shares are purchased.

Chapter 6: Nonpublic company stock-based compensation

6.1 Nonpublic company stock-based compensation overview

This chapter discusses the key aspects of accounting for a nonpublic company's stock-based compensation awards. There are multiple definitions of a "nonpublic company" in US GAAP. ASC 718 contains a specific definition for purposes of applying stock-based compensation guidance, which may result in a conclusion on the company's status that differs from that applicable for other aspects of the entity's accounting and reporting. For purposes of applying ASC 718, the definition of a nonpublic company is included in ASC 718-10-20.

ASC 718-10-20

Nonpublic entity: Any entity other than one that meets any of the following criteria:

a. Has equity securities that trade in a public market either on a stock exchange (domestic or foreign) or in an over-the-counter market, including securities quoted only locally or regionally

b. Makes a filing with a regulatory agency in preparation for the sale of any class of equity securities in a public market

c. Is controlled by an entity covered by the preceding criteria.

An entity that has only debt securities trading in a public market (or that has made a filing with a regulatory agency in preparation to trade only debt securities) is a nonpublic entity.

In accordance with this definition, an entity with only publicly traded debt securities is a nonpublic company under ASC 718, and a subsidiary of a public company is considered a public company. Additionally, an entity controlled by a public company (e.g., a subsidiary controlled by a private equity fund that is controlled by a public company) is considered a public company. In assessing the second criterion of this definition, "making a filing" with a regulatory agency includes both a public filing of a registration statement or periodic Exchange Act filing as well as a confidential submission of a registration statement with the SEC as part of preparing for an initial public offering (for example, under the JOBS Act), even if such document is not legally considered "filed" under the securities laws. See SC 1.3 for further guidance on the definition of a public versus nonpublic company.

Most of the provisions of ASC 718 that apply to public companies also apply to nonpublic companies. This chapter discusses the specific differences and other issues unique to nonpublic companies, including measurement, accounting for mandatorily redeemable financial instruments, and accounting for book value plans. This chapter also addresses the implications of transitioning from a nonpublic to a public company and the classification of awards provided to employees of "pass-through" entities.

6.2 Measurement of awards issued by nonpublic companies

The selection of the appropriate measurement method depends on the classification of the award. Figure SC 6-1 summarizes alternative measurement methods by nonpublic companies for equity and liability awards.

Figure SC 6-1

Measurement methods (nonpublic companies only)

Equity-classified awards	Liability-classified awards
Value according to the following hierarchy: 1. Fair value 2. Calculated value if company-specific volatility cannot be estimated 3. Intrinsic value if the terms of an award are so complex that fair value or calculated value cannot be estimated	Accounting policy election: □ Fair value* or □ Intrinsic value * Nonpublic companies may elect to use the calculated value method to measure liability-classified awards if the calculated value method is used to measure equity-classified awards.

Note about ongoing standard setting

As of the release date of this publication, the FASB has an active project that may provide a practical expedient for the determination of the current price of an underlying share for equity-classified stock option awards issued by nonpublic companies. Financial statement preparers and other users of this publication are encouraged to monitor the status of the project.

6.2.1 Measurement of equity awards by nonpublic companies

Consistent with public companies, the fair value method for awards classified as equity, if practicable to apply for a nonpublic company, is preferable. The AICPA Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, provides both valuation and disclosure best practices related to the issuance of privately-held-company equity securities as compensation, including awards that are within the scope of ASC 718.

In some cases, nonpublic companies may find it difficult to use the fair value method because of the difficulty of estimating volatility for use in an option pricing model. Generally, nonpublic companies can look at volatility of similar ("peer group") public companies to help determine a volatility assumption. See SC 9.4.1.2 for a more detailed discussion on how to select an appropriate peer group.

In addition, a nonpublic company that conducts private transactions using its stock or issues new equity or convertible debt instruments may consider its shares' historical volatility when estimating expected volatility.

For the sake of convenience, throughout this guide, the term fair value is intended to be the equivalent of fair value-based method as used in ASC 718.

6.2.1.1 Use of calculated value method by nonpublic companies

If sufficient information is not available to estimate expected volatility, nonpublic companies may use the calculated value method. The calculated value method requires the use of an option pricing model that substitutes the historical volatility of an appropriate industry/sector index for the expected volatility assumption. A company should first consider other methods, such as applying the fair value

method using peer group volatility, before utilizing the calculated value approach. We believe most companies should be able to identify a peer group to estimate expected volatility.

To apply the calculated value method, companies should select an appropriate industry/sector index (e.g., from the Dow Jones index series), taking into account the nonpublic company's size. Likewise, if a nonpublic company participates in two different industries that have experienced different volatilities, it would need to decide how to average those volatilities for purposes of determining its own volatility assumption.

Once an appropriate index has been identified, a nonpublic company should use the volatility that corresponds to the option's expected term. For example, if the expected term of the nonpublic company's option is five years, it should use the five-year volatility of the appropriate index.

6.2.1.2 Use of intrinsic value method by nonpublic companies

As discussed in SC 2.2.3, in some rare circumstances, it might not be possible to reasonably estimate the fair value or the calculated value of equity-classified awards on the grant date because of the complexity of the award's terms. In these limited situations, a nonpublic company should use the intrinsic value to measure the value of the award. The company should then remeasure the intrinsic value each reporting period until the award is exercised, settled, or expires, even if the company might be able to reasonably estimate the fair value at a later date. Thus, the final measurement of compensation cost would be the award's intrinsic value on the settlement date.

Applying the intrinsic value method to stock-based compensation awards classified as equity is expected to be as rare for nonpublic companies as it is for public companies. A nonpublic company is unlikely to issue awards with terms so complex and unique that it would be unable to reasonably determine the awards' fair value or calculated value.

6.2.1.3 Consistency of measurement method by nonpublic companies

A company should apply the same measurement method for all similar awards, and, for awards that require periodic remeasurement, over the entire life of each of those awards. If a nonpublic company used the intrinsic value method for an award and subsequently believes that fair value or calculated value can be estimated for its new awards, it may use either of those methods, as appropriate, for the new awards even though it will continue using the intrinsic value method for the old awards. If a nonpublic entity has previously measured its equity-classified awards at fair value, generally the company would be unable to justify the use of the intrinsic value or calculated value method for similar awards in the future as fair value would need to be deemed impracticable. The decision on which measurement method to use should be based on a company's specific facts and circumstances.

6.2.2 Measurement of liability awards by nonpublic companies

The alternative measurement methods available to a nonpublic company for measuring its liability-classified awards depend on the method the company uses to measure its equity-classified awards. A nonpublic company that uses fair value to measure its equity-classified awards should adopt an accounting policy to measure all of its liability-classified awards using fair value or intrinsic value. A nonpublic company that uses a calculated value to measure its equity-classified awards would have an accounting policy choice to measure all of its liability-classified awards using the calculated value method or the intrinsic value method. Under each of the measurement alternatives for liability-

classified awards, the company will remeasure the award on each reporting date using the same method until the award is settled.

If a nonpublic entity has a policy to measure its liability-classified awards at fair value, generally the company would be unable to change its policy to use the intrinsic value method, as that change would likely not be viewed as preferable.

6.2.3 Simplified method for estimating expected term by nonpublics

As discussed in SC 9.3.1, SAB Topic 14 (Section D.2, Question 6) provides a simplified method for estimating expected term that is not based on a company's historical exercise data for awards that qualify as "plain-vanilla" options. It is acceptable for a nonpublic company to use the simplified method for stock options if they meet the criteria in SAB Topic 14. It may require judgment to determine whether the criteria are met to apply the simplified method. For example, we believe an equity-classified option with a repurchase feature that is designed to provide liquidity (e.g., a fair value repurchase feature) could still be considered "plain vanilla." However, other repurchase features could preclude a company from concluding that an option meets the criteria (e.g., certain book value repurchase features).

6.2.4 Practical expedient -estimating expected term by nonpublics

Nonpublic companies may employ a practical expedient for estimating the expected term of stock-based compensation awards that would not meet the criteria to apply the simplified method in SAB Topic 14 (see SC 6.2.3), such as awards with repurchase features and awards with performance conditions. However, the practical expedient can only be elected if the award meets specified criteria, which include being granted at the money and not having a market-based vesting condition. The practical expedient varies based on the vesting conditions, as summarized in Figure SC 6-2.

Figure SC 6-2

Practical expedient for estimating expected term of nonpublic company stock options

Type of vesting provision	Probability of performance condition being met at measurement date	Practical expedient for expected term
Service condition only (implicit or explicit)	N/A	Midpoint between the end of the requisite service period and the contractual term of award
Service and performance conditions	Probable	Midpoint between the end of the requisite service period and the contractual term of award
	Not probable	◻ If service period is implicit: contractual term ◻ If service period is explicit: midpoint between the end of

Type of vesting provision	Probability of performance condition being met at measurement date	Practical expedient for expected term
		the requisite service period and the contractual term of award

6.3 Mandatorily redeemable financial instruments

SC 3.3.3 discusses the accounting guidance for public and nonpublic companies that grant awards with repurchase features including mandatorily redeemable financial instruments. The guidance for most repurchase features is the same for public and nonpublic companies; however, the guidance on mandatorily redeemable financial instruments in ASC 480, *Distinguishing Liabilities from Equity,* specifically excludes from its scope certain awards issued by companies that are nonpublic companies that are not SEC registrants or controlled by SEC registrants.

The definition of a nonpublic company is the same under ASC 480 and ASC 718. For example, an entity with publicly traded debt securities is considered a nonpublic company under ASC 480-10-20 and ASC 718-10-20, but is an SEC registrant and therefore, would not qualify for the scope exclusion.

The scope exclusion in ASC 480 allows equity classification for shares that are required to be redeemed upon an employee's termination of service or death at fair value on the redemption date. However, all other requirements for equity classification in ASC 718 need to be met, including the requirement that the employee bear the risks and rewards of equity ownership for a reasonable period of time (i.e., hold the share for at least six months), as discussed in ASC 718-10-25-9. Such instruments are considered mandatorily redeemable under ASC 480 because termination of services and the death of the holder are events that are certain to occur. Either a mandatorily redeemable share or an option that would be settled upon exercise by issuing a mandatorily redeemable share that is subject to the exclusion, would be classified as equity (assuming that the option meets all other requirements for equity classification under ASC 718).

For redeemable awards that are accounted for as equity, it may still be necessary to record an amount outside of permanent equity (i.e., as temporary equity in the mezzanine section of the balance sheet). See SC 3.3.10. Although the requirements discussed in that section apply to SEC registrants, we believe non-SEC registrants should follow the same classification treatment.

6.4 Book value plans / formula value plans

A book value or formula value plan is a stock-based compensation plan where the purchase price is determined by a stated formula based on a company's current book value, or some other formula. Some closely held nonpublic companies maintain a book value plan as a way to compensate employees without giving up voting rights. Most book value plans also require the employee to sell the shares back to the company after termination at a price determined by the same formula.

A book value plan should be reviewed to determine if (1) awards under the plan are compensatory and (2) the award's features, including repurchase features, require the award to be classified as a liability.

6.4.1 Determining if the book value plan award is compensatory

Employers using book value plans generally issue shares, not options. If an employee acquires shares under a book value plan on the same terms (including price) available to all other shareholders of the same class of stock and at the formula price based on the current book or formula value, the transaction is not compensatory. Essentially, the formula price represents the relevant transaction price for those shares and the transaction is the sale of a share of stock at that price. Accordingly, no compensation would be recorded.

To the extent an employee pays less than the then-current formula price to acquire the shares or receives more than the then-current formula price upon a negotiated repurchase of the shares, compensation cost should be recorded for the difference. If a company with a book value plan issues options, compensation cost should be recorded unless the employees pay an amount that is essentially equivalent to the fair value of the options (based on the formula price for the shares and the terms of the option).

To obtain noncompensatory accounting treatment for awards issued by a book value plan, the book value features should apply to all shares within a given class of stock. If there are transactions at a different price in the same or a similar class of stock, such transactions may establish a value for the shares at an amount other than the formula price. In these situations, compensation cost should be recognized for the difference between the price paid by the employee for the shares and the fair value of the shares.

See ASC 718-10-55-131 through ASC 718-10-55-133 for an example of a book value plan. Fact patterns that are not consistent with this example likely do not meet the requirements to be accounted for as noncompensatory.

6.4.2 Determining if the book value plan award is a liability

Awards issued under book value plans need to be assessed to determine whether they include any features that would require liability classification (refer to SC 3). For example, repurchase features should be assessed to determine whether the employee bears the risks and rewards of ownership for at least six months (refer to SC 3.3.3).

Many book value plans have mandatory redemption features that require the shares to be redeemed upon an employee's termination of service or death at the then-current formula price. These features do not preclude equity classification if the company qualifies for the ASC 480 scope exception discussed in SC 6.3. However, to qualify for equity classification, the employee must bear the risks and rewards of equity ownership for at least six months. If such an award does not require the employee to hold the share for at least six months prior to the mandatory redemption, the award would be liability classified for the period from the grant date (or original purchase date) until six months after vesting.

If the shares within the book value plan are always transacted at the formula price, that price effectively represents the relevant transaction price for those shares. Thus, a repurchase right with a price equal to the then-current formula price does not necessarily prevent the employee from bearing the risks and rewards of equity ownership. However, if there are transactions at a different price in the same or a similar class of stock, such transactions may establish a value for the shares at an amount other than the formula price. In these situations, a formula price repurchase right would generally result in liability accounting.

6.5 Transition from a nonpublic company to a public company

Once a nonpublic company files an initial prospectus in preparation to sell equity securities, the company is considered a public company under ASC 718. When that occurs, the company may have to change some of its accounting policies because of the measurement methods available only to nonpublic companies (refer to SC 6.2).

6.5.1 Measurement of equity awards when going public

If a nonpublic company was using the calculated value method to measure awards classified as equity, it will measure all new stock-based compensation awards using the fair value method upon becoming a public company. The company should continue to recognize stock-based compensation cost using the calculated value method for awards granted before becoming a public company unless those awards are subsequently modified, repurchased, or cancelled. If the award is subsequently modified, repurchased, or cancelled, the event would be assessed under ASC 718's provisions for a public company (i.e., at fair value).

6.5.2 Measurement of liability awards when going public

A nonpublic company may need to change the method of measuring awards classified as liabilities after it becomes a public company. If the nonpublic company had previously chosen to measure its liability awards using the intrinsic value or calculated value method under ASC 718, it should measure those same awards at their fair value at the date the company is considered public. If a change in measurement is made, the effect of the change should be recognized in the period the company becomes a public company, as discussed in SAB Topic 14 (Section B, Question 2).

For example, assume that on December 31, 20X0, a calendar year company has a vested liability award that is measured at its intrinsic value of $10. On March 2, 20X1, the company files its initial prospectus (i.e., becomes a public company as defined by ASC 718) when the award's intrinsic value is $13 and its fair value is $15. The company should have recognized compensation cost of $3 between January 1 and March 2 under the intrinsic value method. Additionally, the company should recognize $2 of compensation cost to reflect the change from intrinsic value to fair value during the period in which the company becomes public. The company should remeasure the award to its fair value at the end of each quarter that the award remains outstanding and record compensation cost for any changes in fair value in the current period.

SAB Topic 14 does not specify how the adjustment from intrinsic value to fair value should be presented in the financial statements (i.e., the $2 of compensation cost in this example).

We believe the change from an intrinsic value method to a fair value method is consistent with the definition of a change in accounting principle as described in ASC 250, *Accounting Changes and Error Corrections*. ASC 250-10-45-5 provides for changes in accounting principles to be applied retrospectively, unless impractical. We believe determining the effects of the change from the intrinsic to the fair value method would be impractical. Generally, a company would not be able to independently assess the fair value of the liability awards granted in prior periods; thus, prior periods should not be adjusted. This is consistent with the guidance in SAB Topic 14 (Section B, Question 3), which states that a company should not retrospectively apply the fair value method to its awards. As a result, we believe the incremental compensation costs as a result of a change to the fair value method

should be recognized either through beginning retained earnings or as compensation cost in the current period.

6.5.3 *Award disclosures when going public*

Because a change in measurement method likely results when a nonpublic company becomes public, SAB Topic 14 requires that a company's MD&A include the specific changes in accounting policy that are required under ASC 718 in subsequent periods and the likely future effects.

6.6 *Issues regarding cheap stock and IPOs*

Registrants who have issued stock, or granted stock options or warrants with exercise prices at a price significantly below the public offering price (sometimes referred to as "cheap stock"), shortly before going public, should ensure that they have a sufficient basis to support the valuation of the underlying stock when issued. The same is true for issuances of convertible preferred stock to vendors, service providers, or customers shortly before the IPO when the conversion price is below the IPO price and the registrant recognized the issuance at a fair value significantly below the underlying conversion value.

For example, a nonpublic company may grant a typical fixed, at-the-money stock option six months before its IPO. The offering price at the time of the IPO is $10 higher than the option's exercise price on the grant date. If, in the six-month period preceding the IPO, there was no discrete event that increased the fair value of the underlying stock, there is a presumption that the option was a "cheap stock" grant. This means that, in effect, the company granted an in-the-money stock option. In this case, the company would have to rerun its option pricing model and record compensation cost to reflect the higher fair value of the deemed in-the-money option as opposed to the value of the option when assumed to be at-the-money.

Items affecting the likelihood of an assessment that the company has failed to properly recognize the compensation cost associated with cheap stock in the period prior to an IPO include:

- Whether there were any equity or convertible security transactions with third parties for cash within a reasonable period of time of the grant, and the size and nature of such transactions
- Appraisals by reputable valuation experts independent of the IPO that were prepared at or near the grant date
- Changes in the company's business that would indicate there has been a change in the value of the business, such as new contracts or sources of revenues, more profitable operation, etc.
- The length of time between the grant and the date of the IPO
- Adequate documentation from the date of the grant or earlier that supports the valuation used by the company at that time
- Transfer restrictions

A common misconception is that there is a preconceived range of acceptable discounts from the IPO price dependent upon the period of time that shares or options were issued prior to the IPO. Each situation needs to be evaluated based on its own particular facts and circumstances. No arbitrary

range of discounts should be assumed to be "acceptable." Any value assigned to stock issued or options granted (regardless of the extent of discount from IPO price) needs to be supported by relevant market evidence, not simply a general relationship between the IPO price and the length of time before the IPO that it was granted.

Evidence should focus on a registrant's own specific facts and circumstances and not broad industry factors. Acceptable corroborating evidence often necessitates a credible, independent valuation, particularly in the absence of proximate similar stock transactions with unrelated parties for cash. Preferably, the independent valuation should be performed at the time of the stock grant or award.

The AICPA Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation,* provides financial statement preparers, valuation specialists, and auditors (internal and external) with best practice guidance for valuing privately-held equity securities, including stock-based compensation awards that are within the scope of ASC 718.

The practice aid also specifies enterprise- and industry-specific attributes that should be factored into a determination of fair value (e.g., the fair value of stock-based compensation awards that a company grants to employees), and describes important steps that a company should take when obtaining or performing a valuation. Finally, the practice aid discusses disclosures companies should consider. See FSP 15.

Companies should prepare their cheap stock analyses concurrent with the issuance of the related securities or options and should update them in connection with preparing the IPO registration statement.

A cheap stock analysis should generally include the following for each equity-related issuance within the latest fiscal year and interim period through the date of the IPO:

- The date the security was issued and to whom
- The deemed fair value of the security, with objective and reliable evidence of how the company determined the value of such security, including factors that resulted in each change in fair value during the periods
- A timeline of events leading up to the filing of the IPO, including discussion and quantification of the impact on fair value of any company-specific events that occurred between the date the equity-related awards were granted and the date the registration statement is filed

This analysis should specify the reasons for any difference between the fair value at the transaction date and the estimated IPO price range.

6.6.1 Escrowed share and similar arrangements

In connection with an IPO or other capital-raising transaction, shareholders (e.g., founders or other members of management) may agree to place a portion of their shares into escrow to be released back to them only if specified service or performance-related criteria are met. These arrangements can be between shareholders and the company or directly between the shareholders and new investors in the company.

ASC 718-10-S99 codifies the SEC staff view that escrowed share arrangements are presumed to be compensatory and equivalent to a reverse stock split followed by the grant of restricted stock. Accordingly, the company would recognize compensation cost based on the fair value of the shares at the grant date and recognize that cost over the requisite service period.

This presumption can be overcome in certain fact patterns, particularly if the arrangement is not contingent upon continued employment. For example, if the escrowed shares will be released or canceled without regard to continued employment, it may be appropriate to conclude that the arrangement is in substance an inducement for significant shareholders to facilitate a financing transaction on behalf of the company. In this situation, the arrangement should be accounted for based on its substance and reflected as a reduction of the proceeds allocated to the newly-issued securities. However, if the shares are automatically forfeited if employment terminates, the arrangement should be accounted for as compensation, consistent with the principle articulated in the business combinations guidance for contingent payments to employees or selling shareholders (see ASC 805-10-55-25(a)).

These types of arrangements should generally be reflected in the company's financial statements even when the company is not a party to the arrangement (e.g., when the arrangement is between a shareholder and a new investor). This accounting treatment is consistent with the views in SAB Topic 1 (Section B) and Topic 5 (Section T), and the guidance in ASC 718-10-15-4 regarding share-based payments awarded to employees by a related party or other holder of economic interest.

In some arrangements, shares are not placed into escrow, but shareholders agree that some portion of their shares will either be forfeited or can be repurchased for a nominal amount (often the original purchase price of the shares) upon failure to meet service or performance conditions. These arrangements are often economically similar to an escrowed share arrangement and, therefore, generally the same accounting treatment would apply.

6.7 Classification of awards issued by "pass-through" entities

It is often difficult to determine the appropriate classification (liability or equity) of awards granted to employees of partnerships, limited liability companies (LLCs) and similar pass-through entities. Awards granted by pass-through entities may be akin to equity interests or profit sharing/bonus arrangements. This is because the underlying equity on which these awards are granted may contain rights that differ from other equity instruments of the entity.

There is no authoritative guidance specific to this determination and, therefore, no "bright lines" between an equity interest versus a "profit sharing" arrangement that is more akin to a bonus (i.e., liability). Thus, judgment is required in making that assessment.

The terms of a "profits interest award" in a pass-through entity vary from plan to plan. Depending on the terms of the award, the interest may be similar to the grant of an equity interest, a stock option, a stock appreciation right, or a profit-sharing arrangement. A profits interest award should be accounted for based on its substance.

A profits interest award that is, in substance, a profit-sharing arrangement or performance bonus would generally not be within the scope of the stock-based compensation guidance (ASC 718) and would be accounted for under the guidance for deferred compensation plans (ASC 710-10), similar to a

cash bonus. However, if the award is akin to a performance bonus settled in cash but the amount payable under the award is based, at least in part, on the price of the company's shares or other equity instruments, the arrangement would be accounted for as a liability award in the scope of ASC 718.

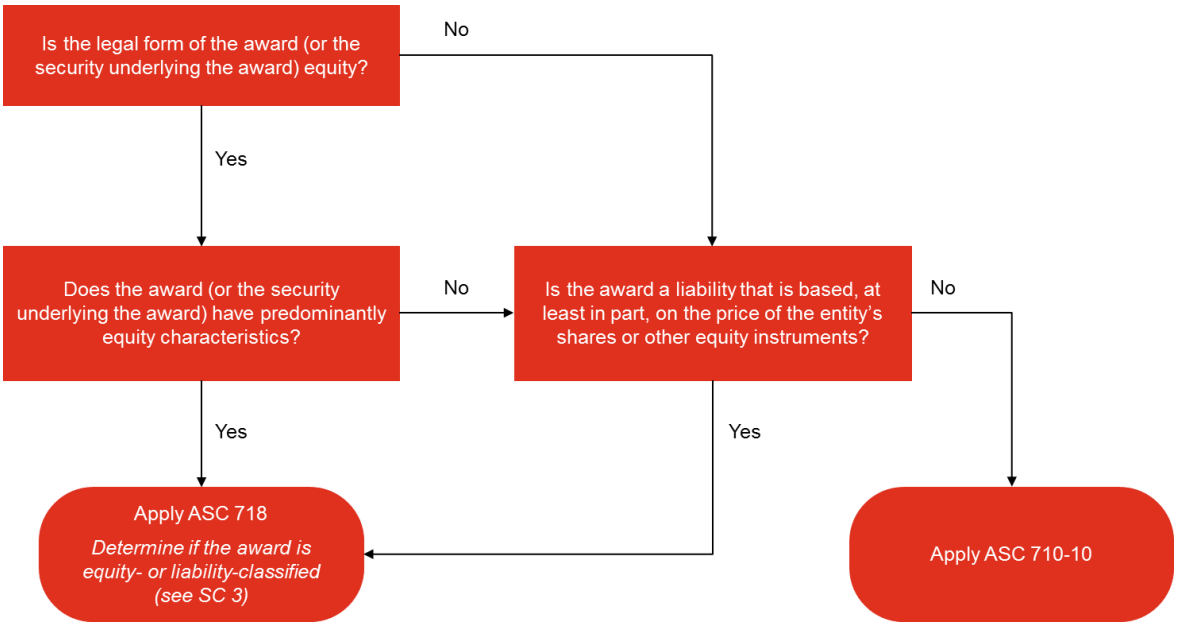
If it is determined that an award (or the underlying security) has predominantly equity characteristics (even if junior to other classes of equity interests), it is subject to the scope of the ASC 718. An assessment should then be performed to determine whether features of the award result in liability classification under ASC 718. For example, an award that is equity both in legal form and in substance might still be liability-classified under ASC 718 due to a repurchase feature based on a formula. Refer to SC 3.

In many cases, these arrangements will have features that are both similar to equity and liabilities. Some characteristics should be considered to bear more weight than others, depending on the specific facts and circumstances of the entity and the arrangement. A key consideration is often understanding an employee's rights upon a voluntary termination. If an employee is only entitled to share in profits while providing employee service and forfeits those rights upon termination of employment, the arrangement would generally be considered akin to a profit-sharing arrangement or performance bonus, not an equity award.

Figure SC 6-3 provides a flowchart to determine the appropriate accounting model for awards granted to employees of pass-through entities.

Figure SC 6-3

Scoping of awards granted to employees of pass-through entities



The following provides a list of the general characteristics to consider when determining whether an award (or the underlying security) has predominantly equity or liability characteristics. This list is not all inclusive.

The following are equity characteristics[1] of awards to employees of "pass-through" entities:

- ☐ Legal form of the security is equity
- ☐ Voting rights commensurate with ownership interest
- ☐ Liquidation rights (Rights to net assets of entity on liquidation. Liquidation rights that are proportionate to other equity holders of a similar class is an equity-like characteristic)
- ☐ Pre-emptive rights (The right of current shareholders to maintain their fractional ownership of a company by buying a proportional number of shares of any future issue of common stock). Sometimes may have "drag-along"[2] or "tag-along"[3] rights which may have "pre-emptive" characteristics
- ☐ Distributions proportionate to ownership interest. (Instrument participates in the residual returns of the entity's net assets in a manner consistent with equity ownership, even if junior to other classes of equity interests)
- ☐ Rights upon sale of the company commensurate with equity ownership. (Instrument participates in the same form of consideration, such as stock or debt, received from a buyer as do other equity holders, rather than receiving cash.)
- ☐ Initial investment required
- ☐ Risk of loss of initial capital (Some arrangements require the employee to "purchase" the equity interest, subject to certain vesting provisions or repurchase features. If the employee has risk of loss of this initial investment, it is an equity-like characteristic.)
- ☐ Claims to net assets subordinate to debt holders
- ☐ Interest is transferable after vesting
- ☐ Employee can retain vested interests on termination of service
- ☐ Employee is subject to risks and rewards of equity ownership
- ☐ Management's intent is to provide the employee an equity ownership interest in the entity

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[1] If an award (or the underlying security) has predominant characteristics of equity, it is subject to the guidance in ASC 718. However, the award might require liability classification based on the provisions in ASC 718. For example, certain repurchase features could require liability classification despite the fact that the instrument underlying the award has the equity characteristics in this list.

[2] A drag-along right grants the controlling shareholder(s) the option to compel shareholders subject to the drag-along provision to sell their shares in a transaction in which the controlling shareholder(s) transfers control of the company, generally under the same terms and in the same proportion. [ASC 805-10-S99.5]

[3] A tag-along right grants a shareholder the option to participate in a sale of shares by the controlling shareholder(s), generally under the same terms and in the same proportion. [ASC 805-10-S99.5]

The following are liability characteristics [4] of awards to employees of "pass-through" entities:

- Little or no investment required (It is common that no investment is required in stock compensation arrangements. Thus, it is reasonable that this factor could be outweighed by other equity characteristics.)
- Repurchase features (puts/calls) based on a formula (e.g., a fixed multiple of EBITDA)
- Off-market employer call feature linked to employment (e.g., if an employer can terminate the employee and call the award at lower than fair value, this is not an equity-like characteristic.)
- Rights to share in distributions tied to employment (e.g., if employees forfeit their award for no consideration upon termination, their rights are tied to employment.)
- Holder entitled to cash upon sale of the company, regardless of the form of consideration paid by the buyer. (Instrument does not participate in the same form of consideration from the buyer as do equity holders.)
- Other cash settlement provisions
- Creditor-like features (e.g., fixed redemption date)
- Management's intent is to provide a performance bonus by allowing employee to share in profits and distributions of the entity only during employment
- Profits interest is used in lieu of cash performance bonuses
- Profits interest used instead of cash bonuses for preferential tax treatment (If cash bonuses were paid, these would be immediately taxable to the employee as ordinary income. Under profits interest structure, tax is deferred until realization and taxed at capital gains rates.)

Example SC 6-1 and Example SC 6-2 illustrates the accounting for the grants of profits interest awards.

EXAMPLE SC 6-1

Grant of profits interest award that is forfeited upon termination

SC LLC grants a profits interest award to its employee. The award vests ratably over a four-year period. Once vested, the holder is entitled to receive distributions proportionate to their ownership interest. However, if the employee voluntarily leaves employment or is terminated, the interest is forfeited for no consideration.

How should SC LLC account for this profits interest award?

[4] If an award (or the underlying security) is determined to predominately have characteristics of a liability, generally it is subject to the guidance in ASC 710-10. However, liabilities for which the amount payable is based, at least in part, on the price of the company's shares or other equity instruments are liability awards in the scope of ASC 718.

Analysis

In this fact pattern, the profits interest award is akin to a profit-sharing arrangement or performance bonus, not an equity award. SC LLC should account for the award similar to a cash bonus plan under ASC 710, accruing cost over the relevant service period when distributions that the holder is entitled to receive are probable and reasonably estimable. See PEB 6.3. Upon termination, the employee forfeits all rights to future distributions and receives no consideration for their interest. The holder never bears the risks and rewards of equity ownership and the amount payable under the award is not based, even in part, on the price of the entity's shares or other equity instruments. Therefore, this award is not a share-based payment in the scope of ASC 718.

EXAMPLE SC 6-2

Grant of profits interest award that can be held beyond termination

SC LLC grants a profits interest award to its employee. The award vests ratably over a four-year period. Once vested, the holder is entitled to distributions and liquidation and pre-emptive rights proportionate to their ownership interest, and participates in the same form of consideration as other equity holders in the event of a sale of the entity. If the employee voluntarily leaves employment or is terminated without cause, SC LLC has a call option to repurchase the vested interests at fair value on the repurchase date. SC LLC has the ability to delay the repurchase of the vested interests for at least six months to allow the employee to bear the risks and rewards of ownership. Unvested interests are forfeited for no consideration upon termination.

How should SC LLC account for this profits interest award?

Analysis

While all facts and circumstances should be considered, SC LLC would likely conclude that the profits interest award is a form of share-based compensation under ASC 718. The employee will participate in future operating and capital transactions of the entity in the same fashion as other equity holders, proportionate to their interest. Upon termination, the employee can either retain their interest or it may be repurchased at fair value which, again, is consistent with bearing the risks and rewards of equity ownership. Therefore, this award is likely a share-based payment in the scope of ASC 718.

The remaining provisions of ASC 718-10-25-6 to ASC 718-10-25-18 should be evaluated to determine the appropriate classification of the award as equity or liability. If it is determined to be an equity-classified award, SC LLC should determine the grant date fair value of the profits interest and recognize it over the requisite service period as described in SC 2.8. If it is determined to be a liability-classified award, SC LLC should remeasure the award each reporting period at either its fair value or intrinsic value, depending on its accounting policy for liability-classified awards (as described in SC 6.2.2). In this example, SC LLC would likely determine that the profits interest award is equity-classified.

When determining the fair value of a profits interest that may be junior to other classes of equity interests (and might not participate in any distributions or proceeds until the more senior classes have received specified amounts or specified returns), the potential upside appreciation of the interest must be considered, similar to an at-the-money stock option. It would generally not be appropriate, for

example, to value the profits interest based on a hypothetical liquidation of the entity and application of the distribution “waterfall” as of the grant date.

Chapter 7: Stock-based transactions with nonemployees

7.1 Stock-based transactions with nonemployees chapter overview

This chapter addresses the accounting for stock-based transactions with nonemployees under ASC 718 upon adoption of ASU 2018-07, *Compensation- Stock Compensation (Topic 718) - Improvements to Nonemployee Share-based Payment accounting* (see SC 7.2) and ASU 2019-08, *Compensation—Stock Compensation (Topic 718) and Revenue from Contracts with Customers (Topic 606)*. See SC 7.2.6 and SC 7.2.7. It also discusses the accounting for stock-based transactions with nonemployees prior to adoption of ASU 2018-07, under ASC 505-50, *Equity—Equity-Based Payments to Non-Employees*. See SC 7.2A. This chapter summarizes the applicable guidance. It does not contain all of the details included in that guidance and may not address all of the questions that may arise in a given fact pattern. Balance sheet presentation guidance can be found in FSP 15.

7.2 Accounting under ASC 718, after adoption of ASU 2018-07

This section provides an overview of the accounting for share-based payments to nonemployees subsequent to adoption of ASU 2018-07 (which amended ASC 718 to also apply to most aspects of awards issued to nonemployees). We also address the areas where nonemployee accounting continues to differ from employee share-based payment accounting.

ASU 2018-07 is effective for public business entities for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted, but no earlier than an entity's adoption of ASC 606. Transition guidance is provided in ASC 718-10-65-11 through ASC 718-10-65-14.

SC 7.2.6 and SC 7.2.7 address the accounting for share-based payments granted to customers upon adoption of ASU 2019-08. ASU 2019-08 is effective for public business entities, and all other entities that have early adopted the nonemployee guidance in ASU 2018-07, for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. For all other entities that have not adopted ASU 2018-07, the guidance in ASU 2019-08 is effective for fiscal years beginning after December 15, 2019, and for interim periods within fiscal years beginning after December 15, 2020.

Early adoption, including in interim periods, is permitted in financial statements that have not yet been issued/made available for issuance, but no earlier than the adoption of the nonemployee guidance in ASU 2018-07.

An entity that adopts ASU 2019-08 in the same fiscal year as the nonemployee guidance in ASU 2018-07 should apply the guidance in ASU 2019-08 retrospectively to all prior interim periods in that fiscal year for which the nonemployee guidance was previously applied. As described in ASC 718-10-65-15, a cumulative-effect adjustment to retained earnings should be recorded as of the beginning of the fiscal year of adoption, following the same provisions as in the nonemployee guidance about which arrangements are subject to the guidance.

An entity that adopts ASU 2019-08 in a later fiscal year than the nonemployee guidance can either:

- Apply ASU 2019-08 retrospectively to all prior periods in which the nonemployee guidance has been previously applied, with a cumulative-effect adjustment to retained earnings as of the beginning of that year, or

- Apply the guidance on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year in which ASU 2019-08 is adopted.

7.2.1 Overview of ASC 718 as amended by ASU 2018-07

Entities will generally apply the same guidance to both employee and nonemployee share-based awards. However, entities must follow specific guidance for share-based awards to nonemployees related to the attribution of compensation cost and the inputs to the option-pricing model for expected term.

7.2.2 Scope of guidance — stock transactions with nonemployees

The FASB limited the scope of ASC 718 to instruments granted for goods or services to be used or consumed in a grantor's own operations; it does not apply to instruments issued to provide financing to the issuer. This was done to address potential structuring concerns. For example, transactions that otherwise would be accounted for under ASC 815 as a derivative (such as the issuance of an equity-linked instrument to purchase gold, when the entity does not use the gold in its operations) cannot be treated as nonemployee awards to purchase products under ASC 718. In this particular example, the FASB was concerned that an entity could issue such an instrument to purchase a commodity (i.e., gold), which could then be sold for cash, effectively resulting in the issuance of an equity-linked instrument for cash financing.

7.2.3 Measurement of nonemployee awards

Nonemployee share-based payment equity awards are measured at the grant-date fair value of the equity instruments, similar to employee share-based payment equity awards.

However, in determining the grant-date fair value of options and similar instruments, an entity may elect to use the contractual term as the expected term in the option-pricing model for its nonemployee awards. This is because it may be more difficult or even impossible for an entity to determine the expected term for nonemployee options. The election is available on an award-by-award basis. An entity may still estimate the expected term as is required for employee awards. An entity should consider whether it has relevant history for comparable nonemployee awards, which may differ than the entity's historical experience for employee awards, and if the terms of the awards are similar.

In addition, a nonpublic entity may also choose to apply a practical expedient in determining the expected term of nonemployee awards, similar to that available for employee awards, as described in SC 6.2.4. However, the practical expedient is a policy election and, if elected, must be applied to all employee and nonemployee awards that meet the following conditions:

- The award is granted at the money,

- The grantee has only a limited time to exercise the award (typically 30–90 days) if the grantee no longer provides goods or terminates service after vesting,

- The grantee can only exercise the award (i.e., cannot sell or hedge the award), and
- The award does not include a market condition.

Certain of these conditions may be less likely to be met for certain types of nonemployee awards and should be carefully evaluated, such as whether hedging is allowed or if the time to exercise the award is truncated when service or the supply agreement is terminated. Notwithstanding the policy election chosen, a nonpublic entity may still elect, on an award-by-award basis, to use the contractual term as the expected term for nonemployee awards, as indicated above.

ASU 2019-08 clarifies that the practical expedient available for nonpublic entities to estimate the expected term when valuing share options or similar awards is available for awards granted to customers. The same conditions described above must be met to apply this practical expedient to awards issued to customers. In our experience, share-based awards issued to customers do not typically include a term truncation feature when the counterparty ceases to be a customer. Therefore, while this practical expedient is technically allowed for share-based awards issued to customers, we believe its use will be limited. If the practical expedient cannot be utilized, entities may elect to use the contractual term as the expected term for purposes of measuring the fair value of the award.

Figure SC 7-1 describes the practical expedient for estimating expected term for nonpublic entities.

Figure SC 7-1

Practical expedient for estimating expected term for nonpublic entities

Type of provision	Employee awards	Nonemployee awards
Service condition only	The midpoint between the end of the requisite service period and the contractual term of the award	The midpoint between the end of the vesting period and the contractual term of the award
Performance condition probable of being achieved	The midpoint between the end of the requisite service period and the contractual term	The midpoint between the end of the vesting period and the contractual term
Performance condition <u>not</u> probable of being achieved	If the service period is implied: - The contractual term If the service period is explicit: - The midpoint between the end of the requisite service period and the contractual term	If the service period is implied: - The contractual term If the service period is explicit: - The midpoint between the end of the vesting period and the contractual term

The figure reflects that despite the slight differences in the definition of the service period between employee and nonemployee awards ("requisite service period" vs. "vesting period"), the guidance is effectively the same.

If a nonpublic entity has an accounting policy to measure its liability-classified employee share-based payment awards at intrinsic value, the entity must be consistent and also measure its nonemployee liability-classified awards at intrinsic value instead of fair value (except those determined to be consideration payable to a customer, as described in SC 7.2.7.2), and vice versa. If a nonpublic entity does not already have an accounting policy, then upon adoption of ASU 2018-07, it can make a one-time election to measure nonemployee liability-classified awards at intrinsic value instead of fair value. Additionally, nonpublic entities will be able to value nonemployee awards using an industry sector volatility index (referred to as a “calculated value”) if determination of expected volatility of the entity’s stock is not practicable, consistent with the guidance for employee share-based payment awards.

7.2.4 Performance conditions — nonemployee awards

The definition of performance condition in ASC 718 after adoption of ASU 2018-07 is consistent for employee and nonemployee awards. The accounting for these awards granted to nonemployees requires using the probability-based recognition approach, consistent with accounting for employee awards. Refer to SC 2.5.3 for discussion of the accounting model for awards with performance conditions.

The definition of "performance condition" was clarified by ASU 2018-07 to specifically state that if the performance condition is in reference to the counterparty's performance, it must be “related to the grantor's own operations (or activities)" as well as "in accordance with the terms of the award." We believe that the intent is to ensure that for nonemployee awards, the performance target measures the impact on the results of the grantor of the goods or services provided by the counterparty in exchange for the awards. The definition would exclude an award, for example, in which the performance target was based on the counterparty’s results. Additionally, delivery of goods or services themselves are not considered “performance conditions” under ASC 718; rather, they are considered “service conditions.” Performance conditions are limited to a further outcome beyond just delivery, such as the growth in the issuer’s revenue as a result of marketing services provided by the counterparty.

7.2.5 Attribution of compensation cost for nonemployee awards

Compensation cost for nonemployee awards is recognized in the same period(s) and in the same manner as if the grantor had paid cash in exchange for the goods or services instead of a share-based award. This reflects the variety of provisions imposed on nonemployee counterparties in exchange for the awards, beyond the typical employee services that are provided over time. In many cases, attribution of compensation cost will be the same as for employee awards. For example, an award granted to a nonemployee that is earned after 2 years of service as a nonemployee consultant to the entity generally would be recognized over that 2-year period. However, there may be situations in which the cost attribution will differ if granted to a nonemployee. For example, if the awards are issued as payment for goods, the cost may be attributed based on the pattern of delivery of the goods.

The existing policy election of a graded or straight-line basis for attribution of service condition-only awards with graded vesting only applies to employee awards (see SC 2.8). There is no similar election for nonemployee awards. As described above, the attribution for nonemployee awards is in the same manner as if the grantor had paid cash for the goods or services. Therefore, we would anticipate that entities that had issued nonemployee awards with graded vesting prior to the adoption of ASU 2018-07 should continue to follow the attribution method they had in place previously. Entities that issue nonemployee awards with graded vesting for the first time after adoption of ASU 2018-07 should apply appropriate judgment in determining the attribution of the cost of such awards.

7.2.6 Awards granted to customers

ASU 2018-07 amends ASC 606, *Revenue from contracts with customers,* to clarify that consideration payable to a customer also includes equity instruments (for example, shares, share options, or other equity instruments). The accounting for the equity instrument (including measurement, classification, recognition, and disclosure) depends on whether the equity instrument is payment in exchange for a distinct good or service. Payments to customers in the form of an entity's own equity instruments in exchange for a distinct good or service at an amount that does not exceed the fair value of the good or service are accounted for in accordance with ASC 718, similar to other share-based payments to nonemployees.

Consideration paid to a customer in the form of equity instruments that is not in exchange for a distinct good or service is addressed in ASU 2019-08. ASU 2019-08 clarifies that the measurement and classification of share-based payment awards issued to a customer follows the guidance in ASC 718 for both equity and liability-classified awards. The value determined at the grant date is reflected as a reduction of the transaction price (and therefore revenue) following the guidance in ASC 606.

As discussed in SC 7.2.5, the guidance for nonemployee share-based payment awards does not specify when and how to recognize the value of an award, other than to require that an asset or expense (or, in this case, a reduction of revenue) be recognized in the same period and in the same manner as if the grantor had paid cash for the goods or services. In accordance with ASC 606-10-32-27, consideration payable to a customer should be recognized at the later of when the award is promised and when the entity recognizes revenue for the transfer of the related goods or services. Therefore, for example, if a share-based payment award issued to a customer vests based on the customer purchasing a specified number or dollar value of units, the grant-date fair value of the award should be recognized in proportion to the delivery of the units, which is similar to the accounting for a cash rebate payable upon the customer achieving a cumulative sales target. See RR 4.6 for further detail.

Example SC 7-1 illustrates the accounting treatment for stock-based compensation granted to a customer.

EXAMPLE SC 7-1

Accounting by a vendor for stock-based compensation granted to a customer

On January 1, 20X1 Customer agrees to purchase from SC Corporation one widget for $2,000 and SC Corporation agrees to grant Customer 500 fully vested shares. All of the criteria to establish a grant date under ASC 718 are met on January 1, 20X1, and the award is classified as an equity instrument under ASC 718. SC Corporation does not receive any distinct goods or services from Customer as consideration for the shares. SC Corporation's share value is $1.00 on January 1, 20X1. SC Corporation transfers control of the widget to Customer on April 10, 20X1. At that time, SC Corporation's share value is $1.50.

How should SC Corporation account for the stock-based compensation granted to its customer?

Analysis

SC Corporation should follow the guidance in ASC 606 for determining the appropriate recognition of the award. The awards are not a payment for a distinct good or service received from the customer; therefore, these awards should be considered a reduction of the transaction price (and therefore

revenue). SC Corporation should follow the guidance in ASC 718 to determine the measurement date and classification for share-based payment awards granted to Customer. Therefore, these equity-classified awards should be measured at fair value at the grant date, which is January 1, 20X1.

	Jan 1 20X1
Revenue from widgets	$ 2,000
Less: Sales incentive	500
Net revenue	$ 1,500

This net revenue should be recognized on April 10, 20X1 when control of the widget is transferred to Customer.

7.2.7 Subsequent measurement of awards granted to customers

ASU 2019-08 clarifies that only the grant-date fair value of share-based payment awards should be reflected as a reduction in revenue. If the number of equity instruments or their terms can vary based on achieving a service or performance condition, changes in the expected outcome of those conditions are reflected in revenue based on the grant-date fair value of those outcomes (see SC 7.2.7.1). Conversely, any changes in measurement of the share-based awards after the grant date due to the form of consideration (e.g., a change in the fair value of a liability-classified award) should not be recognized in revenue, but rather should be recognized elsewhere in the income statement consistent with the guidance for noncash consideration in ASC 606-10-32-23 (see SC 7.2.7.2).

7.2.7.1 Vesting conditions of awards granted to customers

An award with a service or performance condition may have multiple potential outcomes that affect the quantity or terms of the award. ASU 2018-07 updated the definition of a service condition to include a nonemployee delivering goods or rendering services to the grantor over a vesting period, which would incorporate a vesting condition based upon a customer purchasing a certain quantity or dollar value of goods or services from the grantor. The definition of a performance condition includes achieving a target defined solely by reference to the grantor's own operations (or activities) or the grantee's performance related to the grantor's own operations (or activities), such as an award that only becomes exercisable upon an IPO of the grantor.

If the number of equity instruments or their terms could change due to a service condition, the entity should follow its existing accounting policy under ASC 718-10-35-1D for forfeitures of awards issued to nonemployees (see SC 7.2.10). If the entity's policy is to recognize the effects of forfeitures of nonemployee awards only when they occur, the same approach should be applied to awards issued to customers. In that situation, the transaction price would be reduced for the grant-date fair value of the full number of equity instruments that could be issued to the customer. If the customer fails to meet the criteria necessary to earn the award, an adjustment to the transaction price would be made at the time the award is forfeited to reverse the effects of the forfeited award based on the grant-date fair value.

If the entity's policy is to estimate the number of forfeitures expected to occur for awards issued to nonemployees with service conditions, or if the number of equity instruments or their terms could change due to a performance condition, the entity should estimate the number of equity instruments that it will be obligated to issue to the customer each period. Changes in the value of an award when a

different service or performance outcome becomes probable would be recognized as a change to the transaction price (as it is not a change in value based on the form of consideration) based on the grant-date fair value of that new outcome. This estimate would be updated until the award ultimately vests (or fails to vest).

This is similar to the accounting for share-based payment awards with service or performance conditions issued to nonemployees for goods or services, other than the classification of the charge against revenue. It would not be subject to the guidance on measuring variable consideration in ASC 606-10-32-5 through ASC 606-10-32-14.

Market conditions are incorporated into the grant-date fair value of the awards and this amount is recognized whether or not the market condition is ultimately achieved. This is consistent with the treatment of awards with market conditions issued to employees or nonemployees for goods or services.

Example SC 7-2 illustrates the accounting for an equity-classified award with a vesting condition issued as a sales incentive to a customer.

EXAMPLE SC 7-2

Equity-classified award with a service vesting condition issued as a sales incentive to a customer when the probability of vesting changes

On January 1, 20X1, Widgetmaker executes a Master Supply Agreement (MSA) with Customer to deliver widgets with certain specifications. Customer has no minimum purchase requirement. The MSA has a one-year term. Customer agrees to pay Widgetmaker $1,000 for each widget it orders.

As a sales incentive, Widgetmaker includes terms within the MSA to grant Customer 1,500 fully vested shares of Widgetmaker if Customer purchases three widgets during 20X1 and remains a customer for the year. All of the criteria to establish a grant date under ASC 718 are met on January 1, 20X1, and the award is classified as an equity instrument under ASC 718. Widgetmaker's accounting policy is to estimate forfeitures for share-based awards issued to nonemployees.

Upon grant, Widgetmaker believes it is probable that Customer will purchase three widgets in 20X1. At June 30, due to a downturn in Customer's business, Widgetmaker believes it is probable that only 2 widgets will be purchased during the year. However, conditions improve in the following quarter and at September 30, Widgetmaker again believes Customer will purchase three widgets, and ultimately three widgets are purchased during the year and the shares are earned.

Widgetmaker 's stock is valued at $1.00 per share on January 1. Widgetmaker's stock value changed during 20X1 as follows:

Date	Share value
Jan 1	$ 1.00
Mar 31	$ 1.05
Jun 30	$ 1.50
Sept 30	$ 1.00
Dec 31	$ 2.00

During 20X1, Customer issues purchase orders, each for one widget, on March 2, 20X1, June 1, 20X1, and December 31, 20X1. The widgets are delivered (and control transfers) to Customer on the same day as each order.

How should Widgetmaker account for awards issued as a sales incentive to its customer when the probability of vesting changes?

Analysis

Widgetmaker should look to the guidance in ASC 718 to determine the measurement date for share-based payment awards granted to Customer. Widgetmaker would measure the fair value of the equity-classified instruments granted to Customer at the grant date (i.e., January 1, 20X1, when they are worth $1.00 per instrument), which is when the parties reached a mutual understanding of the key terms and conditions of the award. While the ultimate value of the award can change based on Customer's actions in this case, changes due to revisions in the expected outcome of a service or performance condition are not deemed to be changes due to the form of the consideration and, therefore, should be reflected in the transaction price.

ASC 718 provides guidance for when to recognize nonemployee share-based payments. Nonemployee awards should be recognized in the same period and manner as if the grantor had paid cash instead of issuing a share-based award.

Consistent with the guidance in ASC 606-10-32-27, assuming that revenue is recognized at a point in time for the sale of widgets, Widgetmaker should recognize the grant-date fair value of the awards ($1,500 in total: 1,500 shares x $1.00/share) as a reduction of revenue as control of the widgets is transferred to Customer, if the vesting condition is considered probable of achievement. In this example, since the $1,500 value of the equity awards is specifically associated with the delivery of three widgets, it would be appropriate to ascribe $500 of that value to each widget delivered. If revenue was recognized over time (such as for services provided continuously over the period), then the grant-date fair value of the awards would be recognized as a reduction of revenue over time.

Widgetmaker's accounting is summarized as follows:

Date	Cumulative revenue recognized	Probability assessment of Customer earning award	Cumulative amount recorded as a reduction of revenue
Jan 1	no accounting		
Mar 31	$1,000 (1 widget)	Yes	$1,500 × 1/3 = $500
Jun 30	$2,000 (2 widgets)	No, only 2 widgets anticipated	$0[1]
Sept 30	$2,000 (2 widgets)	Yes	$1,500 × 2/3 = $1,000[2]
Dec 31	$3,000 (3 widgets)	Yes	$1,500

[1] As vesting of the award is no longer considered probable at June 30, Widgetmaker's best estimate is that it will not issue any shares to Customer. Therefore, the amount recognized as a reduction of revenue in the March 31 quarter ($500) for the share-based payment award should be reversed in the June 30 quarter. This results in a net increase in revenue for the quarter.

[2] As vesting of the award is again considered probable at September 30, Widgetmaker's best estimate is that it will issue the 1,500 shares to Customer. As two of the three required widgets have been purchased as of September 30, two-thirds of the original grant date fair value of $1,500 should be recognized as a cumulative reduction of revenue at that date. Therefore, $1,000 would be recognized as a reduction of cumulative revenue to Customer in the September 30 quarter for the share-based payment award, even though no sales revenue to Customer was recognized in the quarter.

7.2.7.2 Liability-classified awards granted to customers

ASU 2019-08 clarifies that changes to the fair value of a share-based award issued to a customer after the grant date due to the form of consideration (i.e., market value changes) would not be recognized as part of the transaction price. This is consistent with the guidance for noncash consideration in ASC 606-10-32-23. For example, if the award is classified as a liability and is being marked-to-market each period, only the fair value determined as of the grant date would be recorded as a reduction of revenue. Subsequent changes to the instrument's fair value each period would be reflected elsewhere in the income statement. This may follow, for example, the entity's treatment of gains and losses on derivative financial instruments under ASC 815, although the guidance does not prescribe a treatment.

ASU 2019-08 requires nonpublic entities to measure both equity-classified and liability-classified awards that are determined to be consideration payable to a customer at fair value. Furthermore, any subsequent measurement of liability-classified awards issued to customers must also be measured at fair value. This is required even for nonpublic entities that have elected a policy to measure their liability-classified awards issued in exchange for goods or services at intrinsic value.

Example SC 7-3 illustrates the accounting for a liability-classified share-based payment award issued as a sales incentive to a customer.

EXAMPLE SC 7-3

Liability-classified award issued as a sales incentive to a customer

On January 1, 20X1, Widgetmaker executes a Master Supply Agreement (MSA) with Customer to deliver widgets with certain specifications. Customer has no minimum purchase requirement. The MSA has a one-year term. Customer agrees to pay Widgetmaker $1,000 for each widget it orders.

As a sales incentive, Widgetmaker includes terms within the MSA to grant Customer 1,500 fully vested cash-settled stock appreciation rights (SARs) of Widgetmaker if Customer purchases three widgets during 20X1. All of the criteria to establish a grant date under ASC 718 are met on January 1, 20X1, and the award is classified as a liability instrument under ASC 718. Widgetmaker's accounting policy is to estimate forfeitures for share-based awards issued to nonemployees. Throughout the year, Widgetmaker believes that it is probable that Customer will purchase the three widgets, and Customer ultimately does so.

The fair value of a SAR measured on January 1 is $1.00. The fair value of each SAR changed during 20X1 as follows:

Date	Fair value
Jan 1	$ 1.00
Mar 31	$ 1.05
Jun 30	$ 1.50
Sept 30	$ 1.00
Dec 31	$ 2.00

During 20X1, Customer issues purchase orders, each for one widget, on March 2, 20X1, June 1, 20X1,

and December 31, 20X1. The widgets are delivered (and control transfers) to Customer on the same day as each order.

How should Widgetmaker account for liability-classified awards issued as a sales incentive to its customer?

Analysis

Widgetmaker should look to the guidance in ASC 718 to determine the measurement date for share-based payment awards granted to Customer. Widgetmaker would measure the fair value of the liability-classified instruments granted to Customer at the grant date (i.e., January 1, 20X1, when they are worth $1.00 per instrument), which is when the parties reached a mutual understanding of the key terms and conditions of the award, to determine the amount that should be reflected as a reduction in the transaction price of the revenue contract. Changes in the measurement of the share-based payment award after the grant date that are due to the form of the consideration (i.e., due to the classification of the award as a liability) are reflected elsewhere in the income statement and not as an adjustment to revenue.

ASC 718 provides guidance for when to recognize nonemployee share-based payments. Nonemployee awards should be recognized in the same period and manner as if the grantor had paid cash instead of issuing a share-based award.

Consistent with the guidance in ASC 606-10-32-27, assuming that revenue is recognized at a point in time for the sale of widgets, Widgetmaker should recognize the grant-date fair value of the awards ($1,500 in total: 1,500 SAR's x $1.00/SAR) as a reduction of revenue as control of the widgets is transferred to Customer, if the vesting condition is considered probable of achievement. In this example, since the $1,500 value of the share-based awards is specifically associated with the delivery of three widgets, it would be appropriate to ascribe $500 of that value to each widget delivered. If revenue was recognized over time (such as for services provided continuously over the period), then the grant-date fair value of the awards would be recognized as a reduction of revenue over time. Even though the fair value of the liability-classified awards must be remeasured each period, there is no change in the amount charged against revenue. The impact of the mark-to-market accounting for the awards issued to Customer is recorded on another line in Widgetmaker's income statement.

Similar to the accounting for liability awards issued to nonemployees to acquire goods or services, the liability as of each reporting period should reflect the percentage of the aggregate current fair value of the share-based payment award that would have been recognized had the entity paid cash instead of issuing the award. In this example, one-third of the total value of the award is associated with each widget. Therefore, based on how many widgets have been delivered to Customer at each reporting date, Widgetmaker would record a liability equal to the proportionate amount of the aggregate then-current fair value of the entire 1,500 SAR's. The difference between this amount and the proportion of the grant-date fair value recorded against revenue is the amount to record elsewhere in Widgetmaker's income statement.

Widgetmaker's accounting is summarized as follows:

Date	SAR value	Mark-to-market liability	Recorded as reduction of revenue at grant date fair value as each widget is delivered	Cumulative amount recorded as a reduction of revenue	Cumulative amount recorded outside of revenue	Amount recorded outside of revenue in the quarter
1/1	$ 1.00	no accounting				
3/31	$ 1.05	$525 (1,500×$1.05*1/3)	$500	$500 (1 widget delivered)	$25	$25
6/30	$ 1.50	$1,500 (1,500×$1.50*2/3)	$500	$1,000 (2 widgets delivered)	$500	$475
9/30	$ 1.00	$1,000 (1,500×$1.00*2/3)		$1,000 (2 widgets delivered)	$0	$(500)
12/31	$ 2.00	$3,000 (1,500×$2.00*3/3)	$500	$1,500 (3 widgets delivered)	$1,500	$1,500

7.2.7.3 Modifications and settlements of awards to customers

ASC 718 provides guidance on modifications and settlements of awards issued in exchange for goods or services, focusing on incremental value provided to the counterparty (see SC 4.2 and SC 4.8). ASU 2019-08 does not explicitly address modifications and settlements of awards issued to a customer, other than in the context of potentially transitioning to other guidance. Consistent with the overall approach in ASU 2019-08 to measure and classify share-based payment awards issued to customers under ASC 718 and then account for the resulting amounts under ASC 606, we believe the guidance in ASC 718 should be used to measure the impact of a modification or settlement of a share-based payment award issued to a customer. That is, companies should compare the fair value of the award immediately before and immediately after the modification or settlement to determine if the change creates any incremental value to the holder. Any incremental value would then be considered a further payment to the customer under ASC 606.

The recognition of the incremental value will depend on the facts and circumstances and what aspect of the revenue contract modification model is applicable under ASC 606. For example, the incremental value of the share-based award may simply be accounted for as an immediate additional charge to revenue if the associated goods and services have already been fully delivered and the modification is not associated with the execution of a new contract. However, if the goods and services are still being delivered, the incremental payment to the customer may be viewed as a contract modification subject to the guidance in ASC 606-10-25-10 to ASC 606-10-25-13. Based on that guidance, for example, the incremental value associated with the share-based payment award (a change in the transaction price)

may lead to accounting for the transaction as the cancellation of the existing contract and the creation of a new contract. See further discussion of revenue contract modifications in RR 2.9.

7.2.7.4 Awards to customers becoming subject to other guidance

ASU 2019-08 clarifies that a share-based award issued to a grantee will continue to be accounted for under the share-based payment guidance in ASC 718 throughout the life of the award, unless its terms are modified after a grantee:

- vests in the award and is no longer providing goods or services,
- vests in the award and is no longer a customer, or
- is no longer an employee.

If the terms are modified after one of these situations (other than in certain qualifying equity restructuring transactions), the modification is accounted for under the share-based payment guidance, but after the modification, the recognition and measurement of the instrument is subject to other applicable GAAP (see SC 4.10). For example, if a stock option issued to a customer is modified after the counterparty ceases to be a customer, the modification would first be subject to the guidance in ASC 718, and then immediately after the modification, the stock option would be subject to the classification and measurement guidance in ASC 815, *Derivatives and Hedging*. ASU 2019-08 does not specify when a counterparty ceases to be a "customer." For example, it is unclear how to consider a counterparty that has fulfilled its existing contract but is in negotiations for a potential new contract. Appropriate judgment should be applied based on the facts and circumstances.

7.2.7.5 Goods/services given to customers before the grant date

ASU 2019-08 clarifies that equity instruments granted by an entity in conjunction with selling goods or services should be measured and classified at the grant date, as that date is defined in ASC 718. However, there may be circumstances when goods or services are delivered to a customer before the grant date of an associated share-based award; for example, if the terms and conditions of the award have not yet been finalized at the time goods or services begin to be delivered, or if the exercise price of an option will be set based on a future stock price. In such a circumstance, the award should be measured at its fair value as of the reporting dates that occur before the grant date, and that amount should be reflected in the determination of the transaction price each period in accordance with the guidance on variable consideration in ASC 606-10-32-7 and ASC 606-10-32-27. That amount should be updated (on a cumulative effect basis) each subsequent reporting period until the grant date occurs. Once the grant date occurs, the entity should adjust the transaction price for the cumulative effect of measuring the fair value at the grant date rather than the fair value previously used.

7.2.8 Awards to employees/nonemployees of equity method investees

ASC 323-10-25-3 through ASC 323-10-25-6 requires that, for transactions in which stock-based compensation is incurred by an investor on behalf of an equity method investee, the investee should apply the guidance in ASC 718 to measure compensation expense incurred by the investor on its behalf and record a corresponding capital contribution. The investor should recognize an expense for the portion of the costs incurred that benefits other investors and recognize the remaining cost as an increase to its equity investment in the same period compensation expense is recognized on the books of the investee.

The investor shall recognize the full cost of the awards as incurred (that is, in the same period the costs are recognized by the investee) for share-based payment awards granted to employees or nonemployees of an equity method investee (that provide goods or services to the investee that are used or consumed in the investee's operations). This is assuming no proportionate funding by the other investors occurs and the investor does not receive any increase in the investor's relative ownership percentage of the investee. Therefore, awards to nonemployees of an equity method investee will be measured at the grant date fair value and recognized as if cash had been paid for the goods or services.

Other non-contributing investors should recognize income equal to the amount that their interest in the investee's net book value has increased. In ASC 323-10-S99-4 the SEC Observer indicated that SEC registrant investors should classify any expense or income resulting from the application of this guidance in the same income statement caption as the equity in earnings (or losses) of the investee.

ASC 323-10-25 does not apply to situations in which proportionate funding exists. In these cases, both investors are contributing stock-based awards (or other consideration) of proportionate value. Because of the proportional contributions, a cash contribution to the investee would be an equity investment to the investor. Similarly, ASC 323-10-25 does not apply to arrangements established at the time of the investor's original investment in the investee. When the compensation expense is recorded on the investee's books, the investor would record a portion of the expense in relation to the equity investment.

We understand, based on discussions with the FASB staff, that this guidance is limited to grants of investor share-based payment awards to employees and nonemployee service providers of equity method investees. This does not extend to awards issued to employees and nonemployee service providers of entities under common control. Refer to SC 1.6 for further details.

7.2.9 Awards in the form of convertible instruments

Entities occasionally issue convertible instruments (such as debt or preferred stock that is convertible into common stock of the entity) to nonemployees in exchange for goods or services. The fair value of the instrument at the grant date will be used to measure compensation cost.

ASU 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity* (Subtopic 815-40), eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. See FG 6.7.

ASU 2020-06 is effective for public business entities that meet the definition of an SEC filer, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. The ASU must be adopted as of the beginning of an entity's fiscal year and may not be adopted in an interim period.

7.2.9.1 Convertible instruments, after adoption of ASU 2020-06

The grant-date fair value of convertible instruments (such as debt or preferred stock that is convertible into common stock of the entity) issued to nonemployees in exchange for goods or services will be used to measure compensation cost. These share-based payment awards in the form of convertible

instruments will remain subject to the recognition and measurement guidance of ASC 718 throughout the life of the instrument (and will not be reassessed under other applicable GAAP, such as ASC 815, *Derivatives and hedging*, or ASC 470-20, *Debt – Debt with conversion and other options*), unless the terms of the award are modified after the grantee vests in the award and is no longer providing goods or services (or is no longer an employee or customer).

7.2.9.1A *Convertible instruments, prior to adoption of ASU 2020-06*

The fair value of convertible instruments (such as debt or preferred stock that is convertible into common stock of the entity) issued to nonemployees in exchange for goods or services will be used to measure compensation cost and to determine if there is an initial beneficial conversion feature to record as of the grant date. Additionally, the fair value of the convertible instrument and the related intrinsic value of the conversion option (using the fair value of the underlying common stock) is required to be remeasured at the date the award becomes fully vested for purposes of determining if a beneficial conversion feature exists at that date. See FG 6.7 for further information on beneficial conversion features.

The post-vesting treatment of employee and nonemployee awards is consistent and generally does not require assessing the instruments issued to nonemployees under other applicable literature once performance is complete. However, an award that is convertible into equity instruments of the grantor follows the recognition and measurement requirements of other applicable literature upon vesting (including ASC 470-20, *Debt - Debt with conversion and other options*).

7.2.10 *Forfeiture policy election*

Existing guidance in ASC 718 allows an entity to establish an accounting policy for employee awards to either estimate forfeitures or account for them when they occur. See SC 2.7 for further discussion on the accounting policy for forfeitures. An entity must also establish a forfeiture policy for nonemployee awards. The policy for nonemployee awards can be the same or different as the policy for employee awards; however, these policies must be applied consistently to their respective types of awards.

7.2A *Accounting under ASC 505-50 prior to adoption of ASU 2018-07*

ASC 505-50-30 requires all nonemployee transactions, in which goods or services are the consideration received in exchange for equity instruments, to be accounted for based on the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable. In situations where an SEC registrant is applying this guidance, the fair value of the equity instruments should be used. We believe this should generally also be the case for nonpublic companies. This section provides an overview of ASC 505-50, including the measurement and period and manner of recognition for stock-based transactions with nonemployees.

7.2.1A *Overview of ASC 505-50 prior to adopting ASU 2018-07*

Prior to the amendments in ASU 2018-07, ASC 718 did not prescribe the measurement date or provide guidance on recognition for transactions with nonemployees. ASC 505-50 addresses the measurement date and recognition approach for such transactions. ASC 505-50 does not, however, apply to the following transactions:

- Transactions with individuals meeting the definition of an employee.

- Transactions with employee stock ownership plans.
- Transactions involving equity instruments either issued to a lender or investor that provides financing to the issuer or issued as consideration in a business combination.

See SC 1.5 for guidance on the definition of an employee.

7.2.2A Measurement date and performance commitment -ASC 505-50

ASC 505-50 states that the fair value of an equity instrument issued to a nonemployee (i.e., counterparty) should be measured by using the stock price and other measurement assumptions as of the earlier of the date at which either: (1) a commitment for performance by the counterparty has been reached; or (2) the counterparty's performance is complete.

A performance commitment is defined as a commitment under which performance by the counterparty to earn the equity instruments is probable because of sufficiently large disincentives for nonperformance. This disincentive must result from the relationship between the issuer and the counterparty, beyond the equity instruments themselves. Question SC 7-1A addresses the assessment an entity should perform to determine whether a performance commitment contains a "sufficiently large disincentive for nonperformance."

Question SC 7-1A

How should an entity assess whether a performance commitment contains a "sufficiently large disincentive for nonperformance"?

PwC response

The assessment of whether a performance commitment contains a "sufficiently large disincentive for nonperformance" should be based on both quantitative and qualitative factors. Generally, we believe situations in which "performance commitments" exist prior to performance being completed will be rare.

With respect to assessing if there exists a performance commitment, the guidance notes that forfeiture of the equity instrument as the sole remedy for nonperformance by the counterparty would not be considered a sufficiently large disincentive for nonperformance.

In addition, the ability to sue for nonperformance, in and of itself, does not present a sufficiently large disincentive to ensure that performance is probable. The guidance discusses that an entity can always sue for nonperformance but that it is not always clear if any significant damages would result. We believe that since ASC 505-50 specifically indicates that the mere ability to sue for damages is not considered a sufficiently large disincentive for nonperformance, there must be specific delineation of the potential penalties if the counterparty does not perform as specified in the contract.

The penalties (i.e., large disincentives for nonperformance) should be assessed against the value of the arrangement, not just the value of the equity award. In addition to these factors, other factors to consider may include, but are not limited to, the following:

- Whether the counterparty would be able to pay the damages.
- Whether the penalty is financially significant to the counterparty.

- Whether the counterparty would be negatively impacted by its nonperformance (i.e., the counterparty may provide unique services to the issuer that may lead to future services).
- Whether there are other arrangements the counterparty may have with the issuer that may be impacted by nonperformance.
- Whether the overall size and profitability of the arrangement is such that the penalty could be recouped through other, more profitable, work.

The assessment of whether there is a counterparty performance commitment should be made at the time of grant; no reassessment is needed as the arrangement progresses.

If no performance commitment has been reached by the time the counterparty completes its performance, the issuer should ultimately measure the fair value of the equity instruments at the date the counterparty's performance is complete. The counterparty's performance is complete when the counterparty has delivered or, in the case of sales incentives, purchased the goods or services. Typically, the date the counterparty's performance is complete is also the date the equity instruments vest, because at that date, no further service or other action is required for the counterparty to receive the equity instruments. As noted in SC 7.2.3A, if there is an intervening service period between the initial grant of the award and the performance completion date, interim determinations of fair value should be utilized.

ASC 505-50-25-7 discusses situations in which counterparty performance may be required over a period of time but the equity award granted to the party performing the services is fully vested, exercisable, and nonforfeitable on the date the parties enter into the contract. The measurement date for such an award would generally be the date the parties enter into the contract, even though services have not yet been performed, because the counterparty's ability to exercise and benefit from the award is not contingent upon performing the services.

7.2.3A Period and manner of recognition under ASC 505-50

ASC 505-50 generally does not address the period(s) or the manner (that is, capitalize versus expense) in which SC Corporation should recognize the fair value of the equity instruments that will be issued. However, the guidance indicates that an asset, expense, or sales discount should be recognized in the same period and in the same manner as if SC Corporation paid cash to a vendor in exchange for goods or services, or paid cash to a customer as a sales incentive or discount.

Similar to the accounting for employee options, a recognized asset, expense, or sales discount should not be reversed if an award expires unexercised for which the counterparty has completed its performance and for which all the terms have been established.

The quantity and terms of the equity instruments may be known upfront. If this is the case and if it is appropriate under GAAP for the issuer to recognize any cost of the transaction during financial reporting periods before the measurement date, the equity instruments are measured at their then-current fair values at each of those financial reporting dates (i.e., the instruments are "marked-to-market" through the measurement date).

SC 7.2.4A through SC 7.2.5A discuss the accounting for awards if the quantity or terms of the equity instruments are not known upfront.

7.2.4A Variability before/on the measurement date -ASC 505-50

The quantity and/or terms of equity instruments may not be known upfront because they depend on counterparty performance conditions or market conditions. If the quantity and/or terms depend on either performance conditions or both performance and market conditions, and cost is recorded prior to the measurement date, the equity instruments should be measured at their then-current lowest aggregate fair value at each financial reporting date (i.e., the lowest amount at which the award may be earned if the conditions are not achieved). This amount may be zero.

Similarly, on the measurement date, if the quantity or any of the terms of the equity instruments depend on achieving counterparty performance conditions (or both performance and market conditions) that, based on the different possible outcomes, result in a range of aggregate fair values for the equity instruments as of that date, the issuer should utilize the lowest aggregate amount within that range for recognition purposes.

The examples in ASC 505-50-55-28 through ASC 505-50-55-40 illustrate the application of this guidance.

Question SC 7-2A addresses the application of ASC 505-50 to determine if a counterparty performance condition exists.

Question SC 7-2A

If the number of equity awards to be received by a counterparty is determined based on the level at which the counterparty performs and performance is substantially within the counterparty's control, does a counterparty performance condition exist?

PwC response

No, we do not believe that a counterparty performance condition exists, as defined in ASC 505-50.

For example, a nonemployee counterparty will receive 100 equity awards if it purchases 10,000 units of a particular product from the issuer (vendor). In this scenario, the counterparty can control the outcome (i.e., how many units it will purchase) and ultimately determine how many equity awards it will receive (similar to a service condition). We believe that this type of condition is not a counterparty performance condition as contemplated by ASC 505-50, and it would therefore not be appropriate to apply the "lowest aggregate fair value" guidance in ASC 505-50. In this arrangement, recognition of the then-current fair value of the equity awards prior to the measurement date should be assessed based on the probability that the counterparty will perform.

Conversely, if the event that determines the number of equity awards to be received by the counterparty is outside of the control of the counterparty, then the "lowest aggregate fair value" guidance in ASC 505-50 would apply. For example, a nonemployee counterparty will receive 100 equity awards if it resells 10,000 units of the issuer's (vendor's) product to end-user customers. In this scenario, the counterparty cannot typically control the number of units it will sell because the ability to sell the units depends on outside factors, including the level of customer demand. In this arrangement, the amount of cost recognized should be based on the lowest aggregate fair value, which may be zero, in periods prior to reaching the sales target. The issuer would not assess the probability that the performance condition will be achieved.

The accounting treatment of an award with a performance condition that is granted to a nonemployee differs from the guidance for awards granted to employees. For awards granted to employees, a probability assessment is generally made for all performance conditions. For awards granted to nonemployees, if performance is outside the control of the counterparty, the cost recognized may be zero (if zero is the lowest aggregate fair value) prior to the achievement of the performance condition, even if the issuer believes it is probable the performance condition will ultimately be achieved.

7.2.5A Variability upon a market condition under ASC 505-50

If the quantity or terms of an equity instrument depend only on market conditions, cost should be measured based on the then-current fair value of the equity instruments. ASC 505 describes an approach to calculate the fair value based on the fair value of the equity instruments without regard to the market condition plus the fair value of the issuer's commitment to change the quantity or terms of the equity instruments if the market condition is met. In other words, the fair value of the equity instruments should incorporate the market condition, similar to an employee award.

On the measurement date, the then-current fair value of the equity instrument should be determined, incorporating the market condition. Subsequent to the measurement date, the issuer should recognize and classify any future changes in the fair value (including the market condition) in accordance with the relevant accounting literature on financial instruments (e.g., ASC 815-40). ASC 505-50-55-14 illustrates the application of this guidance.

7.2.6A Changes after the measurement date under ASC 505-50

In some situations, the quantity and/or terms of an equity instrument may not be known until a point in time after the measurement date. After the measurement date, revisions in the quantity or terms of equity instruments should generally be recorded using modification accounting similar to ASC 718-20-35. The adjustment should be measured at the date of the revision of the terms of the equity instruments as the difference between (1) the then-current fair value of the modified award utilizing the then-known quantity and/or terms and (2) the then-current fair value of the original award immediately before the quantity and/or terms become known.

For transactions that involve only performance conditions, the then-current fair value is calculated using the assumptions that result in the lowest aggregate fair value if the quantity and/or any terms remain unknown. The example in ASC 505-50-55-22 through ASC 505-50-55-24 illustrates the application of this guidance.

For transactions that involve both performance and market conditions, modification accounting should be applied, as described above, for the resolution of both performance and market conditions, through the date the last performance condition is resolved. If, at the date the last performance-related condition is resolved, any market conditions remain, the issuer should measure the then-current fair value of the commitment related to the market condition. This amount is an additional cost of the transaction. Thereafter, the issuer should, to the extent necessary, recognize and classify future changes in the fair value of this commitment related to the market condition in accordance with the relevant accounting literature on financial instruments (e.g., ASC 815-40). The example in ASC 505-50-55-15 through ASC 505-50-55-16 illustrates the application of this guidance.

7.2.7A Awards to equity method investee's employees -ASC 505-50

ASC 323-10-25-3 through ASC 323-10-25-6 requires an investee to apply the guidance in ASC 505-50 to measure compensation cost incurred by an investor on its behalf and to record a corresponding capital contribution. The investor should recognize an expense for the portion of the costs incurred that benefits other investors and recognize the remaining cost as an increase to its equity investment in the same period that compensation cost is recognized on the books of the investee.

Other non-contributing investors should recognize income equal to the amount that their interest in the investee's net book value has increased. In ASC 323-10-S99-4 the SEC observer to the EITF indicated that SEC registrant investors should classify any expense or income resulting from the application of this guidance in the same income statement caption as the equity in earnings (or losses) of the investee. The example in ASC 323-10-55-19 through ASC 323-10-55-26 illustrates this guidance.

ASC 323-10-25 does not apply to situations in which proportionate funding exists. In these cases, both investors are contributing stock-based awards (or other consideration) of proportionate value. Similarly, ASC 323-10-25 does not apply to arrangements established at the time of the investor's original investment in the investee. When the compensation cost for these arrangements is recorded on the investee's books, the investor would record the portion of the cost related to the equity investment as part of its ongoing equity in earnings accounting under the equity method.

Example SC 7-1A illustrates an investor's accounting treatment for stock-based compensation granted to employees of an equity method investee that would not be in the scope of the guidance in ASC 323-10-25-3 through ASC 323-10-25-6.

EXAMPLE SC 7-1A

Accounting by an investor for stock-based compensation granted to employees of an equity method investee

SC Corporation enters into an arrangement with Third Party Corporation (an unrelated third party) to form a joint venture. SC Corporation will contribute a subsidiary (which includes employees) to the venture and will receive a 50% interest, which will be accounted for under the equity method (the "investee").

Investee employees will be allowed to retain stock options in SC Corporation that were granted prior to the formation of the venture. Such awards will continue to vest based on the employees' service for the venture. Upon the exercise of the stock options, Third Party Corporation will pay to SC Corporation, in cash, its proportionate share (i.e. 50%) of the book compensation expense recorded on the investee's financial statements.

How should SC Corporation account for the cash received from Third Party Corporation for the options exercised subsequent to the formation of the joint venture?

Analysis

ASC 323-10-25 addresses the accounting for stock-based compensation awards of the investor's stock granted to employees of an investee accounted for under the equity method, when no proportionate funding by the other investor occurs and the investor does not receive any increase in its relative ownership percentage of the investee. Further, ASC 323-10-25 assumes that the investor's grant of

stock-based compensation to employees of the equity method investee was not agreed to in connection with the investor's original acquisition of its interest in the investee.

SC Corporation's fact pattern differs from ASC 323-10-25 because Third Party Corporation is funding its economic share of the award, and the arrangement was part of the original formation of the venture. However, this guidance provides a useful frame of reference for SC Corporation's situation. The value recognized over the vesting period for the options is measured under ASC 505-50 because the individuals are no longer considered employees of SC Corporation and is initially treated as an addition to the investment account in the investee on SC Corporation's books.

Going forward, 50% (its proportionate share) of the investment on SC Corporation's books attributable to the contributed options will be absorbed by the pick-up of a proportionate share of the stock-based compensation cost recorded by the venture, which will be measured and recorded by the venture with a corresponding capital contribution. To the extent the stock options are subsequently exercised by employees of the venture, Third Party Corporation will have an obligation to make cash payments to SC Corporation for 50% (its proportionate share) of the book compensation expense of the awards recognized by the venture. Such amounts received by SC Corporation would be recorded as a reduction of the remaining portion of the investment account that had been established when the awards were originally contributed to the venture.

7.2.8A Accounting for awards given to a customer under ASC 505-50

In many arrangements, the issuer may be selling goods or services, issuing equity awards (e.g., warrants), and receiving cash payments from the nonemployee counterparty. We believe that in arrangements where a fixed amount of equity awards are issued to a nonemployee counterparty (i.e., a customer), in addition to providing the counterparty goods or services, and the counterparty is also paying a contractually required amount of cash to the issuer, the payments received from the counterparty should first be considered payment for the equity awards. In other words, the fair value of the equity awards (remeasured each period through the measurement date or the final determination of the terms of awards with counterparty performance conditions) should be considered a reduction of revenue (sales discount). Any cash in excess of the fair value of the equity awards should generally be considered revenue.

Equity awards issued to suppliers, customers or other providers may take various forms. ASC 605-50, as well as ASC 606-10-32-25 and RR 4.6, provide further guidance on the accounting for consideration given to a customer, which applies whether the payment is made in cash or in the form of equity instruments.

7.2.9A Accounting when ASC 505-50 does not address a topic

In SAB Topic 14, the SEC staff noted that not every potential nonemployee transaction is addressed by ASC 505-50 and that when specific guidance does not exist, registrants should generally apply the principles contained in ASC 718 to nonemployee transactions, unless the application of this guidance would be inconsistent with the terms of the nonemployee transaction. For example, in footnote 7 of SAB Topic 14 the SEC staff noted that it would generally not be appropriate to use an expected term assumption shorter than the contractual term when estimating the fair value of an instrument issued to a nonemployee if certain features, including nontransferability, non-hedgeability, and the truncation of the contractual term, are not present in the nonemployee award.

ASC 505 and ASC 718 do not provide specific guidance on accounting for liability-classified awards issued to nonemployees; however, we generally believe that such awards should be accounted for at fair value each period through settlement, consistent with the overall measurement principles of ASC 718. We also believe that under certain facts and circumstances, it may be appropriate to estimate forfeitures in accounting for both liability and equity awards granted to nonemployees.

7.2.10A Classification of awards to nonemployees under ASC 505-50

Consistent with the discussion in SC 7.2.9A, while there is no explicit guidance in ASC 505-50, we believe the classification of awards issued to nonemployees, although within the scope of ASC 505-50, would generally be the same as awards issued to employees. See SC 3 for discussion of features that cause an award to be liability-classified.

7.2.11A Accounting after performance is complete under ASC 505-50

As discussed in SC 4.10, ASC 718-10-35 provides that an award originally granted as employee compensation will generally remain subject to ASC 718 for the life of the award. This guidance does not apply to equity instruments granted to nonemployees prior to adoption of ASU 2018-07. Nonemployee awards cease being subject to ASC 505-50 after the counterparty's performance is complete and, from that point forward, become subject to other applicable GAAP (e.g., ASC 480, *Distinguishing Liabilities from Equity* or ASC 815, *Derivatives and Hedging*). Depending on their terms, that guidance could require accounting for such instruments as liabilities. Refer to FG 5.5 and DH 2.

For example, assume a company grants a fully vested, nonforfeitable warrant to a nonemployee in exchange for services. The measurement date of the warrant is the grant date because no future performance is required by the holder to retain the warrant. However, because performance has been completed as of the grant date, the company would also need to assess the accounting for the warrant under other applicable GAAP, including ASC 480 and ASC 815.

7.2.12A Illustration: nonemployee stock option award - ASC 505-50

Example SC 7-2A illustrates the application of ASC 505-50 to an award of stock options to a nonemployee that cliff vests. The quantity and terms of the equity instrument are known up front, and there is no performance commitment.

Tax implications have not been included in this example, refer to TX 17.

EXAMPLE SC 7-2A

Nonemployee stock option award that cliff vests at the end of a period

SC Corporation enters into an arrangement with an independent contractor to provide service. The contractor will be compensated by earning 1,000 non-qualified stock options with an exercise price of $30 and an exercise period of 10 years that cliff vest at the end of four years provided that service is rendered through that date. If the contractor does not complete the service, the award is forfeited. This transaction does not contain a performance commitment because the contractor has no disincentive for nonperformance other than the loss of stock options. The contractor commences work on January 1, 20X1 and completes service at the end of four years.

On December 31, 20X5, the contractor exercises all 1,000 options, when the market price of SC Corporation's common stock is $100 per share.

How should SC Corporation record the associated compensation expense in each reporting period over the service period and upon the subsequent exercise of the stock options?

Analysis

A measurement date, as defined in ASC 505-50-30, does not occur until the end of the fourth year. The stock options should be revalued each period and measured at their then-current fair value at the end of each period, with a final measurement taking place at the end of the fourth year when performance is complete and the options are earned.

The following schedule presents the fair value per option and associated compensation expense at each reporting period over the service period. For illustrative purposes, only year-end reporting is shown; however, SC Corporation would also be required to perform interim reporting following a similar methodology.

Reporting period	Fair value per option	Number of options	Aggregate fair value	Percentage of services rendered	Cumulative compensation cost	Compensation cost previously recognized	Current period compensation cost (benefit)
1/1/20X1	$10	1,000	$10,000	0%	$0	$0	$0
12/31/20X1	$15	1,000	$15,000	25%	$ 3,750	$0	$ 3,750
12/31/20X2	$30	1,000	$30,000	50%	$15,000	$ 3,750	$11,250
12/31/20X3	$35	1,000	$35,000	75%	$26,250	$15,000	$11,250
12/31/20X4	$25	1,000	$25,000	100%	$25,000	$26,250	$(1,250)

SC Corporation would record the following journal entries:

Dr. Compensation expense	$3,750	
Cr. Additional paid-in capital		$3,750
To recognize compensation expense in 20X1		

Dr. Compensation expense	$11,250	
Cr. Additional paid-in capital		$11,250
To recognize compensation expense in 20X2		

Dr. Compensation expense	$11,250	
Cr. Additional paid-in capital		$11,250
To recognize compensation expense in 20X3		

Dr. Additional paid-in capital	$1,250	
Cr. Compensation expense		$1,250
To recognize compensation expense (benefit) in 20X4		

On December 31, 20X4 when the contractor completes the service, the stock options vest. The award would be measured at its then-current fair value and would no longer be adjusted. Assume that SC Corporation evaluated the award under ASC 815-40 (as described in SC 7.2.11A) and determined that equity classification continued to be appropriate.

Upon exercise, SC Corporation would record the following entry.

Dr. Cash	$30,000	
Cr. Common stock		$10
Cr. Additional paid-in capital		$29,990
To recognize the exercise of 1,000 options at an exercise price of $30; the par value of the common stock is $0.01		

In Example SC 7-2A, the award cliff vests, and therefore the entire award is marked to market each period until the measurement date is reached. Example SC 7-3A illustrates an instance in which the award vests in tranches over time as the service is provided.

EXAMPLE SC 7-3A

Nonemployee stock option award that vests in tranches

SC Corporation enters into an arrangement with an independent contractor to provide service. The contractor will be compensated by earning 1,000 non-qualified stock options with an exercise price of $30 and an exercise period of 10 years. 250 options vest at the end of each year over four years in conjunction with the contractor continuing to provide service through those dates. If the contractor does not complete the service, only the awards associated with the uncompleted service are forfeited.

How should SC Corporation record compensation expense at each reporting period over the service period?

Analysis

A measurement date, as defined in ASC 505-50-30, for each tranche of options would occur at the end of each year when the work associated with that year was completed and the corresponding options vest. The fair value of the vested awards is fixed as of the vesting date. Unvested awards would continue to be marked to market until the relevant vesting date of each tranche. SC Corporation would record compensation expense on a straight-line basis over the service period, which is the same manner as if they had paid cash instead of share-based awards.

Assume the following fair value of each tranche:

Tranche	Vesting date	Fair value per option	Number of options in tranche	Fair value of options in tranche
1	12/31/X1	$15	250	$3,750
2	12/31/X2	$30	250	$7,500
3	12/31/X3	$35	250	$8,750
4	12/31/X4	$25	250	$6,250

The following schedule presents the fair value per option and an approach to record the associated compensation expense at each reporting period over the service period. For illustrative purposes, only year-end reporting is shown; however, SC Corporation would also be required to perform interim reporting following a similar methodology.

Reporting period	Fair value per option	Number of options	Aggregate fair value (1)	Percentage of services rendered	Cumulative compensation cost	Compensation cost previously recognized	Current period compensation cost
12/31/X1	$15	1,000	$15,000	25%	$3,750	$0	$3,750
12/31/X2	$30	1,000	$26,250	50%	$13,125	$3,750	$9,375
12/31/X3	$35	1,000	$28,750	75%	$21,562	$13,125	$8,437
12/31/X4	$25	1,000	$26,250	100%	$26,250	$21,562	$4,688

(1) The following schedule shows the calculation of the aggregate fair value of the options for each reporting period.

Tranche	Number of options	20X1 Calculation of aggregate fair value	20X2 Calculation of aggregate fair value	20X3 Calculation of aggregate fair value	20X4 Calculation of aggregate fair value
1	250	250 × $15 = $3,750 (2)	250 × $15 = $3,750 (2)	250 × $15 = $3,750 (2)	250 × $15 = $3,750 (2)
2	250	250 × $15 = $3,750 (3)	250 × $30 = $7,500 (2)	250 × $30 = $7,500 (2)	250 × $30 = $7,500 (2)
3	250	250 × $15 = $3,750 (3)	250 × $30 = $7,500 (3)	250 × $35 = $8,750 (2)	250 × $35 = $8,750 (2)
4	250	250 × $15 = $3,750 (3)	250 × $30 = $7,500 (3)	250 × $35 = $8,750 (3)	250 × $25 = $6,250 (2)
Total		$15,000	$26,250	$28,750	$26,250

(2) Vested tranche—fixed value at vesting date

(3) Unvested tranche—then-current fair value

SC Corporation would record the following journal entries:

Dr. Compensation expense	$3,750	
Cr. Additional paid-in capital		$3,750
To recognize compensation expense in 20X1		
Dr. Compensation expense	$9,375	
Cr. Additional paid-in capital		$9,375
To recognize compensation expense in 20X2		
Dr. Compensation expense	$8,473	
Cr. Additional paid-in capital		$8,473
To recognize compensation expense in 20X3		
Dr. Compensation expense	$4,688	
Cr. Additional paid-in capital		$4,688
To recognize compensation expense in 20X4		

Chapter 8: Estimating fair value using option-pricing models

8.1 Estimating fair value using option-pricing models overview

Because observable market prices are generally not available for employee stock options, companies will need to use an option-pricing (or equity valuation) model to estimate the fair value of employee stock options and other employee equity awards, such as restricted stock with market conditions. The best known valuation techniques are the Black-Scholes-Merton (Black-Scholes) model, Monte Carlo simulation models, and lattice (or binomial) models.

This chapter discusses the considerations involved in selecting an option-pricing or equity valuation model, the theoretical underpinnings of the Black-Scholes, Monte Carlo, and lattice models, and how to apply the models when estimating the fair value of employee stock options or other equity awards. While the choice between the Black-Scholes, Monte Carlo simulation, and lattice models is important, the fair value estimates produced by any of these techniques are largely dependent upon the assumptions used. The assumptions usually have a greater impact on fair value than the choice of model. Developing assumptions for use in an option-pricing or equity valuation model is discussed in SC 9.

8.2 Selecting an option-pricing model

ASC 718-10-55-11 permits companies to select the option-pricing or equity valuation model that best fits their unique circumstances as long as the valuation technique:

- is applied in a manner consistent with the fair value measurement objectives and other requirements of ASC 718,
- is based upon established principles of financial theory, and
- reflects all of the substantive terms and conditions of the award.

As a result, for most employee stock options and other employee equity instruments, companies will have flexibility in selecting the option-pricing or equity valuation model used to estimate the fair value of their stock-based compensation awards.

The Black-Scholes model is relatively simple to use and well understood in the financial community. Its relative simplicity stems, in part, from the fact that when estimating the fair value of an employee option, all expected employee exercise behavior and post-vesting cancellation activity is reduced to a single average expected term assumption.

The principal advantage of lattice models, on the other hand, is that they can accommodate a wider range of assumptions about employees' future exercise patterns, as well as accommodate other assumptions that may change over time. This approach may yield a more refined estimate of fair value.

A Monte Carlo model simulates a very large number (as many as 1,000,000) of potential stock price scenarios over time and incorporates varied assumptions about volatility and exercise behavior for those various scenarios. A fair value is determined for each potential outcome. The grant date fair value of the award is the average of the fair values calculated for each potential outcome.

For awards with typical service conditions and performance conditions, the Black-Scholes model will generally produce a reasonable estimate of fair value. Monte Carlo simulation and lattice models result in a more refined estimate of fair value. Additionally, companies that issue awards with market conditions or payoff conditions that limit exercisability should use either a Monte Carlo simulation model or a lattice model because those models can better incorporate assumptions about exercisability in relation to the price movements of the underlying stock and/or potential payoff outcomes related to achievement of market conditions.

Companies will need to weigh the advantages and disadvantages of each model in order to choose a model that fits their particular circumstances. In deciding which model is most appropriate, some factors to consider are:

- **Compensation plan design:** The specific terms of awards granted by a company may have an impact on which option-pricing or equity valuation model it selects. For example, it is generally appropriate (and common practice) for most "plain vanilla" stock options to be valued using the Black-Scholes model. However, lattice models are sometimes used for other awards, including options that are in-the-money, awards with market conditions, and awards with payoff functions limited in certain ways (such as maximum value options, as discussed in SC 10.3). Furthermore, it is common practice for a Monte Carlo simulation model to be used when valuing awards containing a market condition.

- **Data availability:** The principal advantage offered by Monte Carlo simulation and lattice models is that they can accommodate a wider range of assumptions; however, this poses certain challenges. Companies may need to analyze a significant amount of detailed historical employee exercise behavior in order to develop appropriate assumptions required by a lattice model or a Monte Carlo simulation model. Many companies may not have the necessary historical data, or may conclude that their history is not relevant in making assumptions about future exercise patterns. Thus, the Black-Scholes model may be more practical, assuming it is appropriate for the type of award. Additionally, SAB Topic 14 provides a simplified approach, subject to certain conditions, for developing an expected term assumption for "plain vanilla" options, making the continued use of the Black-Scholes model significantly less difficult and time consuming. ASC 718-10-30-20A through ASC 718-10-30-20B provides a similar option for nonpublic companies.

- **Cost-benefit analysis:** Although the Monte Carlo simulation and lattice models may provide a more refined estimate of fair value for some award types, companies should weigh the costs involved before switching from the Black-Scholes model. Some companies may determine that the costs of applying a Monte Carlo simulation or lattice model outweigh the benefits of a more refined fair value estimate.

Companies may decide to change from one option-pricing or equity valuation model to a different one (e.g., from Black-Scholes to a lattice model). A change in option-pricing model is not a change in accounting principle—the underlying objective of estimating the fair value of the award is the same—and therefore does not require justification of preferability (or a preferability letter in the case of an SEC registrant). However, changes in valuation models should generally only be made when the new model will result in an improved estimate of fair value. Additionally, companies may use one model for certain awards and another model for different types of awards. For example, the fair value of a "plain vanilla" option could be estimated using the Black-Scholes model while a Monte Carlo simulation is used for an option with a market condition.

SAB Topic 14 requires companies to disclose any changes to the option-pricing model they use and the reasons for the change. Because Monte Carlo simulations and lattice models are generally considered to provide more refined estimates of fair value than the Black-Scholes model, we believe that once a company adopts a Monte Carlo simulation or lattice model to value a particular type of award, although this is not a change in policy that would require preferability, it would likely be difficult to support switching back to the Black-Scholes model to value that same type of award.

8.3 The financial theory behind option-pricing models

The Black-Scholes, Monte Carlo simulation and lattice models all stem from the same financial concepts: (a) that a portfolio can be built that exactly replicates the payoff on an option or equity instrument at each point along the time spectrum that extends from the award's grant date through its expected term and (b) that the fair value of risky financial instruments can be modeled in a risk-neutral framework. Each of these valuation techniques uses many of the same variables (assumptions) to estimate an award's fair value. These include the exercise price (if applicable), an expected term, the price of the underlying stock, the stock's expected volatility, the risk-free interest rate, and the dividend yield over the award's expected term.

The Black-Scholes model reduces all expected employee exercise behavior and post-vesting cancellation activity to a single average expected term assumption. Lattice models replace this single assumption with a more complex set of assumptions. Thus, lattice models can accommodate a wider range of assumptions about employees' future exercise patterns than the Black-Scholes model, as well as assumptions that may change over time. These additional assumptions should yield a more refined estimate of fair value.

Lattice and Monte Carlo simulation models can accommodate a wide range of employee exercise behavior as well. In addition, when valuing equity awards other than options, the primary advantage of Monte Carlo simulation or lattice models is that they can accommodate a much wider variety of award terms and provisions than the Black-Scholes model.

8.4 The Black-Scholes model

A cornerstone of modern financial theory, the Black-Scholes model was originally a formula for valuing options on stocks that do not pay dividends. It was quickly adapted to cover options on dividend-paying stocks. Over the years, the model has been adapted to value more complex options and derivatives. For example, a modified Black-Scholes model could be used to value an option with an exercise price that moves in relation to a stock index.

To estimate an option's fair value using the Black-Scholes model, it is first necessary to develop assumptions at the measurement date (generally the grant date). See SC 2.6.1 and SC 9 for information about the grant date and developing assumptions, respectively). The six key variables are:

- Per share market price of the underlying stock
- Exercise price of the option
- Expected term of the option
- Risk-free interest rate for the duration of the option's expected term

- Expected annual dividend yield on the underlying stock
- Expected stock price volatility over the option's expected term

The stock price is simply the quoted market price for publicly-traded securities or the estimated fair value of a share of stock for a private company on the measurement date. The exercise price is generally defined by the terms of the award. Developing the valuation model inputs (assumptions) for the remaining four variables requires judgment.

As described in ASC 718-10-55-27, the assumptions used to estimate an award's fair value should be determined in a consistent manner. For example, if an entity uses the closing share price or the share price at another specified time as the current share price on the grant date in estimating fair value, that technique should be employed consistently from period to period for all awards.

Figure SC 8-1 summarizes the manner in which each assumption impacts the value of an option.

Figure SC 8-1

Impact of Black-Scholes assumptions on fair value

Assumptions	Impact on option's fair value as assumption/input increases	Impact on option's fair value	
		Less significant	More significant
Stock price	Increase		X
Exercise price	Decrease*		X
Expected term	Increase		X
Expected volatility	Increase		X
Expected dividend yield	Decrease	X**	
Risk-free interest rate	Increase	X	

* Assuming an at-the-money option, a higher exercise price (and stock price) would drive a higher option fair value, purely as a result of the higher time value component of the option value. For an in-the-money option, holding the stock price constant, the exercise price will have an inverse relationship on the intrinsic value of the option—i.e., a higher strike price would reduce the option's fair value.

** For a large change in dividend yield (e.g., a change from 3% to 6%) this assumption can become more significant.

We note that that Figure SC 8-1 represents high-level general trends that ignore the potential interactions between assumptions. For example, in certain cases, a longer expected term assumption may decrease the fair value of an award that is significantly in the money if a high dividend yield is assumed.

8.4.1 Expected term of an option

The Black-Scholes model uses a single input for an option's expected term (the weighted average expected term)—the anticipated time period between the measurement date (typically the grant date) and the exercise date or post-vesting cancellation date—to estimate the fair value of an employee stock

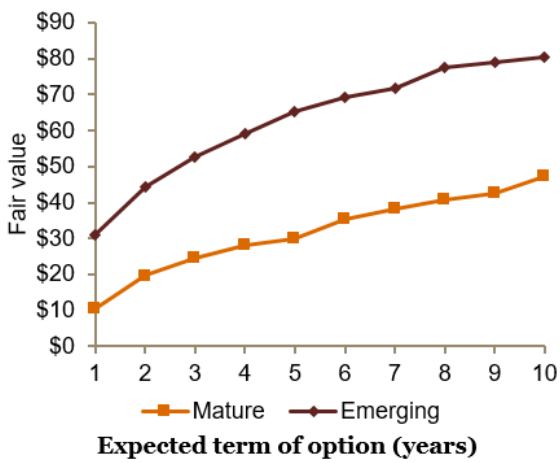
option. The expected term falls between the option's vesting and contractual expiration dates. It can never be less than the period from the grant date to the vesting date. However, as employees may exercise options at widely varying times, developing the expected term assumption is highly judgmental.

SAB Topic 14 provides SEC registrants with a simplified method to calculate the expected term assumption for "plain vanilla" options when the company has no relevant exercise experience on which to develop their assumption. ASC 718-10-30-20A through ASC 718-10-30-20B provide a similar simplified method for nonpublic companies. If a company cannot apply this simplified method, it should develop its expected term assumption by analyzing its employees' past exercise patterns for similar options. See SC 9.3.1 for information on the simplified method for developing the expected term assumption and the factors to be considered by companies that do not use the simplified method.

An option's expected term can have a significant effect on its fair value. Figure SC 8-2 shows how varying expected term assumptions affect the fair value of options issued by a typical emerging company and by a mature company. A change in the expected term assumption will have a greater impact on an option's fair value if the option has a shorter expected term. In contrast, the impact tends to flatten out for longer expected terms. When there is less volatility in the price of the underlying stock (as is the case for the mature company), the fair value of options is lower for all possible expected terms as compared to options for a stock with higher volatility. The fair value is also more linear in relation to expected term.

Figure SC 8-2

Sensitivity of sample fair value to expected term input



Assumptions mature company:

- Stock price at grant date = exercise price = $100
- No dividends
- Risk-free interest rate of 3% (continuously compounded)
- Annualized volatility of 30%

Emerging company:

- Stock price at grant date = exercise price = $100
- No dividends
- Risk-free interest rate of 3% (continuously compounded)
- Annualized volatility of 80%

8.4.2 Expected volatility of an option

Stock price volatility is another key input in all option-pricing models. ASC 718-10-20 defines volatility as "a measure of the amount by which a ... price has fluctuated ... or is expected to fluctuate ... during a period," and also as "a probability-weighted measure of the dispersion of returns about the mean." In

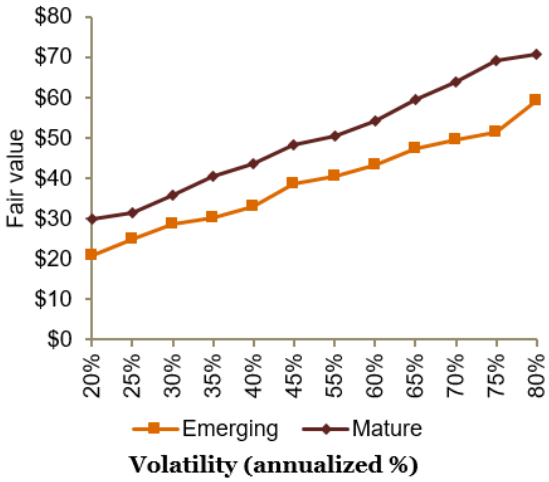
mathematical terms, in the context of the Black-Scholes model, volatility is the annualized standard deviation of the natural logarithms of periodic stock price changes over the option's expected term. In other words, volatility is a statistical measurement of a stock's relative propensity towards wide price movements over a given time and reflects the expected variability of the returns on a company's stock. The price of a less volatile stock fluctuates over a smaller range than does the price of a more volatile stock.

Volatility has a significant impact on the fair value of a stock option. Because a more volatile stock has greater upside potential (and greater downside risk) as a percentage of the stock price than a less volatile one, an option on a stock with high volatility has greater value than an option on a stock with low volatility, assuming all other assumptions are equal. The volatility assumption reflects the benefit of an option holder's right to participate in the upside potential (i.e., stock price increases) with less exposure to downside risk (i.e., stock price decreases). While a number of factors can affect a stock's expected volatility, in general terms, a more mature company is likely to exhibit lower share price volatility than an emerging or high growth company.

Option values are sensitive to changes in volatility assumptions. Figure SC 8-3 illustrates the sensitivity of fair value to stock price volatility for an emerging and a mature company with different expected term assumptions. The fair values for the mature company are higher than for the emerging company because the mature company has a longer expected term. However, the effect of the longer expected term would typically be offset to some degree by a lower volatility assumption for the mature company. For example, the fair values of options for the two companies shown in Figure SC 8-3 would be equivalent (about $50) if the expected volatilities of the emerging company and the mature company were approximately 73% and 53%, respectively.

Figure SC 8-3

Sensitivity of sample fair value to volatility input



Assumptions mature company:

- Stock price at grant date = exercise price = $100
- No dividends
- Risk-free interest rate of 3% (continuously compounded)
- Expected term of 6 years

Emerging company:

- Stock price at grant date = exercise price = $100
- No dividends
- Risk-free interest rate of 3% (continuously compounded)
- Expected term of 3.5 years

8.4.3 Risk-free interest rate for options

The use of an interest rate in valuing an option reflects the time value of the exercise price for the period (the expected term) over which the option holder is able to defer the cash outlay of the exercise price. Management must determine the expected term of an option before it can select the risk-free interest rate because the interest rate must correspond to the duration of the option. ASC 718 requires that the assumed risk-free interest rate be based on the yield on the measurement date of a zero-coupon instrument, such as US Treasury STRIPS, with a remaining duration to maturity equal to the award's expected term. The higher the interest rate, the higher the fair value of the option.

8.4.4 Dividend yield of an option

Since the market price of a stock reflects, in theory, the value of all future dividends expected to be paid, the dividend yield assumption serves to reduce the value of an option for the dividends that will be paid prior to the point at which the option holder becomes a shareholder entitled to participate in dividends. Under ASC 718, the dividend yield assumption usually reflects a company's historical dividend yield (i.e., average annualized dividend payments divided by the stock price on the dates recent dividends were declared) adjusted for management's expectations that future dividend yields might differ from recent ones. The dividend yield assumption represents the expected average annual dividend payment over the life of the award. Because option or other award holders typically do not receive dividend payments prior to exercise or vesting, a higher dividend yield assumption will reduce the fair value of an award if all other assumptions and conditions of the award are equal. For awards when the holder is entitled to receive dividends prior to exercise or vesting, a 0% dividend yield is generally appropriate. See SC 9.6.3 for more details.

8.4.5 Black-Scholes model: Underlying theory

As noted earlier, the Black-Scholes model is based on the theory that a replicating portfolio can be built that exactly reproduces the payoff of an option based on certain assumptions. The replicating portfolio does this through a combination of shares of stock and risk-free bonds. The fair value of an option can be computed in terms of (1) the price of the underlying stock (or short positions in the stock) and (2) the price of a zero-coupon bond of the appropriate maturity (or short position on the bond), so long as the balance of long and short positions can continually be adjusted to exactly match the option's payoffs upon expiration.

Describing how the Black-Scholes model allocates the components of the replicating portfolio involves advanced financial theory and mathematics that are beyond the scope of this guide. Because some knowledge of the underlying theory may be helpful in understanding what drives an option's fair value, the following pages present an overview of two basic components of an option's fair value: intrinsic value and time value. Time value is itself subdivided into two further sub-components: minimum value and volatility value.

8.4.6 Intrinsic value of an option

The first component of the fair value of an employee stock option is intrinsic value. It is the value, if any, at any given date that an employee could realize if the option were exercised (i.e., the amount by which the underlying stock's market price is greater than the option's exercise price). The intrinsic value for a vested and unvested option is the same, even though an unvested option cannot actually be exercised until it is vested.

On the grant date, the intrinsic value of most employee stock options issued by US companies is zero because the exercise price typically equals the price of the underlying stock. Such options are said to be issued at-the-money. An option with a positive intrinsic value is said to be in-the-money, while one where the exercise price exceeds the underlying stock price has no intrinsic value and is said to be underwater or out-of-the-money.

Options have different risks from those of the shares underlying them. The risk of loss is always lower for an option-holder than a shareholder because an option-holder cannot sustain a loss greater than the value of the option—which is always worth less than the value of the underlying stock—while a stockholder can lose the entire price paid for or current fair value of the shares. As a result, option-holders enjoy the same opportunities for gain as a shareholder, but with less risk of loss.

8.4.7 Time value of an option

The second component of the fair value of an employee stock option is time value. This component is comprised of two sub-components: minimum value and volatility value.

8.4.7.1 Minimum value of an option

Minimum value is dependent upon the underlying stock price at grant date, the exercise price, the time to expected exercise, the expected dividend payments on the underlying stock during the option's life, and the risk-free interest rate.

Computing an option's minimum value does not require any particular assumptions about the movement of the underlying stock (i.e., expected volatility); in fact, the only significant judgment required is an estimate of the option's expected term. Additionally, judgments regarding the appropriate risk-free interest rate and dividend yield should be made, but these assumptions usually have a much smaller impact on the estimate of minimum value. Minimum value at grant date is the current value of company stock minus the net present value of funds that will be used in exercising the option, and is calculated by subtracting from the current stock price, the present value (using the risk-free interest rate) of both the exercise price and any dividend payments expected during the option's expected term. In essence, minimum value—which is usually substantially lower than fair value—represents that portion of an option's fair value that is not contingent on volatility, but rather just reflects the benefit of the time value of not having to pay the exercise price until a later date while still enjoying any appreciation of the stock price that may occur. Figure SC 8-4 illustrates the calculation of minimum value.

Figure SC 8-4

Illustration of minimum-value calculation

Assumptions:

- Expected term—6 years
- Exercise price—$50
- Stock price on grant date—$50
- Expected annual dividend yield—1% (annually compounded)
- Risk-free interest rate—3% (continuously compounded)

Minimum value computation:

Current stock price	$50.00
Less:	
◻ Present value of exercise price ($50 discounted at 3% over 6 years)	41.76
◻ Present value of expected dividends (at 1% over 6 years)	2.90
Minimum value	$5.34

8.4.7.2 Volatility value of an option

Under ASC 718, stock price volatility is considered when calculating an option's fair value.

In the Black-Scholes model, an option's fair value will equal its minimum value when volatility is assumed to be zero, or a number very close to zero. Many software versions of the Black-Scholes model will not allow an input of zero volatility, so a very small value (e.g., 0.001%) may be used as the volatility input to demonstrate this equivalence. The volatility assumption should reflect the degree of uncertainty about possible future returns (price changes) on the underlying stock. Volatility value relates to an option's unlimited upside potential and the limited downside risk of principal loss compared with the risk of holding the underlying stock.

Under the mathematical formula underlying the Black-Scholes model, as the value of the volatility assumption increases, the fair value of the option increases since a higher volatility raises the potential payoff. For example, if volatility was assumed to be 20%, 50%, and 80% for the option illustrated in Figure SC 8-4, the estimated fair value under the Black-Scholes model would be $11.52, $23.17, and $32.59, respectively.

Due to the time value and volatility value of an option, the fair value of an option is always higher than the option's intrinsic value. Even an out-of-the-money option (which has $0 intrinsic value) generally has some amount of fair value as there is a possibility of upside if the stock price appreciates without the risk of further downside loss if the stock price declines. However, fair value begins to converge with intrinsic value as the option approaches its expiration date, as well as for deep-in-the-money options.

8.5 Lattice models

Lattice models can accommodate a broader array of inputs with respect to employee exercise patterns, as well as volatility, dividend, and interest rate assumptions, over the option's contractual term.

Because of their flexibility, the financial community has long used lattice models for valuing options and other equity instruments. For example, a trader valuing an option that expires in three months might enter a single value for each of the six assumptions used in the Black-Scholes model. Using a lattice model, the same trader could enter a dynamic forecast with different volatility estimates for different sub-periods (e.g., days or weeks) of the option's three-month life. By incorporating the additional information from this dynamic forecast versus the single average volatility forecast that is input into the Black-Scholes model, the trader attempts to arrive at a more precise value for the option.

In a similar manner, lattice models can incorporate far more detailed assumptions about employees' future exercise patterns than the Black-Scholes model. The Black-Scholes model reduces all possible employee exercise patterns to a weighted-average that is used as a single input—the expected term—while lattice models can incorporate a range of inputs describing possible exercise behavior. A simple lattice model might incorporate an array of values for each of the four inputs related to employee exercise behavior:

- Contractual term of the option – the maximum period for which the option can be held
- Vesting period – the shortest period until the option can be exercised
- Exercise multiple – also known as the suboptimal exercise factor, the exercise multiple is an assumption about "early exercise" behavior or patterns based on stock-price appreciation rather than the time that has elapsed since the grant date. It is described as the expected ratio of stock price to exercise price at the time of exercise. Early exercise refers to the exercise of an option prior to the end of the contractual term.
- Post-vesting termination rate – the likelihood that an employee will be compelled to make an exercise decision prior to the conclusion of the option's contractual term

A more complex lattice model could incorporate considerably more information. Generally, lattice models incorporate the full contractual term of an option, and not simply the expected period until the option is settled (as in the Black-Scholes model).

For these reasons, ASC 718-10-55-17 through ASC 718-10-55-18 recognize that, in many cases, lattice models may provide a more accurate value of employee stock options than the Black-Scholes model. However, while a company might be able to calculate a slightly more refined value using a lattice model, it may not be worth the extra effort to achieve only a slightly different result. Therefore, very few companies currently use a lattice model to value "plain vanilla" at-the-money stock options. For those options, a Black-Scholes model is typically used. However, for companies valuing in-the-money options (such as those assumed in a business combination) that do not otherwise have a market condition, use of a lattice model may be justified. As noted in SC 8.2, awards with market conditions or payoff conditions that limit exercisability typically are valued using a lattice model or Monte Carlo simulation (refer to SC 8.6).

Companies considering using a lattice model often engage an outside consultant to develop the model and analyze the necessary assumptions. Even when a valuation consultant is engaged, it is important for management to understand the valuation methodology and ensure the assumptions used in the model and the results of the valuation comply with the requirements of ASC 718 and SAB Topic 14.

In addition to the various assumptions that can be input into a lattice model, several different mathematical types of lattice model exist, including the binomial model, the trinomial model, finite-difference methods, and other versions of the lattice approach. There is also a related approach involving randomly generated simulated stock-price paths through a lattice-type structure called a Monte Carlo simulation. This section of the guide focuses on the binomial model, the simplest of these approaches, and we touch on Monte Carlo models in the next section. The binomial model accommodates a large number of potential future price points for the underlying stock over the option's contractual term, which can be varied depending upon the number of price points necessary to accurately simulate the real distribution of the stock's potential market prices.

8.5.1 A highly simplified binomial model

To better understand how binomial models work, consider the assumptions in Figure SC 8-5 regarding a stock option grant.

Figure SC 8-5
Stock option grant

Stock price on grant date	$100
Exercise price	$100
Vesting period (cliff vesting)	3 years
Contractual term	10 years
Expected term	6 years
Expected volatility of the underlying common stock	30%
Expected dividend yield on stock	0%
Risk-free interest rate (continuously compounded)	3%

The Black-Scholes model using the assumptions in Figure SC 8-5 yields an estimated fair value of $35.29. Employee early exercise patterns, post-vesting cancellations, and the other factors affecting the expected term assumption are reflected only indirectly in the expected term of six years. Regardless of expected stock price fluctuations, the Black-Scholes model assumes all option-holders will exercise their options six years after the grant date. It does not consider the full distribution of potential exercise times, which in this case, range from three years (the vesting date) to ten years (the contractual term), nor does it consider any possible correlation between stock price appreciation and the likelihood that employees will exercise their options (exercise multiple).

The first step in the application of the binomial model entails calculating the possible terminal values of the option (i.e., the possible intrinsic values at the end of its contractual term). This binomial model calculates a number of potential future stock prices based on the volatility and risk-free interest rate assumptions. Figure SC 8-6 illustrates this by assuming the stock price moves in discrete one-year intervals over the option's 10-year contractual life (one-year intervals were used for simplicity). A lattice model would normally use smaller time-steps and thus would encompass a smoother distribution of potential stock prices over many more possible values.

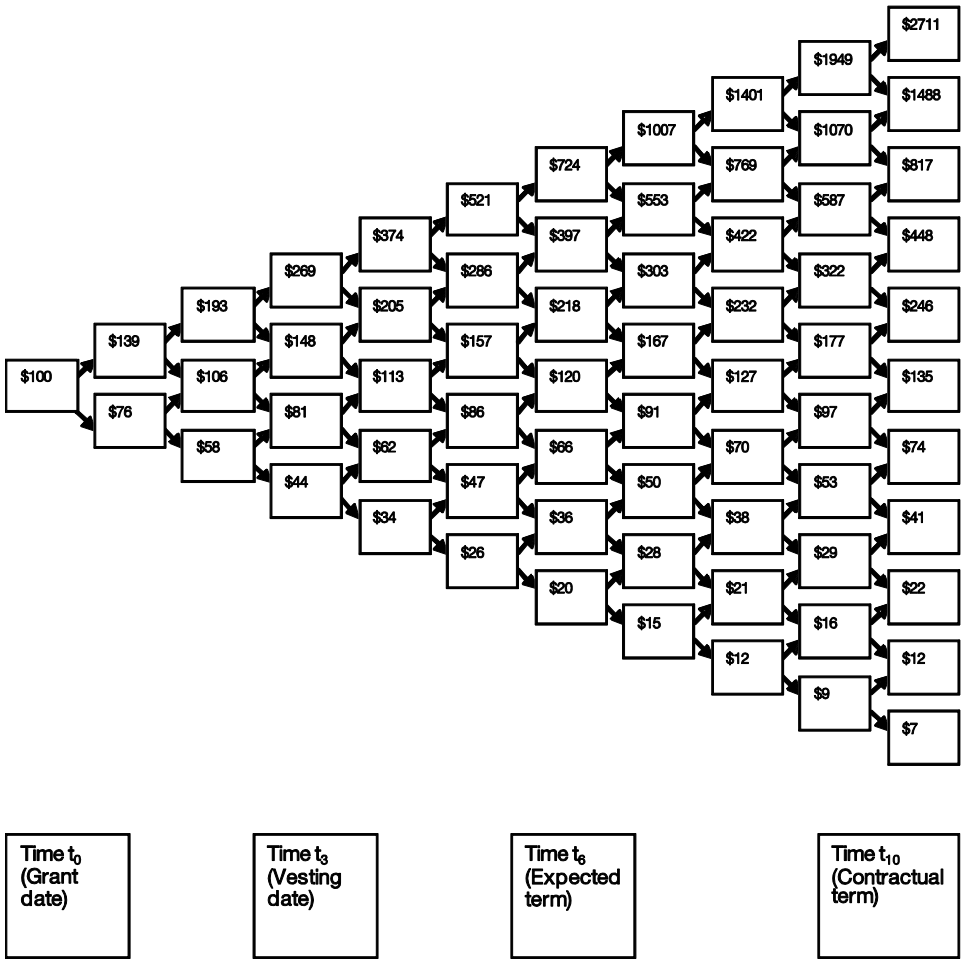
Binomial lattice models require two computations, called "binomial tree-diagrams," in order to value a stock option. Figure SC 8-6 illustrates the first tree-diagram, in which the stock price begins at $100 (stock price on grant date) and increases or decreases according to certain assumptions over the ten-year period of the option's contractual life. Figure SC 8-7, Figure SC 8-8, Figure SC 8-9, and Figure SC 8-10 illustrate different versions of tree-diagrams, in which the option value is calculated backwards from possible option-values on the settlement date to the theoretical starting value for the option.

In Figure SC 8-6, the binary forks in the tree-diagram determine the assumed annual prices to which the stock can move. Had the tree-diagram been drawn with more nodes (e.g., monthly or daily prices), these finite price points would resemble a smooth probability distribution. For basic tree-diagrams such as those presented in Figure SC 8-6, Figure SC 8-7, Figure SC 8-8, Figure SC 8-9, and Figure SC 8-10, the model simplifies reality by assuming the stock price must fall within a given range. This

range widens over time. The size of the range is driven primarily by the volatility assumption, although risk-free interest rates may also influence these values in some versions of the lattice model. For example, at time t_3 (the vesting date) the stock prices are assumed to be within a range from $269 to $44 based largely on the 30% volatility assumption. If the volatility was assumed to be 50%, the range of possible stock prices at t_3 would be from $490 to $24. This wider range would result in a higher fair value for the option, because option value is derived only from the upside potential for stock price appreciation.

Figure SC 8-6

Simplified binomial model of potential stock prices



In Figure SC 8-7, option values are calculated "backwards" in time from time t_6 to time t_0. For simplicity, this figure demonstrates a simple valuation over the option's expected term of six years. Normally, a lattice model would simulate the entire contractual term (as illustrated in Figure SC 8-8, Figure SC 8-9 and Figure SC 8-10). However, Figure SC 8-7 is presented only over the expected term in order to provide a comparison to the fair value determined using the Black-Scholes model.

Figure SC 8-7

Binomial model of option prices with a six-year expected term

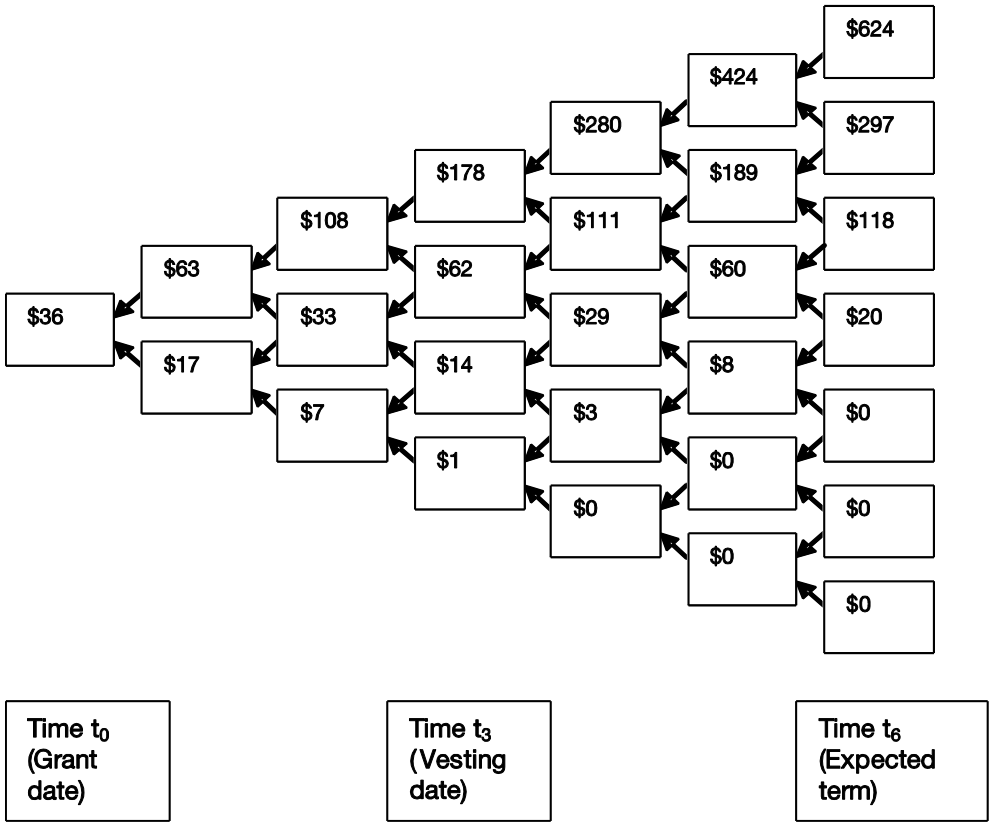


Figure SC 8-7 provides possible option values (rounded to the nearest dollar) at the end of each year of the option's life up to the expected term of the option. The possible values are based on the possible stock prices at time t_6 (the expected term) illustrated in Figure SC 8-6. The option value at time t_6 in Figure SC 8-7 is equal to the greater of (a) the stock price at the corresponding point in Figure SC 8-6 minus $100 (the exercise price of the option) or (b) zero—i.e., the intrinsic value of the option in each stock price scenario at the expected point of exercise.

The option values for points in time (t_n) prior to time t_6 are calculated by working backwards through the tree using established formulas. These formulas involve weighting the two possible values from the two possible nodes following any given node in the tree and discounting to reflect the time value of money. The weightings applied to each possible upward or downward move in the tree are calculated from the volatility and risk-free interest rate assumptions and resemble probabilities. In financial theory, these weightings are called risk-neutral probabilities (which differ from actual probabilities). Using the weightings to work backwards from the terminal (intrinsic) values at t_6, the option's grant date fair value at t_0 is derived from the various potential option values between t_6 and t_0.

In this example, the grant date fair value of the option obtained from this simple six step lattice model with an expected term of six years is $35.88 (rounded to $36), which is close to the $35.29 value calculated using the Black-Scholes model. Given identical assumptions, the results from a binomial model should draw even closer to the Black-Scholes result as the number of time-points or nodes shown in the binomial tree increases, because a large binomial tree approximates the type of continuous distribution assumed by the Black-Scholes model. However, because of the additional

flexibility to incorporate more varied assumptions with lattice models, it is likely that the fair value estimates would not be as close in practice as in this example if varying assumptions about employee exercise behavior depending on stock price over the full contractual life of the option were used in the lattice model.

In practice, a binomial model would typically incorporate a large number of shorter time periods (often daily) to reflect a realistic range of possible prices that a share could achieve over the option's contractual term, which could result in several thousand total nodes. In addition, various probabilities could be assigned to each node to reflect the impact that a particular stock price scenario (node) is expected to have in conjunction with exercise and post-vesting termination assumptions.

A more robust result can be achieved by using an iterative technique called a Monte Carlo simulation (see SC 8.6), rather than developing a complex, full lattice model. This involves the use of a large sample (e.g., 1,000,000 or more) of possible outcomes through a randomly generated process that reflects the proportional distribution of each outcome's probability and formula-based rules regarding expected exercise patterns. When using one of these models, the fair value of the award is estimated by averaging the results of the sample outcomes to minimize sampling error. Accordingly, it is important that the number of outcomes used is sufficiently large.

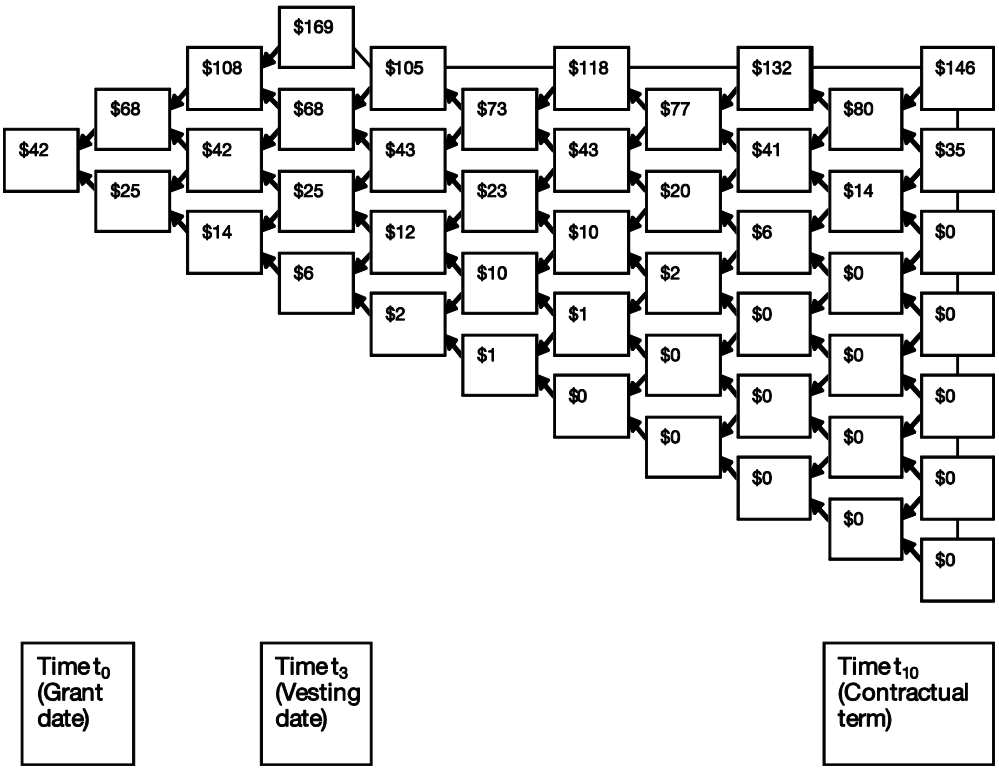
8.5.2 Varying exercise patterns in option-pricing models

The example in Figure SC 8-7 still assumes a single value for the expected term of the option rather than the more varied employee exercise behavior that would occur in reality, which may include the correlation between possible stock price appreciation and the expected time of exercise. However, the main reason to build a binomial model is to incorporate such assumptions over the option's contractual term. Because complex exercise pattern assumptions are not reflected in Figure SC 8-7, the estimates of fair value produced by the Black-Scholes model and the simplified binomial model will converge given a sufficient number of nodes.

One method to incorporate early-exercise behavior assumes exercises based on stock price appreciation. As mentioned previously, a lattice model would simulate exercise behavior over the entire contractual term, rather than simply using the single average expected term as illustrated in Figure SC 8-7. Figure SC 8-8 shows another option valuation binomial tree-diagram, in which exercise is assumed to occur whenever the stock price reaches $200 (i.e., the stock to exercise price multiple of 2.0 is a "threshold" at which exercise is assumed to occur at a date prior to the end of the contractual term). The option value tree-diagram now covers the entire 10-year contractual life of the option instead of the six-year expected term as in Figure SC 8-7, since the option values must be simulated over the contractual life of the option in case the assumed exercise multiple is not reached. At time t_{10} (the end of the option's contractual life), the option is assumed to be exercised immediately if it has any intrinsic value at that point. If the stock price is less than the exercise price at time t_{10}, the option expires worthless (i.e., the value is zero).

Figure SC 8-8

Option tree—ten-year contractual term with a 2.0 assumed exercise multiple



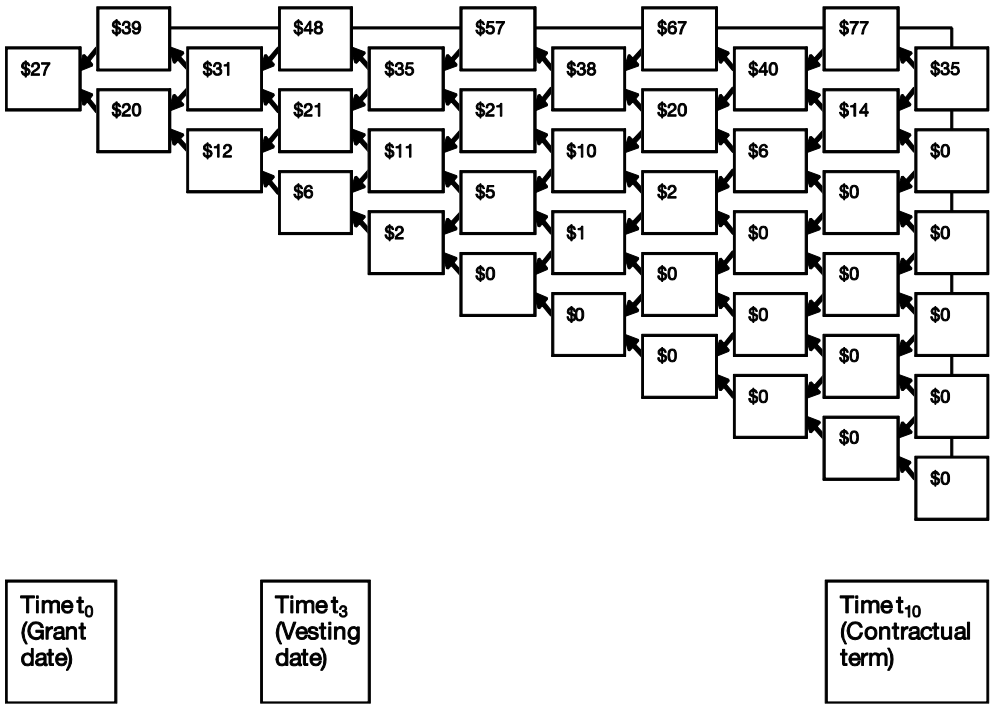
The values along the top boundary in Figure SC 8-8 will equal the option's intrinsic value (the greater of the stock price minus $100, or zero), similar to the values at time t_6 in Figure SC 8-7. This boundary may be thought of as the "exercise frontier" (i.e., the points along the price-time continuum at which exercise is assumed to occur). As exercise is assumed to occur at these boundary points, no nodes above that line are necessary. The calculation proceeds "backwards" from the terminal values using risk-neutral probabilities and discounting for the time value of money. While the time-horizon imposed by the option's 10-year contractual life is reflected in this example, the constraint imposed by the three-year cliff vesting assumption has no effect because the highest potential stock-price at time t_2 (the last node before vesting in our simple one step per year example) is $193, which is less than the assumed exercise threshold of $200. Refer to the corresponding node in Figure SC 8-6, which illustrates the potential stock prices; the values in Figure SC 8-8 above represent potential option-values.

The calculation shown in Figure SC 8-8 results in a fair value of approximately $42 or 17% higher than the approximately $36 fair-value (based on the static six-year expected term) from Figure SC 8-7. The use of an early-exercise assumption (i.e., the single average six-year expected term) will generally reduce the estimated fair value of an option as compared to a model that considers the full contractual life of ten years (on other than a dividend-paying stock, which can make it advantageous to exercise early in some circumstances). However, depending on where the assumed exercise multiple is set when exercise behavior is modeled based on stock-price appreciation, an option's fair value could be higher or lower than that of an otherwise similar option with an assumed static expected term.

To explore the relationship between this type of early-exercise assumption and an option's fair value, Figure SC 8-9 presents another example, identical to the scenario presented in Figure SC 8-8, except that exercise is assumed to occur whenever the price of the underlying stock reaches $130 (i.e., when the assumed exercise multiple reaches 1.3).

Figure SC 8-9

Option tree—ten-year contractual term with a 1.3 assumed exercise multiple



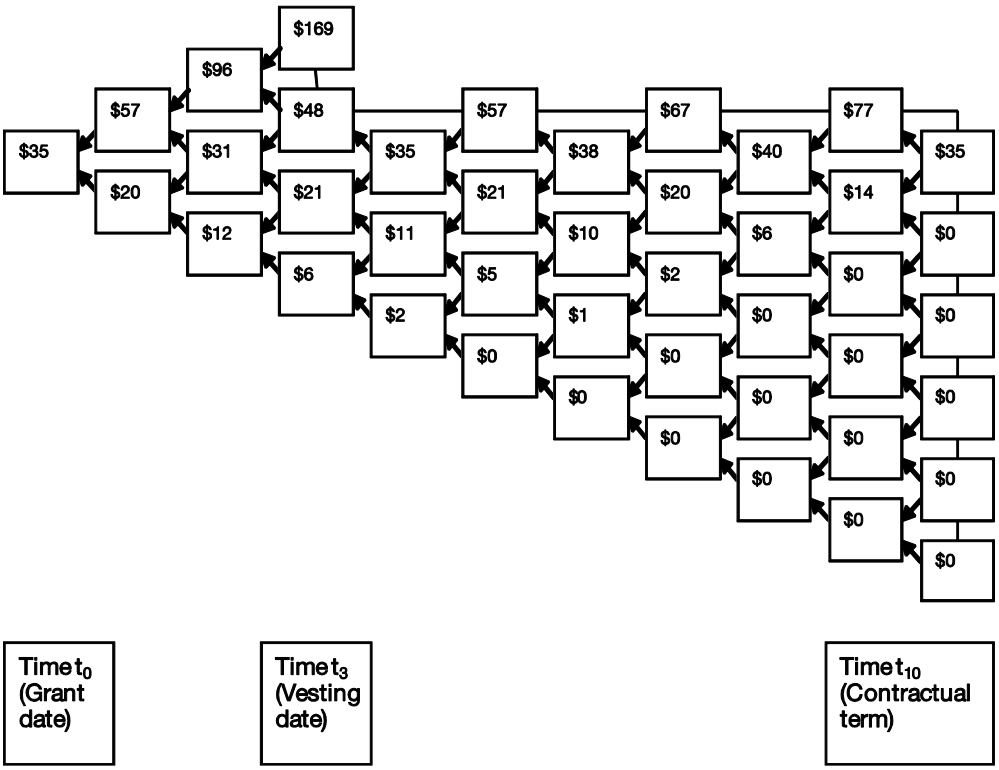
The calculations in Figure SC 8-9 result in a fair value of approximately $27, 36% lower than the fair value of approximately $42, calculated in Figure SC 8-8 (using an assumed exercise multiple of 2.0). This dramatic decrease shows the sensitivity of fair value to the assumed exercise multiple—by essentially truncating the model for significantly more valuable payouts by using a lower exercise multiple, the fair value of the award is much lower. However, the calculation in Figure SC 8-9 may require further adjustment to reflect the terms and conditions of the award. Specifically, the exercise frontier shown in Figure SC 8-9 includes potential exercise scenarios as early as one year after grant (i.e., at a price of $139 at t_1, as shown in Figure SC 8-6), which precedes the three-year cliff vesting date. Therefore, the unadjusted fair value calculation is based on assumptions that are inconsistent with the terms and conditions of the award and must be adjusted.

Figure SC 8-10 illustrates the adjusted calculation for the exercise multiple of 1.3 limited by the option's three-year vesting condition. This results in an exercise frontier with three segments—a vertical barrier at time t_3, to reflect the vesting condition, a horizontal barrier from t_3 to t_{10}, to reflect the exercise multiple of 1.3, and another vertical barrier at t_{10}, to reflect the contractual term of 10 years. If the stock price were to go to its highest possible node at the end of the second year (time t_2), the option would be exercised at the end of the next year, because the stock price will be above $130, with intrinsic value greater than $30 ($130 stock price minus $100 strike price) regardless of whether the stock prices moves up or down from time t_2 to time t_3. The resulting calculation moves the

estimated fair value to $34.56 (rounded to $35), very near to its estimated fair value in the original binomial lattice using a six-year static expected term (approximately $35.88, rounded to $36 in Figure SC 8-7).

Figure SC 8-10

Option tree—ten-year contractual term with a 1.3 assumed exercise multiple limited by the three-year cliff-vesting condition



The results of the calculations in Figure SC 8-8, Figure SC 8-9 and Figure SC 8-10 are affected by the use of one-year time-steps in the lattice model. These time-steps are intended to illustrate the workings of the model. As noted earlier, a more realistic model would use shorter time intervals (e.g., daily) resulting in significantly more nodes. The model in Figure SC 8-7 with one-year time steps resulted in a valuation fairly close to the Black-Scholes value using a simple six-year expected term. In contrast, for the exercise assumptions in Figure SC 8-8, Figure SC 8-9 and Figure SC 8-10, a lattice model with smaller time intervals could produce values that differ by as much as 20% from those shown above. This is because the lattice values with the longer intervals may yield a stock price that well-exceeds an assumed exercise threshold in a single step when the option would theoretically be exercised at a lower price when shorter intervals are used. The values shown in the figures above are rough approximations illustrating the general relationship between results and model inputs with three-year cliff vesting and stock price volatility of 30%, as well as the exact calculations on a simplified basis (note the relationships will vary with different vesting schedules and volatility assumptions).

The examples shown above depict a constant exercise-frontier (except as affected by vesting or expiration of an option). In a more elaborate binomial model, the assumed early-exercise frontier may

have a different slope or may be a probability distribution curve, rather than a straight line, that varies with both the price of the underlying stock and time. The binomial model can also incorporate additional assumptions regarding post-vesting cancellations, as discussed in SC 9.3.3.

For complex binomial models that reflect the correlation of stock price and early exercise, software applications may be employed to perform such modeling. As discussed further in SC 9.1, developing these models and the underlying assumptions manually will require considerable time and effort.

The lattice model also may be used to develop an implied expected term assumption, which is a required disclosure under ASC 718. The analysis of exercise patterns in a lattice model may yield an expected term that is shorter (or longer) than the expected term used in an otherwise similar Black-Scholes model. There are several methods to infer a single expected term from a lattice model, such as the method included in ASC 718-10-55-30, which solves for an implied expected term in the Black-Scholes model such that the Black-Scholes model's fair value equals the lattice model's fair value. Using this method, with an assumed exercise multiple of 2.0, the expected term assumption inferred in Figure SC 8-8 is approximately 8.2 years. Using the risk-neutral expected life method, the inferred expected term assumption is approximately 8.3 years. For typical options, the theoretical, inferred, risk-neutral expected term is much longer than the more realistic, and easily interpreted, implied Black-Scholes expected term.

There is a third method that would involve using a risk-adjusted expected rate of return in conjunction with early exercise assumptions built into the lattice model. The expected term assumption disclosed for companies using lattice models will therefore vary based upon the method used to infer it. The method used to infer the expected term should be applied consistently.

8.5.3 Using lattice models

Because lattice models are flexible, they can accommodate a variety of situations and assumptions. Four specific adaptations of lattice models are:

- **Dynamic assumptions:** Assumptions about volatility, the risk-free interest rate, and the dividend yield, which can vary over the award's contractual term.

- **Awards with market conditions:** Specific nodes of the lattice can be "turned off" to exercises to model an assumption that the option vests only if the underlying stock (or total shareholder return) reaches a pre-set level by a pre-set time (often called path-dependent models).

- **Awards with caps:** Maximum value awards impose a contractual cap on the gain that employees may realize (e.g., the gain is capped at twice the grant date stock price). Lattice models are required to value such awards (or alternatively a Monte Carlo simulation model could be used). For an option, this is because the timing of early exercise for options with caps is generally more correlated with stock price appreciation as compared to ordinary options. As a result of this correlation and the limit on the gain that an employee may realize (for either an option or other award), the fair value of a maximum value option may be significantly lower than an ordinary option or uncapped award.

- **Incorporated patterns of early exercise:** Assumptions that may include the correlation between the stock price and the time of exercise, forced early exercise due to post-vesting termination, and the probability of exercise over the full period from the vesting date to the option's contractual expiration date (see SC 8.5.4 for an illustrative example).

When valuing options with service conditions only, the primary reason to use lattice models instead of the Black-Scholes model is to incorporate more detailed assumptions about employee exercise behavior. Companies considering whether to use a lattice model or the Black-Scholes model should consider their specific circumstances. For options on shares of a company with a relatively low stock price volatility and a longer vesting schedule, a simple lattice model may not yield a significantly more refined estimate of fair value than a Black-Scholes model using an appropriately developed weighted-average expected term assumption. Further, not all companies will have the necessary historical data required to support a more complex lattice model. These factors, taken together with the option to use a simplified method to calculate the expected term for "plain vanilla" options (as described in SC 8.4.1), may make the Black-Scholes model the more practical approach for valuing many "plain vanilla" options.

In general, the development of appropriate assumptions—inputs to the valuation model—is more critical than the model—Black-Scholes or lattice—for many typical option grants. SC 9 discusses the factors to be considered in the development of assumptions.

8.5.4 Incorporating exercise patterns into a lattice model

To understand various techniques for incorporating early exercise patterns into a lattice model, consider a simplification that is used in many of the illustrations that appear in ASC 718. The exercise of 100% of the options is assumed to occur when the underlying stock reaches a certain price. Using this assumption is similar to using a single value for the expected term, except that it assumes options are exercised when a specific stock price is reached, instead of after a specific time period. An appropriate lattice model, at a minimum, should capture early exercise patterns as a function of at least four factors: (1) the assumed exercise multiple(s), (2) the vesting period, (3) the contractual term, and (4) the assumed post-vesting termination rate(s). These factors replace the single expected term assumption that is used in the Black-Scholes model.

Companies that intend to utilize lattice models should consider how much complexity to incorporate into the models and the effort necessary to gather the additional information needed to support the more sophisticated assumptions. In practice, simpler lattice models do not always produce results that are more refined or even as reliable as a Black-Scholes model with simple but well-supported assumptions.

As described earlier, the exercise-multiple (or suboptimal exercise factor) is an assumption about early exercise behavior based on stock price appreciation rather than the time that has elapsed since the grant date. This factor is called suboptimal because traditional financial theory suggests that the optimum behavior is to hold an option until its contractual expiration date. Although suboptimal from a financial theory perspective, it may nevertheless be reasonable for an employee to exercise stock options early, given the fact that typical employee options cannot be sold or hedged and considering individual employee's risk tolerance or liquidity needs. For example, a suboptimal exercise factor of 1.5 assumes that employees will voluntarily exercise options granted at-the-money when the price of the underlying stock price rises 50% above its price on the grant date. Typically, larger suboptimal exercise factors are associated with higher volatility stocks. Because of the sensitivity of an option's fair value to the early exercise assumption, it is particularly important that any suboptimal exercise factor in a lattice model be reasonable in the context of the specific company circumstances, the nature of the award, and the relevant employee demographics.

In addition to the other assumptions, lattice models should include an assumed post-vesting termination rate. Under most option plans, employees who terminate their employment have a short

period (e.g., 90 days) to exercise their vested options. Lattice models typically assume that employees subject to truncation of the option's contractual term will exercise their options immediately upon termination if the options are in the money, and that out-of-the money options will always be cancelled upon termination.

In order to maximize the precision provided by a lattice model, more complex assumptions may need to be developed to reflect suboptimal exercise factors that change during the option's contractual term. For example, for an option with a three-year vesting provision and a ten-year contractual term, the assumed suboptimal exercise factor might be 1.8 in years 4-5, 1.5 in years 6-7, 1.4 in years 8-9, and 1.2 in year 10. Such an assumption reflects the notion that employees may demand larger payoffs to exercise options in the early years after grant but settle for less gain as the contractual term nears its end. Extending this concept even further, probability of early exercise can be added to the model to create a distribution of early exercise factors. For instance, in the above example for years 4-5, instead of assuming all employees will exercise when the stock price reaches 1.8 times the grant price, it could be assumed that, on average, one-third of the options will be exercised at a suboptimal exercise factor of 1.3, one-third at 1.6 and one-third at 1.9.

The following sections illustrate the use of suboptimal exercise factor(s) and the assumed post-vesting termination rate in a lattice model.

8.5.5 Dynamic suboptimal exercise factors in a lattice model

Figure SC 8-11 expands the binomial approach to reflect suboptimal exercise factors that change during the option's contractual term. This version of the lattice model uses a probability distribution of early exercises as it considers a scenario where employees would voluntarily exercise their options early (suboptimally) at stock price appreciation levels that vary by post-vesting sub-period. This distribution of early exercise patterns might be refined over time with the company's new grants to reflect the observed variance around the expected level of stock price appreciation that results in early exercise. Figure SC 8-11 illustrates an equally-weighted probability distribution using three different suboptimal exercise factors for each of four post-vesting sub-periods.

This example assumes that employees will, on average, exercise one-third of the outstanding vested options on each trading day when the stock price is at least equal to the lowest suboptimal exercise factor, an additional one-third of the outstanding vested options will be exercised when the stock price is at least equal to the midpoint suboptimal exercise factor, and the remaining one-third will be exercised when the stock price is at least equal to the highest suboptimal exercise factor. This probability calculation occurs at each node of the lattice to simulate trading days. In other words, the assumption is that there is a 33% probability of early exercise of the outstanding vested options on the trading days when the stock price is between the lowest and middle suboptimal exercise-factors, a 67% probability of exercise when the stock price is between the middle and highest suboptimal exercise factors and a 100% probability if the highest stock price level has been reached. In addition, a small number of employees will be assumed to terminate employment after vesting, meaning their options will be exercised immediately (if in-the-money) or cancelled (if out-of-the money).

This example uses a much more detailed binomial lattice than was used in the previous examples (Figure SC 8-6, Figure SC 8-7, Figure SC 8-8, Figure SC 8-9 and Figure SC 8-10). In order to incorporate an early exercise assumption, the binomial model used with the assumptions shown below has 252 nodes per year (to reflect the number of market trading days in a year) over a full ten-year period, so there are approximately three million possible nodes, as opposed to the 28 nodes in Figure SC 8-7.

Figure SC 8-11 illustrates a binomial model with probability-based exercise distributions of suboptimal exercise factors.

Figure SC 8-11

Binomial model with probability-based exercise distributions of suboptimal exercise factors

Stock price on grant date	$100
Exercise price	$100
Vesting period (cliff vesting)	3 years
Contractual term	10 years
Expected volatility of the underlying common stock	30%
Expected dividend yield on stock	0%
Risk-free interest rate (continuously compounded)	3%

Years after grant date	Suboptimal exercise factors	Annual post-vesting termination rate
At least 3 but less than 5	1.3, 1.6, 1.9	3%
At least 5 but less than 7	1.2, 1.5, 1.8	3%
At least 7 but less than 9	1.1, 1.4, 1.7	3%
At least 9 but less than 10	1.05, 1.25, 1.45	3%

Monte Carlo techniques were used to simulate probability-based early exercise in Figure SC 8-11. The assumed suboptimal exercise factors decline over the option's contractual term. This assumption is designed to replicate an effect observed by economists; namely, that employees may demand larger payoffs before voluntarily exercising their options when there is a longer time remaining in the contractual term for them to exercise. It is assumed that employees will exercise all in-the-money options by the expiration date. Figure SC 8-11 also assumes a constant post-vesting termination rate for simplicity.

Based on the assumptions in Figure SC 8-11, the binomial lattice model produces a fair value per option of $36.21. The increase over the fair value of $34.56 derived in Figure SC 8-10 based on a single suboptimal exercise factor of 1.3 reflects the higher suboptimal exercise factors in the earlier years from grant date (lower probability of early exercise). These fair values are both relatively close to the Black-Scholes model fair value for these options (as determined in Figure SC 8-5 using a 6 year expected term) of $35.29. For purposes of comparison, the implied expected term corresponding to this example equals 6.3 years. This implied expected term was calculated using the method described in ASC 718-10-55-30 (the expected term necessary for the Black-Scholes value to equal the lattice model value).

Companies should be cautious about using a single suboptimal exercise factor in their models, as they may underestimate fair value unless there is sufficient support for the assumption that there is a single level of price appreciation (measured as a proportion of exercise price) at which early exercise by employees actually tends to occur. However, a company will have difficulty either assessing reasonableness or estimating the effects of using various types of lattice models without actually building such models—like the example in Figure SC 8-11—and doing the work necessary to develop

and support appropriate assumptions. In the absence of a lattice model that incorporates complexities, such as probabilistic exercise, companies may be better served by using the Black-Scholes model with well-supported assumptions rather than attempting to implement a simplistic lattice model, especially for "plain vanilla" awards with longer vesting schedules.

8.5.6 Option-pricing models for awards with market conditions

The terms of some awards require that vesting or exercisability depend on achieving a market condition. For example, an option with a market condition may provide that the option cannot be exercised unless the stock price rises by 50% from the grant date price. Performance shares (generally, a promise to issue shares, or entitle employees to vest in share awards, if certain performance targets are met) may also contain market conditions. Awards with market conditions require the use of a lattice model or a Monte Carlo simulation to estimate fair value. For example, a restricted stock unit may contain a provision that vesting is contingent on the company's total shareholder return exceeding the total shareholder return of a specified peer group over a stated number of years.

Figure SC 8-12 illustrates an option that will vest only after the stock has traded at $150 or more for twenty consecutive trading days and the employee completes three years of service. The option will lapse if the stock does not reach its targeted price within three years of the grant date. The award includes a service condition and a market condition.

Figure SC 8-12

Option that vest after three years of service if a targeted stock price is achieved within three years

Stock price at grant	$100
Exercise price	$100
Targeted (threshold) stock price	$150 (for 20 consecutive trading days)
Vesting period (cliff-vesting)	After 3 years of service if achievement of targeted stock price within 3 years of grant date
Expected term	Date of achievement of targeted stock price plus 3.5 years, which may vary from about 3.6 to 6.5 years depending when target price is reached (assumption not relevant if target price not reached because option will not vest)
Full contractual term	10 years
Expected annual volatility of the underlying stock	30%
Expected annual dividend yield on stock	0%
Risk-free interest rate (continuously compounded)	3%

A Monte Carlo simulation or lattice model should be used to estimate the fair value of an option with this type of market condition because it is the only way to simulate the many possible ways stock prices can move to meet the targeted stock price.

Using a Monte Carlo technique with daily stock price intervals to simulate an appropriately large binomial model yields a fair value estimate of $24.26. This fair value estimate is considerably less than the valuations of similar options without a market condition (see Figure SC 8-6, Figure SC 8-7, Figure SC 8-8, Figure SC 8-9 and Figure SC 8-10).

On the other hand, the estimate of $24.26 is greater than the valuation that would result if the actual stock price had to be at or above the targeted stock price on a specific vesting date, for example, three years after grant (with otherwise similar assumptions as in Figure SC 8-12). These differences should be intuitive in that an option with a market condition is clearly worth less than an option that vests over the same time regardless of stock-price appreciation. Further, an option that can achieve the target stock price anytime during a three-year period offers the holder greater flexibility (possible early vesting, with potential gains in the case of early steep stock-price appreciation) and thus should be worth more than an option that vests only if the stock price is at or above its target price upon completion of three years of service.

Other assumptions in the valuation model for awards with market conditions should be tailored to reflect the award's terms. For example, in Figure SC 8-12, because the options vest based on stock price movements, using a single expected term assumption would not be reasonable. Rather, a lattice model or Monte Carlo simulation is needed to reflect the fact that exercise could occur early if the stock price reaches $150 relatively early in the required three-year service period. The model uses a simplified exercise assumption of three and one-half years after achieving the target stock price to reflect the contingent nature of the vesting date and a typical holding period after vesting. More refined early exercise assumptions could also be appropriate.

A lattice model or Monte Carlo simulation should also be used to value an award that involves the achievement of multiple possible market conditions. For example, an option that will vest if the share price doubles within the next two years or if it triples within the next five years and the employee stays with the company until either condition is met should be viewed as one award, with a fair value determined by a lattice model or Monte Carlo simulation.

Market conditions are typically modeled using an approach that incorporates a Monte Carlo simulation (involving a series of random trials that may take different future price paths over the award's contractual life based on appropriate probability distributions). Conditions are imposed on each Monte Carlo simulation to determine if the market condition would have been met for the particular stock price path. For example, in modeling the market condition in Figure SC 8-12, each simulated stock price path was checked to determine whether the stock reached the $150 threshold during the vesting period.

The point at which the stock price achieves the threshold in each scenario in the simulation is also important in determining fair value. This technique for modeling awards with market conditions is called path-dependent modeling because it simulates many possible stock price paths through the lattice (or simulation) to arrive at the outcome. The award's grant date fair value is determined by taking the average of the grant date fair values under each of the scenarios in the Monte Carlo simulation.

In addition, the median path of successful trials for the market condition is used to develop the derived service period (as described in SC 2). The pattern of expense recognition will depend on this value in many cases (see SC 2.6.2 for more details).

8.6 Monte Carlo models

A Monte Carlo simulation model assumes that the underlying entity's stock price follows a Geometric Brownian Motion stochastic process. Geometric Brownian Motion is an accepted methodology for simulating the expected future path of stock prices. Stock prices are simulated at regular intervals (daily, monthly, annually) depending on award conditions and precision of estimate desired.

A large number of sample paths are simulated and a fair value of the award is determined for each sample path outcome based on the payout value of the award discounted to the grant date. The fair value of the award is estimated as the average value of the fair values calculated for each sample path.

Like a lattice or Black-Scholes model, it is first necessary to develop assumptions for the initial stock price, volatility, dividend yield, and any other pertinent factors given the awards' terms.

A discussion of the theoretical underpinnings of the Monte Carlo simulation is outside the scope of this guide. However, we note that best practices have developed for the use of Monte Carlo simulation and the use of such models (with the assistance of an outside valuation specialist) is now commonplace.

A fairly large number of companies issue awards that contain (sometimes complex) market conditions. Valuation of these award types generally requires the use of a Monte Carlo simulation.

Chapter 9: Developing assumptions for option-pricing models

9.1 Developing assumptions for option-pricing models overview

The assumptions a company develops when measuring the fair value of employee stock options or other equity instruments generally will have more impact on fair value than the option-pricing model it uses. This chapter discusses the key assumptions that drive fair value, certain simplifying alternatives available in limited circumstances, and techniques for analyzing historical and current data used to develop and support the following assumptions:

- Expected term
- Expected volatility
- Risk-free interest rate
- Expected dividend yield

9.2 Background of assumptions for option-pricing models

As discussed in SC 8, option-pricing models require six inputs, four of which are assumptions that require significant management judgment:

- Expected term, which can be affected by early exercise and post-vesting termination behavior
- Expected volatility of the underlying stock price
- Risk-free interest rate
- Expected dividend yield on the underlying stock

The two remaining inputs—exercise price (applicable only for options and defined by the terms of the award) and the fair value of the underlying stock on the measurement date (based on observable market prices in the case of publicly-traded securities), are not discussed in this chapter. For nonpublic entities, an enterprise valuation may be necessary to determine the fair value of the stock; refer to FV 7.3.2, *Business enterprise valuation*.

ASC 718, *Compensation—Stock Compensation,* explicitly requires that the assumptions used in an option-pricing or equity valuation model be reasonable and supportable. The assumptions should also reflect the substantive characteristics of the award and all other relevant facts and circumstances.

SAB Topic 14 provides helpful interpretive guidance for SEC registrants related to the application of ASC 718, acknowledging that there may be a range of reasonable judgments in developing assumptions for option-pricing models. SAB Topic 14 also provides registrants with certain simplified alternatives for developing the expected term and expected volatility assumptions, subject to certain conditions. These alternatives are discussed in SC 9.3.1 and SC 9.4. ASC 718-10-30-20A through ASC 718-10-30-20B provides a similar, but slightly broader, practical expedient for determining the expected term for nonpublic companies. If a company cannot or chooses not to use the simplified alternatives, then it should develop its assumptions starting with consideration of its own relevant historical data and adjusting that data, if necessary, for its future expectations.

An option's expected term and the expected volatility of the underlying stock are usually the most difficult assumptions for a company to develop because the same underlying data often could support a range of possible estimates and be segregated and analyzed in a variety of ways. Even the more straightforward assumptions with typically narrower ranges (i.e., risk-free interest rate and the expected dividend yield) can involve choices and approximations, and therefore judgment.

Management should consider all relevant factors when developing its assumptions. Lattice or Monte Carlo models generally require additional and more detailed assumptions than the Black-Scholes model because the Black-Scholes model reduces several separate assumptions to a single value. However, the key concepts and data used to support these assumptions are the same for both types of models.

ASC 718-10-55-23 and SAB Topic 14 acknowledge that there is likely to be a range of reasonable estimates for expected term, volatility, dividend yield, and the resulting fair value. ASC 718 requires that if a best estimate cannot be made, management should use the mid-point in the range of equally likely reasonable estimates.

Note about ongoing standard setting

In August 2020, FASB issued an exposure draft that proposes a practical expedient for the determination of the current price of an underlying share for equity-classified stock option awards issued by nonpublic companies. As of the cut-off date of this guide, the proposed amendments have not yet been issued. Reporting entities should continue to monitor the status of these proposed amendments.

9.3 Developing the expected term assumption

When valuing an employee option under the Black-Scholes model, companies should use the option's expected term rather than the contractual term. SAB Topic 14 reinforces the guidance in ASC 718 that the nonhedgeability and nontransferability of most employee stock options is not considered in fair value, except as it affects the expected term assumption. Additionally, pre-vesting forfeitures should not be factored into the determination of expected term because they are taken into account by the company recognizing compensation cost only for those awards for which employees render the requisite service. As described in SC 9.3.10, certain other factors may be considered when a company develops its expected term assumption.

Companies should consider the following factors in developing an expected term assumption for use in the Black-Scholes model or in developing the group of assumptions related to the expected exercise patterns in a lattice or Monte Carlo model:

- Vesting period of an award
- Contractual term of an award
- Historical exercise and post-vesting cancellation experience with similar company-specific grants (i.e., historical average holding periods)
- Stock price history
- Expected volatility (which may be inversely correlated with the expected term)

- Blackout periods that may trigger automatic early exercise or delay exercise
- Plan provisions that require exercise or cancellation of options shortly after employees terminate
- The extent to which currently available information indicates that the future is reasonably expected to be similar or different from the past

Because employees typically cannot exercise an option until it vests, the vesting date represents the earliest end of the range of possible exercise dates, whereas the contractual term represents the latest end of the possible range. An analysis of historical exercise and post-vesting cancellation behavior is generally used to estimate where within this range the exercise or post-vesting cancellation may occur. If the award has an acceleration feature (e.g., immediate vesting upon a change in control of an IPO of a certain size), the vesting date used to determine the expected term should incorporate the probability that an award's vesting will be accelerated. A company should use its relevant historical experience for similar options and employee groups. If a company's specific historical data is insufficient, ASC 718-10-55-32 and SAB Topic 14 allow the company to use other publicly available data, such as financial statements of similar companies or published academic research. For example, if a company has a history of option grants and exercises only during periods in which the company's stock price was rising sharply, the exercise behavior related to those options likely would not be a sufficient basis to develop the expected term assumption because it would be unreasonable to assume that the stock price will continue to rise in a similar manner. In a case like this, the company might instead rely on academic studies, disclosures from similar companies with similar grants to similar employee groups, or might elect to use the simplified method (as discussed in SC 9.3.1).

When a company uses published academic research or industry data to estimate employees' exercise behavior, it should consider how the awards and companies that sourced the data compare to its own awards, including the following attributes:

- Vesting periods
- Contractual terms
- Blackout periods
- Stock-price volatility
- Demographics of employee populations (which may affect employees' attitudes toward risk and patterns of exercise)
- Any other company-specific attributes that can affect employee exercise behavior

It may be difficult in some cases to identify similar companies that grant similar types of awards to similar populations of employees, but the objective is to ensure that the most relevant data available is used to inform management's judgments.

9.3.1 Simplified method for estimating expected term

SAB Topic 14 provides a simplified method for estimating the expected term for "plain vanilla" options that significantly reduces the analysis required to estimate expected term. This simplified method is only acceptable if (1) a company does not have sufficient appropriate exercise data on which to base its

own estimate or (2) exercise data relating to employees of comparable companies is not easily obtainable. SAB Topic 14 also stipulates that the simplified method should no longer be used once a company has sufficient exercise data in which to base its own estimate or more relevant general information (e.g., published academic or industry-sponsored research) becomes available on employee exercise patterns.

Question 6 in SAB Topic 14-D.2 provides the criteria necessary for application of the simplified method, as follows:

- Stock options are granted "at the money"
- Exercisability depends only on completing a service condition (i.e., continuing to work through the vesting date)
- Employees who terminate their service prior to vesting forfeit their options
- Employees who terminate their service after vesting have only a limited time (typically 30-90 days) to exercise their stock options
- Stock options are nontransferable and nonhedgeable

If a company grants awards that do not meet the SAB Topic 14 criteria, the simplified method cannot be used and historical exercise data is required to be the starting point to develop the expected term assumption. See SC 6.2.3 for guidance regarding the use of the simplified method by nonpublic companies in ASC 718-10-30-20A through ASC 718-10-30-20B. Scenarios where use of the simplified method under SAB Topic 14 may be appropriate include:

- Insufficient historical experience for option grants overall
- Substantial changes in the contractual terms or vesting periods of options granted
- Changes in a company's business or employee population, rendering historical experience irrelevant to expectations for current grants

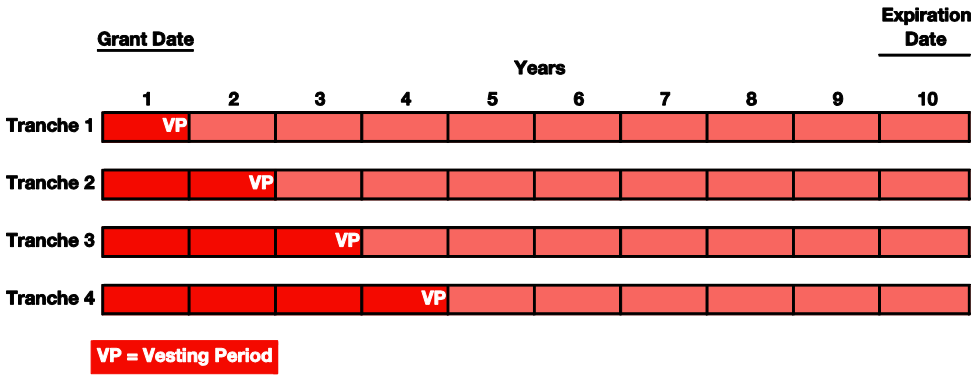
In addition, SAB Topic 14 specifically states that the simplified method is not intended to be applied as a benchmark in evaluating the reasonableness of more refined estimates of expected term.

The simplified method uses the mid-point between the vesting period and the contractual term for each grant (or for each vesting-tranche for awards with graded vesting) as the expected term. For awards with graded vesting, the time from grant until the mid-points for each of the vesting tranches may be averaged to provide an overall expected term.

See Figure SC 9-1 for an illustration of how a company would apply the simplified method of estimating the expected term of an award with a four-year, graded vesting schedule (see additional illustration in footnote 77 of SAB Topic 14). If the SAB Topic 14 criteria are met, this method can be used regardless of the attribution method used to recognize compensation cost (see SC 2.8 for information on attribution methods).

Figure SC 9-1

Application of the simplified method of estimating expected term



The following is the calculation of the expected term by vesting tranche:

Expected term = Vesting period + [(Contractual term - Vesting period) ÷ 2]

$Tranche_1$	= 1 + [(10 - 1) ÷ 2] =	5.5
$Tranche_2$	= 2 + [(10 - 2) ÷ 2] =	6.0
$Tranche_3$	= 3 + [(10 - 3) ÷ 2] =	6.5
$Tranche_4$	= 4 + [(10 - 4) ÷ 2] =	7.0
$\sum Tranche_{1\text{-}4}$	=	25.0

The following is the calculation of the expected term for all vesting tranches:

$$\textit{Simplified expected term} = \frac{\textit{Total of expect terms for each tranche}}{\textit{Total number of tranches}}$$

Simplified expected term = 25.0 years ÷ 4 tranches

= 6.25 years

9.3.2 Evaluating historical exercise data for expected term

Because most public companies have historical data on their employees' exercises of stock options, that should be the starting point for developing the expected term assumption. When completing the analysis, a company should (1) track behavior on an employee-by-employee basis from the grant date through the settlement date (e.g., exercise or post-vesting cancellation) and (2) make adjustments for any changes in award terms during the historical period in relation to current awards (i.e., where the history may not be indicative of the future). In order to appropriately develop the expected term assumption for a new award, a company should analyze historical information on options:

- whose recipients would be expected to exhibit similar exercise and post-vesting termination behavior,
- with a similar contractual term to expiration,

- with a similar vesting schedule, and
- with other contractual provisions similar to the award being granted.

Additionally, a company should consider whether it has an anomalous stock price history that may indicate that its historical exercise patterns may not be predictive of future exercise patterns (for example, if options were under water during most of the available exercise period or there was a sharp increase in the company's stock price over a long period of time). Once this information is collected and analyzed, a company can estimate a historical average holding period (period from grant to exercise) for its employee options. See SC 9.3.5 and SC 9.3.6 for information about adjustments for anomalous historical periods.

If the demographics of the groups of employees receiving options have changed over time, a company may need to make adjustments to historical exercise data before arriving at an expected term assumption for the latest grant. The company could still leverage its historical data, but should adjust it to reflect the new demographics (for example, by using the historical data for only those employees who exhibit similar characteristics to the current covered group, or by appropriately re-weighting the various considerations underlying the expected term assumption). Similarly, if certain events or policy shifts have affected exercise behavior in the past, a company may have to isolate and remove portions of its historical data in favor of recent or more relevant information. In addition, the behavior of employees affected by a prior merger or spin-off may be different from what the company can expect from its current employees.

When analyzing historical exercise information, consideration should also be given to whether exercises generally happen evenly throughout the year or if there are seasonal effects. If exercises happen evenly throughout the year, this assumption can be used to simplify the historical calculation. If exercises are not spread evenly, a more refined approach to calculating the term of each exercise may be appropriate.

9.3.3 Pre-vesting forfeitures vs. post-vesting cancellations

The expected term assumption is intended to reflect the settlement of all vested options, including voluntary exercise, forced exercise (i.e., upon employee termination), and expirations. The term "post-vesting cancellations" refers to all events that may lead to a vested option not being exercised. These events, which occur once employees vest, need to be considered when developing the expected term assumption. In contrast, because previously recognized compensation cost is reversed for awards that are forfeited prior to vesting, a company would not consider pre-vesting forfeitures in determining the expected term assumption.

The expected term assumption should also reflect the possibility that some vested options may never be exercised because they will expire under water while the holder is still an employee. In computing historical average holding periods, a company should count those expired vested options as though they were exercised at expiration, because it reflects the period the awards were held by the employee.

Companies should consider the distinction between pre-vesting forfeitures and post-vesting cancellations when developing their expected term assumption. Some software packages used to administer stock-based compensation plans do not correctly segregate pre- and post-vesting events, which may inadvertently skew a company's expected term analysis by either incorrectly increasing or decreasing its expected term assumption. In addition, segregation of voluntary and forced early exercises

(upon termination of employment) is generally necessary for development of the expected term assumptions under a lattice model.

9.3.4 Adjustments for partial life-cycles

Companies should make adjustments for potential bias due to recently granted unexercised options to account for what is called the partial life-cycle effect. For example, if a company typically issues options with a contractual term of ten years, the only exercise data covering a full life-cycle is likely to be for options issued ten or more years ago, as some options from more recent grants would, in all likelihood, remain unexercised. If the company does not make some adjustment for these outstanding options and instead calculates the average holding period based on partial exercise and post-vesting cancellation data, the expected term assumption and resulting fair value will most likely be too low, because it will not include the impact of outstanding options that will be exercised, expired or cancelled (post-vesting) at a later date.

Additionally, companies should consider whether to only include option grants that are fully vested or to also include partially vested awards. This decision will depend on whether or not emerging experience is different from prior exercise experience as well as the amount of total data available.

Several methods of adjusting exercise data for the partial life-cycle effect exist, such as those listed below:

- **Exercised at expiration.** While some recordkeeping software assumes outstanding options will be held until the end of their contractual term, this generally overstates the expected term assumption because, as practice has proven, there is no reason to believe that all outstanding employee options will be held until expiration. Accordingly, other approaches to adjust for the partial life-cycle effects, such as those described below, are generally more appropriate.

- **Exercised uniformly over remaining term (between the later of vesting date and date of the analysis, and the contractual expiration date of each option).** This method is an impartial approach for estimating expected term, but it may not be appropriate in all situations. For example, if there is clear evidence that non-uniform exercise patterns occur in the later years of options' life-cycles, the uniform exercise approach method for dealing with outstanding options should not be used.

- **Marginal exercise rates.** This more sophisticated method involves estimating marginal exercise rates to complete the life-cycle for each grant. Using this approach, a company determines the weighted-average percentage of options for each grant year (e.g., 20X1) that were exercised in a given period post-grant (e.g., in 20X4, 20X5) in relation to all options for that grant year eligible to be exercised in each given period. These percentages can be averaged over the grant years and then used to model a distribution of expected exercises that reflects all available data in an unbiased manner. If a company has only partial data (e.g., it grants ten-year options but has only five years of history), the marginal rates for the final years could also be estimated using published data, if available. If no published data is available, it may be reasonable to combine estimated marginal exercise rates for earlier life-cycle years with a uniform exercise assumption for later years, spreading outstanding options evenly over life-cycle years after the last year for which marginal rates could reasonably be estimated.

9.3.5 Adjustments for insufficient historical data

The sample size of historical exercises should be large enough to generate a reliable expected term assumption. The appropriate sample size of historical exercises depends on the inherent variability within the data and the number of adjustments a company has to make to that data. An otherwise large amount of data may not be sufficient if options were either significantly in-the-money or out-of-the-money during much of the observation period, or a significant company-specific event (e.g., downsizing) occurred that significantly affected exercise patterns.

If management believes that the expected term assumption derived from historical company-specific data is a poor indicator of future exercise patterns, it could use appropriate subsets of that data, or use data from other sources to replace or supplement the company's data. Some compensation consulting firms compile databases of exercise information collected from a large sample of companies of various sizes in different industries in order to (1) supplement the datasets from the limited number of academic studies on this subject and (2) provide companies with a wider dataset from which to build more refined expected term assumptions.

Companies that conclude they have inadequate exercise history and no access to alternative sources may use the simplified method discussed in SAB Topic 14 (see SC 9.3.1) if certain criteria are met. For example, if a company has a significant history of option grants, but nearly all of those grants have been continuously or nearly continuously out-of-the-money, the available exercise windows may yield only negligible exercise data. Another example is when a new company has made significant grants but most are still unvested. Basing an expected term on the limited exercise data available may not yield a reasonable assumption.

9.3.6 Adjustments for stock price movements

Companies should consider whether exercise patterns are affected by shifting risk-preferences among employees or other external conditions. The most important external condition is stock price movements; employees' exercise decisions are frequently affected by stock price patterns.

Option pricing models implicitly consider several potential stock price paths. Accordingly, a company should not base the expected term of new options on historical data that reflects a unidirectional stock price trend – i.e., only rising (bull market) or falling (bear market) stock-price history. A predominantly bull market sample would tend to result in estimates that understate the expected term, while a bear market sample would tend to overstate it.

Lattice models, by design, as described in SC 9.3.11.1, directly address this over/understatement problem. But when the Black-Scholes model is used, adjustments may be necessary to deal with a largely unidirectional historical stock-price pattern. The following are three generally appropriate ways to address this situation:

- Use more historical information to dilute the effect of periods strongly influenced by unusual market movements
- Use data from academic or compensation consultants' studies as a basis or to supplement the historical data
- Use an approach similar to the SAB Topic 14 simplified method (with appropriate adjustments to reflect the facts and circumstances of the award or grantee population).

In general, it would not be appropriate for companies to selectively use small portions of relatively recent historical exercise data, while excluding other portions based on unusual stock price movements. That approach would imply a forecast of future stock price movements, while financial theory assumes that future price-changes are not foreseeable. Historical exercise data that is strongly influenced by unusual stock-price movements should either be considered entirely irrelevant to future expectations, or possibly used to support an estimate that might be blended with estimates based on other sources, depending on how unusual the historical stock-price path is.

Companies should carefully observe the effect of stock price changes on exercise patterns, especially for more recent data, as the effects of stock prices might interact with the partial life-cycle effect. For example, if a company had a consistently rising stock price until five years ago, at which time the stock price began to fall, its pattern of exercises will likely indicate that employees are tending to hold their options longer for more recent grants. Due to the partial life-cycle effect, however, the average time until exercise for grants made in the past five years may still be much shorter than for older grants. If the outstanding options from these recent grants are extrapolated over their remaining lives, or alternatively, if more sophisticated marginal exercise rate analyses are employed on the data, a pattern of a lengthening holding period may become apparent. Observing this effect highlights the need to combine appropriately adjusted data from recent grants into the overall estimate of future holding periods.

Sometimes employees' appetite for risk and their exercise patterns change despite consistent stock performance. In such cases, a company should consider basing its estimates of future exercise behavior on data that largely reflects recent exercise patterns.

9.3.7 Using historical exercise data to calculate expected term

Once a company analyzes and, if necessary, adjusts its historical exercise data, it can use this data to calculate the expected term. This entails obtaining a weighted average of the holding periods for all awards (i.e., the average interval between the grant and exercise or post-vesting cancellation dates) adjusted as appropriate. While companies can sometimes group options by the month of their grant and/or exercise date, using the exact number of days between the grant and the exercise dates yields a more accurate expected term assumption.

9.3.8 Stratifying the employee population for expected term

This section has so far focused on developing a single expected term assumption for all grants made to the entire employee population. However, different types of employees (e.g., management vs. non-management) or employees of different ages or geographic location may have different appetites for risk and thus different propensities to exercise early. Thus, using a different expected term assumption for different groups of employees will likely yield a more refined estimate of exercise behavior. Stratification may be by position, salary range, geography, age, or any other factor that could affect exercise behavior.

Because fair values produced by the Black-Scholes model are not a linear function of the expected term, stratification of the employee population by the expected term assumption generally has less impact on the fair value of an option with a longer average expected term than one with a shorter average expected term. Typically, the average fair value estimate derived using different expected terms for different groups of employees is marginally lower than if a single expected term is used for all employee groups. Even though the average per share fair value weighted for class size may only be marginally different after stratification, the ultimate cumulative expense may be impacted to a greater

degree if different groups of employees have significantly different rates of forfeiture. Therefore, if there are sub-groups of employees with significantly different expected exercise behavior and forfeiture experience, whose options represent a significant percentage of total company options granted, development of a separate expected term assumption should be considered for each one, provided there is relevant data upon which to develop these stratified assumptions.

9.3.9 Stratifying by vesting tranche for the expected term

ASC 718 allows valuation of options with graded vesting using a single expected term assumption for the entire grant or separate expected term assumptions for each tranche of the award. The practice of stratifying assumptions by vesting tranches will create an incremental (albeit small) reduction in aggregate compensation cost because stratifying by vesting tranche can separate early-exercising options (generally a lower fair value) from later-exercising options (generally a higher fair value). When analyzing exercises by vesting tranche, one potential challenge is that the option exercises are often not specifically tracked, or linked, to a specific tranche. For example, if an employee has vested in awards from two separate tranches and then exercises a portion of those vested options, typically there are no detailed records of which tranche of options were actually exercised. Although GAAP is silent, we believe it would be appropriate in these circumstances for companies to assume that the first exercises were from the first tranche to vest and that subsequently exercised options were from any remaining options in the first tranche, followed by options in later tranches, in order of vesting.

Regardless of the manner in which the expected term assumption is determined – i.e., by stratifying the options by tranche or by using a single expected term — companies can still avail themselves of the accounting policy election of either straight-line or graded attribution of the aggregate compensation cost over the requisite service period for awards with graded vesting and service conditions only.

9.3.10 Other considerations for expected term assumptions

Companies may consider using different volatility assumptions for different intervals of the overall expected term of an award because volatility may be expected to change over the expected term. Volatility that is assumed to change over time may also affect exercise patterns. Generally, only the more sophisticated lattice models can incorporate these relationships. However, when valuing options it is possible to adjust historical exercise data to reflect the assumption that future volatility will differ from recent stock-price volatility (see SC 9.4).

The expected term for option valuation may be impacted by the expected dividend yield. Because employees receiving options generally do not receive dividends on the underlying stock until they exercise, larger dividends offer an additional incentive to exercise options early. Companies should therefore consider adjusting the expected term assumption for significant differences between historical and expected future dividend yields.

Although ASC 718 acknowledges that blackout periods may affect the expected term assumption; it is rare that contractual or SEC-required blackout periods directly affect early exercise behavior or have a significant effect on the measurement of options' fair values. Such periods tend to be fairly short (e.g., six months) and, if they recur, will have already been incorporated into the exercise history.

Occasionally, for potential tax advantages, options may be exercisable prior to vesting. The exercise price is returned to the employee and the award is forfeited if the employee is terminated prior to vesting. For accounting purposes, this type of exercise is not considered substantive. Therefore, any

historical analysis of exercise activity should reflect such an exercise as occurring at the vesting date, for those options that vest, and should exclude from the analysis any options that are forfeited.

9.3.11 Comparing expected term assumptions under different models

Lattice models are generally believed to produce a more refined estimate of fair value than the Black-Scholes model because they have the capacity to incorporate assumptions that vary over time and over potential stock price scenarios. Moving from the Black-Scholes model to a lattice model requires developing more complex assumptions concerning early exercise behavior. Because of the intricacies involved, lattice models are covered only in summary form in the discussion that follows, using examples to illustrate some of the considerations involved.

9.3.11.1 Modelling exercise behavior in relation to stock price

Lattice models replace the single expected term assumption of the Black-Scholes model with a set of assumptions that describe employees' early exercise behavior. That set of assumptions can range from a number of simple assumptions (similar to the expected term assumption under the Black-Scholes model) to an array that correlates the rate at which employees are expected to exercise their options to varying levels of stock price appreciation, as well as other factors. One typical difference between the Black-Scholes model and a lattice model is the manner in which a typical termination provision is handled. Most employee options include a clause that accelerates the contractual expiration of a vested award to a date 60 to 90 days after termination of employment, regardless of the remaining contractual term. The post-vesting termination rate is reflected indirectly in the single expected term assumption in the Black-Scholes model. However, a series of rates that change over the contractual term is generally a separate set of assumptions in a lattice model.

One approach to implementing a lattice model involves estimating the probability distribution of early exercise over two variables: the time that has elapsed between the grant date and the exercise date, and the assumed level of stock-price appreciation at the time of exercise. As described in SC 8.5, this latter variable is called the suboptimal exercise factor and is usually expressed as a multiple of the exercise price. Suboptimal exercise factors may (1) be single values, (2) be values that change over the life of an option, or (3) take the form of probability distributions.

A simple set of assumptions in a lattice model incorporating stock price appreciation is comprised of a single suboptimal exercise factor and fixed rate of post-vesting cancellations, along with the vesting period and contractual term of the option. The option would be assumed to (1) be exercised immediately at any point after vesting when the suboptimal exercise factor is reached; (2) be exercised on expiration if in-the-money but the suboptimal exercise factor is not reached; and (3) expire worthless if out-of-the-money.

A more elaborate set of assumptions to be used in a lattice model could involve either multiple suboptimal exercise factors (and/or post-vesting cancellation assumptions) that change over time, or probability distributions.

Figure SC 9-2 presents an illustrative distribution of the probability of exercise for an award that cliff vests after one year of service.

Figure SC 9-2

Illustration of probability distribution of early exercise

Suboptimal exercise factors	Years after grant										
	0–1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–9	9–10	10
> 3.0	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
2.8–3.0	0%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%
2.6–2.8	0%	98%	98%	99%	99%	99%	100%	100%	100%	100%	100%
2.4–2.6	0%	95%	95%	96%	96%	98%	99%	99%	99%	99%	100%
2.2–2.4	0%	88%	88%	92%	92%	95%	96%	98%	98%	98%	100%
2.0–2.2	0%	79%	79%	84%	84%	88%	92%	95%	95%	95%	100%
1.8–2.0	0%	66%	66%	73%	73%	79%	84%	88%	88%	88%	100%
1.6–1.8	0%	50%	50%	58%	58%	66%	73%	79%	79%	79%	100%
1.4–1.6	0%	34%	34%	42%	42%	50%	58%	66%	66%	66%	100%
1.2–1.4	0%	21%	21%	27%	27%	34%	42%	50%	50%	50%	100%
1.0–1.2	0%	12%	12%	16%	16%	21%	27%	34%	34%	34%	100%

In Figure SC 9-2, the early exercise probabilities are cumulative and correlate with various stock-price appreciation rates. If the stock price is between 2.0 and 2.2 times the exercise price between two and three years after the grant date, the model assumes that 79% of the options will have been exercised. Between three and four years, assuming the stock price remains constant, the proportion assumed to have been exercised climbs to 84%.

9.3.11.2 Expected term for awards with graded vesting

Typically, a company that offers options with graded vesting features would construct a separate probability distribution for each vesting tranche because the vesting date—the first date when exercises can occur—will be different for each tranche. The vesting date is an important input in lattice models because these models consider the possibility that if the stock price has risen significantly above the exercise price by the vesting date, it is very likely that employees will exercise their options immediately upon vesting. By contrast, the estimate of fair value under the Black-Scholes model is only indirectly affected by the vesting period in that the vesting period affects the expected term assumption.

Developing a probability distribution like the one shown in Figure SC 9-2 begins with an analysis of historical exercise data. In addition to elapsed time since grant date, this process considers the effect of stock-price appreciation on expected exercise. Generally, the early exercise distribution used in a lattice model will reflect the hypothesis that exercise becomes increasingly likely as the underlying stock's price appreciates. If a company does not have historical data to support this assumption, it may have to use another modeling technique or data from outside sources.

9.3.11.3 Sources of bias and adjustments to historical data

A company using a lattice model should understand its data requirements and the potential sources of bias in estimating the probability distribution of early exercise. Both Black-Scholes and lattice models

can use the methods described earlier to address biases arising from an incomplete exercise history. However, extended periods of consistent upward or downward stock-price movement, lack of relevant data, historical data that does not fairly reflect future expectations and other factors can affect lattice models in more complex ways due to multiple assumptions about early exercise behavior and the addition of stock-price appreciation levels and other variables. For example, distributions of actual exercises based on recent historical data dominated by periods of extreme stock-price depreciation or appreciation relative to the prices on the grant dates are likely to overstate or understate how long employees are likely to hold their options in the future. Adjustments to historical data should be made in such cases in order to support a lattice model that reasonably reflects future expectations.

Lattice models may require different adjustments than the Black-Scholes model. For example, a historical stock-price path that was dominated by rapid appreciation (and high levels of early exercise that often accompany this scenario) might require further analysis and adjustment of the historical expected term under the Black-Scholes model (as noted in SC 9.3.2), because such rapid stock price appreciation is not expected to recur. Under the lattice model, the same historical stock price path might result in suboptimal exercise factors that are too high because simply applying the historical data to the new grants assumes that the historical stock price path will continue. The assumptions developed for lattice models will therefore have to be based on careful analysis, including adjustment for potential biases and mitigation of the impact of data affected by unusual stock price history that is not reflective of future expectations. Since lattice models typically will require more assumptions than those used in the Black-Scholes model, more analysis will generally be required to properly develop assumptions for lattice models.

9.3.11.4 Post-vesting cancellations and suboptimal exercises

Unlike the Black-Scholes model, lattice models treat post-vesting cancellations and voluntary early exercise behavior as two separate assumptions. Because the options of terminated employees may often be exercised earlier and at lower levels of stock-price appreciation than the options of employees who remain, and are typically cancelled without any payoff if they are underwater during the post-termination exercise period (generally, 60 to 90 days), lattice models can reflect this assumption in more detail than the Black-Scholes model. The post-vesting cancellation assumption should be based on the actual behavior of a similar group of employees. In developing the probabilities of voluntary early exercise for a lattice model (unlike the development of expected term for the Black-Scholes model), the post-vesting cancellations should be excluded, because they are considered separately. Thus, when using a lattice model, an analysis should be performed to separate a company's history of employee exercise behavior into two categories: voluntary (early) exercise and forced exercise that results from termination of employment.

A simpler, less refined form of lattice modeling assumes that early exercise occurs 100% of the time when the stock price first reaches a level represented by a single suboptimal exercise factor. This factor is normally estimated by analyzing probabilities of early exercise over various historical periods in relation to stock price appreciation at the time of exercise. It may be necessary to adjust the data for possible biases due to unusual stock price movements, and there is some inherent unreliability in using a single exercise factor.

9.3.11.5 Limitations of only company-specific exercise history

Many companies will not have sufficient exercise history or the ability to analyze company-specific historical data that is necessary to support the exercise distribution assumptions required for lattice models. A company that decides to use a lattice model may need to hire outside consultants to assist

with software, develop assumptions, and determine any adjustments necessary to mitigate data biases and deficiencies.

Finally, lattice models may incorporate other predictors of early exercise. Other variables tied to stock price performance (besides time and stock price) that may be used in an exercise-prediction model include recent stock price performance (over various windows) or recent stock price volatility. The same considerations may be applied when developing early exercise assumptions to be used in a Monte Carlo simulation model.

9.4 Expected volatility

Developing volatility assumptions is a common practice in the financial community, where many sophisticated techniques have been developed that go beyond simply calculating volatilities based on historical stock prices. The Black-Scholes, Monte Carlo, and lattice models all use a volatility input, which may come from a variety of sources (e.g., historical data, implied market volatility, peer group volatility).

When using historical data to estimate volatility, a sufficient number of daily, weekly, or monthly prices should be used to make the subsequently annualized results statistically valid. Because the estimate of volatility reflects the variation in returns expressed as a percentage of the stock price, annualized volatilities can be compared across stocks on a normalized basis regardless of how frequently the prices are measured, length of the measurement period, or the stock prices of the companies being compared.

Many companies base their volatility assumptions on their historical stock prices, or use historical volatility as a starting point for setting this assumption under ASC 718. According to ASC 718-10-55-24, companies should also consider how future experience may differ from the past. This may entail using other factors to adjust historical volatility, such as implied volatility, peer group volatility, and the range and mean of volatility statistics over various historical periods.

Because ASC 718 does not endorse a particular method of estimating expected volatility, a company should consider all available data, including what marketplace participants would likely use in determining an exchange price for a traded option. When a company develops its volatility assumption to use in its option-pricing model, it should consider the following alternatives:

- Historical volatility — a measurement of the amount by which the company's stock price changes have fluctuated in the past
- Peer group volatility — historical volatility developed for comparable companies (typically used if historical volatility is unavailable)
- Implied volatility — the assumption implied by the observed current market prices of the company's traded options or other convertible securities (if available)
- Blended volatility — a volatility assumption developed by combining data from various sources (e.g., historical volatility calculated using different windows, peer group volatility or implied volatility)

As described in SAB Topic 14, companies should make good faith efforts to identify and utilize sufficient information in determining whether using historical volatility, implied volatility, or a

combination of the two will result in the best estimate of expected future volatility. When using a combination of various estimates, significant judgment is required to determine the relative weighting of the different measures. ASC 718 does not contain prescriptive guidance related to the weighting of estimates. According to SAB Topic 14, a company should consider all available information but may, under certain circumstances, rely exclusively on historical or implied volatility. Furthermore, the SEC staff ". . . believes companies that have appropriate traded financial instruments from which they can derive an implied volatility should generally consider this measure." A company should also disclose in its footnotes why it used the volatility measure it selected.

9.4.1 Historical volatility

As discussed above, a company may conclude that historical results are the best indicator of the future. This section discusses the calculation of historical volatility and how to adjust for various circumstances, such as insufficient data and one-time events.

9.4.1.1 Calculation of historical volatility

Volatility is calculated by taking the standard deviation of continuously compounded historical returns on underlying stock prices (adjusted to remove shifts on ex-dividend dates) and then annualizing the result. Volatility is normally annualized by multiplying by the square root of the number of measurement dates used during a one-year period (e.g., volatility based on weekly prices is annualized using the square root of 52). An appropriate starting point is to measure historical stock prices with consistent frequency over the most recent historical period equal to (or greater than) the option's expected term (for the Black-Scholes model) or contractual term (for lattice models). Companies should have a consistent methodology about the length of the historical window used to estimate volatility, absent relevant changes, such as a significant change in the expected term of options currently granted. The consistency of volatility over other time windows should also be considered. See SC 9.4.1.2 for details on whether and how it may be necessary to consider different volatilities over different terms.

Because volatility usually changes slowly, it may not be necessary to make a separate calculation for each grant date. Grants might be grouped by interval (e.g., by one or three-month periods) and a volatility assumption developed for each period, provided that observed shifts in volatility are not significant. Awards may also need to be grouped and separate volatility assumptions used to reflect differences in contractual terms and vesting schedules. In addition, if a given historical volatility window includes short-term volatility that is not expected to occur in the future, companies should consider whether or not to exclude that data when developing an assumption.

9.4.1.2 Exclusive reliance on historical volatility

After considering all available information, a company may decide to exclusively rely on its historical volatility, because it believes that its historical volatility provides the most reliable indication of future volatility. According to SAB Topic 14 (section D.1, question 4), a company may rely exclusively on historical volatility when the following factors are present, so long as the methodology is consistently applied:

- A company has no reason to believe that its future volatility over the expected or contractual term, as applicable, is likely to differ from its past;
- The computation of historical volatility uses a simple average calculation method;

- A sequential period of historical data at least equal to the expected or contractual term of the share option, as applicable, is used; and
- A reasonably sufficient number of price observations are used, measured at a consistent point throughout the applicable historical period.

The following sections address adjustments that a company may need to consider when developing its historical volatility assumption, which may lead the company to conclude that exclusive reliance on historical volatility over the most recent period of time equal to the expected term is not appropriate.

Frequency of historical volatility measurement

The frequency of stock price measurement can significantly affect the expected volatility assumption. For example, volatility estimates vary depending on whether stock prices are measured on a daily, weekly, or monthly basis. While differences in annualized volatility estimates due to measurement frequency differences may be small, this is not always the case.

A high frequency of measurement (e.g., daily stock prices) provides the largest possible sample size, as discussed in ASC 718-10-55-37(d). According to that paragraph, a public company "would likely use daily price observations." On the other hand, it also may be appropriate to use lower frequency data (e.g., monthly), provided there is an adequate sample size.

ASC 718 does not provide detailed guidance on adequate sample sizes for computing historical volatility. SAB Topic 14, footnote 56, indicates that monthly data should not be used for periods shorter than three years due to insufficient data, indicating that more than 36 data points should be used to estimate historical volatility when using monthly data. Footnote 64 of SAB Topic 14 suggests that two years of daily (approximately 500 measurements) or weekly (approximately 100 measurements) data could provide a reasonable sample, though daily data may be more appropriate when there is an expected term shorter than two years.

When volatilities calculated based upon different measurement intervals (e.g., daily, weekly and/or monthly) differ significantly, a company may consider averaging the annualized volatility estimates from the different measurement intervals. When an option's expected term is much shorter than the available history or when there is less history available, generally it would be more appropriate to use an estimate based on daily or weekly data in order to assure an adequate sample, assuming daily or weekly prices are available and that sufficient trading occurs on each day to make these quotes reliable market indicators. Regardless of which measurement frequency is selected, it should be used consistently for all awards.

Insufficient historical stock price data

Some companies do not have historical stock prices that can be reliably determined for a period that is at least equal to the expected term of their options or do not believe that their recent historical volatility fairly reflects future expectations (e.g., a company that has been public for only three years and has estimated the expected term of its options to be five years). In such cases, it may be appropriate to blend the company's own volatility data with that of a peer group of public companies. Companies in the peer group should (1) be of similar size, (2) have similar histories and relatively comparable financial leverage, and (3) be in similar businesses (industry and geographical markets).

Peer-group volatility

To compute peer-group volatility, a company should use data from one or more relatively recent historical periods that are at least as long as its expected term. Though various weightings are possible, volatility data from the peer group companies are usually averaged, with each company given equal weight.

If a company that grants options with a five-year expected term is looking to use peer-group data to supplement its own last three years of historical data, it would be appropriate to obtain peer-group data for the two years preceding the past three years. In this way, the historical period would equal the five years of the expected term. The company could give the peer-group's average volatility for the two earliest years a two-fifths weighting and its own historical volatility three-fifths. In other fact patterns, other weightings of peer company and company-specific volatilities may be appropriate. A company generally should avoid using overlapping periods of data in this type of analysis (e.g., averaging the peer-group data over the full five-year window with the company's three-year historical data), because that approach would unevenly weight certain periods (see the section below on Mean-reversion and term structure of volatility).

Newly public companies

SAB Topic 14 also allows newly public companies (i.e., those that recently filed for an IPO, whether or not the IPO has yet occurred) to base their estimates of expected volatility on the historical, expected, or implied volatility of similar companies whose stock or option prices are publicly available, after considering the industry, stage of life-cycle, size, and financial leverage of the other companies.

A newly public company can develop peer-group volatility using some of the companies listed in an industry sector index (e.g., a computer vendor may look to a NASDAQ Computer Index, if there is one). However, the company may not use the volatility of the index itself as a substitute. The newly public companies should use the companies selected from the industry sector index consistently, unless circumstances change, or until it has either a sufficient amount of historical information regarding the volatility of its own stock price or other traded financial instruments become available to derive an implied volatility to support an estimate of its expected volatility.

Nonrecurring events

SAB Topic 14 and ASC 718 cite other instances when it may be appropriate to adjust historical volatility for past events that a marketplace participant would likely discount, such as a discrete event that is not expected to recur (e.g., failed takeover bid or major business restructuring). Historical data demonstrably affected by such events (e.g., the abnormally high volatility observed in the six-month period leading up to or following a significant transaction) might be reasonably excluded from the historical volatility calculation, provided the event is specific to the reporting company, under management's control, and not expected to recur during the expected term of the award. However, question 2(s) in Section D.1 of SAB Topic 14 indicates that such exclusions are expected to be rare.

One-time events may also lead to increased expected volatility as compared to unadjusted historical volatility. For example, if a company recently announced a merger that would increase its business risk in the future, then it would consider the impact of the merger in estimating its expected future volatility if it is reasonable that a marketplace participant would also consider this event.

In the rare situations when nonrecurring events such as those described above imply that historical data may not be representative of the future, a company may simply exclude stock-price data from the affected period(s) and use the remaining history so long as there remains sufficient historical data to make an estimate. Companies should carefully analyze volatility estimates from periods that include breaks to ensure that those gaps are not treated as market-price movements. In some cases, such as when the excluded period is an extended period of time, a company may consider using a blended estimate that incorporates peer-group data for the excluded period.

Some companies may be tempted to exclude historical volatility data caused by extraordinary market conditions, such as the effects of the credit crunch in 2008 and the COVID-19 pandemic. We generally believe that data should only be excluded when the volatility relates to one-time events specific to the reporting company that are reasonably within the control of the company's management or shareholders. Data related to events affecting the broader market should not be excluded from a company's analysis, even when those events are considered extremely unlikely to recur. In addition, data from periods of significant stock price changes over a short period of time, such as may occur due to lawsuits, failed product trials, or recalls, generally should not be excluded.

Mergers, acquisitions, divestitures and changes in financial leverage

The volatility of a merged company may differ from either predecessor, while a spin-off may affect volatility of the new entity and its former parent. With merged companies, each of which represents a major component of the merged entity, typically a weighted average of the two entities' historical volatility is appropriate, with the volatility of each company weighted by relative market capitalization prior to the transaction. Spin-off companies will probably have to use peer-group data to estimate volatility, and their former parent may have to do the same if the spin-off fundamentally changes the parent.

Lastly, financial leverage needs to be considered as a factor in examining historical volatility. If a company's debt-to-equity ratio has shifted dramatically over recent history whether due to a merger, spinoff, or just re-leveraging, consideration of other data points such as peer group information may be appropriate.

Mean reversion and term structure

A statistical phenomenon referred to as mean reversion occurs when a series of values is more likely to move towards its longer-term mean than away from it. Volatility is often observed to be cyclical, moving between temporary or short-term highs and lows but then reverting back to the long-term average. Therefore, if a stock's price has been extraordinarily volatile for the past year when compared to a longer period, it may be reasonable to assume that, within another year, the stock price volatility will begin to migrate toward its longer term average volatility level. Under these circumstances, the long-term volatility assumption for options granted in the next year might fall between that of the more volatile recent period and the less volatile long-term average. The mean-reversion theory would also apply when recent volatility has been extremely low compared to long-term average volatility. Companies should consider mean reversion when significant cyclical swings in volatility are observed in the historical data.

Term structure refers to how historical volatilities may vary over specific intervals. This may be relevant in determining the volatility assumptions over the option's expected term (or contractual term when a lattice model is used). The justification for incorporating term structure into an estimate of expected volatility would ordinarily be based on mean-reversion. Thus, if last year's volatility was

20%, but average annual volatility over the previous five years was 40%, the annual volatility assumption for each of the next five years might be closer to 20% at the beginning of the expected term and eventually move toward 40%. An explicit term structure approach to the expected volatility assumption might be used in a more refined lattice model instead of a single fixed volatility assumption, where exercises and vested cancelations are assumed to occur not just after a single weighted average expected term, but throughout the option's entire contractual life. However, the mean-reversion concept may also be applied to a single-value volatility forecast input into the Black-Scholes model.

Mean reversion will generally be most applicable in developing the volatility assumption when expected term is relatively long and recent short-term volatility is very different from long-term average historical volatility. In practical terms, applying the concepts of mean reversion and term structure to expected volatility assumptions involves looking for evidence of possible mean reversion by examining volatility over at least two historical periods of varying lengths, assuming a company has the data. According to ASC 718-10-55-37(a)(2), a company using the Black-Scholes model should start with a period equal in length to the option's expected term, then use progressively shorter periods to determine whether there is a pattern of changing volatility (though longer periods may be examined as well).

If consistent volatility experience is exhibited by using periods of varying lengths, or if actual experience exhibits no clear pattern over various sub-periods of the historical period that corresponds with the option's expected term, then it may be more appropriate to use an unadjusted volatility estimate based on data from a consistent historical period equal to or greater than the length of the expected term. While mean reversion may not be apparent in the historical data based on periods shorter than the expected term, companies should also consider whether it applies on a longer time scale. A company that has typically used five-year volatility for an award with a five-year expected term might also consider data over seven- and ten-year windows, as well as over periods shorter than five years. If the five-year volatility appears unusual, using a blend with longer-term data may be more appropriate. However, using data that is too old (much longer than the typical contractual terms of ten years) is likely to be less relevant and not the best predictor of expected volatility.

It may be difficult to assess whether changes in volatility relate to mean reversion or are due to specific circumstances, such as a company's growth, diversification, reorganization, merger, or spin-off. Careful examination of year-by-year volatility in this context compared to volatility measured over the entire expected term may be helpful in assessing whether a mean-reversion adjustment is appropriate.

9.4.2 Implied volatility

As discussed above, a company may need to consider adjusting its historical volatility when developing its expected volatility assumption. After analyzing its data, a company with available implied volatility information may conclude that its historical results are not the best indicator of the future and instead consider blending implied volatility with historical volatility or, in some cases, relying solely upon implied volatility.

Implied volatility is based on the market price of a company's exchange-traded financial instruments and is sometimes thought to be a market forecast of a company's future stock price volatility. Because current market trades may suggest more about a company's future stock prices than its historical volatility, many believe implied volatility is superior to historical volatility as a tool for predicting future stock price volatility. In our experience, implied volatility tends to correlate with shorter-term historical volatility levels and therefore may be more applicable to shorter-term than to longer-term forecasts.

Generally, we do not expect companies to solely use current short-term implied volatility as their best estimate of long-term volatility for measuring the fair value of employee stock options.

9.4.2.1 Calculating implied volatility

It can be difficult to use implied volatility for valuing employee options because most implied volatilities are based on traded financial instruments (e.g., exchange-traded options) with substantially shorter terms than those of employee stock options. Typically, exchange-traded options have terms less than one year. A select group of large companies have long-term traded options called LEAPs that have terms of two to four years, but other companies have only exchange-traded options with terms less than eighteen months, and many companies have no exchange-traded options at all. Thus, the expected term for most of a company's employee options is much longer than the contractual terms of exchange-traded options on the company's stock. Exchange-traded options are also often thinly traded, so reliable price quotes may be lacking even when option terms are comparable.

To calculate implied volatility, a company should use the Black-Scholes model to find a volatility input that makes the fair value of an employee stock option equal to the market price of the exchange-traded option on a specific date. Because exchange-traded options—unlike employee stock options—are generally held for their full contractual term, there is no judgment involved in estimating their expected term. It simply equals the remaining contractual term of the exchange-traded option on the specific date. Options embedded in certain forms of traded convertible debt may also be used to determine implied volatility.

One pragmatic approach to deciding whether implied volatility is stable enough to rely upon is to perform at least several measurements using the longest duration, market-traded, at- or near-the-money options to ensure that the calculated implied volatilities remain reasonably stable. If the volatilities do not appear stable, they should either not be used as the sole determinant of the volatility assumption (even if the length of the remaining contractual life of the exchange-traded options and the expected term of the employee options are comparable) or they should be weighted less than historical volatility when using a blended rate.

9.4.2.2 Exclusive reliance on implied volatility

SAB Topic 14 provides additional guidance on determining when and how to use implied volatility. According to SAB Topic 14 (Section D.1, question 4), a company may, in limited circumstances, rely exclusively on implied volatility. Based on that guidance, the SEC staff will not object to exclusive reliance on implied volatility if all of the following criteria are met and the methodology is consistently applied:

- The company's valuation model is based on a constant volatility assumption (e.g., Black-Scholes model).
- Implied volatility is derived from options that are actively traded.
- Market prices (i.e., trades or quotes) of both traded options and underlying shares are measured concurrently, synchronized with the grant of the employee stock options. If this is not practicable, a company should at least derive implied volatility as of a point in time that is as reasonably close as practicable to the grant of the options.

- Traded options have exercise prices that are (1) near-the-money and (2) similar to the exercise prices of employee stock options.

- The remaining maturities of the traded options are at least one year.

The term "actively traded" is not defined in SAB Topic 14; however, Rule 101(c) of SEC Regulation M provides criteria (average daily trading volume of $1 million and a public float value of at least $150 million) that may be used by analogy to determine if sufficient trading volume meets this condition.

Based on the guidance in SAB Topic 14, a company could potentially use the implied volatility of an exchange-traded option with a remaining term of one year to estimate the expected volatility of an employee stock option with an expected term longer than one year. In determining whether and to what extent the use of implied volatility is appropriate under these circumstances, companies should consider (1) the other factors from SAB Topic 14, (2) how much longer the expected term of the employee option is than the remaining contractual life of the exchange-traded options, and (3) the historical comparability of implied volatility levels with longer-term observed historical volatility experience. Companies should also note that implied volatilities themselves often vary widely over time relative to observed volatilities calculated using long-term historical prices. Therefore, only implied volatilities measured within a few weeks prior to the measurement date should be considered.

9.4.3 Blended volatility

Using a blend of historical and implied volatility may be appropriate in the following circumstances:

- A company meets some, but not all, of the SAB Topic 14 required conditions to exclusively rely on historical or implied volatility,

- the term structure of implied volatility is unstable, or

- the expected term of the option is significantly greater than the contractual term of traded options.

A combination of both volatility measures may provide the best estimate of expected volatility because it captures the mean reversion concept by weighing both historical (longer term) and implied (near term future) volatilities, and offers the most flexibility to adapt to a company's specific facts and circumstances. We believe this approach is consistent with how most marketplace participants would likely consider using available information to estimate expected volatility, as illustrated in Example SC 9-1.

While SAB Topic 14 stresses that a company's process to gather and review available information to estimate expected volatility should be consistently applied, if facts and circumstances change to indicate new or different information may be useful in estimating expected volatility, then a company should incorporate that information. Situations occasionally arise in which shifts in methodology will be necessary (for example, when previously-used historical or implied information is no longer available or has changed greatly in its apparent reliability). Any such change is not a change in accounting policy, but must nevertheless be supported by sound rationale that the new or different information produces a better estimate of expected volatility. This would include a change in the relative weightings of contributory sources of information—for example, switching from a 50%/50% average of historical and implied volatility, to either a 100% historically-based estimate or a 100% implied-based estimate.

Example SC 9-1 illustrates an approach of using available information from multiple data sources to estimate expected volatility.

EXAMPLE SC 9-1

An approach for estimating volatility using multiple data sources

In early 20X4, Company A acquired Company B in a stock transaction. Company A's stock has historically been much more volatile than Company B's. However, from the transaction's announcement to its closing date, Company B's shares have become much more volatile, moving in tandem with Company A's shares since late 2004. Once the deal closed, the combined company's shares became less volatile, closer to Company B's pre-announcement historical volatility levels.

On January 1, 20X7, the combined company issues employee stock options. Because this was a significant acquisition and it has only three years of data as a combined company, Company A also looked at peer-group volatility data for the post-acquisition period. During this time, historical one-year volatilities for the peer-group of companies were consistently below the historical one-year volatility of the combined company.

Pre-acquisition volatilities of the separate companies based on weekly prices were as follows:

Year	Company A	Company B	Average of Company A and Company B
20X1	65.4%	33.8%	49.6%
20X2	77.3%	43.3%	60.3%
20X3	69.7%	71.1%	70.4%

The post-acquisition volatilities for Company A and its peer group were as follows:

Year	Combined company	Average peer group
20X4	56.5%	48.1%
20X5	53.8%	45.8%
20X6	39.3%	33.5%
Three-year historical volatility	50.8%	43.3%
Most recent two-year historical volatility	48.0%	39.0%

Management believes that each company's volatility was elevated during the year prior to the acquisition (20X3) and the combined companies' volatility was elevated during the year after the acquisition (20X4) due to the market's uncertainty about the integration of the two companies.

The volatility of exchange-traded options on the combined company's shares was also assessed for dates near the end of December 20X6. These traded options have contractual terms of four to eight months. Management excluded information on thinly traded options from its analysis and used three

specific options that have larger trading volumes, believing that their implied volatility is reliable. The specific options included in management's analysis were near-the-money at the end of 20X6.

The implied volatilities calculated from the traded options are lower than the historical volatilities of either the predecessor companies or of the peer group:

Trade date	Remaining term (as of trade date)	Implied volatility
December 28, 20X6	8 months	32.4%
December 29, 20X6	4 months	31.3%
December 30, 20X6	8 months	29.8%
Average		31.2%
Average (excluding four-month option)		31.1%

How should management use this data to develop an expected volatility assumption for the options granted in early 20X7 with a three-year expected term, a ten-year contractual term, and a one-year cliff-vesting service condition?

Analysis

Because the company uses the Black-Scholes model, it would develop a single volatility estimate for the options' expected term, beginning with the combined company's three-year historical volatility of 50.8%.

Assuming the combined company does not envision an acquisition of this magnitude in the foreseeable future, it may expect near-term future volatility to be much lower, perhaps as low as the 20X6 level of 39.3%. The consistently lower peer-group volatilities from 20X4 to 20X6 appear to support this assumption.

However, if management believes that the combined company has unique features that might affect future performance, the average volatility that its own stock experienced in the last two years (48.0% over 20X5 through 20X6) may be a more reliable basis for a historical volatility forecast than the peer-group data, and is not inconsistent with the average of Company A and Company B volatilities of 55.0% in 20X1 and 20X2.

Management should also consider the much lower implied volatilities of its traded options. These appear to show that market expectations regarding near-term future volatility are considerably below historical levels. However, the traded options have terms of less than a year, while the employee stock options have expected terms of three years. Consistent with ASC 718 and SAB Topic 14, management should consider all of the above factors when estimating its expected volatility estimate, weighting the historical and implied volatility. Given that the only available exchange-traded options with remaining contractual terms to expiration greater than 6 months have a total term of only eight months (compared to the employee options' term of 3 years), a relatively lower weighting for the implied volatility would be reasonable. Assume this results in a 37.5% weighting for the implied volatility and a 62.5% weighting for the two-year historical volatility.

Using these percentages to weight the average implied volatility for traded options with eight-month terms and the company's own two-year historical average yields the following blended volatility estimate:

(Implied average × weighting) + (Historical average × weighting) = Expected

(31.1% × 37.5%) + (48.0% × 62.5%) = 41.7%

Company A would use this weighted average as the expected volatility assumption in determining the fair value of its new employee stock options.

This example is intended to illustrate the potentially relevant data points in developing a volatility estimate and one potentially appropriate approach. The determination of volatility is a matter of judgment and will vary depending on each specific set of facts and circumstances. For example, the historical three-year-average peer-group volatility of 43.3% was not used directly but helps corroborate the reasonableness of the applied approach. Also, the company could have considered peer group implied volatility.

9.4.4 *Comparing volatility assumptions under different models*

The Black-Scholes model uses a single volatility estimate over an option's expected term. In contrast, lattice models can incorporate dynamic volatility assumptions that vary over the option's contractual term, along with more sophisticated assumptions where volatility changes with stock-price fluctuations.

In Example SC 9-1, the combined company's averaged volatility estimates considered both its own and peer-group historical periods of varying lengths and near term implied volatility to arrive at a single expected volatility estimate for the Black-Scholes model. A lattice model could incorporate a period-by-period future expected volatility in different parts of the lattice rather than a single combined volatility forecast. This also means that a longer historical period might become relevant, since the lattice model should simulate the entire contractual term of the option, not just its expected term.

9.5 *Risk-free interest rates*

Both the Black-Scholes and lattice models require the use of risk-free interest rates.

9.5.1 *Risk-free interest rates in the Black-Scholes model*

The risk-free interest rate assumption involves less judgment than the other assumptions required in an option-pricing model. In the US context, the Black-Scholes model typically makes use of the implied rate on the grant date for a traded zero-coupon US Treasury instrument with a term equal to the option's expected term. Zero-coupon bonds are used because they have one payment that will be paid at the end of the expected term to match the period of investment through the time until expected exercise or settlement of the award. For terms greater than one year, Treasury STRIPS should generally be used. However, other estimates of risk-free rates are available (such as swap curves) and may be appropriate. Companies outside the US or companies issuing options with exercise prices denominated in a foreign currency should use an appropriate risk-free instrument in that currency environment in developing a risk-free rate assumption, or may use forward currency exchange rates

combined with US risk-free rates. If an option's expected term or an equity award's contractual term falls between two maturities with available risk-free rate data, it is usually appropriate to interpolate a rate from the available maturities.

Implied interest rates on zero-coupon government bonds are based on their traded prices. These are typically reported as bond-equivalent yields based on implied semi-annual compounding (this allows one to compare zero-coupon and coupon-bearing government bonds which make payments semi-annually). To obtain precise results, a company should convert bond-equivalent rates into continuously compounded rates before using them in the Black-Scholes model. Although the difference is usually very small, a company that wishes to omit this step should determine whether the difference is material.

9.5.2 Risk-free interest rates in lattice models

Lattice models require risk-free interest rates for all potential durations until exercise. These rates are obtained by using a yield curve for the relevant instrument as of the grant date. A lattice model will therefore require the yield curve for the entire time period during which employees might exercise their options. Some software packages specify the frequency with which users should input yields over the potential exercise period (e.g., monthly), while others allow users to choose the frequency with which they input a range of yields. These risk-free interest rates are often different in coupon type and compounding frequency from those reported in the financial media. Users should be careful to determine the proper type of rate to input into the modeling software to achieve a zero coupon risk-free rate in the valuation.

9.6 Expected dividend yields

Both the Black-Scholes and lattice models require an assumption for expected dividend yields.

9.6.1 Expected dividend yields in the Black-Scholes model

Selecting the expected dividend yield assumption usually does not require extensive analysis. A common practice is to assume that current dividend yields or cash dividend payments in effect at the grant date will continue in the future. The dividend yield assumption is usually determined (1) by dividing the most recent dividend paid by the current stock price, or (2) as an average of one or more recent dividend payments divided by the stock price on their respective declaration dates. These methods work if dividend yields are expected to remain reasonably stable and, if so, may be used with the Black-Scholes model without further adjustment. Higher dividend yields reduce the fair value of options; lower dividend yields increase the fair value of options.

A company with highly volatile stock prices and relatively stable cash dividend payments may find that dividend yields are also volatile. Such companies may have to use a longer history to obtain a reasonable estimate of future dividend yield. For example, a company whose quarterly dividend remains at $0.10 per share, while its stock price trades regularly between $20 and $40, will find that its historical yield fluctuates between 1% and 2%. This company could estimate its dividend yield over a longer period (e.g., the option's expected term) while considering the effect of recent stock-price changes up to the grant date on expected future yields.

When a company has had a pattern of increasing or decreasing dividend yields, and this pattern is expected to continue, it may be appropriate to reflect this pattern in the expected dividend yield

assumption. For example, a company with a history of significant and steady increases in cash dividend payments might indirectly forecast a continuation of those increases regardless of future changes in the stock price by using a slightly higher dividend yield assumption. If the estimated increases are large enough, an option pricing model reflecting a forecast of increases in cash dividend payments may result in a lower fair value than an otherwise similar model reflecting the historical percentage dividend yield. A model reflecting a percentage dividend yield assumes the percentage yield remains constant (i.e., dividends in the future will change in proportion to changes in stock price), whereas a forecast of steeply increasing cash dividends may result in higher future dividend yields and therefore, a lower fair value.

In a case where a company recently experienced a significant change in stock price, without a comparable change expected in future dividend amounts that would maintain the company's average historical dividend yield levels, it may be appropriate to consider only current and/or near term future expected dividend amounts (annualized) compared to the stock price on the grant date, when determining the expected dividend yield assumption. Because under the standard Black-Scholes model stock prices are expected to increase in the future on average at the risk-free rate of return, this basis for determining the dividend yield for use in the Black-Scholes model would also be appropriate for companies that have a consistent pattern of gradual annual dividend increase in the amount of cash dividends without regard to increases or decreases in stock price.

9.6.2 Expected dividend yields in lattice models

The usual adaptation of the Black-Scholes model for dividend-paying stocks uses a single dividend yield estimate, which is input as a percentage of the stock price with that yield held constant as a percentage of stock price over the expected term of an option. Lattice models have been adapted to reflect dividends, which are assumed to be specific fixed-dollar amounts, as an alternative to using a constant dividend-yield forecast. The assumed cash dividend payments may be further assumed in a lattice model to change over an option's contractual term (e.g., continuing a pattern of steady increases or decreases). These models also allow for explicit input of changing dividend yields or amounts over different periods. Lattice models can simulate the fact that, in certain circumstances, employees may be expected to exercise slightly earlier than they otherwise would, specifically timing exercises in order to capture a large dividend payment. This may result in a further reduction in fair value (under a refined lattice model as compared to a Black-Scholes model) for options on stocks that pay large dividends.

9.6.3 Dividend-protected awards

Generally, option holders are not entitled to receive dividends that are paid on the underlying shares of an option or other equity award. Certain stock options or other equity awards may be structured to provide option holders a form of dividend protection. For example, an option may be structured so that the exercise price is adjusted downward during the term of the option to reflect dividends paid on the underlying shares. Dividend protection features should be reflected in the estimate of the fair value of the stock option. Where the exercise price is reduced by an amount equal to the per-share dividend payments made on the underlying shares, the effect of the dividend protection may often be reasonably approximated by using an expected dividend assumption of zero and the unadjusted grant date exercise price in the option pricing model. Other types of dividend protection, such as the payment of nonrefundable cash dividend equivalents to holders of unexercised options or unvested awards may result in somewhat larger effects. Companies should assess the impact of other features on the fair value of the stock option, considering the form of dividend protection provided. See SC 2.9 for guidance on the accounting treatment of cash dividend payments received by award holders.

Chapter 10: Stock-based compensation plan design considerations

10.1 Stock-based compensation plan design overview

This chapter is intended to assist companies and the designers of stock-based compensation plans in better understanding the key issues that are likely to affect how stock-based and cash-based long-term incentive plans are designed. It addresses developments that may impact stock-based compensation and plan design as well as certain tax considerations related to an employee's taxable income and employer deductions.

10.2 The executive compensation environment

In designing an executive compensation plan, companies consider how their decisions will impact the employee, the company, and market perception. Different internal and external economic and accounting factors may influence a company's decision to offer stock vs. cash incentives, for example, or the nature of the conditions required to be met to earn the incentive. Each decision may result in differences in the timing and amount of related expense recognized by the company and have tax consequences for the company and the employee. Companies should consider each of the following factors when developing or making changes to its compensation plans.

10.2.1 *Restricted stock – plan design*

Institutional investors and their advisors have consistently expressed concern that significant use of restricted stock provides too much benefit to employees who have only limited downside potential (i.e., it provides employees with value even if the company's stock price declines) and creates excessive costs for shareholders. It is important for companies to strike the right balance on the use of restricted stock to incentivize employees while protecting shareholder value.

10.2.2 *Performance conditions – plan design*

As discussed in SC 2.5.1, ASC 718 defines market conditions, performance conditions, and service conditions as factors affect the exercisability or vesting of stock-based compensation awards. For purposes of compensation design, the general term "performance" (e.g., performance conditions or performance shares) typically refers to any non time-based vesting or exercisability condition included in an award. Therefore, companies may use the term "performance shares" to refer to either a market condition or a performance condition under ASC 718. The use of a "performance condition vesting requirement" has both tax and accounting consequences. As such, designing a performance condition may require input from human resources, tax, and finance personnel.

IRC Section 162(m), discussed in SC 10.8.1, provides that a public company cannot deduct compensation that it pays to its top officers ("covered employees") if the compensation exceeds $1 million per year. Prior to the 2017 tax law changes, certain performance-based compensation was exempt from this limitation. Under new law, that exception no longer applies and therefore all compensation paid to one of the covered employees will be subject to the limitation. Additional changes expand the scope and duration of covered employee status. A limited transition relief rule may grandfather deductibility for compensation provided pursuant to a written binding agreement that was in effect on November 2, 2017 and is not materially modified thereafter.

10.2.3 Corporate governance - plan design considerations

Shareholders, institutional investors, and regulators continue to scrutinize executive compensation and demand "pay for performance" and executive accountability. They may question whether stock-based compensation, and specifically options, cause executives to make decisions primarily to drive short-term increases in stock price instead of what is in the company's best long-term interest. In response, many companies actively engage in discussions with shareholders and proxy advisors on equity compensation program design, results and disclosures and describe the nature and outcome of these discussions in their proxy statement. In some cases, stakeholder feedback may influence management to redesign their compensation plans, alter grant practices, and enhance disclosures related to their plans. Changes to better align plan design and stakeholder interests may include extending the vesting schedules, setting mandatory holding periods, establishing guidelines for net share retention, and adding clawback provisions in the event of certain "bad behaviors".

10.2.4 Clawbacks of stock-based compensation awards

The Sarbanes-Oxley Act included provisions that called for clawbacks of CEO and CFO compensation in the case prior period financial statements had to be restated. Many companies have "noncompete" clawbacks, which require an employee to return some amount of compensation if he or she leaves to work for a competitor. Other actions that commonly trigger clawbacks include fraud, malfeasance, and the violation of a nonsolicitation agreement (prohibiting a former executive from recruiting other employees for their new employer).

The Dodd-Frank Act requires national security exchanges to require any listed company to include clawback provisions in their incentive compensation plans for current and former executive officers. The clawback provision must indicate that, in the event of certain accounting restatements, the issuer will recover the excess of what was paid over what would have been paid to executive officers based on the restated amounts during the 3-year period prior to the restatement. The provision applies to cash-based incentive compensation programs as well as stock-based compensation arrangements. This requirement is broader than the clawback provision in the Sarbanes-Oxley Act, which permits the SEC (but not the company or its shareholders) to recoup monies for the company from only the CEO and the CFO extending back 12 months, and is applicable only in cases involving the restatement of the financial statements caused by misconduct.

The SEC proposed regulations to implement the Dodd-Frank requirement, but they have not been finalized. Even so, many companies have enhanced their employment contracts to allow for clawbacks in the event the executive:

- Engages in conduct that is detrimental to the company;
- Takes actions that result in restatement of the financial statements or other financial harm to the company;
- Achieves performance-based targets, although expected profits were not actually achieved when considered in hindsight;
- Violates established risk management policies, considered from both a quantitative and qualitative perspective; and

- Demonstrates behavior that, in the discretion of management or the compensation committee, is improper.

These clawback provisions are intended to help companies better align compensation and risk. However, there are a number of challenges in implementing clawbacks. Because some of these clawback provisions are vague, it may be difficult to determine whether they have been triggered. In addition, even when a provision has clearly been triggered, it might not always be clear who triggered it. For example, if a company needs to restate its financial statements, it might not be obvious whether the clawback would apply only to the individual who directly caused the restatement, or should also apply to that person's supervisor who failed to catch the error.

As discussed in SC 2.4, the accounting guidance for many clawbacks is generally straightforward. However, the new breed of clawback features may pose accounting challenges. For example, some provisions may require stock-based compensation awards to be clawed back if certain operating or performance metrics are not met. Because such provisions are linked to the performance of the entity or individual, they would likely be considered "performance conditions" for accounting purposes. The accounting for awards with performance conditions is different from the accounting for awards with clawback features. Further, the company may need to determine whether those measures will be based on the performance of individuals, business units, or subsidiaries. Assessing performance at the individual level may seem like the fairest approach, and it is certainly possible in some cases (e.g., for a trader in a financial services firm). In many cases, however, tracking such measures may be impossible or cost-prohibitive.

The accounting for clawbacks presumes the company and employee mutually understand the key terms and conditions of the clawback feature when the award is issued. A grant date may not be established at the time of issuance of the award if there is subjectivity or discretion regarding the triggering event of the clawback feature. If there is no grant date, variable (i.e., mark-to-market) accounting may be required (if a service inception date is established) for the fair value of the award until settlement or the date that a mutual understanding of the terms and conditions is reached.

To ensure that these performance-type clawback features will result in the establishment of a grant date at inception, the metrics should be clear and objectively determinable. Conditions based on the operations of the employer must be based on metrics that are established up-front at the grant date. These metrics might be based on financial metrics (e.g., revenue, earnings, or EPS targets), operating metrics (e.g., number of accounts opened, new customers or loans signed), or specific actions of the company (e.g., change in control, IPO).

Conditions based on the employee's individual performance will also need to be clear and objective. If metrics are based on employee evaluations and performance ratings, the evaluation process should be well controlled and understood by the employee, be reasonably objective, and serve as a basis for promotion and other compensation decisions.

Some companies provide themselves discretion to claw back compensation awards. This discretion might be related to the contingent event itself (i.e., what triggers the clawback), or to the consequence of the clawback (i.e., what action will the company take as a result of the clawback). This discretion may result in an inability to establish a grant date for accounting purposes upon award issuance, as a grant date can only be achieved when the employer and employee mutually understand the key terms of the award. If the company has discretion to decide when a clawback is triggered, the employee may not be in a position to understand what is required in order to earn and retain the award.

Finally, since clawbacks entail recovering compensation that has already been awarded, enacting a clawback may result in litigation.

10.2.5 Executive compensation disclosures

The Dodd-Frank Act requires companies to describe in their proxy statement the relationship between executive compensation actually paid and the company's financial performance, which is measured by an issuer's Total Shareholder Return (TSR) and TSR relative to peer companies. A need to compare actual pay and financial performance may cause companies to rethink their compensation structures and may incent them to include graphical presentations that demonstrate the relationships between actual pay and performance in various elements of compensation in their CD&A. Companies may also wish to consider reviewing performance metrics to assess the degree to which existing program incentives support the increased emphasis on TSR as a measure of performance.

10.2.6 Taxation of stock-based compensation awards

The tax impact of stock-based compensation awards to both employees (see SC 10.6) and employers (see SC 10.7 and SC 10.8) is a significant consideration in plan design. As discussed in SC 10.10, the tax law determines when an employee is taxed for certain awards such as discounted stock options and stock appreciation rights ("SARs"). Under IRC Section 409A, these awards are taxed on the date of vesting, even if they have not yet been exercised, and a 20% federal penalty is assessed in addition to regular income tax. In addition, every year after vesting until the option is exercised is another taxable event for the employee. Such treatment can easily result in a 75% tax rate and it is difficult to calculate the taxes due and figure out how to withhold taxes from employees, which is required. As a result, few companies knowingly grant discounted stock options or SARs to employees.

10.3 The role of stock awards in compensation plan design

Stock options, restricted stock, and other long-term incentives are critical components of effective compensation programs—in fact, the majority of companies grant at least one, if not a combination of these vehicles to select employee levels.

Figure SC 10-1 summarizes the accounting, tax and plan design considerations for the major categories of employee stock-based compensation awards.

Figure SC 10-1
A primer on stock-based-compensation awards

All awards are presumed to be equity-classified except for the cash-settled SAR and phantom stock

	At-the-money stock options (non-qualified) with service condition	Incentive stock options (qualified)	Discounted stock options	Premium options	Stock-settled SAR	Cash-settled SAR	Restricted stock or restricted stock units (RSUs)	Performance shares with performance conditions
Description	Stock option with exercise price equal to stock price at grant date, vests based on	Same as nonqualified at-the-money stock option except for special tax treatment if	Stock option with exercise price less than stock price at grant date	Option with exercise price set higher than grant date stock price	Employee receives stock equal to intrinsic value at exercise; otherwise identical to	Same as stock-settled SAR except intrinsic value at exercise paid in cash	Grant of shares (restricted stock) or promise to issue shares (RSUs) upon	Restricted stock or units that vest based on time-based vesting plus attainment of

	At-the-money stock options (non-qualified) with service condition	Incentive stock options (qualified)	Discounted stock options	Premium options	Stock-settled SAR	Cash-settled SAR	Restricted stock or restricted stock units (RSUs)	Performance shares with performance conditions
	continuous employment over specified time period	the option complies with IRC requirements			nonqualified stock option; may be at-the-money, discounted or premium exercise price		completion of service condition	non-stock-price-related performance conditions (e.g., revenue or EPS)
Pros	Employee benefits from stock price increases; can be issued to employees and directors; simple to understand; provides more 'upside' potential than restricted stock	Same as nonqualified at-the-money option except employee may receive capital gain treatment instead of being taxed as ordinary income	Same as at-the-money option except provides reward even if stock price declines somewhat; employee may perceive that discount has more value than increase in fair value	No value to employee unless stock price rises above premium; increases motivation; reduces fair value	Same as nonqualified stock option plus exercise price need not be paid by employee, and reduces dilution compared to broker-assisted exercise	Same pros as stock-settled SAR except for accounting under ASC 718 and no share dilution	Simple for employees to understand; provides value if stock price declines; less share usage as compared to stock options	No expense unless performance target attained; employee motivated to reach targets; shareholders also benefit if targets reached
Cons	Has no 'downside' risk if stock price declines below exercise price; may not provide optimal linkage with business, compensation and shareholder objectives	Same as nonqualified at-the-money stock options; employer generally has no tax deduction unless disqualifying disposition; can only be issued to employees; no tax benefit recorded for accounting purposes until exercise and a disqualifying disposition	Unfavorable tax treatment for employee under IRC Section 409A	Employee may demand more options to make up for perceived reduction in value	Same as nonqualified stock options	Mark-to-market accounting; otherwise same as nonqualified stock options; requires use of cash	Provides less value than options if stock price rises; may be viewed as a giveaway by shareholders	Difficulty in calibrating performance condition
Accounting under ASC 718	Expense based on fair value at grant and number of options that vest, recognized over service period	Same as nonqualified at-the-money stock options; no tax benefit recorded for accounting purposes until exercise and a disqualifying disposition	Same as nonqualified option; fair value higher than at-the-money stock options but generally increase is less than discount amount	Same as nonqualified at-the-money stock options except lower grant-date fair value	Same as nonqualified stock options	Considered liability award with mark-to-market fair value (using an option-pricing model); total expense equals cash paid to employee	Expense based on grant-date fair value of stock and number of shares that vest, recognized over service period	Same as restricted stock except recognize compensation cost over the period when targets will probably be attained and true-up for actual vesting

	At-the-money stock options (non-qualified) with service condition	Incentive stock options (qualified)	Discounted stock options	Premium options	Stock-settled SAR	Cash-settled SAR	Restricted stock or restricted stock units (RSUs)	Performance shares with performance conditions
US taxation	Employee: Subject to income and employment taxes based on intrinsic value (difference between stock price and exercise price) at exercise Employer: Deduction equal to employee's income	Employee: No employment taxes; no tax at exercise (other than AMT); subject to capital gains tax at sale of shares (may have ordinary income if a disqualifying disposition occurs) Employer: Deduction equal to employee's ordinary income; no deduction unless disqualifying disposition	Employee: Under IRC Section 409A, discounted options treated as deferred compensation with employee taxed at vesting and 20% penalty applied Employer: Deduction equal to employee's income	Same as nonqualified at-the-money stock options	Same as nonqualified stock options	Same as nonqualified stock options	Employee: Subject to tax at vesting based on stock price on that date; may elect under IRC Section 83(b) to be taxed at grant date. RSU's may allow for further deferral opportunities Employer: Deduction equal to employee's income when taxed	Same as restricted stock

	Performance shares with market conditions	Options with performance conditions	Awards with vesting accelerators	Indexed option	Reload options	Maximum value options	Phantom stock
Description	Same as performance shares with performance conditions except with targets related to stock price increases or relationship of stock price to an index	Stock option that vests based on attainment of performance condition	Options or restricted stock with time-based vesting where vesting accelerates if specified targets are attained, (performance or market condition is attained)	Options with exercise price that increases (or decreases) at regular intervals, either by fixed percentage, reference to published index or peer group stock price changes	Grant of new options, subject to same expir-ation date as original option, for shares of owned stock used in option exercise	Stock option with cap on maximum level of appreciation (e.g., two times exercise price)	Grant of hypothetical stock units (full value or appre-ciation only) equivalent to shares of stock. Units generally valued based on a formula and employee receives cash upon exercise or vesting
Pros	Employee directly motivated to increase stock price; fair value per share generally lower than stock price at grant	Same as performance shares except have greater upside potential of an option	Increase employee motivation to achieve targets	Same as premium options if exercise price only increases; exercise price could drop (e.g., when peer group prices fall) then employees may be rewarded for doing better than peers	Locks in stock price appreciation for employee but retains value of future appreciation	Reduced compensation expense with little or no reduction in employee's perceived value	Simple to understand

	Performance shares with market conditions	Options with performance conditions	Awards with vesting accelerators	Indexed option	Reload options	Maximum value options	Phantom stock
Cons	Compensation expense not reversed if targets not attained; lattice model generally required to measure fair value	Same as performance shares except no protection against reduction in stock price	Targets may be outside employee's direct control; retention value lost once targets are reached	More complicated to understand and administer; fair value complex to calculate; shareholders may question why employees are rewarded when stock price declines	May ultimately have higher compensation expense	Caps upside potential value; hard to explain to employees; generally requires lattice model	Mark-to-market accounting if settled in cash
Accounting under ASC 718	Fair value at grant-date reflects market condition using lattice model; expense recognized over derived requisite service period and not reversed if targets are not attained	Same as performance shares with performance condition	For awards with performance condition, see performance shares with performance conditions. For awards with market conditions, see performance shares with market conditions	Generally needs a lattice model to measure fair value; cross-volatility assumption may be needed; otherwise accounting same as at-the-money stock options; could be a liability if index is something other than stock price	Same as nonqualified options with reload treated as new grant; original grant and each reload may have short expected term assumption, reducing fair value and expense	Same as at-the-money stock options except fair value lower due to cap; generally need lattice model to measure fair value	Same as cash-settled SAR
US taxation	Same as restricted stock	Same as nonqualified options	Same as options or restricted stock	Same as nonqualified options	Same as nonqualified options with reload treated as new grant	Same as nonqualified options	Employee: Subject to ordinary income tax.

10.3.1 Costs and benefits of stock-based compensation plans

Companies should attempt to estimate the perceived value to their employees of a stock-based compensation plan and compare that perceived value to the fair value determined under ASC 718. According to academic research and empirical data, there may be a significant gap between the cost, as measured in accounting terms, and the perceived value to the employee of a stock-based compensation award. Some of the more prominent observations are:

- Academic research finds that the cost of stock-based compensation to a company (fair value) often exceeds what participants perceive to be the value of stock-based compensation, due to factors such as lack of diversification, non-transferability, and risk aversion.

- Research further indicates that the cost/benefit gap increases for lower level employees because those employees are less able to bear the increased risks (i.e., lack of diversification) associated with stock-based compensation.

- Generally, the cost/benefit gap also increases proportionally to the extent that the stock-based compensation is out-of-the-money (e.g., the gap is narrowest for at-the-money options and widest for underwater or premium-priced stock options).

- In one study, observed trades of cash for stock-based compensation confirmed that the fair value of the stock-based compensation in such trades exceeded the value of the cash compensation that was replaced (e.g., $12,000 of stock-based compensation was required to replace $10,000 of cash compensation).

- Surveys of employees' preferences can be used to better understand the perceived value of alternative forms of stock-based and cash compensation. Perceived value is a temporal notion that hinges on current economic and market factors.

10.3.2 Practical implications of ASC 718 on plan design

When designing a long-term incentive plan, a company should consider the following steps:

- Estimate the fair value and compensation cost associated with each alternative design.

- Ascertain employee preferences regarding different forms of stock-based compensation (e.g., use focus groups, employee surveys, etc.) to estimate the cost/benefit relationship of alternative strategies.

- Develop plan designs that balance share usage/dilution, tax deductibility, deduction timing, the effective tax rate, compensation cost, cash flow, earnings per share and administrative costs.

- Re-evaluate the total compensation mix (e.g., cash vs. equity) to optimize value for total compensation cost.

- Introduce performance targets in stock-based compensation plans, particularly for senior executives and assess implications of market versus performance conditions.

- Develop methodologies to compare different forms of compensation for external benchmarking and internal purposes.

- For non-US employees, make sure that new plan designs maximize tax deductibility in all jurisdictions.

- Determine the administrative requirements and costs of new plan design.

- Evaluate communications strategies.

- Reconsider the range of long-term incentive eligibility within the organization.

- Provide differentiation in grants to reward high performers and/or employees with higher retention risk.

10.4 Plan design process: An expanded set of constituents

To address the requirements of ASC 718, tax planning, and other considerations on plan design, most companies need to draw on an array of subject matter experts. The cross-function plan design teams have the responsibility for creating, documenting, and benchmarking alternative plan designs and presenting those alternatives for management and compensation committee approval.

Prior to the adoption of the guidance in ASC 718, most companies' planning teams consisted primarily of human resources staff, who were responsible for overseeing executive compensation, with separate involvement by the legal department and limited involvement by members of the finance and tax departments. Subsequent to the adoption of the guidance in ASC 718, companies have needed to expand the role that members of the legal and finance departments play on the plan design team and encourage a greater degree of participation and coordination among team members. If business-performance metrics are to be used in future stock-plan awards (e.g., for vesting), the team probably needs to also include operations and business unit managers.

Figure SC 10-2 summarizes the roles of the members of a company's plan design team.

Figure SC 10-2

Typical roles of corporate departments in designing long-term incentives

Department	Typical roles
Stock plan administrator/ human resources	Chairs the team; develops competitive stock plan and benchmarking data for long-term incentives; recommends eligibility rules; recommends the types and amounts of long-term incentive awards; advises on the general competitiveness of the company's plan in the market; coordinates with business units on correlating stock plans to business strategy, selecting the metrics, and targeting performance levels; coordinates employee surveys and communications
Finance	Determines the financial feasibility and impact of implementing, modifying, and using long-term incentive compensation plans (considers a range of issues from accounting costs to shareholder dilution to cash flow implications); provides (through payroll department) compensation information that is to be included in the proxy statement; involved in the valuation and reporting of awards
Tax	Determines the tax liabilities and benefits of long-term incentive compensation for the employer and employees (for both US and foreign employees); assists with the design, modification, implementation, and use of the various types of long-term incentive compensation awards; coordinates compliance with income tax accounting rules under ASC 718 and 740; advises on IRC Section 409A deferred compensation rules; advises on IRC Section 162(m) rules
Investor relations	Assesses major investors' views on plan design and share-allocation requirements; coordinates (with the human resources and legal departments) necessary shareholder approvals
Legal/corporate secretary	Ensures compliance with laws and regulations during the design, modification, implementation, and use of long-term incentive compensation plans; drafts the plan; coordinates (with the human resources department) proxy disclosure requirements; prepares compensation committee resolutions

Boards of directors' compensation committees are also becoming more involved in the overall design process, which culminates in the plans being approved by the committee and the full board of directors. Compensation committees are often engaging independent compensation consultants to

review proposed plans and provide guidance to the committee as it makes its final decision. Many companies will become more proactive in considering the views of their key shareholders and shareholder advisers when designing stock-based-compensation plans and are advised to disclose sufficient information about newly designed plans to ensure that shareholders understand the plan's objectives and operation. In addition, the board's audit committee should oversee the financial reporting, disclosure, and valuation issues related to ASC 718. Finally, CD&A and SEC executive compensation proxy disclosure rules require extensive reference to ASC 718 calculations, including reference to the assumptions used to estimate fair value.

10.5 Employee stock purchase plans (ESPPs)

Under ASC 718, ESPPs generally result in compensation cost. A company may wish to continue operating its ESPP as currently designed, regardless of the compensation cost, to provide its employees with the maximum benefit. Because the compensation cost associated with an ESPP (including the discount and fair value related to the look-back provision) are incurred only for employees who voluntarily participate, the overall compensation cost of an ESPP may be lower than initially expected. This is in contrast to broad-based stock option grants that result in cost for all recipients, regardless of whether those recipients view the options positively. However, a company that wants to reduce its ESPP compensation cost should consider the following alternatives:

- Making the ESPP's discount comply with ASC 718's safe-harbor discount of 5% and eliminating the look-back provision (results in no charge).
- Keeping the discount at historical levels and eliminating the look-back provision (results in a reduced charge).
- Eliminating the discount and keeping the look-back provision (results in a reduced charge).
- Eliminating multiple-period ESPP plans or those with a reset provision for the look-back price (results in a reduced charge).
- Some companies are swapping the company-stock-purchase-option in their 401(k) plans and replacing it with an ESPP. This initiative reduces the company's fiduciary risk related to the 401(k), while still offering employees with an option to invest in company stock (thus mitigating any negative perceptions associated with the company-stock purchase removal from the 401(k)). It also provides an additional corporate tax deduction opportunity for dividends paid on stock held in the plan.

See further discussion of the accounting for ESPP's in SC 5.

10.6 Income tax considerations — Employee's taxable income

The following section summarizes some of the key individual income tax considerations related to stock-based compensation under US federal income tax laws and regulations. It is intended to provide helpful context for considering plan design from the employer perspective. However, it is not intended to be and should not be considered comprehensive authoritative guidance for any specific employer or employee tax consequences.

10.6.1 Basic rules for employees' taxable income

An understanding of how employees are taxed for stock-based compensation in the US requires knowledge of the underlying principles of deferred compensation: the principles of economic benefit and constructive receipt. Application of these principles, together with certain statutory provisions (described in SC 10.6.1.1), determines when a taxable event occurs and the amount that should be taxed.

10.6.1.1 Economic benefit and constructive receipt

The economic benefit doctrine specifies that when an employer transfers property to an employee, such as shares of restricted stock or an economic benefit in cash or property (e.g., the funded and secured right to receive cash in the future), the employee's receipt of that cash or property should be taxed immediately unless the transfer is subject to a substantial risk of forfeiture.

The constructive receipt rules govern the timing of an employee's inclusion of compensation, such as a stock-based compensation award, in taxable income. As a general rule, a cash-basis individual taxpayer is taxed when the individual receives an item of income. However, income that is not actually received (or deemed to have been received under the economic benefit doctrine) will be taxed if it has been constructively received. Income is constructively received when the income is set aside, credited to, or made available so that the individual may draw upon it at any time without substantial limitation or restriction. IRC Section 409A partially codifies the constructive receipt rules but does not alter or affect the application of any other IRC provision or common law.

Together, the doctrines of economic benefit and constructive receipt provide a framework for determining when stock-based compensation awards will be included in the employee's taxable income. However, in the vast majority of situations, statutory provisions specifically dictate how those doctrines apply to stock-based compensation awards. The IRC (including IRC Section 83, discussed further in SC 10.6.1.2) specifically addresses the most common stock-based compensation awards, including restricted stock, restricted stock units, nonqualified stock options, and statutory stock options. Those awards are described in SC 10.6.2, SC 10.6.3, SC 10.6.4.1, and SC 10.6.4.2.

10.6.1.2 IRC Section 83

Generally, stock-based compensation will be taxed under IRC Section 83, which requires that property (such as shares of stock) that is transferred to an employee or independent contractor will be taxed as ordinary income at the earlier of when the property is transferable by the employee or is not subject to a substantial risk of forfeiture. Shares of stock are considered property; however, neither cash nor an unfunded and unsecured promise to pay is considered property. A transfer of property occurs when an employee acquires a beneficial ownership interest in the property.

If an employee receives the benefits and risks of holding the property, generally the employee is considered to have beneficial ownership and a transfer to the employee has occurred within the meaning of IRC Section 83.

Property is transferable by the employee (and therefore taxable to the employee) if (1) the employee receiving the award can sell, assign, or pledge (such as for collateral for a loan) his or her interest in the property and (2) the employee is not required to give up the property or its value in the event the substantial risk of forfeiture materializes. A substantial risk of forfeiture is a condition which if not met can result in a forfeiture of the property. Whether a risk of forfeiture is substantial depends upon the

facts and circumstances. The most common risk of forfeiture is the risk that the employee will fail to meet a requirement to continue to perform services for the employer during a specified period (i.e., an employee's failure to fulfill a service condition) or that designated performance or market conditions are not met. Treasury Regulation Section 1.83-3(c)(2) describes other situations that may result in a substantial risk of forfeiture, as well as provides examples of conditions that do not cause a substantial risk of forfeiture.

10.6.1.3 Section 83(i) "qualified stock" deferrals

As a result of the 2017 Tax Cuts and Jobs Act, qualified employees of certain private companies may elect to defer tax for up to five years after the exercise of stock options or the settlement of RSUs ("qualified stock"), with the taxable value locked in at exercise or settlement. This election is not available with respect to any current or prior CEO or CFO, any 1% shareholder, the top four officers during the preceding 10 years, or any relatives of such persons. If the entity is no longer a private company (such as through an IPO) or the stock otherwise becomes transferable (including back to the company), the deferral period would end.

10.6.2 Restricted stock awards - tax implications to employees

In a typical restricted stock award, the employer gives the employee, or allows the employee to purchase, shares of the employer's stock. As discussed in SC 1.3, ASC 718 also refers to restricted stock as unvested or non-vested shares. While the employee is considered the owner of the restricted stock for purposes of state law, the employee's right to the stock is generally subject to a substantial risk of forfeiture and generally cannot be transferred until the service, performance, or market condition associated with the award is satisfied. If the specified condition is not satisfied during the award's requisite service period, the employee will forfeit the stock and return the shares to the employer. Because the employee's right to the restricted stock cannot be transferred and is subject to a substantial risk of forfeiture, the employee will postpone including the restricted stock in taxable income until the right becomes transferable or the risk of forfeiture lapses or expires, whichever occurs first.

Once the substantial risk of forfeiture lapses (i.e., vesting occurs), the employee recognizes compensation (i.e., ordinary) income equal to the fair market value of the restricted stock on the vesting date less any price the employee has paid for the stock (i.e., the intrinsic value). For stock of a publicly traded corporation, the fair market value of restricted stock equals the traded market price of a similar unrestricted share of the same class of stock. The employee's income from the restricted stock will be subject to federal income tax, employment taxes, and potentially state and local taxes. Thereafter, the employee's tax basis in the stock is the fair market value of the stock on the vesting date; the employee's holding period for capital gains purposes begins immediately after the vesting date.

Once the employee is vested, the employer must report the income to the IRS on a timely basis, and also withhold the applicable taxes. As a result, employees should be prepared to sell sufficient shares or have cash available to pay the withholding taxes. Alternatively, if the employer permits, employees may choose to have the employer withhold shares with a value equal to the required withholding taxes. Employers that withhold shares (often referred to as a net settlement) should carefully review the accounting implications of this withholding alternative. As described in SC 3.3.6, if an employer withholds an amount that exceeds the employee's maximum statutory rate in a jurisdiction, the stock-based compensation award would be classified as a liability under ASC 718.

A service recipient (i.e., a company who engages an independent contractor) must report to the IRS compensation paid to independent contractors. There is no required withholding unless the backup withholding rules apply.

10.6.2.1 Capital gains tax on restricted stock awards

Upon selling the vested shares, the employee will recognize a capital gain or loss on the difference between the sale price and his or her basis in the shares. The tax treatment will depend on how long the employee holds the shares before disposition. If the employee holds the shares for more than one year and the price exceeds the tax basis of the shares, the gain will be taxed as a long-term capital gain. If the employee holds the shares for one year or less, the gain will be taxed as a short-term capital gain. The employee may also be subject to state and local taxes on the gain depending on where the individual works and resides.

10.6.2.2 IRC Section 83(b) elections on restricted stock awards

An IRC Section 83(b) election enables an employee to pay income tax on the fair market value of property such as a restricted stock award on the date it is transferred (e.g., the date it is granted) rather than on the vesting date, as required under the normal rule of IRC Section 83(a). Thus, an IRC Section 83(b) election effectively means that the employee ignores the substantial risk of forfeiture provision in an award or believes that the risk of forfeiture is not significant. An IRC Section 83(b) election does not, however, change the requirement that the employee satisfy the vesting condition. If the employee fails to satisfy the vesting condition, the award will still be forfeited.

Any appreciation in the restricted stock after the grant date will be taxed as a capital gain (either long- or short-term) instead of as ordinary income with the capital gains holding period commencing at the date of grant instead of the vesting date. The employer will be required to withhold applicable taxes at the grant date, and the employee will have to make arrangements with the employer to satisfy the withholding requirements. The result of this election for stock that appreciates in value after the grant date is a reduction in the taxes that the employee incurs. Conversely, if the stock declines in value, the employee is limited to a capital loss upon sale of the stock.

Employees should be aware that an IRC Section 83(b) election is not without risk. For example, if the employee does not satisfy the vesting condition, the award will be forfeited and the employee will not be allowed an ordinary loss (but may recognize a capital loss) with respect to any amounts actually paid for the stock but not on the income recognized under the IRC Section 83(b) election. The employee also bears the risk of a market decline between the grant date and the vesting date.

An IRC Section 83(b) election must be filed no later than 30 days after the grant of the restricted stock award and, once filed, is irrevocable. The election must be filed with the IRS service center where the employee normally files his or her tax return. The employee no longer must attach a copy to the tax return for the taxable year in which the election is made.

10.6.2.3 Dividend treatment on restricted stock awards

If dividends are paid on restricted stock during the vesting period, the dividend income will be treated as compensation income and will be subject to the reporting and withholding rules described in SC 10.6.2.1 (i.e., ordinary income to the employee). Once the restricted shares are vested, the dividends will receive normal dividend treatment and will not be subject to the withholding rules that apply to compensation income. If the employee makes an IRC Section 83(b) election, dividends received on the

restricted stock will be treated as regular dividends during the vesting period. Employers should coordinate with their transfer agent and/or stock-plan administrator to avoid duplicate or incorrect reporting of dividends on restricted stock.

10.6.3 Restricted stock units - tax implications to employees

Similar to restricted stock, an RSU is an incentive designed to reward an employee with employer stock provided the specific vesting condition is met. However, unlike restricted stock, an RSU is merely a promise to deliver stock at some future date as defined by the terms of the award. There is no transfer of shares on the grant date and no asset for employees to establish either legal or economic ownership of during the vesting period. Employees do not have voting or dividend rights until the shares are transferred and there is no opportunity to make an IRC Section 83(b) election at the grant date because RSUs constitute a promise to deliver property in the future – not an actual transfer of property at the grant date.

After an RSU becomes vested, the number of shares under the vested RSU is transferred to the employee on a fixed date or a fixed event (often on the vesting date). IRC Section 83(a) provides that the employee will have compensation income on the transfer of vested shares equal to the FMV of the stock on the transfer date less any amount paid by the employee.

Under IRC Section 409A, RSUs are considered deferred compensation and must comply with IRC Section 409A or result in an additional 20% federal tax penalty to the recipient, additional underpayment penalties, and an acceleration of taxation to the vesting date. Refer to SC 10.10 for further discussion of IRC Section 409A.

RSUs that are settled at the time of vesting must be structured to either comply with IRC Section 409A or satisfy the short-term deferral exception. Some RSU plans have a deferral feature, under which the employer delivers the shares in a year later than the year of vesting or allows employees to voluntarily postpone receipt of the shares past the vesting date. Any deferral beyond the vesting date must comply with the IRC Section 409A rules.

There are a number of non-US jurisdictions that tax restricted stock at the grant date rather than the vesting date. Multinational companies that wish to convey a similar economic benefit while deferring tax until the actual receipt of the shares should consider granting RSUs rather than restricted stock. Prior to granting restricted stock and/or RSUs, multinational companies should review the tax laws of each jurisdiction.

10.6.3.1 Dividend equivalents on RSUs

Typically, employees do not receive voting or dividend rights on RSUs until delivery of the shares. However, an employer may choose to pay dividend equivalents on its RSUs prior to vesting or deliver the cumulative dividend equivalents on the vesting date. Dividend equivalents, if paid, will be treated as compensation income and are subject to the normal reporting and withholding rules for compensation.

10.6.4 Stock options - tax implications to employees

In the US, two types of stock options are generally offered to employees: nonqualified stock options and incentive stock options (ISOs). Nonqualified stock options are extremely flexible, allowing the employer to grant options to employees and non-employees, and set the term of the options for

periods of more than ten years. However, nonqualified stock options generally result in the employee's taxable income being included on the option's exercise date. ISOs, on the other hand, are generally not taxable to the employee until the underlying common stock is sold, but they must meet certain statutory requirements in order to qualify for such favorable tax treatment.

IRC Section 409A somewhat limits the flexibility of nonqualified stock options. Under IRC Section 409A, a nonqualified stock option must meet the following requirements: (1) be granted on stock that is "service recipient stock," (2) have an exercise price that is (or could be at some point in the future) at least equal to the stock's fair market value on the grant date, and (3) not defer the employee's income tax to a date after exercise of the option. If these criteria are not met, the option generally will be considered to be deferred compensation and therefore will be subject to the provisions of IRC Section 409A, including the potential for a 20% penalty tax (refer to SC 10.10 for additional information). A dividend equivalent right provision may also cause the nonqualified stock option to fail to meet the criteria. ISOs, qualified ESPPs, and restricted stock awards (but not RSUs) are specifically excluded from the definition of deferred compensation under IRC Section 409A.

10.6.4.1 Nonqualified stock options - tax implications

In general, most nonqualified stock options granted to employees do not have a readily ascertainable fair market value. Thus, the employee is not deemed to have received compensation for tax purposes on the grant date. Such options will be taxed at exercise, assuming the options are vested at that time. If the options are not vested at the time of exercise (i.e., "early exercise"), the employee would normally be taxed at the time those shares subsequently vest, similar to restricted stock awards (SC 10.6.2). However, an employee could make an IRC Section 83(b) election in this situation (SC 10.6.2.3), thereby including the value of the unvested shares (less the option exercise price) in taxable income when the option is exercised.

Like the US, most foreign jurisdictions tax stock options at the time of exercise. However, some foreign jurisdictions tax the employee at a time other than the exercise date, for example, at grant or at the time of vesting. Some jurisdictions allow the employee's tax to be deferred until the stock is sold, so long as certain conditions are satisfied (similar to what is allowed by the rules governing ISOs in the US; see SC 10.6.4.2). Multinational companies should understand the tax rules that apply to option awards to employees in all of their jurisdictions to understand the effect on employee behavior and the company's compliance obligations.

If an employee purchases shares or exercises an option using a loan from the employer and the employee is not required to repay all or part of the loan or if the loan is not adequately secured, the purchase or option exercise generally is not treated as a transfer of the underlying shares for tax purposes. Rather, it is treated as a new option or an extension of the existing option to purchase the shares and the taxable transfer is delayed until the loan is repaid. If the transaction is treated as a purchase of the shares and the loan is forgiven, the forgiven debt should be treated as compensation and subject to income and employment taxes. The employer must withhold taxes on the value of the forgiven debt and report the amount as compensation income. Further, if in making a loan the employer does not charge interest at the prevailing rate, interest will be imputed and the employee will be liable for income tax and applicable employment tax on the imputed income. However, in the case of below-market loans, the employer will not be required to withhold employment taxes and report the amount of the imputed income if the underlying value of the loan is $10,000 or less.

Not only might a loan feature result in additional unintended tax consequences for the employee and employer, it also presents potential corporate-governance issues. The Sarbanes-Oxley Act places

restrictions on direct and indirect personal loans to certain executives. Under Section 402 of the Sarbanes-Oxley Act, "Enhanced Conflict of Interest Provisions," it is unlawful for a company to directly or indirectly provide credit or arrange for the extension of credit in the form of a personal loan to or for any director or executive officer. Employers should also consider whether their cashless-exercise program may be affected by this rule (refer to SC 3.3.7 for more information on this type of program). Loans can also result in a number of accounting issues as described in SC 2.3.

10.6.4.2 Statutory stock options - tax implications

There are two kinds of statutory stock options: ISOs and options that are granted under a qualified employee stock purchase plan ("ESPP"). Like nonqualified stock options, both types of statutory stock options are contractual promises that permit an employee to acquire the employer's stock on a future date under terms established on the grant date. However, because ISOs and ESPPs meet specific IRS requirements, they are not taxed on either the grant date or the exercise date (or purchase date in the case of qualified ESPPs). Instead, employees are taxed when they sell their shares. If the employee completes a qualifying disposition, whereby the employee sells the stock at least two years after the grant date and one year after the date of exercise or purchase (the statutory holding period), the employee will recognize a greater capital gain and less ordinary income on the sale of the stock. If the employee sells the stock before the statutory holding period ends, the sale will be a disqualifying disposition and the employee will recognize more ordinary income, which is taxed at a higher rate. Employment taxes (FICA) will not be due for either ISOs or ESPP shares.

10.6.4.3 Incentive stock options - tax implications

In addition to complying with the statutory holding-period requirement, an option must also satisfy the following conditions in order to qualify as an ISO:

- **ISOs may be granted only to employees.** For purposes of the ISO rules, the term "employee" has the same meaning as it does in the withholding tax rules of IRC Section 3401(c). Thus, outside directors and other independent contractors may not be granted ISOs.

- **ISOs plans may not last longer than ten years and an option exercise period cannot be longer than 10 years from grant.** Options under the plan must be granted within ten years from the date that the plan is adopted or approved by shareholders, whichever is earlier. Although the term of the plan is ten years, all ISOs may have up to 10 years for exercise, so that even an ISO granted in the ninth year of a plan may have a ten-year term (5 years for a 10% shareholder).

- **ISOs must have a FMV exercise price.** The exercise price cannot be less than 100% of the fair market value of the stock at the grant date (110% in the case of options that are granted to shareholders that hold 10% of the company's stock). A reasonable, good-faith method may be used to determine the fair market value. If it is determined that the exercise price is less than the fair market value of the stock on the grant date, the option cannot be treated as an ISO and will be considered a deferred compensation arrangement subject to IRC Section 409A.

- **ISOs must be exercised within three months of an employee's termination.** If termination results from disability, ISO treatment may continue up to one year following termination. If an employee dies and the ISO is transferred by bequest or inheritance, the option may continue to be treated as an ISO for its full term. An ISO can specify a shorter exercise period if desired.

- **Only a limited number of ISOs may be granted.** Not more than $100,000 worth of ISOs, valued at the grant date, may become exercisable in any year for an individual employee. Any stock options granted that exceed the $100,000 vesting limit will be treated as nonqualified stock options. This limit applies on an aggregate basis to all ISO plans of the employer, its parent, and subsidiaries awarded to an individual employee. While the assessment is initially made at the time of grant, it should be re-assessed as needed, for example if a change in control accelerates vesting of ISOs.

- **The ISO plan must be approved by the company's shareholders within one year after the plan is adopted.** The approved plan must specify the aggregate number of shares that can be issued and the eligible class or **classes of employees that may participate in the plan**.

- **ISOs may only be granted on the employer's stock.** ISOs cannot involve a partnership interest.

- **ISOs cannot be transferred.** The option agreement should specifically state that the ISOs cannot be transferred, other than through a will or by the laws of descent.

If an employee sells the shares obtained from the exercise of the option through a qualifying disposition, the individual will pay only long-term capital gain taxes on sale proceeds that exceed the option's exercise price. Although an employee does not recognize taxable income until the shares are sold or otherwise disposed of, the employee will have to make an adjustment to reflect the alternative minimum tax (AMT) in the year of exercise. The excess of the fair market value of the shares at exercise over the exercise price is included in the calculation of the taxpayer's AMT as a tax adjustment item. This adjustment is not required if the shares are sold in the same year as the option is exercised.

If an employee fails to meet the statutory holding-period requirements (i.e., if the employee sells the shares within two years after the grant date or one year after the exercise date including via a net share settlement), the ISOs will be deemed as having been disposed of in a disqualifying disposition. In a disqualifying disposition, the exercise of the option will be treated as though the option was a nonqualified stock option. Even though employment taxes will not be due, ordinary income tax will be imposed on the stock's fair market value on the exercise date less the exercise price.

If the amount realized on the sale exceeds (or is less than) the sum of the amount paid for the shares and the amount of income recognized on the disqualified disposition, the gain (or loss) is determined under the rules of IRC Section 302 or 1001, as applicable.

The employer is not required to withhold income tax on any portion of the ordinary income or capital gain that is triggered upon disposition; however, the employer is required to report the compensation income on the employee's Form W-2.

10.6.5 Employee stock purchase plans - tax implications

ESPPs allow employees to purchase company stock (usually via a payroll deduction) at a discount that does not exceed 15%. For purposes of federal income tax, this discount does not result in immediate compensation, provided that the statutory holding period requirements and the requirements of IRC Section 423 are met. For a plan to qualify as an ESPP, it must meet the following requirements:

- ESPPs may only be offered to employees of the employer or related corporations.
- ESPPs must be granted to all employees on an equal basis.
- ESPP shares may be purchased only by an individual who is an employee from the grant date to three months before the purchase date.
- An employee who has voting power that is greater than 5% may not participate in the plan.
- Certain employees may be excluded from participating in an ESPP, including
  - Employees who have been employed for less than two years.
  - Employees who customarily are employed 20 hours or less per week.
  - Employees who customarily are employed no more than five months in a calendar year.
  - Highly compensated employees, as defined in IRC Section 414(q).

Because ESPPs must be granted to all employees of US companies to qualify for favorable treatment under IRC Section 423, multinational companies should generally be careful not to exclude those employees who work for overseas branches or representative offices of US companies.

ESPPs must also comply with the following conditions:

- The plan is approved by the shareholders of the company within 12 months before or after the plan is adopted.
- The plan designates the aggregate number of shares that may be issued.
- The awards granted under the ESPP are in the stock of the employer.
- The term during which a participating employee has the option to purchase the employer's stock cannot exceed 27 months, unless the option price is not less than 85% of the stock's fair market value at the time that the option is exercised.

Further, an employee cannot accrue a right to purchase more than $25,000 (valued at the grant date) of stock each year under any ESPP of the employer, its parent company, and subsidiary corporations.

If the ESPP designates a maximum number of shares that may be purchased by each employee during the offering, or establishes a fixed formula to determine that number (such as $25,000 divided by the fair market value of the stock on the first day of the offering period), the first day of the offering period is deemed the "option grant date." Establishing this date is critical to avoiding issues under IRC

Section 409A. If no maximum is set, the option grant date for purposes of establishing the minimum exercise price is deemed to be the exercise date.

In the case of a qualifying disposition, if an option has an exercise price that takes advantage of the IRC Section 423 discount feature, the employee must include in ordinary income, at the time that the stock is disposed (assuming that the statutory holding-period requirement is met), the lesser of the following two amounts:

- The amount of the fair market value of the shares at the time of the disposition or the employee's death that exceeds the exercise price of the option.
- The amount of the stock's grant-date fair market value that exceeds the option's exercise price.

Any additional gain upon selling the stock should be treated as a long-term capital gain.

If the stock is sold through a disqualifying disposition, the employee will recognize ordinary income that is equal to the difference between the purchase date fair market value and the purchase price. This amount is considered ordinary compensation income in the year of sale even if no gain is realized on the sale. The difference between the proceeds of the sale and the employee's basis in the stock will be treated as a capital gain or loss. Ordinary income that the employee recognizes upon a disqualifying disposition of ESPP shares constitutes taxable income and should be reported by the employer on the employee's Form W-2; however, taxes do not have to be withheld.

Unlike ISOs, ESPPs provide that even in a qualifying disposition some amount of ordinary income will be recognized at the time of sale. However, the amount of ordinary income in a qualifying disposition is generally lower than the amount of ordinary income in a disqualifying disposition.

10.7 Employer's income tax deductions for stock-based awards

The following section summarizes some of the key corporate income tax considerations related to stock-based compensation under US federal income tax laws and regulations. It is intended to provide helpful context for considering plan design from the employer perspective. However, it is not intended to be and should not be considered comprehensive authoritative guidance for any specific employer or employee tax consequences.

Most areas of the income tax laws and regulations can be overwhelmingly complex and rule-driven. It should therefore come as no surprise that an employer's reporting of income tax deductions for stock-based compensation is a complicated matter. This section reviews the income tax rules for employers that companies commonly need to address when they design or modify their stock-based compensation plans. The following guidance should be considered a summary, not an all-inclusive description. Because the rules that govern employers' reporting of income tax deductions continue to evolve, companies should monitor the legislation and IRS regulations for new developments.

See TX 17 for a discussion of the financial accounting implications of income taxes associated with stock-based compensation.

10.7.1 Employer's income tax rules for stock-based awards

As discussed in the preceding section of this chapter regarding employee's taxable income, IRC Section 83 provides guidance on the taxation of stock-based compensation to the employee. IRC Section 83 also specifies how an employer should deduct stock-based compensation on its tax return. IRC Section 83(h) provides that upon the transfer of property in connection with the performance of services, the "person for whom services were performed" (i.e., the employer) may claim a corporate tax deduction under IRC Section 162. The amount of the employer's tax deduction should equal the amount that was included in the gross income of the person who performed the services (this includes both employees and nonemployee service providers). If the employer timely reports the income on the employee's Form W-2 or on Form 1099 for independent contractors, (1) the person is deemed to have included the compensation in gross income and (2) the company may deduct the compensation on its tax return.

The employer's compensation deduction is generally allowed in the taxable year during which (or with which) the employee's taxable year ends. In other words, the employee's tax year is considered first, and the deduction may be delayed if the employer and employee use different taxable years. Consider the following examples:

- If the employer and employee are both calendar-year-end taxpayers, the timing of the employer's deduction will generally correspond with the timing of the employee's recognition of income for the compensation.

- If the employer's tax year ends on August 30, any compensation paid to the employee after December 31 and before September 1 may cause a one-year delay in the reporting of the employer's tax deduction.

Treasury Regulation Section 1.83-6(a)(3) makes a significant exception to this timing rule. The exception permits the employer to take a deduction in accordance with its method of accounting (cash or accrual) if the property is substantially vested upon transfer. Typically, most non-qualified stock-based compensation awards, other than restricted stock, will qualify for this exception and the deduction will be taken when the employee recognizes income.

Companies that do not have a calendar year-end should familiarize themselves with this regulation because the timing of recognizing the employer's tax deduction will impact the recognition of the tax impacts of the awards in the financial statements.

Companies will recognize windfall tax benefits when the uncertainty about the amount of the deduction is resolved, which is typically when an award is exercised or expired, in the case of share options, or vests, in the case of nonvested stock awards, subject to normal income tax valuation allowance considerations. For example, assume an employer's fiscal and tax years end on June 30. If a taxable exercise of a non-qualified stock option occurs on May 1, 20X6 (during the company's fiscal year ended June 30, 20X6), the employee will reflect the compensation income in their tax return for the year ending December 31, 20X6. Any compensation earned by the employee between January 1 and June 30 may not be deductible by the employer until its following fiscal year. Therefore, the company may not be able to reflect a tax deduction until its June 30, 20X7 tax return, as that is the company's tax year that includes the year-end date of the employee's 20X6 tax year.

10.7.2 Tax deductions for various types of stock awards

The following section discusses the timing of deductions by employers for restricted stock, restricted stock units, and stock options.

10.7.2.1 Restricted stock award tax deductions

The timing of the deduction for restricted stock awards will typically correspond with the employee's recognition of income under IRC Section 83(a). Because restricted stock shares are not fully vested upon transfer, the employer's deduction is subject to the general timing rule under Treasury Regulation Section 1.83-6(a)(1). Thus, the employer's deduction is taken in its tax year in which the employee's tax year ends. This guidance assumes that the compensation will have been included, or deemed to have been included, in the employee's gross income due to the employer's timely reporting.

If the employee makes an IRC Section 83(b) election (which accelerates the employee's income recognition), the employer is allowed to take the tax deduction in the year that the employee reports the compensation in gross income. If the amount of compensation that the employee recognized is not properly reported for tax purposes on the employee's Form W-2 (or the independent contractor's Form 1099-MISC), the employer will not be able to claim its deduction unless it can prove that the employee properly recognized the amount as compensation.

10.7.2.2 Restricted stock unit tax deductions

Similar to restricted stock awards, the timing of the deduction for RSUs will correspond with the employee's recognition of income upon vesting. However, because most RSU shares are fully vested upon transfer, the employer's tax deduction is generally taken under the special timing rule under Treasury Regulation Section 1.83-6(a)(3). Therefore, to the extent that the RSU income is timely reported by the company on the employee's Form W-2 (or the independent contractor's Form 1099-MISC), the employer may take a deduction in accordance with its method of accounting in the year the vested shares are transferred. Because an RSU is a promise to deliver shares to the employee in the future and does not represent an actual property interest, it is not until the shares are both vested and transferred (as sometimes the share transfer is delayed by the employer) that the employee will have taxable compensation and the employer is eligible to claim a tax deduction.

10.7.2.3 Nonqualified stock option tax deductions

Nonqualified stock options are not treated as property on the grant date for purposes of IRC Section 83, unless the option is in the uncommon position of having a readily ascertainable fair market value at that time. The grant of a nonqualified stock option to an employee is generally not reported on the employee's tax return. Instead, the compensation event occurs when the options are exercised and the underlying stock is delivered, at which time the employee is taxed. If the employee receives vested shares upon exercising the option, the employer is entitled to a tax deduction at the time of exercise. The timing of the deduction will be determined under Treasury Regulation Section 1.83-6(a)(3), which permits the employer to take a deduction in accordance with its method of tax accounting. If, however, the shares delivered upon exercise are not substantially vested and if the employee does not make an 83(b) election, the employee's taxation is delayed under IRC Section 83(a), and the employer would take its deduction under the general rule of Treasury Regulation Section 1.83-6(a)(1).

10.7.2.4 Statutory stock option tax deductions

If the employer has granted statutory stock options (e.g., ISOs or ESPPs), it will receive a tax deduction only upon a disqualifying disposition. If there is a disqualifying disposition, the employer will be entitled to a tax deduction if (1) the employee recognizes ordinary income at the time of sale and (2) the employer reports the income. An employer that otherwise satisfies the requirements of IRC Section 6041 will be regarded as having fulfilled those requirements in a timely manner if the employer gives the employee a Form W-2 or Form W-2(c) (as appropriate), and files the form with the IRS by the date that the employer files the tax return that claims the deduction related to the disqualifying disposition.

Many companies allow employees to transfer their shares to personal brokerage accounts. When that occurs, companies may lose the ability to track disqualifying dispositions and corporate tax deductions may be lost. Companies that continue to grant ISOs might consider requiring that shares be held with a specified broker during the holding period, requesting annual self-reporting by employees, or legending the stock (which is a restriction that prevents the shares from being sold or transferred until approved by the company) to prevent sales without notification to the company.

10.8 Limitations on stock-based compensation tax deductions

The following section summarizes some of the key corporate income tax considerations related to stock-based compensation under US federal income tax laws and regulations. It is intended to provide helpful context for considering plan design from the employer perspective. However, it is not intended to be and should not be considered comprehensive authoritative guidance for any specific employer or employee tax consequences.

10.8.1 IRC Section 162(m) limitation

The tax deduction that an employer is eligible for under IRC Section 83(h) may be subject to certain limitations. One limitation is the million-dollar limitation, which was established by IRC Section 162(m). IRC Section 162(m) provides that for public companies, the annual compensation that may be deducted in a year with respect to covered employees is limited to $1 million per covered employee. Prior to the 2017 tax law changes, certain performance-based compensation was exempt from this limitation. That exception may still be applied to remuneration paid under a written binding agreement that was in effect on November 2, 2017 and has not been materially modified. There was previously an exemption under the IPO transition rules for newly public companies, which was eliminated in 2020.

All individuals who hold the position of either chief executive officer or chief financial officer at any time during the taxable year are covered employees. Covered employees also include the company's three other most highly compensated officers, pursuant to the SEC's rules for executive compensation disclosures in the annual proxy statement. Any individual who is deemed a covered employee will continue to be a covered employee for all subsequent taxable years, including years after the death of the individual. The anticipated effect of the Section 162(m) limitation should be considered, using one of three methods, when recognizing deferred tax assets for awards that may be subject to the limitation. The selection of a method should be treated as the election of an accounting policy and should be applied consistently. We believe any of the following approaches would be acceptable for

determining whether a deferred tax asset should be recorded for stock-based compensation that is subject to the IRC Section 162(m) limitation:

- The impact of future cash compensation takes priority over stock-based compensation awards. In other words, if the anticipated cash compensation is equal to or greater than the total tax deductible annual compensation amount ($1 million) for the covered employee, a company would not record a deferred tax asset associated with any stock-based compensation cost for that individual.

- The impact of the stock-based compensation takes priority over future cash compensation. In other words, a deferred tax asset would be recorded for the stock-based compensation up to the tax deductible amount.

- Prorate the anticipated benefit between cash compensation and stock-based compensation and reflect the deferred tax asset for the stock-based compensation award based on a blended tax rate that considers the anticipated future limitation in the year such temporary difference is expected to reverse.

10.8.2 Golden parachute rules

In addition to the IRC Section 162(m) limitation, the tax deduction for stock-based compensation may also be limited by the golden parachute rules under IRC Section 280G. IRC Section 280G(a) provides that an employer is not allowed to take a deduction for an excess parachute payment. An excess parachute payment is any payment that serves as compensation to (or that is for the benefit of) a disqualified individual and:

- is contingent on (1) a change in ownership or effective control of the corporation, or (2) a change in ownership of a substantial portion of the corporation's assets; and

- has an aggregate present value that equals or exceeds an amount that is three times the base amount.

Treasury Regulation Section 1.280G-1 specifies that certain compensation payments can be excluded from the definition of parachute payments. Some forms of stock-based compensation may qualify for this exception, such as reasonable compensation for services that are actually rendered after a change of control; payment from certain privately held companies; payment from qualified plans; and payments made by a small-business corporation.

To determine the IRC Section 280G value of stock options, taxpayers must use an option valuation model, such as Black-Scholes, to determine the parachute value of a stock option where vesting is accelerated upon a change of control. To accurately track the corporate tax deduction related to stock options with parachute value, companies may need to establish a separate tracking mechanism for the time these options remain outstanding following the change of control.

10.9 Awards to employees of non-US subsidiaries

Stock-based compensation that is granted to the employees of a US company's non-US subsidiaries will generally not result in a US federal income tax deduction for the parent company. There are two specific considerations to address in this area:

- Under IRC Section 83(h), the tax deduction is granted only to the employer for whom the services were performed. If the non-US employee provides services only to the non-US subsidiary and such services benefit only the non-US subsidiary's business operations, the US parent company will not be entitled to a tax deduction for such awards.

- In certain countries, the non-US subsidiary may be entitled to a corporate tax deduction that can be calculated in the same manner as the US deduction. In many jurisdictions, the non-US subsidiary must bear the cost of the award in order to be eligible for a local corporate-tax deduction. By charging the award's cost to the non-US subsidiary, the consolidated company may be able to lower its overall corporate-tax expense and repatriate cash to the United States. If costs are recharged to the non-US subsidiary, the recharge of stock-based compensation costs to the non-US subsidiaries in return for cash (1) should be treated as the company's issuance of capital stock in exchange for cash or property and (2) should not result in the issuing company's recording a taxable gain or loss on the transaction. According to IRC Section 1032(a) and Treasury Regulation Section 1.1032-1(a), the US parent company would be allowed to receive cash payments from its non-US subsidiaries in exchange for its stock and would not be required to record for tax purposes any income, gain, or loss related to such arrangement.

Before implementing a recharge agreement in a given jurisdiction for purposes of claiming a local corporate tax deduction, multinational companies should review the tax laws of each jurisdiction to ensure that foreign exchange, social tax, or treasury share issues will not limit or prohibit the recharge. Companies should also consider the impact of a recharge arrangement on the new global intangible low-taxed income (GILTI) and base erosion and anti-abuse (BEAT) taxes, which may be favorable or negative depending on each company's specific facts and circumstances. There may be a number of recordkeeping issues with such recharge agreements to ensure that costs are appropriately charged to the correct local entity and that employee income tax withholdings have been determined appropriately. Additionally, companies should consider whether statutory accounting requirements may impact the timing or amount of the deduction. For example, an amendment to IFRS 2 provides guidance on the accounting for stock-based compensation in subsidiary financial statements. This guidance may impact the timing and amount of a corporate tax deduction in certain jurisdictions. Companies should consider consultation with local accounting and tax advisors to determine how the different requirements interact.

10.10 Summary of IRC Section 409A

IRC Section 409A determines when an employee is taxed for stock-based compensation awards (see SC 10.2.6, SC 10.6.3, SC 10.6.4, and SC 10.6.5). Section 409A provides a broad definition of nonqualified deferred compensation and provides rules related to the timing of elections and distributions under deferred compensation arrangements. In addition to affecting deferrals of cash compensation, IRC Section 409A has significant implications for stock-based compensation plans.

While Section 409A includes a very broad definition of nonqualified deferred compensation, the regulations confirm that ISOs, qualified ESPPs, and restricted stock awards (but not restricted stock units) are specifically exempt from the provisions of IRC Section 409A. In addition, the regulations provide that nonqualified options are not deferred compensation and are not subject to Section 409A if:

- The option is over "service recipient stock;"

- The exercise price of the option can never be less than the fair market value of the underlying stock on the grant date;
- The receipt, transfer, or exercise of the option is subject to taxation under IRC Section 83; and
- The option does not include any deferral feature other than deferral of income from the grant date until the option exercise date.

Options with a floating exercise price that could be less than the fair market value of the stock on the grant date will be treated as deferred compensation under Section 409A. Further, the payment of a dividend equivalent contingent upon the exercise of the option will be treated as a reduction in the exercise price causing the option to be deferred compensation under Section 409A. Companies should review their plans to ensure that the exercise price and dividend equivalent rights meet the requirements under Section 409A.

The regulations include a similar exception for both cash- and stock-settled SAR plans.

In order for both nonqualified stock options and SARs to be exempt from Section 409A, the award must be over "service recipient stock." Generally, a stock right may cover common stock of the employing company or another company directly up the corporate chain. The rules regarding service recipient stock are complex and should be carefully examined in each individual circumstance. The regulations provide that service recipient stock is any class of stock that is common stock for the purposes of IRC Section 305. Any class of common stock may be used, even if another class of service recipient stock is publicly traded or has a higher aggregate value outstanding, provided that the common stock does not have a preference to distributions and cannot be subject to mandatory repurchase (other than a right of first refusal) or a put or call right that is not a lapse restriction, unless the price paid is the current fair market value on the repurchase event. An American Depository Receipt or American Depository Share, to the extent that the stock is traded on a foreign exchange, continues to qualify as service recipient stock.

Other stock-based compensation grants may be exempt from IRC Section 409A if the compensation is paid during the "short-term deferral period." The Treasury Regulations provide an exclusion to Section 409A for compensation that is paid in the year of vesting or no later than 2 1/2 months after the end of the later of the employer's tax year or the employee's tax year in which vesting occurs. Thus, for example, an RSU that transfers the stock in the year of vesting is generally excluded from Section 409A.

Stock-based compensation awards that do not fall within the exceptions are generally subject to the requirements of IRC Section 409A. Section 409A imposes restrictions on the timing and form of deferral elections, the timing of distributions/payments and the use of certain trusts to fund the arrangements. If these requirements are not met, the individual is subject to accelerated taxation, enhanced underpayment interest, and an additional 20% tax.

Chapter 11: Employee stock ownership plans (ESOPs)

11.1 Employee stock ownership plans (ESOPs) chapter overview

This chapter provides an overview of employee stock ownership plans (ESOPs) as well as questions and interpretive responses to specific aspects of presentation and recognition. The guidance for ESOPs is located in ASC 718-40. This chapter includes some supplemental and interpretative guidance, but does not include the entirety of the accounting framework contained in ASC 718-40.

AICPA Statement of Position (SOP) No. 76-3, *Accounting Practices for Certain Employee Stock Ownership Plans*, was the principal source of guidance before the issuance of SOP 93-6, *Employers' Accounting for Employee Stock Ownership Plans,*" which is now codified in ASC 718-40. The guidance of SOP 76-3 was not carried forward to the FASB Accounting Standards Codification, but under the original transition provisions of SOP 93-6, employers could elect to continue to account for shares acquired by an ESOP on or before December 31, 1992 under SOP 76-3. We have not included detailed guidance under SOP 76-3 in this guide, but information can be found in SOP 76-3. The following EITF consensuses also provide further interpretive guidance on the application of SOP 76-3:

- EITF 89-10, *Sponsor's Recognition of Employee Stock Ownership Plan Debt*
- EITF 89-8, *Expense Recognition for Employee Stock Ownership Plans*
- EITF 87-23, *Book Value Stock Purchase Plans*

The key difference between the guidance in ASC 718-40 and SOP 76-3 is that compensation cost recognized under SOP 76-3 is based on the historical purchase cost of the shares rather than the fair value of the shares at the time they are allocated to employees.

11.2 Overview of ESOP plans

An employee stock ownership plan is a qualified stock bonus plan, or a combination stock bonus and money purchase pension plan (essentially a defined contribution plan), that is designed to invest primarily in employer stock, and that meets the requirements of the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code of 1986.

ESOPs are established for many reasons, including (1) to provide employees compensation and an ownership stake in the company, (2) as a form of takeover protection, (3) as a financing vehicle, (4) as a means to take a company private, (5) to transition ownership from a single owner or a group of owners (i.e., an exit strategy), or (6) to realize available tax incentives. In addition to the tax advantages provided by other employee benefit plans, ESOPs may enable employers and others to qualify for the following, if specific requirements are met:

- Contributions to an ESOP that are used to repay loans incurred to purchase employer securities may be deducted if they do not exceed 25% of the compensation paid to participants.
- Contributions to an ESOP that are used to pay the interest on the ESOP loan may not be subject to the 25%-of-compensation limit.

- Certain dividends on employer stock held by an ESOP may be deductible by the employer for tax purposes if the dividends are:
  - paid to ESOP participants,
  - used to repay the ESOP loan, or
  - at the election of the participant, either distributed to the participant or reinvested in employer stock.
- An individual who sells shares of a C-corporation to the ESOP may be able to defer the recognition of the taxable gain on the sale of the shares, if certain requirements are met.

An ESOP may purchase the employer's shares from an existing shareholder, the employer's unissued shares or shares held in treasury, or shares outstanding in the public equity market, or may also purchase the employer's debt securities. Alternatively, new classes of capital stock are frequently created specifically for ESOPs. See SC 11.3.3.

Shares issued to the ESOP are allocated by the ESOP trustee to plan participants in accordance with the plan agreement. Shares are allocated to individual employees even though they may not vest for a period of time and will not be distributed to them until retirement or termination.

Some companies' bylaws prohibit non-employees from owning employer stock, thereby requiring participants to sell their shares back to the ESOP or the company upon termination of employment or retirement. Large publicly-traded companies typically do not require participants to sell their shares upon leaving the company.

At a high level, a typical ESOP is just another way to provide compensation to employees in the form of employer stock. Depending on the specific terms of the ESOP, including when and how shares are allocated to individual participants, the amount and timing of recognition of compensation expense may vary, but the basic principle is that compensation expense will be recognized for the value of the shares awarded to the employee over the requisite service period.

11.3 Types of ESOPs

There are four types of employee stock ownership plans: (1) nonleveraged ESOPS (see SC 11.3.1), (2) leveraged ESOPS (see SC 11.3.2), (3) convertible preferred stock with a put option (see SC 11.3.3), and (4) convertible preferred stock with guaranteed redemption (see SC 11.3.4).

11.3.1 Nonleveraged ESOPs

In a nonleveraged employee stock ownership plan, the employer contributes cash to the ESOP, which is used by the ESOP to purchase the employer's stock, or the employer contributes its stock directly to the ESOP. This type of ESOP is essentially a defined contribution plan, or part of a defined contribution plan. An employer's accounting for contributions to a defined contribution plan and the related compensation cost to be recognized are specified in ASC 715-70. ASC 718-40, *Employee Stock Ownership Plans*, also contains guidance for nonleveraged ESOPs (see SC 11.4.1).

Many employers have established nonleveraged ESOPs within their 401(k) plans when employer stock is offered as an investment option to participants or there is or was a company contribution of

employer stock. The funds in these 401(k) plans held in company stock can be converted to nonleveraged ESOPs within the plan to take advantage of the dividend deduction opportunity, as described in SC 11.2.

11.3.2 Leveraged ESOPs

In a leveraged employee stock ownership plan, the ESOP borrows funds from a bank or other lender. The employer that sponsors the ESOP generally guarantees the loan or otherwise commits, directly or indirectly, to make contributions, pay dividends, or both to the ESOP. Alternatively, the employer may make a loan to the ESOP without any external financing. Employer contributions to the ESOP and, in most instances, dividends on the employer's stock held by the ESOP, are used by the ESOP to service the debt, whether with a third party or with the sponsor. In cases when there is a third-party lender, it is common for the third-party lender to provide a loan to the employer, and for the employer to make a loan to the ESOP.

11.3.2.1 Debt terms and share allocation of a leveraged ESOP

Some leveraged employee stock ownership plan borrowings have terms that require level repayment of the debt over a period of years. Alternatively, the repayment schedule for the ESOP loan could depend on the employer's expected cash flow or expected compensation costs. Loans may be structured to require only interest payments for a number of years or may permit negative amortization of the principal amount. Debt agreements may also require prepayments of debt if the employer's cash flow exceeds certain thresholds or may permit voluntary prepayments by the employer. Shares issued to the ESOP may be allocated to participants (employees) based on principal payments or principal and interest payments, depending on the particular ESOP plan and IRS regulations. In cases when there is a loan from a third party to the employer with a corresponding loan from the employer to the ESOP, the outside loan from the third party is frequently repaid more rapidly than the loan from the employer to the ESOP. The repayment of the loan to the ESOP (from the employer in these cases) triggers the release and allocation of shares to participants in the ESOP.

11.3.2.2 Dividends paid on shares held in a leveraged ESOP

Some leveraged employee stock ownership plans are structured so that much of the amount necessary to service the debt comes from dividends paid on the shares of stock held by the ESOP. Dividends on allocated shares—i.e., essentially shares that are deemed to be owned by the employees—are not treated as compensation expense but are charged by the employer directly to retained earnings. For this reason, some preferred stocks issued to leveraged ESOPs pay dividends at rates that may be higher than the dividend rates for similar securities.

ASC 718-40-25-16 requires employers to account for dividends on unallocated shares as a payment of debt or accrued interest (if the dividends are used to pay debt service) or as compensation cost (if the dividends are paid to participants or added to their accounts) (see SC 11.4.2).

Pursuant to ASC 718-740-45-8, the tax benefit of tax-deductible dividends on allocated and unallocated employee stock ownership plan shares should be recognized as a component of income tax expense. See TX 17.

11.3.2.3 Cash flow impact of payments on leveraged ESOP debt

Payments made on principal balances of outstanding employee stock ownership plan loans obtained from outside lenders that are funded through contributions (either cash or as dividends) from the employer should be reflected as financing cash outflows. Under ASC 718-40, the employer that sponsors the ESOP effectively consolidates the ESOP, reflecting both the loan and the cost basis of the shares held by the ESOP on the employer's balance sheet. ASC 718-40-25-9 indicates that employers should accrue interest cost on the debt, and should report cash payments to the ESOP that are used by the ESOP to service debt (regardless of whether the source of cash is employer contributions or dividends) as reductions of the debt and accrued interest payable when the ESOP makes payments to the outside lender. As the contributions are reflected as reductions of the debt and accrued interest balances, the cash flows associated with paying down the principal balance of the debt should be reported by the employer as financing cash outflows (FSP 6.7.2). The payments associated with interest should be reflected as operating cash outflows.

11.3.3 Convertible preferred stock with a put option in an ESOP

Some companies have issued a class of convertible preferred stock (rather than common stock) to an employee stock ownership plan due to, among other things, the additional flexibility this allows with respect to dividends and the potential for mitigating the earnings per share dilution impact from ESOP shares.

An ESOP may purchase employer securities in the form of convertible preferred stock that is not readily tradeable on an established market. Under federal income tax regulations, employer securities held by ESOP participants that are not readily tradeable must include a put option. The put option gives participants the right to demand that the employer redeem shares of employer stock held by the participant for which there is no market at a price determined by a fair valuation formula. The employer may have the option to issue other of its marketable debt or equity securities for all or a portion of the put option rather than pay cash. In some cases, the provisions of the ESOP may permit the ESOP to buy the employer’s stock under the put option instead of the employer buying it back; however, in no case can the employer require the ESOP to assume the obligation for the put option.

In ESOPs when the employee has the option to put the preferred stock to the ESOP trustee for cash or employer common stock, the ESOP trustee would have the right to put the preferred stock back to the employer. In certain plans, the employer may be required to satisfy the put with common stock only, and the ESOP would then sell the common stock in the open market for cash, which it would use to satisfy the employee request for cash.

ASC 480, *Distinguishing Liabilities from Equity*, establishes standards for how an issuer should classify and measure certain financial instruments with characteristics of both liabilities and equity. The guidance in ASC 480 is required to be followed for freestanding financial instruments (as defined in the standard) issued in connection with an ESOP only if they are no longer subject to ASC 718-40 or related guidance. Until that occurs, the instruments would be outside the scope of ASC 480. ASC 480-10-15-8 states that ESOP shares or freestanding agreements to repurchase these shares are not within the scope of ASC 480 because those shares are accounted for under ASC 718-40 or its related guidance through the point of redemption.

Thus, these hybrid securities must be analyzed to determine whether any of the embedded derivative features need to be bifurcated under ASC 815, *Derivatives and Hedging*. ASC 815-15-25 requires that the terms of a convertible preferred stock, excluding the conversion option, be assessed to determine if

the host is more debt-like or equity-like. A conclusion that the host is more debt-like would require further evaluation of the security to determine whether the embedded derivative should be bifurcated. If the security contains any options (whether they are puts, calls, or conversion options, and whether they are contingent or not), the options should be evaluated under ASC 815. Refer to FG 1.6 for additional information.

11.3.4 Convertible preferred stock with guaranteed redemption

An employer may issue a convertible preferred stock to an employee stock ownership plan that is redeemable by the employer at a redemption price equal to the initial value established for the preferred stock. Redemption may be satisfied in common stock, cash, or a combination of both. Alternatively, each share of the preferred stock could be convertible into a fixed number of shares of common stock.

11.4 Accounting for ESOPs

ASC 718-40 applies to all employee stock ownership plans, including those used to settle or fund liabilities for specified employee benefits, such as an employer's 401(k) plan matching contribution.

11.4.1 Accounting for nonleveraged ESOPs

Under ASC 718-40, employers that sponsor a nonleveraged ESOP should account for the arrangement as follows:

- Employers should report compensation cost equal to the contribution called for in the period under the plan.
- The shares contributed or acquired with the cash contributed should be allocated to participant accounts as of the end of the employee stock ownership plan's fiscal year and held by the ESOP until distributed to the employees at a future date, such as on the date of termination or retirement.
- Employers should generally charge dividends on shares held by the ESOP to retained earnings as described in ASC 718-40-25-20.

11.4.2 Accounting for leveraged ESOPs

Under ASC 718-40, employers that sponsor a leveraged ESOP should account for the arrangement as follows:

- The issuance of new shares or the sale of treasury shares to the employee stock ownership plan should be recorded when the issuance or sale occurs, and should report a corresponding charge to unearned ESOP shares, a contra-equity account.
- Employers should recognize compensation cost equal to the fair value of the shares for those ESOP shares committed to be released to compensate employees directly.

  ASC 718-40 uses the concept of "committed to be released" shares, which are "shares that, although not legally released, will be released by a future scheduled and committed debt service payment and will be allocated to employees for service rendered in the current accounting period."

The legal release of shares generally does not occur until debt payments are made, but employee service to which the shares relate is continuous.

ASC 718-40 notes that the period of service to which the shares relate is generally defined in the ESOP documents. The shares are deemed to be committed to be released ratably during the accounting period as the employees perform services, and, accordingly, average fair values are used to determine the amount of compensation cost to recognize each reporting period.

- For ESOP shares used to settle or fund liabilities for other employee benefits, employers should report satisfaction of the liabilities when the shares are committed to be released. Compensation cost and liabilities associated with such benefits should be recognized in the same manner as they would if an ESOP had not been used to fund the benefit.

- Employers should charge dividends on allocated and committed to be released shares to retained earnings; dividends on unallocated shares should be treated as a payment of debt or accrued interest or as compensation cost, depending on whether the dividends are used for debt service or paid to participants.

- For ESOP shares committed to be released that are designated to replace dividends on allocated shares used for debt service, employers should report the satisfaction of the liability to pay dividends when the shares are committed to be released for that purpose.

- Employers should credit the contra-equity account “unearned ESOP shares” as the shares are committed to be released, based on the original cost of the shares to the ESOP. The difference between the amount reported for compensation expense (the fair value of the shares committed to be released) and the amount credited to the contra-equity account (i.e., the cost of the shares to the ESOP) should be charged or credited to shareholders' equity in the same manner as gains and losses on sales of treasury stock (see ASC 505-30-30-5 through ASC 505-30-30-10).

- Employers should report redemptions of ESOP shares as purchases of treasury stock.

- Employers should report loans from outside lenders to their ESOPs as liabilities on the balance sheet and should report the related interest cost on the debt. Employers with internally leveraged ESOPs should not report the loan receivable from the ESOP as an asset and should not report the ESOP's debt from the employer as a liability, or recognize interest income or cost on the employer loan.

11.4.2.1 Recognition upon termination of an ESOP

ASC 718-40-40-7 states that the release of remaining suspense shares to participants upon termination of an employee stock ownership plan results in a charge to compensation in accordance with ASC 718-40-25-11 through ASC 718-40-25-14. It further states "compensation cost should equal the fair value of the shares at the date the ESOP debt is extinguished because that is when the shares are committed to be released."

However, ASC 718-40 defines "committed to be released shares" as "the shares that, although not legally released, will be released by a future scheduled and committed debt service payment." This definition implies that shares may be committed to be released prior to the extinguishment of ESOP debt and, therefore, a compensation charge could be recorded prior to the date of the debt

extinguishment (i.e., at the time the shares are committed to be released in accordance with ASC 718-40-25-12).

As the definition in ASC 718-40 of "committed to be released shares" addresses situations other than termination of the ESOP, the guidance in ASC 718-40-40-7 should be followed only when accounting for a termination of an ESOP. In all other cases, the guidance in ASC 718-40-25-12 should be followed.

11.4.3 Commitments to make future contributions to an ESOP

Employers typically make cash contributions to employee stock ownership plans, either to fund debt service for a leveraged plan or to purchase shares that will be allocated to participants' accounts in the current fiscal period for a nonleveraged plan. On occasion, an employer may commit to make additional contributions to the ESOP (either leveraged or nonleveraged) in the future to purchase additional shares of the entity's stock, which will be allocated to the participant accounts of those employees providing service in the year the contributions are made. This may be the result, for example, of consideration for the plan trustees agreeing to extend the terms of an ESOP loan. Under ASC 718-40-25-13, compensation expense should only be recognized when the shares are committed to be released to participants, the definition of which includes allocation to employees providing service in the current accounting period, not just the commitment to make a cash payment. In this case, no expense should be recognized in the current year. It is the commitment to release shares based on service in the current accounting period, not the employer's cash contribution or commitment to make a future contribution, which represents the economic transfer of compensation to participants in exchange for service.

As noted in ASC 718-40-25-3 through ASC 718-40-25-6, if the employer decides to make an additional stock contribution and those shares are unallocated until some future date, the entity should report the share issuance as a reduction of shareholders' equity, as if they were treasury stock with a corresponding charge to unearned employee stock ownership plan shares (contra-equity). As such, until there is a commitment to release and allocate the shares to participant accounts, no compensation expense should be recorded. This is consistent for both leveraged and nonleveraged ESOPs.

Additionally, the balance sheet should not reflect a liability to the ESOP for a commitment by the employer to contribute additional consideration to the ESOP in the future nor a receivable by the ESOP for the employer’s commitment. In ESOP accounting, an entity typically eliminates transactions between the employer and the ESOP, and accounts for only external transactions. This is described in ASC 718-40-25-9(b), which explicitly calls for the elimination of any loans between the employer and the ESOP, as well as ASC 718-40-40-3, which states that, if the employer makes a contribution to the ESOP or pays dividends on unallocated shares that are used by the ESOP to repay the debt, the employer should charge the debt and accrued interest payable only when the ESOP makes the payment to the outside lender. As a contractual loan between the employer and ESOP plan is eliminated and not reflected as a payable by the employer, we similarly do not believe that the employer should reflect a commitment (even if legally binding) to make additional cash contributions to the ESOP plan in the future in exchange for future service as a liability.

11.5 Questions and interpretive responses specific to ESOPs

The following are questions and interpretive responses specific to employee stock ownership plan accounting and presentation.

11.5.1 Balance sheet presentation of ESOPs

Question SC 11-1 addresses the classification of shares held by an ESOP that are classified outside of permanent equity.

Question SC 11-1

For a leveraged employee stock ownership plan when the stock purchased by the ESOP is classified outside of permanent equity, how should the ESOP's investment in those shares be classified in the sponsor's consolidated balance sheet?

PwC response

Pursuant to ASC 480-10-S99-4, when some or all of the recorded amount of the securities held by the ESOP are required to be classified outside of permanent equity (see FG 7.4.3.2), a proportional amount of the "unearned ESOP shares" contra-equity account should be classified in the same manner.

The contra account could either be presented as a separate line item or could directly reduce the recorded securities amount, provided there is adequate disclosure describing the netting.

Question SC 11-2 addresses the reporting by a parent and its subsidiary in the separate financial statements of a subsidiary borrowing to fund an internally leveraged ESOP.

Question SC 11-2

In reporting of ESOP transactions by a parent, its subsidiary, and the parent's ESOP, how are the following transaction reported by the ESOP and in the separate company financial statements of the parent and its subsidiary?

- Subsidiary obtains a third-party loan and lends the borrowed money to the parent.
- The parent loans the money to the ESOP so it can purchase stock of the parent.

PwC response

The third-party loan obtained by the subsidiary should be accounted for as a loan payable by the subsidiary to the third party. This would be reflected in the consolidated financial statements.

The intercompany loan between the subsidiary and the parent should be accounted for as a loan to the parent by the subsidiary and a loan payable to the subsidiary by the parent. This loan would be eliminated in the consolidated financial statements.

The parent would account for the cash paid to the ESOP as a loan to the ESOP. The ESOP should account for the cash received as a loan from the parent. This loan would eliminate in the consolidated financial statements.

The ESOP should account for the purchase of the parent stock as an investment in the parent. The parent would report the issuance of the shares as an increase to equity. In the consolidated financial statements, the ESOP's investment in the parent's stock would be reclassified to a contra-equity account referred to as unearned ESOP shares.

Question SC 11-3 addresses the accounting for convertible stock with a put option or that is subject to redemption by the sponsor of an ESOP.

Question SC 11-3

Under what circumstances should all or a portion of stock with a put option or a mandatory cash redemption feature held by an ESOP (see SC 11.3.3) be classified outside of permanent equity in the sponsor's balance sheet?

PwC response

ASC 480-10-S99-4 provides the SEC staff's interpretation requiring classification outside of permanent equity of the maximum possible cash obligation if an equity security contains conditions (regardless of their probability of occurrence) whereby holders of the security (e.g., ESOP participants, regardless of whether the underlying shares have been allocated to individual participants) can require the company to redeem the shares for cash. When the cash obligation relates only to a market value guarantee feature (i.e., cash feature only for amount by which the "floor" exceeds the common stock market price as of the reporting date), this guidance requires only the cash portion of the obligation to be classified outside of permanent equity. While this guidance is only applicable to public companies, we believe the interpretation of whether classification outside of permanent equity is appropriate for instruments subject to redemption based on conditions outside the control of the issuer is generally also appropriate for private companies.

11.5.2 Profit and loss of ESOPs

Question SC 11-4 addresses the reporting by a parent and its subsidiaries of committing shares to be released in an ESOP.

Question SC 11-4

A parent has two subsidiaries (Subsidiaries A and B) whose employees are participants in the ESOP. How are shares committed to be released reported by the ESOP and in the separate company financial statements of the parent and its subsidiaries?

PwC response

As the ESOP shares are committed to be released, the parent would recognize compensation cost, or reduce dividends payable or an accrued compensation liability, depending on the purpose for which the shares are being released. The amount should be measured at the current fair value of the shares committed to be released. The parent would reflect the commitment to release the shares as a

reduction of the unearned ESOP shares contra-equity balance. Subsidiaries A and B should record this as a charge to compensation expense for their employees' portion of the shares committed to be released with a corresponding credit to additional paid-in capital consistent with the guidance in ASC 718-10-15-4 for share-based payments to an employee by a related party or other economic interest holder. The commitment to release shares is not an accounting event for the ESOP itself, so no entry would be made by the ESOP for this transaction.

Question SC 11-5 addresses the reporting by a parent and its subsidiary in their separate financial statements of dividends paid to shares held by an ESOP.

Question SC 11-5

A parent has a subsidiary whose employees are participants in the ESOP. The subsidiary obtains a third-party loan and lends the borrowed money to the parent. The parent then loans the money to the ESOP in order for the ESOP to purchase shares of parent stock. How are dividends paid on the parent's stock reported by the ESOP and in separate company financial statements of the parent and its subsidiary?

PwC response

The ESOP would report an increase in cash and dividend income for all of the dividends received by the ESOP. If the dividend payment related to unallocated shares will be used to service the debt, the ESOP would reduce the balance of its loan (and accrued interest) due to the parent.

The parent would charge the dividend payment to the ESOP as a charge to retained earnings (if the dividend payment relates to allocated shares), or as a reduction of the loan payable to the subsidiary (if the dividend relates to unallocated shares) with a corresponding reduction to cash or dividends payable.

The subsidiary would recognize the cash (received from the parent's dividend payment via the ESOP, which pays its loan to the parent, which then in turn pays its loan to the subsidiary) and reduce the intercompany loan receivable from the parent. If the dividend payment or other payments from the parent to the ESOP are not sufficient for the subsidiary to service its third-party loan, and the substance of the arrangement is that the parent will not owe the subsidiary any more than the subsidiary's third-party debt, the "additional" debt service funded by the subsidiary should be reflected as a dividend by the subsidiary to the parent. Accordingly, the subsidiary would charge retained earnings and reduce the intercompany note receivable from the parent. The parent, in turn, would reduce the intercompany loan payable to the subsidiary and increase its investment in the subsidiary.

Dividends on unallocated shares paid to participants or added to participant accounts are compensation expense. Dividends on allocated shares are charged to retained earnings in consolidation.

Question SC 11-6 addresses the accounting for a repurchase of shares by the employer or by the ESOP of private company shares at a contractual redemption price that is other than fair value as of that date.

Question SC 11-6

A private company has an employee stock ownership plan for all of its employees. The ESOP plan document provides that the company will repurchase participants' interests in their ESOP accounts upon retirement at the fair value of the company's stock as of the end of the ESOP plan year preceding distribution.

On June 30, 20X1, an employee retires when the fair value of the company's stock is $40. Assume the fair value as of the preceding plan year end was $59 per share. Because of the decline in the fair value of the company's stock, this creates a situation in which the ESOP must repurchase the shares from the retiring employee at a price that is in excess of the fair value of the shares on the date of repurchase. Should the company record compensation expense for the excess of the repurchase price over the fair value of the stock on the date of repurchase?

PwC response

Not in this situation. As noted in ASC 718-40-25-2, employers are required to give a put option to participants holding ESOP shares that are not readily tradable, which on exercise requires the employer to repurchase the shares at fair value. However, ASC 718-40 does not specifically address when this fair value must be determined. In private company ESOPs, a valuation performed by an outside appraiser as of the preceding year end date is typically used to determine fair value (i.e., the repurchase price) for such put options exercised in a given year. The legal terms of this plan require that the repurchase price be set based on the fair value as of the preceding plan year end. The repurchase of ESOP shares by the company in accordance with those terms is therefore not a discretionary decision by the company to further compensate the participant. Furthermore, it is not a provision designed to keep the participants from bearing the normal risks and rewards of share ownership as a participant in the ESOP plan, but an administrative convenience to facilitate efficient operation of the plan. As such, no compensation charge would be recorded for the excess of the repurchase price over the fair value of the stock on the date of repurchase.

Compensation expense for ESOPs is measured at the fair value of the shares when shares are committed to be released (i.e., as the employees perform the services to which the shares relate) under ASC 718-40. ASC 718-40-30-2 further states that "The amount of compensation expense recognized in previous interim periods should not be adjusted for subsequent changes in the fair value of the shares." Therefore, there is generally no compensation expense to be recorded for the company's repurchase of retiring individuals' shares. Likewise, if the repurchase price was less than the fair value of the stock on the date of repurchase, it would also be recorded as a treasury stock repurchase and there would be no reversal of compensation cost recognized.

Note that this accounting treatment should not necessarily be applied by analogy to other types of share-based awards. As ESOP shares are subject to the guidance in ASC 718-40 and not ASC 718-10 or ASC 718-20, they are not, for example, subject to the guidance in ASC 718-10-25-9 regarding the impact of repurchase features on the classification of a share-based payment award as liability or equity. Had the repurchase been related to a share-based payment award to an employee outside of an ESOP, there may be different implications of the repurchase feature at a price other than fair value on the date of repurchase. See SC 4.8. Similarly, if the terms of the plan, by design, always resulted in a repurchase of the ESOP shares at a premium, that could result in the recording of additional compensation cost.

11.5.3 *Tax effects of ESOPs*

Question SC 11-7 addresses the accounting for the tax benefit of dividends paid on ESOP shares for which the employer receives a tax deduction.

Question SC 11-7

How is the tax benefit resulting from any qualifying dividend deduction recorded in the financial statements?

PwC response

The tax benefit of tax-deductible dividends on allocated and unallocated employee stock ownership plan shares are required to be recognized as a component of income tax expense in the income statement pursuant to ASC 718-740-45-8.

Question SC 11-8 address the income tax accounting for the difference between the fair value and historical cost of shares held by a leveraged ESOP.

Question SC 11-8

What is the appropriate application of ASC 740, *Income Taxes*, for treating differences between the fair value (book expense) and the original cost of employee stock ownership plan shares that are committed to be released for leveraged ESOPs?

PwC response

ASC 740-20-45-11 indicates that the suggested treatment for employee stock options is analogous to ESOPs. Therefore, if the cost of shares committed to be released differs from the shares' fair value, the employer should record the tax effect of the difference to the income statement. Temporary differences that are created based on the timing of expense recognition for income tax and financial reporting purposes should receive normal deferred tax accounting treatment. ASC 718-40-55 contains examples that illustrate the accounting for deferred tax effects of ESOP transactions.

11.5.4 *Earnings per share implications for shares held by an ESOP*

Question SC 11-9 addresses the EPS implication of preferred stock held by an ESOP.

Question SC 11-9

When should convertible preferred stock issued to an employee stock ownership plan impact the computation of earnings per share?

PwC response

As with all convertible securities, the number of additional common shares issuable for convertible securities should not be considered for purposes of calculating basic earnings per share.

As described at FSP 7.5.6, all convertible securities have to be evaluated as to their effect on earnings per share calculations as soon as they are issued. This applies to all shares issued to an ESOP; however, under ASC 718-40-45-6, shares are not considered outstanding until they are committed to be released. Therefore, only the number of common shares that would be issued on conversion of the convertible preferred shares held by an ESOP that have been committed to be released should be deemed outstanding in the if-converted EPS computations for diluted EPS, and only if the effect is dilutive.

Question SC 11-10 addresses the EPS implications of dividends paid on convertible preferred stock held by an ESOP.

Question SC 11-10

The Sponsor has issued convertible preferred stock to the ESOP, which pays dividends at a higher rate than the underlying common stock into which it is convertible. If the sponsor pays dividends on the convertible preferred stock to meet the ESOP's debt service requirements, should net income be reduced in the computation of diluted earnings per share by any additional ESOP contribution that would be required to meet the debt service requirement had the preferred stock actually been converted?

PwC response

Under the if-converted method for EPS purposes, conversion of the preferred stock is assumed as of the beginning of the period. Thus, the dividends paid on the preferred stock would be added back to the numerator of the EPS calculation (net income available to common stockholders). However, if the preferred stock had been converted to common stock, a greater number of common shares would need to be committed to be released to participants in order to fund the ESOP's debt service, since the dividend rate on common stock is lower. That allocation would result in additional compensation expense. Thus, because the allocation of additional shares to participants is a nondiscretionary adjustment as a result of the application of the if-converted method, net income available to common stockholders for purposes of calculating diluted EPS should reflect the additional compensation cost that would arise from the assumed conversion. See ASC 718-40-45-4 and the illustration in ASC 718-40-55-21 through ACS 718-40-55-33.

ASC 718-40-45-4

Employers that use dividends on allocated ESOP shares to pay debt service shall adjust earnings applicable to common shares in the if-converted computation for the difference (net of income taxes) between the amount of compensation cost reported and the amount of compensation cost that would have been reported if the allocated shares were converted to common stock at the beginning of the period.

Question SC 11-11 addresses the application of the treasury stock method to sponsor guarantees of the market value of shares held by an ESOP.

Question SC 11-11

If a sponsor guarantees that the employees or trustee will receive common stock with a market value at least equal to a specified amount for the convertible preferred stock, sometimes referred to as the guaranteed floor, for purposes of calculating diluted earnings per share, would shares assumed to be outstanding ever be increased if the market price of the underlying common stock is less than the redemption price for the preferred stock?

PwC response

Under ASC 718-40-45-7, if the sponsor guarantees a stated minimum value per share that is redeemable in either cash or common stock, and if the value of the shares of common stock issuable is less than the stated minimum value, in applying the if-converted method the employer should presume that such a shortfall will be made up with additional shares of common stock. However, that presumption may be overcome if past experience or a stated policy provides a reasonable basis to believe that the shortfall will be paid in cash.

In applying the if-converted method, the number of common shares issuable on assumed conversion, which should be included in the denominator of the diluted EPS calculation, should be the greater of (a) the shares issuable at the stated conversion rate and (b) the shares issuable if the participants were to withdraw the shares from their accounts. Shares issuable on assumed withdrawal should be computed based on the ratio of (a) the average fair value of the convertible stock or, if greater, the stated minimum value to (b) the average fair value of the common stock. The appropriate ratio should then be applied to the shares issuable at the stated conversion rate to determine the number of shares issuable on assumed withdrawal.

Question SC 11-12 addresses the EPS implications of a sponsor guarantee of the market value of the shares held by an ESOP that must be settled in cash.

Question SC 11-12

If the sponsor is required to satisfy the guaranteed floor feature in cash, should interest be imputed or the reverse treasury stock method applied as a result of such assumed cash payment?

PwC response

ASC 718-40 does not address this question. In our view, the liability to satisfy the guaranteed floor feature is conceptually no different from any other liability of the sponsor. Therefore, the effect of funding the assumed payment should not be considered (i.e., net income need not be reduced to reflect a reduction in interest income or an increase in interest expense as a result of the assumed use of cash to satisfy the guaranteed floor feature). Similarly, it should not be assumed that additional shares would be issued to fund the cash payment (i.e., the reverse treasury stock method).