
Guide to Accounting for Stock-based Compensation

A Multidisciplinary Approach

2013

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This publication has been updated to reflect new and updated authoritative and interpretative guidance since the 2012 edition. See Appendix C for a summary of changes from the 2012 edition.

**To Our Clients and Friends:**

Nearly nine years after being issued, the application of the guidance contained in ASC 718, *Compensation—Stock Compensation*, continues to be a complex undertaking. The guidance's many nuances impact not only the accounting for employee stock-based compensation, but also the related corporate income tax accounting, the calculation of earnings per share, and the presentation of the cash flow statement. The 2013 edition of our stock-based compensation guide explains those and many other issues.

This guide also addresses certain issues that are uppermost on the minds of individuals who are responsible for administering stock-based compensation plans. For example, many companies are deciding to move away from service-based stock options and employee stock purchase plans in favor of awards that align compensation with company performance. This has been accomplished through both the granting of new awards and the modification of existing awards—both of which can have significant accounting ramifications. In assessing alternative plan designs, a company will want to address the related tax consequences for both itself and its employees. The guide explains the considerations necessary to determine if a proposed plan meets the criteria for tax deductibility and whether employees may elect to be taxed on the grant date rather than the vesting date, among others.

This guide will help companies understand the accounting rules that apply to their current stock-based compensation plans. As companies reassess their plans, the guide will help identify alternative plans available, contribute to determining the implications of each plan on the company's financial results, and assist with the development and implementation of a new plan. Given the desire of many companies to better align compensation with the performance and goals of the company and its shareholders, there are sure to be developments in the area of stock-based compensation for years to come.

PricewaterhouseCoopers LLP

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Chapter 1:

Accounting and Disclosure under ASC 718

Chapter 1: Accounting and Disclosure under ASC 718

This chapter addresses how public companies should account for stock-based compensation granted to employees under ASC 718, *Compensation—Stock Compensation*, and discusses the ramifications of the accounting rules.

Under ASC 718, companies that award their employees stock-based compensation will recognize the fair value of those awards in their financial statements, generally beginning on the date the awards are granted. Throughout this guide, the term “stock-based compensation” refers to all forms of employee compensation that fall within the scope of ASC 718. This chapter generally covers the significant accounting aspects of ASC 718 for awards granted by public companies to their employees. The accounting for employee stock purchase plans (ESPPs) and nonemployee awards are addressed in Chapter SC 2 and additional considerations for employee awards granted by nonpublic companies is addressed in Chapter SC 3.

Reading this chapter is not a substitute for reading ASC 718, because it does not discuss all of the accounting guidance that is contained in ASC 718. Some terminology and technical references have been abbreviated in this and other chapters; see Appendix SC A for a list of these abbreviations.

1.1 International Financial Reporting Standards

Accounting for stock-based compensation has also been addressed by the IASB, which issued IFRS 2 in February 2004. Although IFRS 2 and ASC 718 are similar, several differences exist (refer to Appendix SC B for a summary of the principle differences between ASC 718 and IFRS 2).

1.2 FAS 123(R) Resource Group

The “FAS 123(R) Resource Group,” an advisory group to the FASB staff, was created to discuss specific FASB Statement No. 123 (revised 2004), *Share-Based Payment* (FAS 123(R)),¹ implementation issues. The FAS 123(R) Resource Group consisted of individuals from accounting firms, the preparer community, benefits consulting firms, and the staff of the FASB, and included observers from the staffs of the SEC and the PCAOB. The objective of the FAS 123(R) Resource Group was to identify potential implementation issues arising from FAS 123(R), discuss such issues, reach a consensus (if possible), and elevate issues that cannot be resolved to the FASB’s attention. Views of the FAS 123(R) Resource Group on significant issues are incorporated throughout this guide. These views do not represent authoritative guidance; however, the FASB staff has publicly stated that it would generally not expect diversity in practice to develop in regard to a particular issue if the FAS 123(R) Resource Group was able to reach a consensus on that issue.

1.3 Awards within the Scope of ASC 718

ASC 718 applies to all stock-based compensation when a company acquires employee services by:

1. Issuing its stock, stock options, or other equity instruments, except those held by employee stock ownership plans (ESOPs).

¹ During 2009, the Financial Accounting Standards Board integrated and categorized existing U.S. Generally Accepted Accounting Principles (GAAP) into a single source known as the FASB Accounting Standards Codification (ASC). As a result of the ASC, the guidance contained in FAS123(R), and its related FASB Staff Positions is now located within ASC 718.

2. Incurring liabilities whose amounts are based on the price of the company's stock or other equity instruments or incurring liabilities that may be settled through issuance of the company's stock or other equity instruments.

PwC Observation: When shares are given to an individual who is both an employee and a shareholder, management must carefully analyze the facts to determine whether the shares were remuneration for employee services and therefore should be accounted for as stock-based compensation under ASC 718. If the individual received shares commensurate with shares received by non-employee shareholders, it may fall outside the scope of ASC 718.

ASC 718 addresses all forms of employee stock-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 permit employees the right to purchase shares of the company.
- Restricted stock and restricted stock units (RSUs)
 - 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 shares to employees are better termed “nonvested shares” because the employees must satisfy certain vesting conditions to earn the rights to the shares. Nonetheless, as noted below, this guide generally refers to nonvested shares as restricted stock;
 - 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-settled stock-appreciation rights (SARs)
 - A contract that gives the employee the right to receive an amount of stock that equals the appreciation in a company's stock from an award's grant date to the exercise date. SARs generally do not involve payment of an exercise price.
- Cash-settled SARs
 - Similar to a stock settled SAR however, cash settled SARs are settled in cash in an amount equal to the appreciation in a company's stock from an award's grant date to the exercise date.
- 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 Chapter SC 2 of this guide which covers ESPPs in greater detail.
- Long-term incentive plans (LTIPs)
 - Generally a cash settled plan that is earned by employees over a number of years. LTIPs are within the scope of ASC 718 if the amount earned by the employees is based on the price of the company's stock or other equity instruments. An example is a cash award that will be earned by employees if

the Company's stock price achieves a specified target at the end of 5 years. LTIPs that are earned through service or performance conditions are often 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 gives nonpublic companies certain alternatives that are not available to public companies (see Chapter SC 3). ASC 718's definition of a public company is as follows:

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 be a nonpublic company for purposes of applying ASC 718. Once a company files for an initial public offering (e.g., the date the initial prospectus is filed with the SEC), it is considered a public company. 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 definition of a public entity.

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

- A U.S. subsidiary of a parent company whose equity securities are publicly traded in a non-U.S. jurisdiction.
- A subsidiary (Company A) that does not have publicly traded equity securities but is controlled by a private equity fund that in turn is controlled by a public company with publicly traded equity securities (Company B). Company B accounts for its investment in the private equity fund at fair value (in accordance with the Investment Company Act of 1940 and the AICPA Audit and Accounting Guide for Investment Companies) rather than consolidating the private equity fund and its controlled investment companies, including Company A. In this scenario, Company A would be considered a public company.
- An entity (e.g., Limited Liability Partnership C or LLP C) that does not have publicly traded equity securities but is considered a variable interest entity under ASC 810, *Consolidation*, and is consolidated by the primary beneficiary company, that has publicly-traded equity (Company D). Due to LLP C being consolidated by Company D under ASC 810, LLP C is considered to be controlled by a public entity. Therefore, LLP C would meet the definition of a public entity.
- A joint venture formed by two companies, Companies X and Y. Company X has publicly traded equity securities and Company Y does not have publicly traded equity securities. 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. However, if the joint venture is consolidated by Company Y and accounted for under the equity method by Company X, the joint venture may not be considered a public entity.

1.4 Accounting for ESOPs

This guide does not provide guidance to companies that utilize employee stock ownership plans. The current guidance for ESOPs can be found in ASC 718-40.

1.5 Related Parties and Other Economic-Interest Holders

To determine which awards are subject to ASC 718, companies should look beyond related parties and also consider awards from other holders of an economic interest, which includes any person or entity that has a financial interest (e.g., via equity securities, certain contractual arrangements, etc.) in the company. Under ASC 718, a transaction in which 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 should be accounted for by the company as stock-based compensation.

ASC 718's definition of a related party does not differ from the definition in ASC 850, *Related Party Disclosures*. However, ASC 718's definition of other economic-interest holders expands the number of people and entities whose awards to a company's employees would be subject to ASC 718 by the company because it includes people and entities that hold any form of pecuniary interest or arrangement in the company.

1.6 Employees and Nonemployees

Because of differences in the accounting for and measurement of instruments awarded to employees versus nonemployees, companies should establish procedures for ensuring that the recipients of those instruments are properly identified. This section includes the following topics:

- Definition of an Employee
- Member of a Board of Directors
- Employees and Owners of a Pass-Through Entity
- Employees of a Subsidiary or an Unconsolidated Entity
- Leased and Part-Time Employees
- Changes in Employment Status

1.6.1 Definition of an Employee

ASC 718 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.

1.6.2 Member 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 people 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.

For companies that comprise one or more consolidating entities and, thus, have multiple boards of directors, an outside director will be treated as an employee only if the individual is acting as a member of the parent company's board of directors. Additionally, the employee model applies to nonemployee members of a consolidated subsidiary's board of directors if the members of that board are elected by shareholders of the subsidiary that are not controlled directly or indirectly by the parent or another member of the consolidated group.

If the members of a subsidiary's board of directors were not elected by the minority shareholder of the subsidiary, then the awards granted for director services to the subsidiary should be accounted for as a nonemployee transaction. However, in the separate financial statements of the subsidiary, if the members of the subsidiary's board of directors were elected by the subsidiary's shareholders, including controlling shareholders of the consolidated group, then the award granted for director services should be accounted for as an award granted to an employee.

1.6.3 Employees and Owners 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 structure of owners in a pass-through entity (e.g., a partnership). 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 section SC 3.7 titled "Classification of Various Types of Awards Provided to Employees of 'Pass-Through' Entities."

1.6.4 Employees of a Subsidiary or an Unconsolidated Entity

Employees of a subsidiary, that is included in the parent company's consolidated financial statements, are considered employees of the parent company. In the separate financial statements of a subsidiary we believe that the guidance in superseded stock compensation literature² should continue to be followed by analogy because ASC 718 does not contain any specific guidance on this subject.

Under ASC 718, an unconsolidated entity's employees who are granted an instrument in the investor company's equity (e.g., equity-method investees, joint ventures) do not qualify as employees of the investor company. Similarly, awards granted by a company to former employees of the company who are now employed by

² See Questions 3 and 4 of FIN 44.

an unconsolidated joint venture of the company should apply the non-employee guidance in ASC 505-50, *Equity-Based Payments to Non-Employees*, as the employees of unconsolidated entities are not viewed as common law employees of the investor. See additional discussion in Section SC 2.2.8 “Accounting by an Investor for Stock-Based Compensation Granted to Employees of an Equity Method Investee.”

When an equity method investee grants awards to its employees in the shares of other entities, including its investors, the awards would not be subject to the guidance of ASC 718 as the awards are not the equity of the granting company. The investee would account for the awards based on the guidance in ASC 815, *Derivatives and Hedging* (ASC 815-10-55-46 through 55-48).

Figure 1-1 illustrates the accounting for awards granted to companies under common control as part of a consolidated group (assuming equity classification in all scenarios).

Figure 1-1: Awards Granted to Employees of Companies Under Common Control

Scenario 1: Awards of the parent company are granted to employees of its consolidated Subsidiary Z

Parent Company Consolidated Financial Statements	Subsidiary Z Separate Financial Statements
Awards of the parent company granted to employees of a consolidated subsidiary are measured at fair value on the grant date and accounted for in the parent company's consolidated financial statements as awards granted to an employee, as defined by ASC 718.	→ Awards of the parent company granted to employees of consolidated Subsidiary Z are accounted for in the separate financial statements of Subsidiary Z as employee awards under ASC 718. Therefore, Subsidiary Z would recognize compensation cost for the parent company awards in its separate financial statements in accordance with ASC 718 as the grant of an equity award. If Subsidiary Z does not provide any consideration to the parent company for the awards, the offsetting entry to equity is considered a capital contribution from the parent company.

Scenario 2: Awards of consolidated Subsidiary Z are granted to employees of the parent company

Subsidiary Z Separate Financial Statements	Parent Company Consolidated Financial Statements
Awards of Subsidiary Z, a consolidated subsidiary, are granted to employees of the parent company (who are not providing services to Subsidiary Z) and are measured at fair value on the grant date and recognized as a dividend to the parent company in the separate financial statements of Subsidiary Z. The awards would be treated as a dividend to the parent company because the parent company, as the controlling entity, could require Subsidiary Z to grant the awards to the parent company's employees, despite there not being any services rendered to Subsidiary Z.	→ Awards of Subsidiary Z, a consolidated subsidiary, granted to employees of the parent company are accounted for in the consolidated financial statements as employee awards, as defined by ASC 718.

(continued)

Scenario 3: Awards of Subsidiary Z are granted to employees of Subsidiary Y, who are both controlled by the same parent company

Parent Company Consolidated Financial Statements	
Awards of Subsidiary Z, a consolidated subsidiary, are granted to employees of Subsidiary Y, also a consolidated subsidiary. These awards are accounted for in the parent company's consolidated financial statements as employee awards.	
Subsidiary Z Separate Financial Statements	Subsidiary Y Separate Financial Statements
<p>Awards of Subsidiary Z, a consolidated subsidiary, are granted by Subsidiary Z to employees of Subsidiary Y, also a consolidated subsidiary. These awards are measured at fair value on the grant date and recognized as a dividend to the parent company in the separate financial statements of Subsidiary Z. The awards would be treated as a dividend to the parent company because the parent company, as the controlling entity, could require Subsidiary Z to grant the awards to Subsidiary Y's employees.</p> <p>Notwithstanding the general model, we believe in certain circumstances it may be appropriate to account for such awards as nonemployee awards under ASC 505 and recognize the expense in the grantors stand alone financial statements provided it is clear that the the grantor is receiving services in exchange for the award.</p>	<p>The awards of Subsidiary Z granted by Subsidiary Y to the employees of Subsidiary Y are <u>generally</u> considered awards based on the equity of another entity. Under this view, the awards should be accounted for by Subsidiary Y in accordance with ASC 815-10-55-46 through 55-48. For the stand-alone financial statements of Subsidiary Y, if the awards are accounted for in accordance with ASC 815, the fair value of the awards would be measured each reporting period and recognized as compensation cost. The offsetting entry to equity is considered a capital contribution from the parent company.</p>

The accounting discussed in Scenario 1 of Figure 1-1 is also applicable when a parent company grants an award in which the underlying security is a tracking stock. A tracking stock is a security issued by a parent company to track the results of one 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 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; and
- 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 deemed not to be substantive, 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.

1.6.5 Leased and Part-Time Employees

Under ASC 718, certain criteria should be met for a leased individual to meet the definition of an employee, as defined in the Glossary at ASC 718-10-20. Additionally, part-time employees generally meet ASC 718's definition of an employee, because they are considered employees under common law.

PwC Observation: Companies should segregate the awards they grant into two categories, awards to (1) employees and (2) leased employees, because of the additional criteria that should be met for a leased individual to be considered an employee under ASC 718. Management should carefully analyze the facts against those criteria when determining whether a person is an employee or a nonemployee. It may be necessary to seek legal advice about how common law defines these categories. If a leased employee does not meet the definition of an employee, nonemployee accounting would apply.

1.6.6 Changes in Employment Status

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. Although both employee and nonemployee awards are measured at fair value under ASC 718, equity-classified nonemployee instruments are subject to the measurement guidance in ASC 505-50. In addition, footnote 7 of SAB Topic 14 notes that it would 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, nonhedgeability, and the truncation of the contractual term, are not present in the nonemployee award. ASC 718 does not provide specific guidance on accounting for a change in employment status when the recipient continues to provide substantive services. By analogy, we believe that it is appropriate to apply the guidance in superseded stock compensation literature³ to account for the change in employment status. 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.

If the award was not modified in connection with the change in status, but future 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. 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 measurement of the award would be accounted for prospectively under ASC 505-50. However, only the portion of the newly measured compensation cost attributable to the revised requisite service period should be recognized as compensation cost prospectively from the date of the change in status. No adjustment should be made to any compensation cost recognized prior to the change in status unless the award is forfeited prior to vesting.

If the award was modified to allow the recipient to continue vesting in the award after the change in status, 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

³ See Questions 5(a) and 5(b) of FIN 44.

deemed improbable of vesting. The full amount of compensation cost related to the new (modified) award would be measured under ASC 505-50 and recognized prospectively over the revised requisite service period. This is a Type III modification under ASC 718 (as discussed in section SC 1.13.3.1 titled “Modifications of Performance or Service Conditions That Affect Vesting”) because at the modification date, the service condition of the original award is not expected to be satisfied.

PwC Observation: In situations where an employee (a) terminates employment and enters into a consulting agreement with the company or (b) remains an employee but enters into an agreement to provide a reduced level of services, an assessment should be made as to whether the services to be provided by the individual are substantive. All of the relevant facts and circumstances should be considered, including whether the individual’s compensation is reasonable in comparison to the services to be provided to the company 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. If the services to be provided by the individual are not substantive, the transaction would be accounted for as a severance arrangement with no future service requirement; therefore, any related compensation cost would be recognized immediately.

1.7 Measurement Basis and Date

The next several sections of this chapter summarize the measurement requirements of ASC 718, including the implications of those requirements that companies should consider, and include the following topics:

- Measurement Basis
- Measurement Objective
- Use of Market Instruments to Value Employee Stock Options
- Nonvested and Restricted Stock: Definitions and Types of Restrictions
- Measurement Effect Based on Award’s Balance Sheet Classification
- Modified-Grant-Date Model
- Measurement of Awards, Option-Pricing Models, and Assumptions
- Inability to Estimate Fair Value
- Recourse Notes
- Nonrecourse Notes
- Other Measurement Issues: Reloads and Clawback Features

1.7.1 Measurement Basis

ASC 718 principally requires the use of the “fair-value-based method” for measuring the value of stock-based compensation. Employee stock options are not traded in the financial markets and also 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 Measurements and Disclosures*.

1.7.2 Measurement Objective

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 that the company would be obligated to provide when an employee is entitled to the award and is no longer required to provide service to the employer. For most awards, fair value will be measured once at the grant date and will not be adjusted for subsequent changes.

When determining fair value (in accordance with ASC 718-10-55-10 through 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., the Black-Scholes model or a lattice model). 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).

If a company values stock options using either Step 1 or 2 of the valuation hierarchy above, PwC engagement teams are required to consult with the Accounting Services Group within PwC’s National Professional Services Group.

1.7.3 Use of Market Instruments to Value Employee Stock Options

Some companies may try 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 “terms and conditions approach” and the “tracking approach.”

A market instrument designed under the terms and conditions approach attempts to replicate the terms and conditions of an employee stock option. For example, the holder of this type of instrument would be restricted from trading or hedging the instrument, similar to the restrictions placed on employees under the terms of a typical employee stock option. OEA concluded 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, which is to determine the cost to the company of granting the option. OEA believes that the terms and conditions approach would likely not reflect the cost to the company because the investor would, in theory, price the instrument from the viewpoint of the holder of the instrument, not the issuer.

Under the tracking approach, an instrument is designed to replicate the future cash flows associated with an employee stock option. The future cash flows could either be net receipts by employees (through option exercise) or net obligations of the company under the option contract, which, at the point of settlement, are identical amounts. For example, an instrument could have a future payoff to the investor that mirrors the future intrinsic value realized by employees of the company currently holding stock options. Such an instrument would likely be priced by investors based on estimates of the future intrinsic value of the awards upon exercise. Unlike an instrument designed under the terms and conditions approach, OEA believes that the price of 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.

PwC Observation: 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.

1.7.4 Nonvested and Restricted Stock: Definitions and Types of Restrictions

ASC 718 uses two terms: nonvested shares and restricted shares. Each has different implications for measuring fair value. This guide generally refers to nonvested shares as restricted stock.

Restricted stock or RSUs are valued and accounted for as follows under ASC 718:

- Fair value is 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 accumulated during the vesting period and issued to the employee upon vesting of the restricted stock or RSU, the grant-date fair value of the award should not be reduced.
- No value is attributed to awards that employees forfeit because they fail to satisfy service or performance conditions. As such, the number of shares granted is reduced by assumed forfeitures and adjusted based on actual forfeitures until vesting.

See section SC 1.15 titled “Accounting for Dividends Paid on Stock-Based Compensation Awards” in this chapter for guidance on accounting for dividends received by holders of restricted stock or RSUs.

As used in ASC 718, restricted shares refer to shares that are owned by the employee that contain restrictions on sale or transfer. A restricted share, as used in ASC 718 (i.e., a share whose sale is contractually or governmentally prohibited for a specified period of time after the employee has a vested right to it), awarded to an employee shall be measured at its fair value, which is the same amount for which a similarly restricted share would be issued to third parties. 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.

1.7.5 Measurement Effect Based on Award’s Balance Sheet Classification

The classification of stock-based compensation as either equity or liability affects whether the measurement of fair value is fixed (i.e., measured only once) on the grant date or whether fair value will be remeasured each reporting period until settled, as illustrated in Figure 1-2.

Figure 1-2: Balance Sheet Classification

Award Classification	Measurement Effect
Liability-classified award	Remeasured at the end of each reporting period, at fair value, until settlement
Equity-classified award	Fixed on the grant date and not remeasured unless the award is modified

1.7.6 Modified-Grant-Date Model

ASC 718 applies a modified-grant-date model. Under that model, compensation cost is measured on the grant date and adjusted over the period of the employees' services to reflect (1) actual forfeitures and (2) the outcome of awards with performance or service conditions through the requisite service period. For awards that do not vest because service or performance conditions are not fulfilled, no compensation cost is recognized (i.e., any previously recognized compensation cost is reversed). Expectations of forfeitures are not reflected in the grant-date fair value of an individual award under the modified-grant-date-model.

1.7.7 Measurement of Awards, Option-Pricing Models, and Assumptions

The option-pricing model used to measure fair value and the specific assumptions input into the model will have a direct effect on the amount of compensation cost that companies will recognize under ASC 718. Chapter SC 6 provides an overview of how to select an option-pricing model, the financial theory supporting option-pricing models, discusses the required assumptions, and explains the differences between the Black-Scholes model and lattice models. Chapter SC 7 recommends ways of developing the required assumptions under both the Black-Scholes model and a lattice model and presents case studies involving certain assumptions.

1.7.8 Inability to Estimate Fair Value

A public 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.

PwC Observation: Public companies generally are able to estimate the fair value of their stock-based compensation awards; therefore, the use of the intrinsic-value method should be rare. Additionally, under ASC 718, a company cannot switch from the intrinsic-value method to fair value based upon a change in circumstances.

1.7.9 Recourse Notes

A recourse loan is an enforceable obligation in which default may result in loss of collateral and also personal suit and judgment. 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.

Although not specifically noted within ASC 718, superseded stock compensation literature⁴ indicated that the legal form of a recourse note arrangement should be respected (i.e., the stock option is considered to be exercised) unless any one of the following conditions is met:

- The employer has legal recourse to the employee's other assets but 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.

If any of the above conditions are met, 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 arrangement continues to be a stock option for accounting purposes and is therefore not accounted for as an exercised stock option. Nonrecourse notes are discussed in more detail in section SC 1.7.10.

1.7.9.1 Recourse Note with a Non-Market Rate of Interest

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. The compensation cost to be recognized for the purchase of stock is calculated as 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 consider a market rate of interest that would be required for the employee.

1.7.9.2 Forgiveness of a Recourse Note

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.

⁴ See Issue 34 of EITF Issue 00-23.

1.7.9.3 Extension of the Term of a Recourse Note

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 section SC 1.7.9 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 section SC 1.7.9.4 titled “Conversion of a Recourse Note to a Nonrecourse Note” 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.

1.7.9.4 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. Any compensation cost to be recognized should be recognized over the requisite service period of the new award, if any.

1.7.10 Nonrecourse Notes

A nonrecourse note is a loan from a company to an employee that is neither collateralized by nor has recourse to the assets of the employee, other than the stock issued. Typically, nonrecourse notes are used by employees to fund the exercise of stock options or purchase stock. A nonrecourse note received by a company as consideration for the issuance of stock is considered a stock option for accounting purposes as the substance is similar to the grant of an option. 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 (not the term of the note) through a charge to compensation cost and a corresponding credit to APIC or to a liability, depending on the classification of the award.

PwC Observation: When a company permits an employee to exercise a stock option or purchase stock with a nonrecourse note, it is important to consider whether employees are required to provide future service to earn the award and keep the shares because this will impact the attribution period of the related compensation expense. For example, if the employee is not required to provide future service (i.e., the employee can repay the note at any time and keep the award), 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. The maturity date of the note typically does not impact the attribution of expense, but rather reflects the legal term of the “option” for purposes of valuing the award.

1.7.10.1 Nonrecourse Note with Variable 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. For example, a nonrecourse note that has an interest rate that is 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 “stock 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).

1.7.10.2 Nonrecourse Note 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.

1.7.10.3 Dividends Paid on Nonrecourse Notes

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 section SC 1.15 titled “Accounting for Dividends Paid on Stock-Based Compensation Awards” in this chapter for more guidance on accounting for dividends received by holders of options or shares issued.

1.7.10.4 Forgiveness of a Nonrecourse Note

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 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 section SC 1.13.9 titled "Cancellations and Replacements of Awards" for the accounting related to cancellations without the concurrent grant of a replacement award.

1.7.11 Part Recourse and Part Nonrecourse Notes

Within superseded stock compensation literature⁵ 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).

1.7.12 Other Measurement Issues: Reloads and Clawback Features

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 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 section SC 8.1 titled "Recent developments in stock-based compensation" for further discussion on awards with clawback features.

1.8 Equity-Classified Awards

In order for an award to be classified as equity, it should possess a vesting condition and fulfill certain other requirements. The vesting conditions included in an equity-classified award will affect the way companies recognize compensation cost. This section summarizes the following topics related to equity-classified awards:

⁵ See Issue 34 of EITF Issue 00-23.

- Vesting Conditions
- Definitions of Vesting Conditions
- Market Conditions
- Performance and Service Conditions That Affect Vesting
- Performance and Service Conditions That Affect Factors Other than Vesting

1.8.1 Vesting Conditions

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 section SC 7.2 titled "Developing the Expected Term Assumption" in Chapter SC 7.)

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 the next sections.

1.8.2 Definitions of Vesting Conditions

To be accounted for as an equity-classified award under ASC 718, the terms of an award should contain one of the following conditions as well as satisfy certain other requirements:

1. A market condition
2. A performance condition
3. A 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. Refer to section SC 1.9.8 titled "Multiple Service Periods" later in this chapter. Figure 1-3 defines and gives examples of each condition.

Figure 1-3: Types of Vesting/Exercisability Conditions

	Market Condition	Performance Condition	Service Condition
Definition [Excerpted from ASC 718-10-20]	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) an employee's rendering service 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 employer'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. A condition that results in the acceleration of vesting in the event of an employee's death, disability, or termination without cause is a service condition.
Examples	<p>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).</p> <p>A stock option in which the employee's vesting depends on the movement of the underlying stock relative to a market index of peer companies.</p> <p>A stock option in which vesting is dependent upon a specified rate of return to a controlling shareholder is generally considered a market condition.</p>	<p>A stock option that vests if a sales target of \$3 million is achieved.</p> <p>A stock option 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.</p> <p>A stock option that vests as a result of achievement of a defined EPS target.</p>	<p>A stock option that vests if the employee provides three years of service.</p> <p>A stock option that vests upon an employee's death, disability, or termination without cause.</p>

1.8.3 Market Conditions

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., a discount may be taken when estimating the fair value of an option or restricted stock award to reflect the market condition). That fair value will be lower than the fair value of an identical award that has only a service or performance condition because those awards will not include a discount to the fair value. 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.

PwC Observation: Companies that grant awards with market conditions should be aware of the important distinction between awards that have a market condition and awards that have either a performance or service condition. Once employees complete the requisite service period, the related compensation cost should not be reversed, regardless of whether the market condition has been satisfied.

1.8.4 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. Performance and 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, net of an estimate of pre-vesting forfeitures (e.g., due to termination of employment prior to vesting) over the requisite service period. 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). 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.

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, if an award vests upon a liquidity event such as a change in control of the company, the company could not conclude that it was probable that the award will vest until the date of the liquidity event because such an event is outside the company's control.

PwC Observation: Awards with market and performance conditions, as defined in ASC 718, have different accounting and measurement requirements. For example, awards with performance conditions are accounted for based on a probability assessment, as discussed above. However, no such probability assessment is made for an award with a market condition because the effect of the market condition is reflected in the fair value of the award. It is important that companies carefully review ASC 718's definitions of these two conditions to determine whether awards contain performance or market conditions. Awards that are generically referred to as "performance awards" or "performance shares" may contain either a performance or a market condition or both.

1.8.4.1 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 initial public offering (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.

A condition that relates to the company completing an IPO is considered a performance condition. However, it is not clear whether the condition described above (where the award holder does not have to be employed on the IPO date) would technically meet the definition of a "performance condition" as defined in ASC 718 since the definition refers to both providing service and achieving a performance target.

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 condition is satisfied post-retirement. As discussed in section SC 1.9.6 titled "Retirement Eligible Employees," 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.

The Statement 123(R) Resource Group discussed the accounting for an award with a performance condition satisfied after the service period. However, no consensus was reached. Three approaches were identified:

1. Account for the condition similar to a post-vesting restriction. Under this approach, a company would incorporate the probability of achieving the performance target into the estimate of fair value on the grant date and recognizes compensation cost over the requisite service period even if the performance condition ultimately is not met.

2. Account for the condition as a condition other than a service, performance or market condition. This requires the award to be classified as a liability subject to remeasurement at fair value each reporting period until the award is settled.
3. Account for the condition similar to a performance condition. Under this approach, a company recognizes compensation cost over the requisite service period 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 initially it was not probable the performance target would be achieved (and thus, no compensation cost was recognized during the service period), and after the service period is completed, it becomes probable that the target will be achieved, compensation cost would be recognized immediately.

PwC Observation: We believe that all three approaches are acceptable. In many fact patterns, we believe the third approach described above best reflects the economics of the transaction if the award holder does not receive any benefit from the award unless the performance target is achieved. However, 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) or if the award does not have an ultimate expiration date if the condition is not met, different accounting may be required. A company should consistently apply one approach to all similar awards and disclose the accounting treatment if the amounts are significant.

The SEC staff has expressed a view that in measuring the fair value of liability-classified awards with post-vesting contingencies, SEC registrants should incorporate the probability of achieving the contingency (including a “performance-type” condition such as a change in control event) that will be resolved after an employee vests in the award (i.e., completes the requisite service period). It should be noted that this SEC staff view is specific to SEC registrants and liability awards with post-vesting contingencies.

1.8.5 Performance and Service Conditions That Affect Factors Other Than Vesting

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, if an employee were to reach one of four targeted sales thresholds, an award could have four different corresponding exercise prices. Each outcome would have a specific grant-date fair value and the company would recognize compensation cost for the outcome that is probable. This probability assessment should be updated each reporting period. If a company concludes that none of the outcomes are probable, no compensation cost would be recognized until such time that an outcome becomes probable. The final measure of compensation cost would 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 55-65 and Examples 3, 4, and 6 of ASC 718-20-55).

Figure 1-4 summarizes the key differences among all of the conditions, including certain awards with common multiple conditions, and their effect on fair value.

Figure 1-4: Differences Among Conditions and Their Effect on Fair Value

Condition	Effect on Grant-Date Fair Value	Adjustments to Compensation Cost for Outcome of the Condition
Market Condition: Affects 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: Affects 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.
Performance and Market Condition: Affects 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.
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: Affects 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 whose outcome is achieved.

PwC Observation: ASC 718's accounting and measurement requirements require management to exercise judgment in several areas; for example, determining the employee's service period, estimating the number of awards expected to vest (including assessing the probability of whether a performance condition will be achieved), and determining when to reverse compensation cost. When awards include multiple conditions, the level of judgment increases. As discussed in Chapter SC 8, companies should carefully consider the design of their compensation plans, maximizing the perceived value given to employees, and considering the possible compensation cost of each plan design.

1.9 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. Although this seems straightforward, ASC 718 includes concepts that may complicate matters somewhat. This section discusses the following topics:

- Grant Date
- Requisite Service Period
- Service-Inception Date

- Service-Completion Date
- Determining the Requisite Service Period
- Retirement Eligible Employees
- Noncompete Provisions
- Multiple Service Periods
- Changes to the Requisite Service Period
- Recognition Effect of Changes to the Requisite Service Period
- Examples of Determining and Adjusting the Requisite Service Period

1.9.1 Grant Date

The fair value of stock-based compensation is measured on the grant date. The following criteria should be satisfied to establish a grant date:

1. The employer and its employees have reached a mutual understanding of the award's key terms and conditions.
2. The company is contingently obligated to issue shares or transfer assets to employees who fulfill vesting conditions.
3. 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).
4. Awards are approved by the board of directors, management, or both if such approvals are required, unless perfunctory.
5. 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).

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.

PwC Observation: We believe that “a relatively short time period” should generally be measured in days or weeks, not months. We further believe that the reference to an entity’s “customary human resource practices” does not imply that a company’s historical practices, by default, would qualify as a relatively short time period. Companies should consider their individual facts and circumstances when analyzing what is “a relatively short time period,” including the method of communication (e.g., in person or via e-mail) and the number and geographical location of employees receiving awards.

If an award has a performance condition (e.g., an earnings target in a future period), a grant date will generally not be established until the performance condition has been defined and a mutual understanding of the terms has been reached, assuming all other criteria for establishing a grant date have been satisfied.

1.9.2 Requisite Service Period

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 credit to equity (additional paid-in capital (APIC)) 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.
- Is generally the vesting period.
- May begin earlier than the grant date.
- Is presumed to be for future service.
- May 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 in certain circumstances (as discussed in the next subsection SC 1.9.3, “Service-Inception Date”). Additionally, the requisite service period is presumed to be for future service; therefore, a company cannot conclude that a period before the earlier of the service-inception or grant date is an award’s requisite service period.

Figure 1-5 provides definitions and examples of the terms used in ASC 718 to assist in determining the requisite service period.

Figure 1-5: Definitions and Examples of a Requisite Service Period

Definitions	Examples
Explicit Service Period: The 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.

(continued)

Definitions	Examples
Implicit Service Period: The 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: This service period is derived from certain valuation techniques that are used to estimate fair value. This principally applies only to awards that have market conditions.	An award will become exercisable if the stock price increases by 100 percent 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 section SC 6.4 titled "Lattice Models" in Chapter SC 6 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). 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 1-6 summarizes how an award's requisite service period may be determined based on the vesting condition that the award contains.

Figure 1-6: Determining Requisite Service Based on an Award's Condition

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.

1.9.3 Service-Inception Date

The “service-inception date,” is the first date of the requisite service period during 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 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:
 1. 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).
 2. 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.

PwC Observation: Applying the concept of “authorization” to an award is an interpretation that should be made by the company. We believe the following two views may be considered when considering authorization:

1. A narrow interpretation of authorization, consistent with ASC 718-10-55-108(a), which would require that all necessary approvals and details surrounding the award, including the number of shares to be awarded, would need to be finalized in order for approval to be completed and the award to be considered authorized.

(continued)

2. Under a broad interpretation of authorization, the following facts should be present:

- The board of directors or compensation committee has approved an overall compensation plan that includes the stock-based compensation awards.
- The employees broadly understand the compensation plan, including an awareness that the employees are working towards certain goals and an expectation that awards will be granted (e.g., granting of the awards is dependent upon the company achieving performance metrics and the employees have an understanding of those performance metrics).

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 by the compensation committee either through formally authorized policy or established practices).
- The substance of the approval process at the beginning of the subsequent year to finalize the award, including the amount of discretion that the compensation committee uses to deviate from the compensation strategy previously approved and understood.

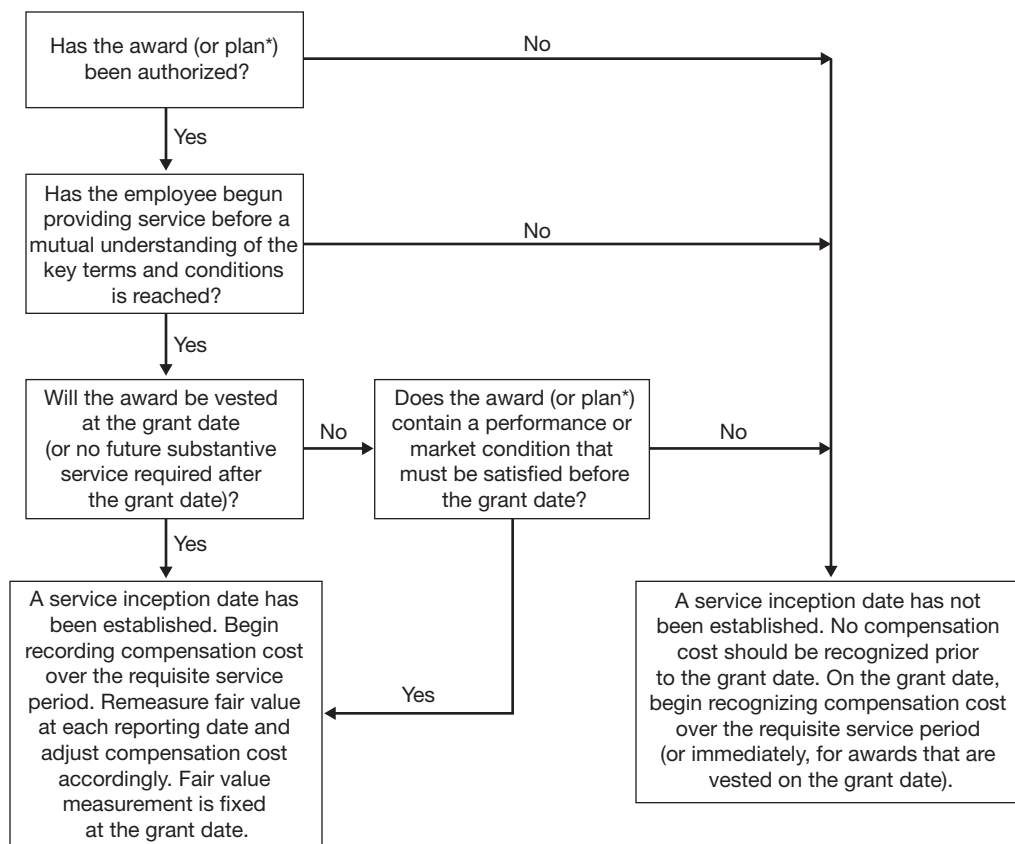
The interpretation made by the company will involve considerable judgment and will require careful consideration of the facts and circumstances of the company. The company should make a policy decision regarding its interpretation of authorization and apply this policy consistently for all awards.

If the service-inception date precedes the grant date, a company should accrue compensation cost beginning on the service-inception date. The company would estimate the award's fair value on each subsequent reporting date, until the grant date (i.e., remeasure each period at fair value). On the grant date, the estimate of equity-classified awards' fair value would be fixed, the cumulative amount of previously recognized compensation cost would be adjusted, and the company would no longer have to remeasure the award. If the award is liability-classified, the awards would continue to be marked to fair value each reporting period until settlement.

PwC Observation: Companies should carefully evaluate the terms of their awards and understand the impact of when a service-inception date could precede the grant date. Companies that do not want to recognize compensation cost prior to the grant date should time their awards so that the grant date corresponds with the service-inception date.

Figure 1-7 summarizes the criteria for establishing the service inception date.

Figure 1-7: 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.

1.9.4 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.

1.9.5 Determining the Requisite Service Period

The requisite service period should be based on an analysis of the award's terms, as well as on other relevant facts and circumstances (e.g., the analysis should cover co-existing employment agreements or a company's prior practice). For an award that has only a service condition, the requisite service period is presumed to be the

vesting period. A company's requisite service period should be consistent with the assumptions (e.g., expected term) that the company used in estimating the fair value of the award, unless the employee is retirement eligible.

ASC 718-10-55-109 through 55-115 provides additional details on determining the requisite service period and include several examples. Figure 1-8 illustrates the relationship between the service-inception date, the grant date, and the requisite service period.

Figure 1-8: Illustration of the Relationship Between Service-Inception Date, Grant Date, and Requisite Service Period

Assumptions	Service-Inception Date (SID), Grant Date (GD), Requisite Service Period (RSP)	Initial Date and Amount of Compensation Cost Recognized
<p>A company offers the position of CEO to an individual on April 1, 2006; the offer has been approved by the board of directors. In addition to offering a salary and other benefits, the company offers 10,000 shares of restricted stock that the prospective CEO would vest in upon completing five years of service. The CEO would begin vesting in the award on the date that he begins work.</p> <p>The individual accepts the CEO position on April 2, 2006, but is unable to begin providing services until June 2, 2006, when the market price of the stock is \$40.</p>	<p>SID: June 2, 2006 That is the date that the CEO begins providing substantive employee services.</p> <p>GD: June 2, 2006 That is the date that the employee begins to participate in the risks and rewards of equity ownership.</p> <p>RSP: Five years (ending June 2, 2011).</p>	<p>The grant-date fair value of the share award is \$400,000 (10,000 × \$40). Compensation cost would start being recognized on June 2, 2006, because that is the service-inception date and the grant date, which is when the individual becomes an employee and starts providing services to the company.</p>

1.9.6 Retirement Eligible Employees

Many companies have plans that allow awards granted to retirement-eligible employees to immediately vest when the employee retires, 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 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 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. For employees near retirement eligibility, attribution of compensation cost should be over the period from the grant date to the retirement eligibility date.

1.9.7 Noncompete Provisions

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 underlying assets) 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 present examples of 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 underlying assets 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, as described above, compensation cost is recognized immediately.

Conversely, the fact pattern in Example 11 of ASC 718-20-55 led the FASB to the conclusion that the noncompete provision essentially creates an in-substance requisite service period. The noncompete provision creates an in-substance requisite service period because all of the facts and circumstances relating to the company, the employee, and the noncompete agreement indicate that the employee was essentially in the same position as he or she would have been if an explicit vesting period had existed. In other words, the noncompete provision functions as an in-substance vesting condition. In Example 11 of ASC 718-20-55, even if the award were fully vested, or the recipient were retirement-eligible, as described above, 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, 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 evidence 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).
- Past employees' actions regarding the terms of the noncompete agreements (if relevant).
- Circumstances specific to the individual employees.

PwC Observation: We believe that a company should presume that a noncompete provision does not represent an in-substance service condition unless there is persuasive evidence that the provision compels the employee to remain in active service to receive the award. We expect that instances where a noncompete provision creates an in-substance period will be rare.

1.9.8 Multiple Service Periods

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 1-9 summarizes this analysis.

Figure 1-9: Determining a Requisite Service Period for an Award with Multiple Explicit, Implicit, or Derived Service Periods

Conditions That Must Be Satisfied before Vesting (or Exercise)	Initial Estimate of Requisite Service Period
The market condition(s) and either the performance or service condition(s), assuming that it is probable the performance or service condition(s) will be satisfied.	Longest of the explicit, implicit, or derived service periods, because all of the conditions need to be satisfied.
The market condition(s) or either the performance or service condition(s), assuming that it is probable the performance or service condition(s) will be satisfied.	Shortest of the explicit, implicit, or derived service periods, because vesting occurs upon satisfaction of any of the award's conditions.

An example of an award that contains both a market and a performance condition is an award granted by a nonpublic company that vests only upon a liquidity event (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) from the liquidity event. In this example, the award contains a performance condition (the liquidity event) and a market condition (the IRR metric), both of which must be satisfied for the award to vest. As discussed previously, 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.

1.9.9 Changes to the Requisite Service Period

A company may change its initial estimate of the requisite service period. Figure 1-10 summarizes when a company can change its requisite service period (ASC 718-10-55-77 through 55-79).

Figure 1-10: Changes to the Requisite Service Period

Basis for Initial Estimate of the Requisite Service Period	Required Change to the Requisite Service Period
Performance or service condition	<p>Change the requisite service period if subsequent information indicates that:</p> <ul style="list-style-type: none"> • It is probable that the performance condition will be achieved within a different time period <p style="text-align: center;">or</p> <ul style="list-style-type: none"> • Another performance or service condition becomes the probable outcome
Market condition	<p>Do not change the requisite service period unless:</p> <ul style="list-style-type: none"> • The market condition is satisfied before the end of the initially estimated requisite service period
<p>Market condition and a performance or service condition</p> <p>[The initial estimate of the requisite service period is based on the market condition's derived service period.]</p>	<p>Do not change the requisite service period unless:</p> <ul style="list-style-type: none"> • The market condition is satisfied before the end of the derived service period <p style="text-align: center;">or</p> <ul style="list-style-type: none"> • Satisfying the market condition is no longer the basis for determining the requisite service period <p style="text-align: center;">or</p> <ul style="list-style-type: none"> • It is probable that another performance or service condition will be fulfilled before the end of the initially estimated requisite service period

1.9.10 Recognition Effect of Changes to the Requisite Service Period

A change to a company's requisite service period requires the use of judgment and should be reasonable and supportable. As Figure 1-10 describes, a company may change its initial requisite service period based on certain criteria, however, not all changes are treated the same. The accounting treatment depends on the following:

- 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., it 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 of change will be recognized prospectively over the revised requisite service period, if any (i.e., no "cumulative effect" adjustment recognized).

PwC Observation: Estimating the requisite service period may be challenging, particularly as the vesting criteria of new awards shift from service conditions to either performance or market conditions (or both). Companies should develop processes for estimating and reassessing the requisite service period.

1.9.11 Examples of Determining and Adjusting the Requisite Service Period

Figures 1-11 and 1-12 summarize and illustrate the concepts regarding determining and adjusting the requisite service period.

Figure 1-11

Assumptions:

On January 1, 2007, a company grants two executives 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).

Determining the Requisite Service Period:

When determining the requisite service period, the company must assess the probability that the performance condition will be satisfied. At the grant date, the company determines that it is probable that the new product design will be completed two years from the grant date. The company also believes the executives will be employed on that date. The requisite service period is two years. The company will recognize \$500,000 ($\$10 \times 100,000 \times 50\%$) of compensation cost each year.

Adjustments to the Requisite Service Period:

Because the award has a performance condition, the company must reassess the probability of satisfaction of the performance condition each reporting period. One year after the grant date, as a result of the company's probability assessment, the company determines that it is probable that the performance condition will be satisfied in three years (i.e., two years from the current date). The company believes the executives will continue to be employed for the next two years.

In this scenario, the remaining requisite service period is two years, as compared to the one-year remaining requisite service period based on the company's original estimate. The change in the requisite service period does not affect the grant-date fair value of the award or the quantity of awards that are expected to vest. Therefore, the company should account for the change in estimated requisite service period prospectively. The company should record the unrecognized compensation cost of \$500,000 over the remaining two-year requisite service period (\$250,000 each year).

Figure 1-12

Assumptions:

On January 1, 2007, a company grants two executives 100,000 stock options. The terms of the award specify that the award will vest upon the earlier of (1) the stock price reaching and staying at a minimum of \$100 per share for 60 consecutive trading days (i.e., a market condition) or (2) the completion of five years of service (i.e., a service condition).

Determining the Requisite Service Period:

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 bases its estimate of the award's derived service period on the lattice model's results. According to the model, the median of the distribution of stock-price paths 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.

Adjustments to the 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.

1.10 Estimates and Adjustments for Forfeitures

Equally as important as measuring the fair value of compensation cost is estimating the quantity of awards that are expected to vest or become exercisable. ASC 718 includes specific guidance on this topic. This section summarizes the following topics related to accounting for forfeitures:

- Key Principle
- Forfeitures and Liability-Classified Awards
- Applying a Forfeiture-Rate Assumption
- Segregating and Analyzing Pre-Vesting Forfeitures
- Examples of Equity Awards with Forfeitures and Other Conditions
- "Last Man Standing" Arrangements

1.10.1 Key Principle

For purposes of this guide, a pre-vesting forfeiture describes when an award is forfeited prior to vesting, such as due to termination or failure to satisfy a performance condition. A post-vesting cancellation describes when employees terminate after vesting and do not exercise their vested awards 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 section SC 7.2 titled “Developing the Expected Term Assumption” in Chapter SC 7, the development of the expected term assumption does not consider pre-vesting forfeitures but does consider post-vesting cancellations.

Under ASC 718, companies are required to develop an assumption regarding the pre-vesting forfeiture rate beginning on the grant date, which will impact 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, companies (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 (ASC 718-10-30-25 through 30-26 and ASC 718-10-35-7). 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.

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.

1.10.2 Forfeitures and Liability-Classified Awards

A forfeiture assumption (considering forfeiture experience to date and estimating future forfeitures) should be applied to awards that are classified as liabilities, as well. However, those awards will be remeasured at fair value each reporting period; thus, any impact of forfeitures will be reflected during each remeasurement.

1.10.3 Applying a Forfeiture-Rate Assumption

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.

Figure 1-13 illustrates how a company could apply its estimated annual forfeiture rate to an option grant.

Figure 1-13

Assumptions:

A company grants to its employees 400 stock options that (1) vest upon the employees' completion of a service condition and (2) have a four-year graded-vesting schedule (25 percent or 100 awards per year). The company estimates a 5 percent annual forfeiture rate, based on its historical forfeitures. The company 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 x .95
2	100	90	= 100 x .95 x .95
3	100	86	= 100 x .95 x .95 x .95
4	100	81	= 100 x .95 x .95 x .95 x .95
Totals	400	352	

In Figure 1-13, 88 percent of the options are expected to vest (352 options expected to vest / 400 options granted). As discussed in section SC 1.11 titled "Graded-Vesting Features" in this chapter, 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, the company 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. (Note that if the vesting schedule in the above example was back-loaded—for example, vesting for tranches 1, 2, 3 and 4 was 10%, 20%, 30% and 40%, respectively—then the company would begin expensing 88 options in year 1 under the straight-line attribution approach.)

As each tranche vests, a company should assess the actual number of awards vested in order to comply with ASC 718's 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.

PwC Observation: Companies could use separate pre-vesting forfeiture assumptions for different employee groups (e.g., executives and other employees) when they believe that the different groups will exhibit different behaviors. For example, based on its history and expectations, a company may develop a 5 percent annual forfeiture estimate for senior executives and a 10 percent annual forfeiture estimate for all other employees. If a company uses significantly different pre-vesting forfeiture estimates for different groups of employees, then it should also consider stratifying the employee groups to develop the expected term assumption.

1.10.4 Segregating and Analyzing Pre-Vesting Forfeitures

In developing its estimated pre-vesting forfeiture rate, a company should start with an analysis of its 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.

PwC Observation: 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 pre-vesting forfeitures.

1.10.5 Examples of Equity Awards with Forfeitures and Other Conditions

Figure 1-14 illustrates the differences among the three vesting conditions that were described earlier, and shows how estimated forfeitures and actual forfeitures interrelate.

Figure 1-14

Assumptions for all three scenarios:

A company grants its employees 5,000 stock options on January 1, 2006. The grant-date fair value is \$8 per option.

Scenario 1: Service Condition

All of the options cliff vest after three years of service. In 2006 and 2007, the company estimates that 95 percent of the options will vest. In 2008, the company completes a significant restructuring, which results in only 45 percent of the options vesting because 55 percent 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 2008 as shown below.

	2006	2007	2008
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 Condition

Assume the same facts as in Scenario 1, except that the vesting condition is based on achieving a specific cumulative sales target over the period from 2006 through 2008. In 2006, the company estimates that 90 percent of its employees will achieve their targets and remain employed through 2008 (i.e., 90 percent of the options will vest). At the end of year 2, however, the company reassesses the likelihood that the targets will be achieved and determines that 95 percent of the employees will achieve their targets by the end of 2007 and remain employed through 2008. Due to a new competitor's product that is launched in 2008, only 75 percent of employees actually achieve the cumulative sales targets.

(continued)

	2006	2007	2008
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

Assume the same facts as in Scenario 1, except that the options become exercisable only if the employee remains employed by the company for three years and the company's stock price outperforms the S&P 500 Index by 10 percent 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 this option is \$4.50. Ninety-five percent of the employees are expected to complete the requisite service period.

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

	2006	2007	2008
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

1.10.6 “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.

1.11 Graded-Vesting Features

1.11.1 Definition

Some stock-based compensation awards include graded-vesting features such as the award described in Figure 1-13. Graded vesting is defined as an award that vests in stages over the award's contractual term as compared to cliff-vesting, which is an award that vests as of a specific date.

1.11.2 Alternative Attribution Methods

ASC 718 provides two attribution methods for awards that have graded-vesting features and service conditions only (ASC 718-10-35-8):

1. **The graded-vesting method:** A company recognizes compensation cost over the requisite service period for each separately vesting tranche of the award as though the award were, in substance, multiple awards.
2. **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).

Under ASC 718, a company may elect to use either attribution method for an award with graded-vesting features and only service conditions. The company should make a policy decision and apply this policy consistently for all awards with similar features. Under either method, 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.

PwC Observation: While ASC 718 does not address whether the choice of attribution method for awards with only service conditions applies to liability-classified awards, we believe that such a choice is a policy election.

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 section SC 7.2 titled "Developing the Expected Term Assumption" in Chapter SC 7). 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.

PwC Observation: Under ASC 718, a provision that accelerates the vesting of stock options upon either a change in control event or an initial public offering is a performance condition. A change in control event and an initial public offering are two events that are generally not within the company's control and therefore, are not accounted for until the events actually occur. We believe that a provision that accelerates vesting upon these events would not affect attribution of compensation cost until the event occurs. Therefore, we believe a company is not precluded from using the straight-line attribution method for an award with a service condition and graded vesting when the award also includes a performance condition that accelerates vesting either (1) upon a change in control event or (2) an initial public offering. If, however, the award includes other performance conditions, such as a provision that accelerates vesting of the award upon the company achieving a specified performance target, we believe that the company should use the graded-vesting attribution method.

A distinction should be made between the sale of a business and the sale of a business unit (as the change in control event). When considering probability for the sale of a business unit, the threshold for the sale is analyzed differently than for the sale of a business. 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 criteria creates the presumption that management controls the sale.

We believe that a similar approach should be used when determining whether an award meets SAB Topic 14's "plain vanilla" requirements for using the "simplified method" for estimating the expected term assumption (see section SC 7.2.1 titled "SAB Topic 14's Simplified Method for Estimating Expected Term" in Chapter SC 7). Generally, an award with a performance condition would not qualify as "plain vanilla"; however, we believe that an award with a performance condition that accelerates vesting either (1) upon a change in control event or (2) an initial public offering could be considered "plain vanilla."

The application of the graded-vesting method of attribution is illustrated in Figure 1-15: An award has four separate tranches that vest 25 percent each year over four years.

Figure 1-15

	Percent of Compensation Cost Recognized Each Year			
	Year 1	Year 2	Year 3	Year 4
Tranche #1	100%	0%	0%	0%
Tranche #2	50%	50%	0%	0%
Tranche #3	33%	33%	34%	0%
Tranche #4	25%	25%	25%	25%

1.12 Liability-Classified Awards

This section addresses the following topics:

- Measurement Principle
- Liability Awards with Performance and Market Conditions
- Balance Sheet Presentation
- Criteria for Determining Whether an Award Is a Liability
- Awards with Conditions or Other Features Indexed to Something Other Than a Market, Performance, or Service Condition
- Certain Criteria in ASC 480, Distinguishing Liabilities from Equity
- Obligations Based on a Fixed Monetary Amount
- Shares with Repurchase Features
- Options Settled in Cash or Other Assets and Substantive Liabilities
- Options with Underlying Shares Classified as Liabilities
- Minimum Statutory Tax Withholding Requirements
- Awards Exercised Through a Broker-Assisted Cashless Exercise
- Exercise Prices Denominated in Other Currencies
- Repurchase Features That Function as Forfeiture Provisions
- Classification of Certain Redeemable Securities under ASR 268
- Flowcharts Summarizing Criteria for Determining Liability or Equity Classification

1.12.1 Measurement Principle

As described earlier in section SC 1.7.5 titled “Measurement Effect Based on Award’s Balance Sheet Classification,” the most significant way that a liability-classified award differs from an equity-classified award is that liability-classified awards are remeasured each reporting period at fair value 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 and begin to recognize compensation cost.
- 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, immediately recognize compensation cost for any changes in fair value.

ASC 718 requires that a company measure an award at fair value and not at intrinsic value. As discussed in section SC 6.3 titled “The Black-Scholes Model” in Chapter SC 6, fair value includes both the intrinsic value and time value of the award. As employees vest in liability-classified awards, the time value of these awards will decline to zero and the awards’ fair value will approach intrinsic value and, on the settlement date, equal intrinsic value.

Under ASC 718, the fair value of stock options or other awards that are classified as liabilities are measured using an option-pricing model.

Figure 1-16 illustrates the initial measurement and subsequent measurement of a liability award.

Figure 1-16

Assumptions:

On January 1, 2006, a company grants 100 of its employees 100 cash-settled SARs (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. The company determines that, based on the awards' service condition, the requisite service period is three years.

The company determines that \$5 is the grant-date fair value of each SAR. Because the awards were granted at-the-money, with no intrinsic value, the SAR's fair value of \$5 represents only the time value. The SARs' fair value would be \$50,000 on January 1, 2006, the grant date. For simplicity, forfeitures have not been included in this example, and it is assumed that journal entries to account for the award are recorded only at year-end.

Liability Measurement:

On December 31, 2006, the end of the first year of the requisite service period, the company determines that the SAR's fair value is \$6 per SAR (\$60,000 in total). Because the employees completed one-third of the requisite service period by December 31, 2006, the company would recognize \$20,000 (10,000 SARs x \$6 fair value of each SAR x 1/3 portion vested) of compensation cost.

At the end of each subsequent reporting period over the next two years, a similar process would be completed to measure the current fair value of the SAR and the completed portion of the requisite service period.

For reporting periods after the requisite service period is completed, the company would remeasure the SAR's fair value and recognize the change in fair value immediately in the income statement because the SAR is vested.

On the settlement date, the company 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.

PwC Observation: Remeasuring liability awards in each reporting period may result in greater income statement volatility. Companies should consider these consequences and the additional financial-reporting disclosures (e.g., MD&A) that may result from granting awards that are classified as liabilities rather than as equity.

1.12.2 Liability Awards with Performance and Market Conditions

For liability-classified awards with a performance condition, a company should begin recording compensation cost for the award when it becomes probable that the

performance condition will be met. The fair value of the award would be measured at each reporting date and the percentage of fair value recognized as a liability in the financial statements would equal the amount of the requisite service period completed.

For liability-classified awards with a market condition, a company should measure the fair value each reporting period. 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).

1.12.3 Balance Sheet Presentation

A company should determine whether a liability-classified award is a current or non-current liability. Generally, a current liability is an obligation that is reasonably expected to be liquidated within one year. The current liability classification also includes obligations that are due on demand. A liability-classified award would generally be classified as non-current until the award is vested unless vesting is expected to occur within one year. If a vested award is payable upon demand, the award should be classified as a current liability.

1.12.4 Criteria for Determining Whether an Award Is a Liability

The criteria (outlined in ASC 718-10-25-6 through 25-19) for determining whether an award should be classified as a liability or as equity are complex. ASC 718 describes five types of awards that should be classified as a liability, although certain exceptions exist. Figure 1-17 summarizes the types of awards that companies should classify as liabilities.

Figure 1-17: Five Types of Stock-Based Compensation Awards Qualifying as Liabilities

1. An award with conditions or other features that are indexed to something other than a market, performance, or service condition.
2. An award that meets certain criteria of ASC 480.
3. A share award with a repurchase feature that permits an employee to avoid, for a reasonable period (at least six months) after the stock issuance, the risks and rewards that are normally associated with stock ownership;

or

A share award where it is probable that the employer would prevent, for a reasonable period (at least six months) after the stock issuance, the employee from bearing the risks and rewards that are normally associated with stock ownership.

4. 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.
 5. An option or similar instrument where the underlying stock is classified as a liability.
-

1.12.5 Awards with Conditions or Other Features Indexed to Something Other Than a Market, Performance, or Service Condition

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. 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. Figure 1-18 illustrates four examples of these awards.

Figure 1-18: Examples of Awards Indexed to Something Other Than a Market, Performance, or Service Condition

1. A stock option with an exercise price that is indexed to the market price of a commodity (e.g., platinum, soybeans, live cattle).
 2. 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.
 3. A stock option with an exercise price that is indexed to the Consumer Price Index.
 4. An award that vests based on the company's EBITDA growth exceeding the average growth in net income of the peer companies over the next three years.
-

PwC Observation: Judgment needs to be applied when determining if an award should be accounted for as equity or as a liability. It may be difficult to determine if an award is indexed to a factor that is not a market, performance or service condition. Careful consideration of the individual facts and circumstances is necessary to determine the appropriate classification of awards that are indexed to factors such as the price of a commodity or an index (e.g., the Consumer Price Index).

1.12.6 Certain Criteria in ASC 480

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 Section 480-10-25 and paragraphs ASC 480-10-15-3 through 15-4 when determining whether stock-based compensation awards should be classified as a liability unless ASC 718-10-25-6 through 25-19 require otherwise.

1.12.6.1 Overview of ASC 480 and Related Examples

ASC 480 specifies that financial instruments within its scope embody obligations of the issuer and should be classified as liabilities. Figure 1-19 summarizes and illustrates three types of freestanding financial instruments that, by reference to Section 480-10-25 and paragraphs ASC 480-10-15-3 through 15-4, companies should classify as liabilities.

Figure 1-19: Types and Examples of Freestanding Financial Instruments Classified as Liabilities under Section 480-10-25 and Paragraphs ASC 480-10-15-3 through 15-4

Instruments Classified as Liabilities	Examples
<p>Mandatorily redeemable financial instruments</p> <p>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</p>	<p>Preferred stock that must be redeemed on a specified date</p> <p>Common stock that must be redeemed upon the employee's death or termination of employment (unless the issuer is a nonpublic non-SEC registrant that qualifies for the indefinite deferral under ASC 480-10-65-1, as discussed below)</p>
<p>Obligations to repurchase a company's equity shares by transferring assets</p>	<p>A written put option on the company's equity shares that requires a physical or net-cash settlement</p> <p>A forward purchase contract for the company's equity shares that requires cash settlement</p> <p>Compound instruments, other than outstanding shares, such as a collar that includes a written put option</p>
<p>Certain obligations to issue a variable number of the company's shares</p> <p>A company is required to classify a financial instrument that embodies an unconditional obligation or a financial instrument other than an outstanding share that embodies a conditional obligation as a liability if (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:</p> <ul style="list-style-type: none"> • 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) • Variations in the fair value of the company's equity shares, but moves in the opposite direction 	<p>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</p>

If a stock-based compensation award meets one of the above criteria, that award would be accounted for as a liability under ASC 718.

PwC Observation: Assessing whether an award has a fixed monetary amount settled in shares can be complex. As noted in the Figure 1-19 above, an award with a single fixed dollar value amount (i.e., specific dollar amounts to be settled with a variable number of shares based on the then-current stock price) is a liability classified award in accordance with ASC 480-10-25-14. However, an award that could result in a number of potential outcomes within a range, such as an award that results in a range of possible fixed values depending on the percentage increase of the company's stock or total shareholder return, should be carefully analyzed to determine whether it is more akin to an equity classified stock-settled SAR or stock-settled debt as described in ASC 480-10-25-14.

1.12.6.2 Deferral of ASC 480 for Certain Entities and Instruments

The FASB delayed the effective date of ASC 480 for certain entities and instruments (ASC 480-10-65-1). This deferral does the following:

- Defers ASC 480's effective date for nonpublic companies that are non-SEC registrants until fiscal periods beginning after December 15, 2004, for financial instruments that are mandatorily redeemable on fixed dates for amounts that are either fixed or determined by reference to an interest rate index, currency index, or external index.
- Indefinitely defers the effective date of ASC 480 for 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).
- Does not defer the effective date for any other instrument that embodies an obligation to repurchase the company's equity shares by transferring assets or certain obligations to issue a variable number of shares.

For additional guidance, refer to section SC 3.2 titled "Classification of Awards with Repurchase Features and ASC 480" in Chapter SC 3, which discusses how this deferral specifically impacts nonpublic companies.

1.12.6.3 Obligations Based Solely or Predominantly on a Fixed Monetary Amount

As noted in Figure 1-19, one of the 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 the fixed dollar amount over the vesting period, with an offsetting liability.

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 cap value on the number of shares to be issued upon settlement of the award. As a result, in certain outcomes, the value of the award on the settlement date will vary based on the company's stock price, while in other outcomes, the value of the award will be based on a fixed dollar amount

(the dollar cap). In this scenario, the company should assess whether the dollar 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.

1.12.7 Shares with Repurchase Features

A repurchase feature gives the employee the ability to put 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 two conditions is met:

1. The employee can avoid bearing the risks and rewards that are normally associated with equity ownership (as a result of the repurchase feature), for a reasonable period after the share's issuance.
2. It is probable that the employer will prevent the employee from bearing normal risks and rewards of stock 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 unrestricted 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 (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. If the repurchase price is an amount other than fair value (e.g., derived using a formula), the share-based arrangement should be classified as a liability. There is a limited exception for certain nonpublic company plans that qualify as book value plans. Refer to SC 3.3 for 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 within six months of the issuance of a vested share. When assessing whether it is probable that an employer will prevent the employee from bearing the risks and rewards of stock ownership, the following factors should be considered (by analogy to the guidance in superseded stock compensation literature⁶):

⁶ See Issue 23(a) of EITF Issue 00-23.

- 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 fair value 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 section SC 1.13.5 titled "Modifications That Change an Award's Classification").

1.12.7.1 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, liability accounting would begin on the date of the initial public offering.

PwC Observation: 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), we believe that in the case of an employer call right, it is appropriate to consider the probability of whether the call is expected to be exercised prior to the employee bearing risks and rewards of ownership for a reasonable period of time (six months).

For example, assume a company 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, and likewise does not believe it is probable the call will be exercised.

(continued)

While 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, we believe it would be acceptable to classify the award as an equity instrument. In the event the employee terminates and the Company exercises the call within six months of vesting, the award would be reclassified as a liability. The company would follow the guidance for equity-to-liability modifications in ASC 718-20-55-144 (refer to SC 1.13.5.1 “Equity-to-Liability Modification”).

Awards with repurchase features should be evaluated carefully, as determining the appropriate classification of such awards can be complex, particularly for repurchase features at a price other than fair value.

SEC registrants should also consider the impact of ASR 268 on the classification of shares with repurchase features. See section SC 1.12.14 titled “Classification of Certain Redeemable Securities under ASR 268” for further guidance.

1.12.8 Options Settled in Cash or Other Assets and Substantive Liabilities

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 Figure 1-16 (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).

If a company grants a tandem award that offers a choice of settlement in stock or in cash, 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. Therefore, an option for which the company has the choice of settlement and the ability to deliver shares 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 of whether the substantive terms of an award (e.g., if the employee can choose the form of settlement) indicate that the award is a liability. However, a company’s past practice of settlement may outweigh the written terms, resulting in substantive liabilities and, thus, liability classification. For example, Company A has the choice of settling an option in shares or cash. Company A’s past practice has been to settle in cash (or Company A settles in cash whenever an employee asks for cash settlement), resulting in a substantive liability, even when Company A retains the choice of settling the option in cash or shares.

PwC Observation: An option with a net-share settlement feature in and of itself does not cause the option to be classified as a liability, including options that may be settled by use of “immature shares” (e.g., shares held less than six months after vesting or exercise of an option).

1.12.8.1 Options with Contingent Cash Settlement Features

The cash settlement of a stock option upon the occurrence of a contingent event does not result in liability classification if the contingent event is (1) not probable and (2) outside the control of the employee (ASC 718-10-25-11). 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 section SC 1.13.5 titled “Modifications That Change an Award’s Classification”). This guidance only applies to awards granted for employee compensation.

SEC registrants should also consider the impact of ASR 268 on the classification of options with contingent cash settlement features. See section SC 1.12.14 titled “Classification of Certain Redeemable Securities under ASR 268” for further guidance.

1.12.8.2 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.

PwC Observation: Complex awards that involve both cash and equity settlement should be carefully analyzed before concluding that the award can be bifurcated and accounted for as two separate awards. This assessment may require significant judgment.

1.12.9 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 under ASC 718. Therefore, if the shares underlying an option have repurchase features, a company should first consider whether the underlying shares would be classified as liabilities under ASC 718. 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 deferral in ASC 480-10-65-1. 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.

1.12.10 Minimum Statutory Tax Withholding Requirements

A stock-based compensation plan may permit shares that are issued upon an employee's exercise of an option to be withheld as a means of meeting tax withholding requirements. In order for a company to classify such an award as equity, the plan should meet both of the following criteria (ASC 718-10-25-18 through 25-19):

- It does not permit the option holder to require that the employer withhold taxes in excess of statutory minimums (federal, state, and local taxes, including payroll taxes).
- The employer, as a matter of practice, does not withhold taxes in excess of statutory minimums.

If an award fails to meet both of these criteria, then the entire award is classified as a liability, not just the amount withheld for tax purposes.

PwC Observation: Certain jurisdictions may have a minimum statutory withholding rate that varies by employee or may not have a minimum statutory withholding rate. In situations where the minimum statutory withholding rate varies by employee, equity classification is permitted (assuming all other requirements for equity classification are met) if the withholding is done on an employee-by-employee basis using each employee's specific minimum statutory withholding rate. In situations where there is no minimum statutory withholding rate, any withholding would result in liability classification.

It is not appropriate to use a "blended" rate or a maximum rate for all employees. If a "blended" or maximum rate is used, and the rate exceeds the minimum rate for an individual employee, that employee's award should be accounted for as a liability. Companies should consider the impact of accounting for awards as liabilities when assessing the materiality of using a "blended" or maximum rate, not just the materiality of the excess amount withheld.

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 minimum statutory withholding requirement.

Because of these complexities, it is important that companies understand the tax laws in each applicable jurisdiction. While many service providers and software systems have the ability to apply withholding rates on an employee-by-employee basis, it is generally the company's responsibility to determine which rates to use and provide this information to its service provider. A significant amount of recordkeeping may be required in some situations. Companies should consider the systems, processes, and controls needed to monitor the appropriate rates.

We believe that a company's convention of rounding up shares to the next whole share for purposes of meeting net share settlement requirements does not alter equity classification if the convention is applied consistently.

1.12.11 Awards Exercised Through a 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 other 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:

1. 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.
2. The broker executes the sale and notifies the company of the sales price.
3. By the settlement date (typically three days later), the company delivers the stock certificates to the broker.
4. On the settlement date, the broker (a) pays the company the exercise price and the minimum statutory withholding taxes and (b) remits the net sales proceeds 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 are satisfied (ASC 718-10-25-16 through 25-17):

- 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).

PwC Observation: 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 employees' minimum statutory withholding without causing the award to become classified as a liability. 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 remitted cash back to the company to settle the tax liability.

1.12.12 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 section SC 1.12.5 titled "Awards with Conditions or Other Features Indexed to Something Other Than a Market, Performance, or Service Condition"). 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.

1.12.13 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 shares for an amount equal to the award's 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 be analyzed as a call right, per se. 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.

1.12.14 Classification of Certain Redeemable Securities under ASR 268

SEC registrants should also consider the requirements of ASR 268 when determining the appropriate classification of an award. The SEC staff clarified in SAB Topic 14 that ASR 268 and related guidance (including ASC 480-10-S99-3) are applicable to stock-based compensation. Under ASR 268, 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 types of redeemable securities outside of permanent equity (i.e., as temporary equity in the mezzanine section of the balance sheet).

PwC Observation: Although non-SEC registrants (i.e., nonpublic companies) are not subject to the requirement under ASR 268 to classify outside of the equity section certain redeemable securities, we would prefer that they follow the same classification treatment.

Certain awards that qualify for equity classification under ASC 718 may require classification as temporary equity under ASR 268, 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 14 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 ASR 268 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 share that is vested. 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 option that is vested. 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-S99-3, 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 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, ASR 268 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 percent vested at the balance sheet date, 75 percent 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 percent vested at the balance sheet date, 75 percent 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 1-20 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 1-20: Impact of ASR 268 and 480-10-S99-3 on Four Different Stock-Based Compensation Awards

Example	Amount Presented as Temporary Equity on the Grant Date	Subsequent Adjustments to Temporary Equity
An at-the-money option award has underlying shares that are puttable at fair value by the employee after a six-month holding period. The option cliff vests in four years. The grant-date fair value of the option is \$50,000, which will be recognized as compensation cost over the four-year vesting period. One year after grant, the intrinsic value of the option 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. For example, at the end of the first year, 25% of the intrinsic value, or \$25,000, would be reclassified from permanent equity to temporary equity.

(continued)

Example	Amount Presented as Temporary Equity on the Grant Date	Subsequent Adjustments to Temporary Equity
<p>An at-the-money option award has a cash settlement feature that permits the employee to put the option to the company at fair value upon a change in control. A change in control of the company is outside the control of both the company and the employee and is not probable. The option cliff vests in four years. The grant-date fair value of the option is \$50,000, which will be recognized as compensation cost over the four-year vesting period.</p> <p>One year after grant, the intrinsic value of the option is \$100,000.</p>	<p>No amount is presented as temporary equity on the grant date because the option is unvested and has no grant-date intrinsic value.</p>	<p>The company would not subsequently present any amounts as temporary equity because the option had no intrinsic value on the grant date.</p> <p>Because it is not probable that the option will become redeemable, the company should not adjust the amount presented as temporary equity to the current intrinsic value at each reporting date.</p> <p>If it becomes probable that the options will be cash settled, the award would become a liability under ASC 718.</p>
<p>An in-the-money option award, with an intrinsic value of \$30,000 on the grant date, has underlying shares that are puttable at fair value by the employee after a six-month holding period. The option is 100% vested on the grant date. The grant-date fair value of the option is \$50,000, which is immediately recognized because the award is vested.</p> <p>One year after grant, the intrinsic value of the option is \$100,000.</p>	<p>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.</p>	<p>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. For example, at the end of the first year, \$70,000 would be reclassified from permanent equity to temporary equity, for a cumulative total of \$100,000 presented as temporary equity.</p>
<p>A restricted stock award cliff vests in four years. The award also immediately vests and becomes puttable at fair value by the employee upon a change in control. A change in control of the company is outside the control of both the company and the employee and is not probable. The grant-date fair value of the restricted stock is \$150,000, which will be recognized as compensation cost over the four-year vesting period.</p> <p>One year after grant, the fair value of the restricted stock is \$200,000.</p>	<p>No amount is presented as temporary equity on the grant date because the restricted stock is unvested.</p>	<p>As the restricted stock award vests, the company should present the grant-date fair value as temporary equity. For example, 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.</p> <p>Because it is not probable that the stock will become redeemable, the company should not adjust the amount presented as temporary equity to the current fair value at each reporting date.</p>

(continued)

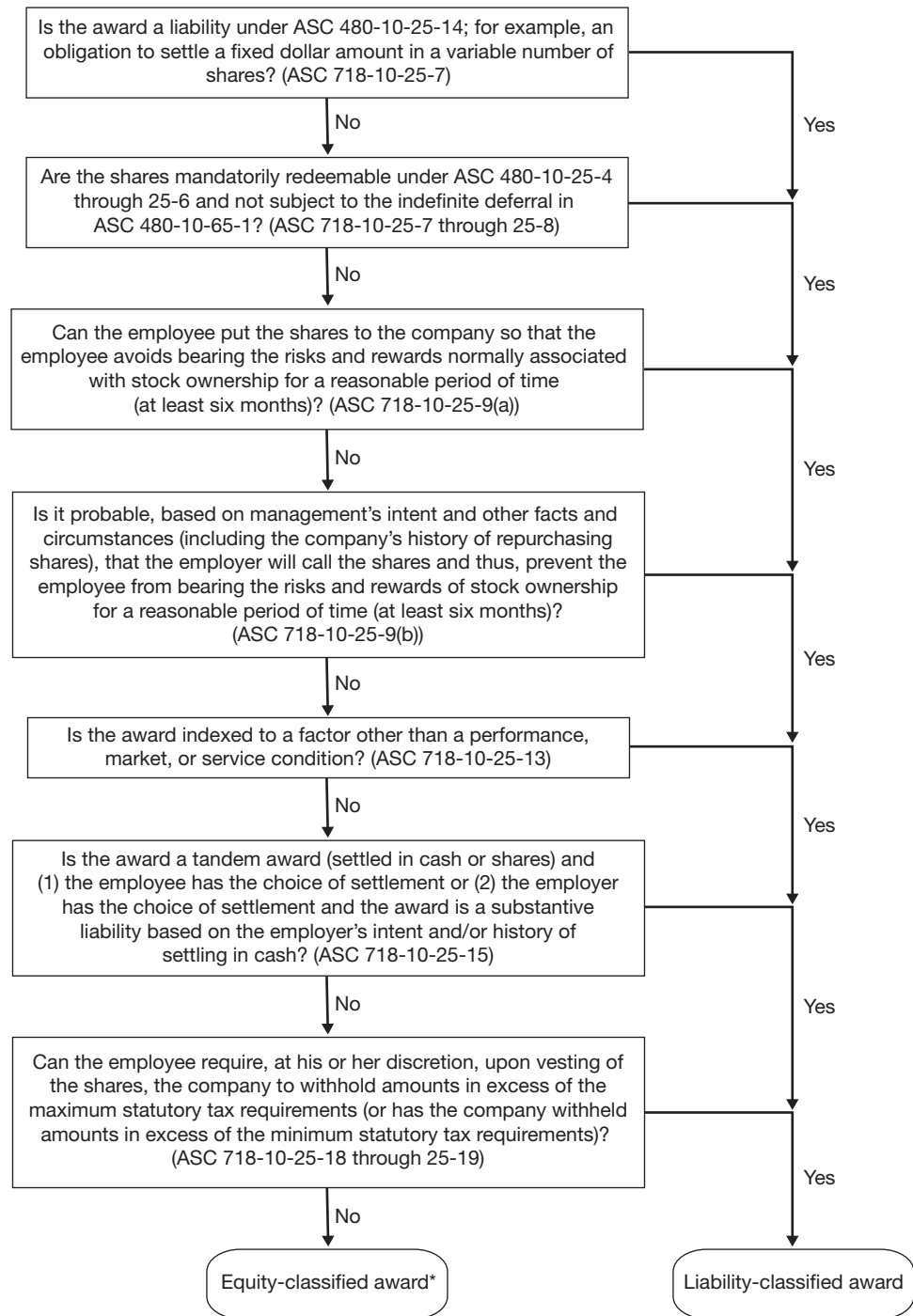
Example	Amount Presented as Temporary Equity on the Grant Date	Subsequent Adjustments to Temporary Equity
		<p>If a change in control becomes probable and the put becomes active within six months of vesting, the award would become a liability under ASC 718.</p> <p>If a change in control becomes probable 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.</p>

PwC Observation: Application of the guidance in ASR 268 and 480-10-S99-3 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-S99-3 and therefore, the company would not be required to apply the two-class method of calculating earnings per share described in ASC 260, *Earnings Per Share*, (260-10-45-60B).

1.12.15 Flowcharts Summarizing Criteria for Determining Liability or Equity Classification

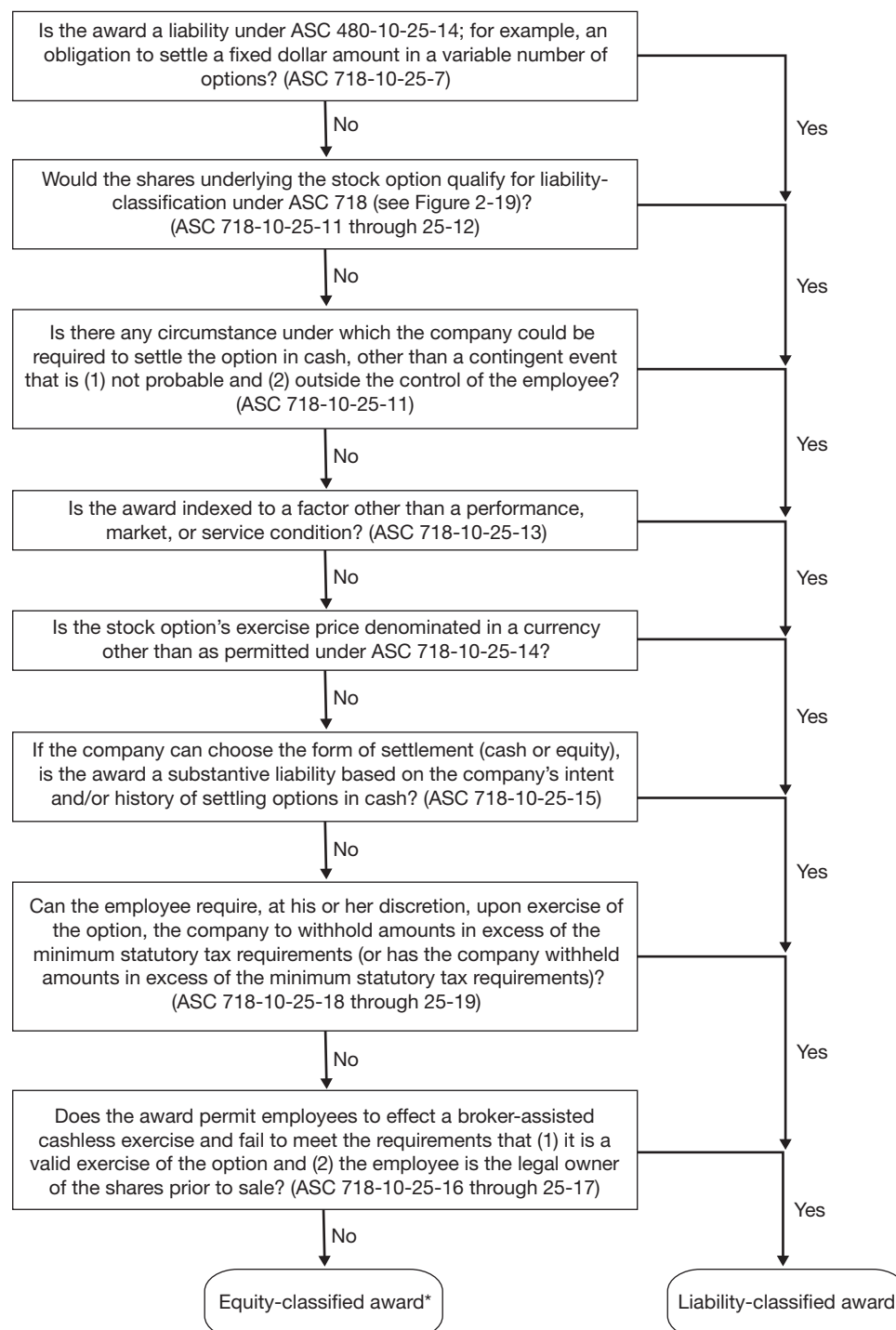
Figures 1-21 and 1-22 summarize the basic criteria for determining the appropriate classification of a share award and a stock option, respectively. These flowcharts may not address the appropriate classification of awards with very complex or unusual terms.

Figure 1-21: Liability and Equity Classification of a Share Award



* Companies should also apply the classification and measurement provisions of ASR 268, which may require classification of certain amounts outside of permanent equity.

Figure 1-22: Liability and Equity Classification of a Stock Option



* Companies should also apply the classification and measurement provisions of ASR 268, which may require classification of certain amounts outside of permanent equity.

1.13 Modifications

This section on modifications to awards has the following subsections:

- Background
- Measuring and Recognizing Compensation Cost
- Modifications of Awards Classified as Equity
- Repurchase of an Award for Cash
- Modifications That Change an Award's Classification
- Modifications in an Equity Restructuring
- Modifications in a Business Combination
- Inducements
- Cancellation and Replacement of Awards

1.13.1 Background

ASC 718 defines a modification as a change in any of the terms or conditions of a stock-based compensation award; for example, a repricing, an extension of the vesting period, or changes in the terms of a performance condition. In addition, a change in how the award will be substantively treated, even if there is not legal modification, may result in a change to the award such that it should be accounted for as a modification. For example, a company may cash settle awards, which it concludes taints the remaining awards and, therefore, causes the awards to be modified from equity awards to liability awards.

As discussed further in this section, a company modifying an award under ASC 718 will, generally, (1) calculate the incremental fair value of the new 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 revise its volatility and expected term assumptions from the grant date values to reflect conditions as of the modification date.

There are various types of modifications, which are measured and recognized as described in the following sections. Listed below are some common modifications of a stock-based compensation award:

- The repricing of an award.
- An acceleration of vesting.
- Changes in an award's terms.
- Reclassification of an award (from equity to liability or vice versa).
- Modification of stock options during blackout periods.
- A modification in an equity restructuring (e.g., a spin-off or stock dividend).
- A modification in a business combination.
- An inducement.

1.13.2 Measuring and Recognizing Compensation Cost

The accounting for modifications depends on whether an award is classified as equity or as a liability.

1.13.2.1 Equity-Classified 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 do the following at the modification date:

- 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.
- 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.
- Determine whether the modification of unvested or partially vested awards changes the estimate of the number of awards that are expected to vest.
- 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. For further details, see section SC 1.13.3.1 titled "Modifications of Performance or Service Conditions That Affect Vesting."

1.13.2.2 Liability-Classified Awards

The general principle of exchanging the original award for a new award also applies to the accounting for 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.

1.13.2.3 Measurement Date

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.

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. 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. Refer to section SC 1.13.6.3 titled “Awards Modified to Add an Antidilution Provision.”

1.13.3 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.

1.13.3.1 Modifications of Performance or Service Conditions That Affect Vesting

Under ASC 718-20-35-3 through 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.

PwC Observation: As a result of these requirements, companies that modify equity-classified awards should keep two sets of records showing which awards vested under the original conditions and which awards vested under the modified conditions to ensure that the appropriate amount of compensation cost is recognized.

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. As discussed earlier, ASC 718's use of the term probable is consistent with the term's application in ASC 450, which refers to an event that is likely to occur (ASC Master Glossary). 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 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 for an award that undergoes a Type I modification is the original grant-date fair value of the award plus any incremental fair value. A Type 1 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-Impossible: 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 expected to be rare 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 grant-date fair value would be recognized, regardless of whether the modified conditions are satisfied.

Type III: Impossible-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 equal to the fair value of the modified award because the value of the modified award is compared to a value of zero (as the original award is not expected to vest). 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: Impossible-to-Impossible: 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).

PwC Observation: On an equity-classified award's modification date, 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 impossible, management should develop, document, and consistently apply a methodology for assessing the probability of achieving vesting conditions, as well as support its probability conclusions with reasonable and objective evidence.

1.13.3.1.1 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 an executive or the termination is involuntary. Two common modifications made in connection with termination of employment are: (1) acceleration of the vesting of unvested awards and (2) extension of the exercise period of 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. The company should update its forfeiture estimate, as needed, in the period that it became probable the employee would terminate employment.

If the employee would have forfeited the awards upon termination, and the company chooses to accelerate vesting or allow continued vesting, the modification is a Type III modification (as described in SC 1.13.3.1 titled "Modifications of Performance or Service Conditions That Affect Vesting"). Therefore, incremental fair value is equal to the fair value of the awards on the modification date. This amount is recognized immediately if the awards do not require further service.

In some instances, the original terms of an award provide for vesting to accelerate 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 (refer to SC 1.9.10 titled "Recognition Effect of Changes to the Requisite Service Period").

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 (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 often provide for a 30- to 90-day exercise period after termination of employment. The expected term of the modified option should be based on 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.

1.13.3.2 Modification of Stock Options During Blackout Periods

At times, a company will impose blackout periods that suspend employees' abilities 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 truncation (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 can not 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.

PwC Observation: 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 through reference to other GAAP (e.g., ASC 480 and ASC 815). As a result of this application of other GAAP, the award may be subject 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. Refer to SC 1.14 for more information on possible transitions from ASC 718 to other generally accepting accounting principles.

1.13.3.3 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 35-4, whereby a company 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.

Figure 1-23 illustrates the accounting for a repricing of unvested options.

Figure 1-23

On October 1, 2006, a company 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. The company recognizes compensation cost using the straight-line attribution method. On October 1, 2007, 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). The company 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 on October 1, 2007 (per option)	\$ 23.53	n/a
Unrecognized compensation cost on October 1, 2007 (in dollars: \$23.53 x 1,000,000 options)	\$23,530,000	n/a

The additional compensation cost stemming from the modification is \$6.23 and the total compensation cost per option is \$29.76 as shown below:

Fair value of modified option on October 1, 2007	\$24.59
Fair value of original option on October 1, 2007	-18.36
Incremental value of modified option on October 1, 2007	\$ 6.23
Incremental value of modified option on October 1, 2007	\$ 6.23
Unrecognized compensation cost for original option	+23.53
Total remaining compensation cost to be recognized	\$29.76

(continued)

The total remaining compensation cost of \$29,760,000 will be recognized over the modified award's two-year requisite service period because (1) employees have completed one-third of the original award's requisite service and (2) the company has not modified the original requisite service period. Accordingly, the company's compensation cost will be recognized ratably over the remaining two years (50 percent each year or \$14,880,000 per year).

1.13.3.4 Modifications to Accelerate Vesting upon Change in Control or Sale of a Business Unit

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 section SC 1.8.4 titled "Performance and Service Conditions That Affect Vesting," 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. 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 unvested awards in anticipation of the sale of a business unit. For example, a company might modify unvested awards to accelerate vesting upon the sale because employees terminating employment with the company in connection with the sale otherwise would have forfeited the awards.

In this scenario, the company should determine whether it expects the original vesting conditions to be satisfied as of the modification date. If the sale of the business is considered "probable" as of the modification date, it might be probable that the employee will terminate employment (upon sale of the business) prior to the original vest date. Therefore, the modification is a Type III modification (Improbable-to-Probable) as discussed in section SC 1.13.3.1.1 titled "Modifications in Connection with Termination of Employment." To make this determination, a company should consider its assessment of when the business unit meets the held for sale criteria of ASC 360 as that assessment also involves assessing whether the sale transaction is probable.

1.13.3.5 Modifications to the Requisite Service Period

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 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. 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). The FAS 123(R) Resource Group discussed 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. The FAS 123(R) Resource Group agreed that either of the above two approaches is acceptable. The decision to adopt either approach is an accounting policy decision which should be disclosed in the financial statements and consistently followed.

1.13.3.6 Modifications of Awards with Market Conditions

As discussed in section SC 1.8.3 titled "Market Conditions," 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 compensation cost over the remaining requisite service period (if any).

1.13.3.7 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 Chapter SC 3). If a nonpublic company is applying an alternative measurement method, that method should be used instead of “fair value” when calculating incremental compensation cost resulting from a modification.

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

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 section SC 1.7.8 titled “Inability to Estimate Fair Value”). 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.

1.13.4 Repurchase of an Award for Cash

The cash settlement of an award is the repurchase of an outstanding equity instrument. Accordingly, an equity-classified award that is modified and settled in cash should be accounted for as follows (ASC 718-20-35-7):

- If the award is unvested and probable of vesting, the company should recognize the cash settlement as an equity-instrument repurchase that vests the award and any unrecognized compensation cost measured at the grant date should 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, compensation cost for the difference should be recognized. If the award is cash-settled for an amount less than its fair value, the entire amount of cash transferred to repurchase the award should be charged to equity.
- 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 recorded as compensation cost would have been reversed. The entire amount paid to settle the award should be charged to compensation cost as the award was not expected to vest under the original terms.

PwC Observation: It may be difficult to determine if an award that has been repurchased or settled should be accounted for as a repurchase of an equity instrument (as described above) or as the modification of an equity award to a liability. 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.

An award is modified to a liability if a company has a pre-existing right to repurchase an award, or settle an award in cash or shares, and the company decides to settle the award in cash. Additionally, a history of cash settlements may indicate that the substantive terms of the award include a cash settlement feature, which could result in liability classification of the awards. Refer to SC Section 1.12 “Liability Classified Awards.”

1.13.4.1 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.

PwC Observation: 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.

1.13.5 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.

1.13.5.1 Equity-to-Liability Modification

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

- Determine what percentage of the requisite service has been provided.
- Recognize a liability that equals the modified award’s modification-date fair value, multiplied by the percentage of the requisite service provided.
- Apply the following “floor principle” such that the fair value (compensation cost to be recorded) of the liability-classified award is at least equal to the amount that would be recognized if the award had retained its equity classification.
- If applicable, recognize as compensation cost the amount by which the fair value of the liability-classified award exceeds the amount that would have been recognized if the award had retained its equity classification.

- 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 after consideration of the floor principle.

An example of a modification that causes an award's classification to change from equity to liability can be found in ASC 718-20-55-123 through 55-133. Figure 1-24 illustrates the accounting for a modification that results in an award's classification switching from equity to liability.

Figure 1-24

This illustration uses the same assumptions as in Figure 1-23. The company decides to issue cash-settled SARs to replace the options. The original equity-classified award's grant-date fair value was \$35.29 per option. Because the award has three-year cliff-vesting provisions, the company would have recognized compensation cost of \$11.76 per year per option ($1/3 \times \$35.29$). On the modification date (October 1, 2007), the fair value of the cash-settled SAR is \$30 per right. Before applying the floor principle, the company would have recognized for each SAR \$10 ($1/3$ of the liability). However, compensation cost is not adjusted because the pro rata fair value of the liability (\$10) is less than the pro rata grant-date fair value of the original award when it was an equity-classified award (\$11.76). The company would record the following journal entries:

On September 30, 2007:

To recognize stock-based compensation cost for the year

Dr Compensation expense	\$11,760,000	
Cr Additional paid-in capital		\$11,760,000

On October 1, 2007 (the modification date):

To recognize the effect of the modification

Dr Additional paid-in capital	\$10,000,000	
Cr Stock-based compensation liability		\$10,000,000

On October 1, 2008, the liability's fair value is \$39. The company would recognize a liability of \$26 ($2/3 \times \39). Because the liability amount for the cash-settled SAR (\$26) exceeds the amount that the liability would have been if the award had retained its equity classification (\$23.53 [$2/3 \times \35.29]), the company also recognizes the excess portion of \$2.47 (\$26 – \$23.53) as additional compensation cost, with a credit to the stock-based compensation liability account.

1.13.5.2 Liability-to-Equity Modification

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 to additional paid-in capital on the modification date.
- Recognize compensation cost equal to the excess, if any, of the modified award's fair value over the liability award's fair value 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 55-138.

1.13.6 Modifications 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. Certain awards 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 an "antidilution provision." For example, to offset the decrease in the per-share price of the stock underlying a stock option after a stock split or spin-off, a company may adjust the exercise price of the stock option, the number of shares underlying the stock option, 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 stock-based compensation awards to preserve the value of the awards after an equity restructuring event may result in significant incremental compensation cost if there was no requirement to make such adjustments based on the award's existing terms. Plan terms that permit adjustment of awards at the discretion of management or the compensation committee will not prevent companies from incurring compensation cost because such a provision does not require, and a company cannot assume, an adjustment if an equity restructuring event occurs.

1.13.6.1 Awards That Do Not Contain an Antidilution Provision

If the adjustment of an award's terms in an equity restructuring was not required by its existing terms, modification accounting will likely result in incremental fair value. The incremental fair value is created because the award's fair value immediately before modification is based on the assumption that the equity restructuring will occur and the award does not have an antidilution provision, while the fair value immediately after modification reflects the "equitable" adjustments made to the award's terms, thus increasing its value.

Figure 1-25 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.

Figure 1-25: Modification of Stock Options Without an Antidilution Provision for a Stock Split

Assumptions

1. On June 1, 2006, Company Z 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.
2. The options cliff-vest in four years based on a service condition.

(continued)

3. 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).
4. One year after the grant date, Company Z completes a 2-for-1 stock split of its common stock when the market price of its stock is \$50.
5. Concurrent with the stock split, Company Z 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.
6. All other fair value assumptions remain constant before and after the modification: expected volatility of 40%, expected term of 6 years, dividend yield rate of 0%, and risk-free rate of 4%.

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 Company Z'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 x 10,000 options).

Immediately after the modification, the exercise price has been modified to \$10 and the number of options increased to 20,000. Using a Black-Scholes model and adjusting only the exercise price, the fair value per option is \$17.88. The total compensation cost for the options outstanding immediately after the modification is \$357,600 (\$17.88 x 20,000 options). Thus, this modification, which was intended only to make the option holders "whole," results in incremental 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 Company Z's stock	\$ 25*	\$ 25
Exercise price	\$ 20	\$ 10
Fair value per option	\$ 13.05	\$ 17.88
Number of options	10,000	20,000
Total compensation cost	\$130,500	\$357,600

* Although the market price of Company Z'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.

Equity restructurings where award holders receive a cash payment in lieu of modifying the award are also treated as a modification. Similar to the illustration in Figure 1-25 above, the value of the award immediately before the cash payment is compared to the value of the unmodified option immediately after the cash payment to the award 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. In equity restructurings, both the change in the exercise price and the cash payment should be included in the assessment of whether incremental fair value has been provided to the award holders.

1.13.6.2 Awards That Contain 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 modification should be equal to its fair value immediately after the modification.

PwC Observation: To avoid treatment as a discretionary provision, we believe it is not necessary for an antidilution provision to specify how the awards will be adjusted; however, the provision should state that an "equitable" or "proportionate" adjustment is required. 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. This may be a determination that necessitates the opinion of legal counsel.

1.13.6.3 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 compensation cost. Similar to Figure 1-25 above, 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.

PwC Observation: Companies that wish to add an antidilution provision to their plans or modify an existing provision should do so prior to announcing an equity restructuring to avoid the accounting consequences of adding an antidilution provision in contemplation of an equity restructuring event. ASC 718 does not define "in contemplation." In Case B of Example 13 of ASC 718-20-55, it is assumed that a modification to add an antidilution provision is in contemplation of an equity restructuring event as the event has been publicly announced. Once publicly announced, the information becomes available to market participants who would incorporate the anticipated effect of the equity restructuring event when determining the fair value of the award. 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.

The addition of an antidilution provision to an outstanding stock option at any time after the grant date may be considered a "material modification" as defined by the Internal Revenue Code that may impact the qualified status of incentive stock options and additionally, may have potentially adverse tax implications to the company under Section 409A. Accordingly, companies that plan to add an antidilution provision to their plans should consult with their tax advisor and/or legal counsel.

1.13.6.4 Spin-off Transactions

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 spin-off entity upon the spin-off. 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 will be addressed:

- Nature of the award modification.
- Impact of mandatory antidilution provision.
- Determining the appropriate stock prices to be used in the incremental fair value calculation.
- Attribution of stock-based compensation cost.

Nature of Modification: Understanding the form 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 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, the fair value of the subsidiary is necessary to measure the incremental fair value, if any.

Companies that grant awards in the former subsidiary as an equitable adjustment pursuant to an antidilution provision would not account for those awards as derivatives based on guidance in ASC 815 (ASC 815-10-55-46 through 55-48). However, if the parent company grants awards in the former subsidiary after the spin-off, those awards would be subject to ASC 815-10-55-46 through 55-48.

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 section SC 1.13.6.1 through 1.13.6.3 for further guidance.

Stock Prices Used In Incremental Fair Value Calculation: The nature of the exchange or adjustment of awards will determine which stock prices are necessary

to measure the awards' fair value. For example, if the parent company's stock option agreement already includes a provision whereby the parent company will distribute stock options in the former subsidiary to the parent's employees based on the spin-off ratio received by 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" should be added to the fair value 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 is not appropriate because the use of averages introduces effects from 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.

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 pertaining to those awards in addition to awards it issued in connection with the spin-off. Incremental fair value for unvested awards would be recognized prospectively 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. In this scenario, any incremental fair value from the spin modification would be recognized immediately in the parent company financial statements for vested awards.

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 affecting 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.

1.13.7 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 payment awards. These replacement stock-based payment 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 payment 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 PwC's "A Global Guide to Accounting for Business Combinations and Noncontrolling Interests—Application of the U.S. GAAP and IFRS Standards."

1.13.8 Inducements

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. 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.

With respect to short-term inducements, the modification guidance under ASC 718 should be applied 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.

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.

Because the ASC 718 definition of a short-term inducement, as found in the ASC Master Glossary, excludes an offer to repurchase or settle an award for cash, a limited time offer to repurchase or settle an award for cash would not be accounted for as a modification. The repurchase of an award for cash would be accounted for in accordance with ASC 718-20-35-7. Refer to section SC 1.13.4 titled "Repurchase of an Award for Cash."

PwC Observation: Because short-term and long-term inducements have significantly different effects on compensation cost, understanding the terms of the arrangement is important. 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.

1.13.9 Cancellations and Replacements of Awards

If a company chooses to cancel an existing award along with a concurrent grant of a replacement award, the transaction should be accounted for as a modification. 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 a re-priced award, 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 re-priced award over the fair value of the original award on the modification 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.

PwC Observation: A company may cancel an award with a performance condition that is not probable at the time of the cancellation without the concurrent grant of a new award. Due to the fact that the performance condition was not probable, the company did not recognize any of the award's grant date fair value prior to the cancellation. As such, at the time of the cancellation, we do not believe that the company would recognize any of the unrecognized compensation cost.

1.14 Transition from ASC 718 to Other Generally Accepted Accounting Principles (GAAP)

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. However, an award may become subject to other applicable GAAP if its terms are modified during the period when the holder is no longer an employee (ASC 718-10-35-11). 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, when an award is no longer within the scope of ASC 718, the application of other GAAP may result in changes to the classification and measurement of the

award. As a result, companies should carefully assess when modifications to awards may cause the award to become subject to other applicable GAAP.

Pursuant to ASC 718-10-35-10, certain equity restructuring modifications made to an award during the period when the holder is no longer an employee would not result in the award being subject to other applicable GAAP. An award modified to reflect an equity restructuring when the holder is no longer an employee is not subject to other applicable GAAP if the modification meets both of the following conditions:

- 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.

PwC Observation: We believe that a modification to accelerate vesting 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 718-10-35-10 through 35-11) may result in the award becoming subject to other applicable GAAP. For example, the repricing of a vested award held by a former employee would result in the award becoming subject to other GAAP.

The guidance in this section only applies to awards granted to employees in exchange for employee services. Nonemployee awards cease being subject to ASC 718 and ASC 505-50 after performance has occurred and, from that point forward, become subject to other applicable GAAP. Refer to section SC 2.2 titled “Accounting under ASC 505-50 for Stock-Based Transactions with Nonemployees” in Chapter SC 2 for the accounting related to nonemployee awards.

1.15 Accounting for Dividends Paid on Stock-Based Compensation Awards

In certain situations, an employee may receive the dividends paid on the underlying shares while an option award is outstanding or a restricted stock award (or RSU) is unvested.

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

The accounting treatment of dividends paid on equity-classified awards should be based on the company’s estimate of the awards expected to vest, which should be consistent with the forfeiture-rate assumption used to recognize compensation cost. The estimate of the awards expected to vest should be adjusted when the forfeiture-rate assumption is adjusted and true-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.

Dividends paid on equity-classified awards are often subject to the same vesting conditions as the 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.

This guidance 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 the previous section SC 1.13.6 titled “Modifications in an Equity Restructuring.”

Unvested awards that contain nonforfeitable rights to dividends are considered participating securities for purposes of computing earnings per share. Refer to section SC 5.7 titled “Participating Securities” in Chapter 5 for further discussion.

1.16 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 under the applicable GAAP similar to the treatment of cash compensation. Stock-based compensation should generally be treated in a manner similar to cash compensation in such cases. For example, employee costs may require capitalization as:

- Inventory.
- Deferred loan origination costs.
- Contract accounting assets.
- Self-constructed fixed assets.
- Capitalized internal-use software.
- Capitalized software costs pursuant to ASC 985-350-25-1.

Once capitalized, compensation cost should be expensed in accordance with 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.

ASC 718 does not provide specific guidance regarding compensation cost that qualifies for capitalization under other GAAP. Similarly, ASC 718 provides limited guidance on the income tax effects related to capitalized compensation cost. See the section SC 4.19 titled “Capitalized Compensation Cost” in Chapter SC 4 for more guidance on the income tax effects of capitalized compensation cost.

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.

1.17 Classification of Compensation Cost Associated with Stock-Based Compensation Awards

SAB Topic 14 provides guidance on the presentation of compensation cost in a public company's financial statements. Under SAB Topic 14, a company should present the expense related to stock-based compensation awards in the same line item(s) as cash compensation paid to the same employees. For example, stock-based compensation awards provided to inventory managers should be classified as cost of goods sold.

Additionally, a company may disclose the amount of expense related to stock-based compensation awards by using the following means:

- In a parenthetical note to the appropriate income statement line items
- On the cash flow statement
- In the footnotes to the financial statements
- Within MD&A

PwC Observation: Based upon discussion with the SEC staff, companies are precluded under SAB Topic 14 from displaying stock-based compensation cost as a single line item in the income statement.

1.18 Segment Reporting

ASC 280, *Segment Reporting*, applies to public companies (including those that issue publicly-traded debt securities). Companies should determine the impact on their segment disclosures that results from having compensation cost included in financial information reviewed by their chief operating decision makers (CODMs). For example, if the CODM's internally-generated periodic financial reports include stock-based compensation cost at the corporate level rather than at the operating segments, the compensation cost should be included in the segment that includes the corporate function.

1.19 Non-GAAP Financial Measures and Management's Discussion and Analysis

Non-GAAP financial measures continue to receive significant attention and are frequently the focus of SEC comment letters. In 2003, the SEC adopted Regulation G and Item 10(e) of Regulation S-K to address non-GAAP financial measures in all public disclosures, such as earnings releases and SEC filings. In 2010, the SEC staff updated its interpretive guidance relating to non-GAAP financial measures. The updated guidance did not change the SEC's rules governing the presentation of non-GAAP measures, but rather it was intended to encourage companies to be consistent in how they portray their financial results to investors by removing certain perceived constraints that some believe discouraged companies from disclosing non-GAAP measures in public disclosures.

A non-GAAP financial measure is a numerical measure of a company's historical or future financial performance, financial position, or cash flows that:

- Excludes amounts, or is subject to adjustments that have the effect of excluding amounts, that are included in the most directly comparable measure calculated and presented in accordance with GAAP, or

- Includes amounts, or is subject to adjustments that have the effect of including amounts, that are excluded from the most directly comparable measure calculated and presented in accordance with GAAP.

There are three basic presentation and disclosures models that must be considered when evaluating non-GAAP financial measures: Regulation G, Instruction 2 to Form 8-K 2.02, and Item 10(e) of Regulation S-K. If a company discloses a particular non-GAAP financial measure in multiple places, the company would need to consider each potential presentation and disclosure model.

Regulation G is applicable to all public non-GAAP financial measure disclosures and requires:

- That a non-GAAP financial measure may not be made public if that measure, taken together with the information accompanying it, is misleading, and
- A reconciliation of the non-GAAP financial measure to the most directly comparable GAAP financial measure.

Instruction 2 to Form 8-K 2.02 is applicable to non-GAAP financial measure disclosures furnished to the SEC under Form 8-K 2.02 (e.g., an earnings release). It includes a requirement that non-GAAP financial measures comply with Regulation G and also requires:

- A presentation, with equal or greater prominence, of the most directly comparable financial measure calculated and presented in accordance with GAAP,
- A statement disclosing the reasons why management believes the non-GAAP financial measure provides useful information to investors, and
- A statement disclosing the additional purposes, if any, for which management uses the non-GAAP financial measures that are not otherwise disclosed (to the extent material).

Item 10(e) of Regulation S-K is applicable to all information filed with the SEC (e.g., in a Form 10-K or Form 10-Q) and requires that non-GAAP financial measures comply with Regulation G and the requirements included in Instruction 2 to Form 8-K 2.02. Item 10(e) of Regulation S-K also prohibits:

- Adjusting a non-GAAP performance measure to eliminate or smooth items identified as nonrecurring, infrequent, or unusual when the nature of the charge or gain is such that it is reasonably likely to recur within two years or there was a similar charge or gain within the prior two years,
- Presenting non-GAAP financial measures on the face of the financial statements or in the accompanying notes,
- Presenting non-GAAP financial measures on the face of pro forma financial information required to be disclosed by Article 11 of Regulation S-X, and
- Using titles or descriptions of non-GAAP financial measures that are the same, or confusingly similar to, titles or descriptions used for GAAP financial measures (e.g., referring to EBITDA as “operating earnings”).

A company’s management may use a non-GAAP financial measure that excludes the effect of stock-based compensation under ASC 718 (e.g., “Net Income Before Stock-Based Compensation Expense” or an equivalent measure). If management uses such a measure, that measure may also provide useful information to investors. If the non-GAAP financial measure “Net Income Before Stock-Based Compensation

Expense” does not violate any of the prohibitions of Regulation G, Instruction 2 to Form 8-K 2.02, or Item 10(e) of Regulation S-K, the company may include the non-GAAP financial measure in a public disclosure. However, the presentation and disclosure of such non-GAAP financial measure would need to comply with the SEC rules under the appropriate presentation and disclosure model(s) described above, depending on the type of public disclosure in which the information is presented (e.g., Form 10-K or earnings release).

In MD&A, the discussion of a company’s performance should address significant trends, variability of earnings, and changes in significant components of revenues and expenses. Given the differences between stock-based compensation and other expenses, management should determine if investors would be well served by including transparent disclosure in MD&A of the amount of expense associated with stock-based compensation awards and the reasons why such amounts fluctuated from period-to-period.

For further discussion regarding non-GAAP measures, refer to PwC’s SEC Volume Section 6020.

1.20 Disclosures

This section summarizes the following topics regarding disclosures:

- Disclosure Objectives
- Minimum Disclosure Information
- Separate Financial Statements of a Subsidiary

1.20.1 Disclosure Objectives

ASC 718 establishes four disclosure objectives that companies should meet when disclosing stock-based compensation (ASC 718-10-50-1). A company that has granted one or more stock-based compensation awards to its employees should provide information that enables users of the financial statements to understand the following:

- The nature and general terms of such awards that were either outstanding or granted by the company during the period presented in the financial statements, as well as the potential effect that those awards might have on shareholders;
- The effect that the stock-based compensation cost had on the income statement;
- The method of estimating (1) the fair value of the goods or services that the company received during the period presented in the financial statements and (2) the fair value of the equity instruments that the company granted during that period; and
- The cash flow effects resulting from stock-based compensation awards.

1.20.2 Minimum Disclosure Information

ASC 718 specifies the minimum information that a company should provide in order to achieve the above-stated objectives for both employee and nonemployee awards.

Figure 1-26 provides a summarized table of the minimum disclosure requirements found in ASC 718-10-50-2. In addition, SAB Topic 14 includes additional disclosure requirements related to specific valuation topics which are discussed in section SC 7.4 titled “Additional Disclosures under SAB Topic 14” in Chapter SC 7.

Figure 1-26: Minimum Disclosure Requirements under ASC 718

In order to meet the disclosure objectives described in ASC 718-10-50-1, companies should disclose, at a minimum, the information set out below. In some circumstances, a company may need to disclose information beyond that listed below to achieve the disclosure objectives.

ASC 718's Minimum Disclosure Requirements

1. A description of the stock-based compensation award(s), including:
 - a. The general terms of awards under the arrangement(s), such as the requisite service period(s) and any other substantial conditions, such as vesting conditions.
 - b. The maximum contractual term of stock options or similar instruments.
 - c. The number of shares authorized for awards of options or other equity instruments.
 - d. The method (e.g., fair value, calculated value, or intrinsic value) used to measure stock-based compensation awards with employees.
2. For the most recent annual income statement presented, provide the number and weighted-average exercise price (or conversion ratios) of the following groups of stock options (or stock units):
 - a. Outstanding at the beginning of the year.
 - b. Outstanding at the end of the year.
 - c. Exercisable or convertible at the end of the year.
 - d. Granted during the year.
 - e. Exercised or converted during the year.
 - f. Forfeited during the year.
 - g. Expired during the year.
3. For the most recent annual income statement presented, provide the number and weighted-average grant-date fair value (or calculated value or intrinsic value) for the following awards not specified above (e.g., restricted stock):
 - a. Nonvested at the beginning of the year.
 - b. Nonvested at the end of the year.
 - c. Granted during the year.
 - d. Vested during the year.
 - e. Forfeited during the year.
4. For each year an income statement is presented, provide:
 - a. The weighted-average grant-date fair value (or calculated value or intrinsic value) of equity awards granted during the year.
 - b. The total intrinsic value of options exercised (or stock units converted), stock-based liabilities paid, and the total fair value of shares vested during the year.

(continued)

5. For fully vested stock options (or stock units) and stock options expected to vest at the date of the latest statement of financial position, provide:
 - a. The number,
 - b. Weighted-average exercise price (or conversion ratio),
 - c. Aggregate intrinsic value (except for nonpublic companies), and
 - d. Weighted-average remaining contractual term of stock options (or stock units) outstanding.
6. For fully vested stock options (or stock units) currently exercisable (or convertible) at the date of the latest statement of financial position, provide:
 - a. The number,
 - b. Weighted-average exercise price (or conversion ratio),
 - c. Aggregate intrinsic value (except for nonpublic companies), and
 - d. Weighted-average remaining contractual term of stock options (or stock units) currently exercisable (or convertible).
7. For each year for which an income statement is provided (these disclosures would not be required for entities that use the intrinsic-value method):
 - a. A description of the method and significant assumptions used during the year to estimate the fair value (or calculated value) of stock-based compensation awards, including (if applicable):
 1. Expected term of stock options and similar instruments, including a discussion of the method used to incorporate the contractual term of the awards and employees' expected exercise and expected post-vesting termination behavior into the fair value (or calculated value) of the awards.
 2. Expected volatility. A company that uses a method that employs different volatilities during the contractual term should disclose the range of volatilities used and the weighted-average expected volatility. A nonpublic company that uses the calculated-value method should disclose (a) the reasons why it is not practicable for it to estimate the expected volatility of its stock price, (b) the appropriate industry sector index that it has selected, (c) the reasons for selecting that particular index, and (d) how it has calculated historical volatility using that index.
 3. Expected dividends. A company that uses a method that employs different dividend rates during the contractual term should disclose the range of expected dividends used and the weighted-average expected dividends.
 4. Risk-free rate. A company that uses a method that employs different risk-free rates should disclose the range of risk-free rates used.
 5. Discount used to estimate post-vesting restrictions. If a company uses a discount to estimate post-vesting restrictions, it should disclose both the discount and the method used to estimate it.

(continued)

8. A company that grants equity or liability awards under multiple employee stock-based compensation plans should provide all of the above information separately for different types of awards to the extent that the differences in the characteristics of the awards make separate disclosure important to an understanding of the company's use of stock-based compensation. For example, it may be important for a company to:
 - a. Provide separate disclosure of weighted-average exercise prices (or conversion ratios) at the end of the year for stock options (or stock units) with a fixed exercise price (or conversion ratio) and those with an indexed exercise price (or conversion ratio).
 - b. Segregate the number of stock options (or stock units) not yet exercisable into those that will become exercisable (or convertible) based either (a) solely on fulfilling a service condition or (b) fulfilling a performance condition.
 - c. Provide separate disclosures for awards that are classified as equity and those classified as liabilities.
 9. For each year for which an income statement is presented:
 - a. Total compensation cost for stock-based compensation awards recognized in income as well as the total related income tax benefit.
 - b. Total compensation cost capitalized as part of the cost of an asset.
 - c. A description of significant modifications, including the terms, the number of employees affected, and the total incremental compensation cost resulting from the modifications.
 10. At the latest balance sheet date presented, the total compensation cost related to nonvested awards not yet recognized and the weighted-average period over which total compensation cost is expected to be recognized.
 11. If not separately disclosed elsewhere, the amount during the annual period of:
 - a. Cash received from the exercise of stock options and similar awards.
 - b. Tax benefits realized from exercised stock options and similar awards.
 - c. Cash used to settle equity instruments granted under stock-based compensation awards.
 12. A description of the company's policy, if any, for issuing shares upon stock option exercise (or stock unit conversion), including the source of those shares (i.e., new shares or treasury stock). If as a result of its policy, a company expects to repurchase shares in the following annual period, the company should disclose an estimate (or range) of shares to be repurchased during that period.
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ASC 718-10-55-134 through 55-137 includes an illustrative example of ASC 718's disclosure requirements.

1.20.3 Separate Financial Statements of a Subsidiary

As discussed in section SC 1.6.4 titled "Employees of a Subsidiary or an Unconsolidated Entity," a subsidiary may be required to record stock compensation in its separate financial statements for awards of parent stock-based awards granted to its employees. In this scenario, the subsidiary should disclose all of the information required by ASC 718, as outlined in ASC 718-10-50-1 through 50-4, for such awards in its separate financial statements.

1.21 Cash Flow Statement Considerations

1.21.1 Excess Tax Benefits

ASC 718 requires that gross windfall tax benefits from stock-based compensation cost be classified as cash inflows from financing activities. For more information, refer to section SC 4.22.1 titled “Cash Flow Statement Presentation.”

1.21.2 Cash Settlements of Stock Options

In some cases, a company may decide to settle outstanding stock options with cash. The presentation of the settlements of equity-classified stock options as a cash outflow from financing activities or operating activities depends on the amount of cash paid for the settlement of the options. If the cash paid to settle an equity-classified stock option does not exceed the fair value of the award on the settlement date, then the amount of cash paid to repurchase the equity award would be charged to equity. As such, the settlement should be categorized as a financing outflow in the statement of cash flows, in accordance with ASC 230, *Statement of Cash Flows* (230-10-45-15).

However, if the amount paid to settle an equity-classified stock option exceeds the fair value of the award on the settlement date, then the cash paid in excess of fair value would be charged to compensation cost. As such, the cost of the settlement would be bifurcated in the statement of cash flows. The amount categorized as a financing cash outflow would be the fair value of the award and the cash paid in excess of fair value would be categorized as an operating cash outflow.

If cash was paid to settle a liability-classified stock option, then the amount of cash paid to repurchase the award would be charged to the liability with any differences from fair value on the settlement date charged to compensation cost. As such, any settlements of a liability-classified stock option should be categorized as an operating cash outflow in the statement of cash flows.

1.21.3 Cash Received upon Early Exercise of a Stock Option

In some instances, companies grant awards to employees that are exercisable prior to vesting so that the employee’s holding period for the underlying stock begins at an earlier date to achieve a more favorable tax position. As discussed in SC 1.12.13 titled “Repurchase Features That Function as Forfeiture Provisions,” the “early exercise” of an option would not be considered substantive for accounting purposes and any cash received upon “early exercise” would be recognized as a deposit liability.

We believe that the cash received from the employee upon “early exercise” of a stock option should generally be presented as a cash inflow from financing activities. Although the underlying shares are not considered “issued” for accounting purposes under ASC 718 when the cash is received (because the options are subject to vesting conditions), the cash represents proceeds in connection with awarding equity instruments. Further, cash flows from operating activities, as the term is used in ASC 230, are generally the cash effects of transactions and other events that enter into the determination of net income. The cash received from an “early exercise” of an option is not the result of such a transaction.

1.21.4 Minimum Statutory Tax Withholdings

Many stock-based compensation plans permit shares that are issued upon an employee's exercise of an option or vesting of a restricted stock unit to be withheld as a means of meeting minimum statutory tax withholding requirements. In some cases, the shares are withheld directly by a company (i.e., not a third-party broker) and the company remits the withholding taxes to the appropriate taxing jurisdiction. We believe that these withholdings by a company may be presented as a cash outflow from financing activities or operating activities.

The presentation as a financing activity follows the view that the company, in substance, issued the gross number of shares to the employee on vesting and then repurchased shares equal to the minimum statutory tax withholding requirement. As a result, it would be appropriate to account for the "in substance" repurchase of shares as the repurchase of an equity instrument in the financing section of the cash flow statement.

Alternatively, it would also be acceptable to present the cash outflow related to the withholding within operating activities. Under this view, rather than the repurchase of an equity instrument, the cash outflow is viewed as the settlement of a tax obligation on behalf of an employee.

1.22 Effective Dates and Transition

1.22.1 Effective Date

The stock-based compensation guidance in ASC 718 applies to awards that are granted, modified, or settled in interim or fiscal periods beginning after the applicable effective date. Figure 1-27 summarizes the effective dates of the stock-based compensation guidance of ASC 718.

Figure 1-27

Type of Company	Effective Date of ASC 718	Applies to Companies with a Calendar-Year-End Beginning on:
Public company that does not file financial information with the SEC as a small-business issuer	As of the beginning of the first fiscal year that starts after June 15, 2005	January 1, 2006
Public company that files financial information with the SEC as a small-business issuer	As of the beginning of first fiscal year that starts after December 15, 2005	January 1, 2006
Any nonpublic company	As of the beginning of the annual reporting period that starts after December 15, 2005	January 1, 2006
Foreign private issuers	As of the beginning of the first annual reporting period that starts after June 15, 2005 (or in a prospectus or registration statement that is required to include an interim period of the first fiscal year that begins after June 15, 2005)	January 1, 2006

1.22.2 Transition Methods

Under ASC 718, public companies should have chosen the modified prospective application (MPA) transition method or the modified retrospective application (MRA) transition method.

1.22.2.1 Modified Prospective Application

A public company that used the MPA method did not adjust its prior financial statements. Instead, the company applied ASC 718 for:

- New awards granted after the adoption of ASC 718,
- Any portion of awards that were granted after the first fiscal year beginning after December 15, 1994, and have not vested by the date that the company adopted ASC 718, and
- Any outstanding liability awards.

Measurement and attribution of compensation cost for awards that were outstanding and classified as equity at the adoption date of ASC 718 should have been based on the original grant-date fair value of those awards and the same attribution method that, under the provisions of FAS 123, the company previously used for the purpose of either recognition or pro forma disclosure.

The company, if applicable, should have discontinued its past practice of recognizing forfeitures only as they occur (i.e., during the remaining vesting period, the company needs to estimate forfeitures for those earlier awards). Refer to section SC 1.23.1 titled “Future Forfeitures on Outstanding Awards.”

1.22.2.2 Modified Retrospective Application

For companies that wished to present previously filed financial statements as if they had adopted FAS 123, ASC 718 allowed companies two potential transition alternatives.

1.22.2.3 Modified Retrospective Application to All Prior Periods

Under the MRA method, a company adjusted its prior financial statements to include the amounts that the company previously reported as pro forma disclosures under FAS 123’s original provisions. The measurement and attribution of compensation cost for equity-classified awards that the company granted for the fiscal years beginning after December 15, 1994, are based on the grant-date fair values of those awards and on the same attribution method that was previously used for the FAS 123 pro forma disclosures.

If under the MRA method, a company had liability-classified awards that needed to be remeasured, it should have measured those liabilities using the same attribution method used previously under FAS 123. Assuming it had not previously adopted the recognition provisions of FAS 123, a company would have recognized those liability-classified awards using the intrinsic-value method because that was the accepted method under FAS 123.

PwC Observation: Under the MRA method, a company should have adjusted applicable balance sheet accounts (e.g., deferred tax assets, inventory, self-constructed property, plant and equipment), and income statement accounts (e.g., cost of goods sold, depreciation, income tax provision) and the statement of cash flows.

1.22.2.4 Modified Retrospective Application to Only Interim Prior Periods of the Year of Adoption

The FASB provided an alternative method of transition, the modified retrospective application to only interim periods of the ASC 718's year of adoption.

Public companies whose fiscal years did not coincide with the effective date of ASC 718 or that decided to early adopt had the alternative of applying the MRA method to only the interim periods of the year in which they adopted ASC 718. Under this method, those public companies only adjusted their earlier interim periods using amounts from their FAS 123 pro forma disclosures for those earlier periods. Therefore, companies that elected this alternative should have recognized compensation cost for those earlier interim periods of the fiscal year by applying FAS 123 and account for latter interim periods of the fiscal year by following the guidance in ASC 718. As described above, a company's liability-classified awards that needed to be adjusted were recognized using the intrinsic-value method because that was the accepted method under FAS 123.

1.23 Cumulative Effect Adjustments

1.23.1 Future Forfeitures on Outstanding Awards

Upon adoption of ASC 718, certain companies were required to make a one-time cumulative adjustment at the adoption date to record an estimate of future forfeitures on outstanding awards. This adjustment was applicable for those companies that, prior to the adoption of ASC 718, recognized actual forfeitures when they occurred (as opposed to estimating forfeitures at the grant date and subsequently adjusting their estimated forfeitures to actuals). The cumulative effect adjustment was the amount of compensation cost related to outstanding awards that were not expected to vest based on an estimate of forfeitures as of the ASC 718 adoption date. The cumulative effect adjustment would have been recorded as follows:

- For awards with compensation cost recognized in the financial statements prior to the adoption of ASC 718 (under FAS 123 or APB 25), an adjustment to record estimated forfeitures was recorded as a cumulative effect adjustment in the financial statements at the adoption date of ASC 718.
- For awards with compensation cost reported in the FAS 123 pro forma footnote disclosure, no adjustment should have been made to the amounts included in the footnote disclosure and no cumulative effect adjustment would have been recorded in the financial statements at the adoption date of ASC 718. However, the company should have incorporated a forfeiture-rate assumption when determining the compensation cost that is recognized after adoption of ASC 718 for awards outstanding on the adoption date.

1.23.1.1 Adjustments to Compensation Cost Recorded under APB 25

As discussed above, a company that recognized compensation expense under APB 25 (e.g., for restricted stock or in-the-money options) should have recorded a cumulative effect adjustment in its financial statements at the adoption date of ASC 718 to reverse the APB 25 compensation cost recorded prior to adoption of ASC 718 related to awards that it estimates will be forfeited prior to vesting. Therefore, for awards that are partially vested at the adoption of ASC 718, total cumulative compensation cost could include both:

- APB 25 compensation cost for the portion of the requisite service period completed prior to the adoption of ASC 718, and
- ASC 718 compensation cost for the portion of the requisite service period completed after the adoption of ASC 718.

Companies need to track those awards that were partially vested at the adoption date of ASC 718 and, thus, resulted in compensation cost under both APB 25 and ASC 718. Adjustments to the company's estimate of forfeitures should be calculated so that the financial statements include, on a cumulative basis, APB 25 and ASC 718 compensation cost only for those awards that ultimately vest. Adjustments to the forfeiture estimate after the adoption of ASC 718 (including the final adjustment to actual forfeitures) should be recorded in compensation cost in the period of the change in estimate.

PwC Observation: For awards outstanding at the adoption date of ASC 718 that included performance conditions, we believe that companies should have followed a similar approach. If achievement of the performance condition was probable at the adoption date of ASC 718 and subsequently the company determines that it is no longer probable that the performance condition will be achieved, the company should reverse, in the current period, any APB 25 and/or ASC 718 compensation cost that was recorded for that award. Conversely, if achievement of the performance condition was not probable at the adoption date of ASC 718, no cumulative compensation cost would have been recorded under APB 25. If the company subsequently determines that it is probable that the performance condition will be achieved, we believe that compensation cost should be recorded based on the grant-date fair value (i.e., determined under FAS 123 for purposes of pro forma disclosure), as opposed to recording any amounts based on the intrinsic value.

1.23.2 Other Cumulative Effect Adjustments

Under either the MPA or MRA transition methods, companies may have needed to make additional cumulative effect adjustments (net of any related tax effect) at the adoption date of ASC 718, including the following:

- For an outstanding equity award under FAS 123 or APB 25 that would now be classified as a liability under ASC 718, an adjustment would have been required to remeasure that award at its fair value (or fair value pro rated for the portion of the requisite service period rendered). If the fair value of the liability is greater or less than previously recognized compensation cost for the award, the liability would be recognized first by reducing compensation cost for the award to the extent of such previously recognized cost and second by recognizing any remaining difference in the income statement.

- For an outstanding liability award under FAS 123 or APB 25 measured at its intrinsic value, an adjustment would have been required to measure that award at its fair value.

A company that adopted under the MPA transition method may have had the following additional transition adjustments:

- For pro forma inventory or other assets that include capitalized compensation costs, an adjustment may have been recorded to include such amounts on the balance sheet upon adoption of ASC 718 if the company capitalized compensation costs in its pro forma footnote disclosure. Refer to the previous section SC 1.16 titled “Capitalized Compensation Cost.” ASC 718 did not permit a company that adopted under the MPA transition method to include pro forma deferred tax assets on its balance sheet.
- For unearned or deferred compensation (i.e., contra-equity accounts) related to awards granted prior to the adoption of ASC 718, such amounts should have been eliminated against the appropriate equity accounts (generally, APIC) upon adoption.

Chapter 2:

Employee Stock Purchase Plans and Stock-Based Transactions with Nonemployees

Chapter 2: Employee Stock Purchase Plans and Stock-Based Transactions with Nonemployees

This chapter addresses the accounting treatment for (1) employee stock purchase plans (ESPPs) under ASC 718, *Compensation—Stock Compensation*, and (2) stock-based transactions with nonemployees under ASC 505-50, *Equity—Equity-Based Payments to Non-Employees*. This chapter summarizes the guidance provided in the accounting literature listed above. 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.

2.1 Employee Stock Purchase Plans

A typical ESPP in the United States is designed to promote broad-based employee ownership of a company's stock and, as discussed in section SC 4.23.5 titled "Employee Stock Purchase Plans" in Chapter SC 4, provides favorable tax treatment if the plan meets the tax-qualification conditions of Internal Revenue Code Section 423. By using payroll withholding and avoiding brokers' commissions, ESPPs give employees a convenient and economical means of acquiring company shares (usually at a discount). This section summarizes the following topics related to accounting for ESPPs:

- Compensatory vs. Non-compensatory.
- Types of ESPPs and Measuring Compensation Cost.
- Requisite Service Periods.
- Forfeitures.
- Multiple Purchase Periods.
- Changes in Withholdings and Reset Features.
- Liability and Equity Classification.
- Disqualifying Dispositions.
- Earnings Per Share.

2.1.1 Compensatory vs. Non-compensatory

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 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).

In addition, 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 equity-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 stock-issuance costs that would have been incurred had there been an 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.
- If the ESPP purchase discount the company offers to employees is greater than the equity-issuance costs, the entire purchase discount should be considered compensatory. For example, if a company estimated its issuance costs at 7% and offered a 15% ESPP purchase discount to employees, the fair value of the entire 15% purchase discount (as opposed to just the 8% difference) is compensatory in addition to any compensation attributable to look-back features.
- 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 purchase discount is now greater than the company's equity-issuance costs, any subsequent grants made through the ESPP should be considered compensatory. For example, if a company estimated that its issuance costs would be 7%, and the ESPP had a purchase discount of 15%, future purchases under the ESPP would be compensatory; prior purchases under that ESPP would not be compensatory.

Condition 2:

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

PwC Observation: 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 a look-back feature (a feature that generally permits the employee to purchase shares at the lower of the share price on the grant date or at the later purchase date), other than the following:

- 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, provided that the purchase price is based solely on the market price of the stock on the purchase date.

PwC Observation: Many ESPPs are compensatory under ASC 718, because they have either a discount that is greater than 5% or a look-back feature. In order for the ESPP to qualify as non-compensatory, companies offering ESPPs that have a discount greater than 5% should be able to support their assertion that the per-share costs associated with a public stock-issuance transaction exceed the percentage discount offered by the plan at least annually.

Companies that offer their employees a compensatory ESPP should recognize compensation cost over the requisite service period for stock grants that were made under the ESPP. 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.

2.1.2 Types of ESPPs and Measuring Compensation Cost

ASC 718-50-55-2 identifies and defines nine different types of look-back options associated with ESPPs. For measurement guidance on ESPPs, refer to this guidance.

As described in ASC 718-50-55-24, the fair value of a typical ESPP award granted under a Type B plan with a 15% purchase discount, look-back feature, and no cap on the number of shares to be purchased generally consists of:

- the purchase discount (e.g., 15% of the enrollment/grant-date stock price), and
- the fair value of the look-back feature on the enrollment/grant date, which consists of a call option on 0.85 of a share of stock and a put option on 0.15 of a share of stock.

2.1.3 Requisite Service Periods

The requisite service period for an ESPP is the period during which the employee participates in the plan and pays for the shares. 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 shares are purchased.

PwC Observation: Many ESPPs have shorter requisite service periods than typical employee stock options, because of the full-time employee eligibility and maximum purchase period length of time constraints required for tax qualification under IRC Section 423. The most common purchase period for these ESPPs is 6 or 12 months. (Alternative periods of 3, 9, 18, 24 or more months are less common.)

2.1.4 Forfeitures

An estimated forfeiture rate should be applied in determining compensation expense when it can be reasonably estimated how many employees will terminate during a service period. 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.

PwC Observation: In practice, a minimal forfeiture rate may be appropriate, when ESPP purchase periods are short and anticipated employee turnover is minimal.

2.1.5 Multiple Purchase Periods

Some ESPPs provide for multiple purchase periods during the plan offering period. The fair value of an award under an ESPP with multiple purchase periods during the offering period that all have a look-back feature based upon the stock price at the beginning of offering period enrollment date should be determined at the enrollment date in the same manner as an award under a graded-vesting stock option plan. The attribution of expense (graded-vesting or straight-line attribution) will then be based on the Company's policy election for awards with graded vesting.

Under the graded-vesting 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, respectively. 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.

In contrast, the measurement and attribution approach is different for an ESPP with a two-year offering period that includes four separate six-month purchase periods, each of which has a six-month look-back feature to the stock price at the beginning of its own six-month purchase period; that plan would be valued and compensation cost recognized separately and sequentially as if there were four independent six-month offering periods. The fair value of each award would be recognized over its 6-month requisite service period and graded-vesting attribution would not be applicable.

PwC Observation: We believe that the accounting policy election made to recognize compensation cost for a company's awards with service-condition only graded-vesting features (e.g., stock options) under either the graded-vesting or straight-line attribution method should also apply to its ESPPs with multiple purchase periods.

2.1.6 Changes in Withholdings and Reset Features

ASC 718-50 provides accounting guidance for the various features that can accompany an ESPP, including resets, rollovers, and changes in withholdings. When or if these plan features become effective, the changes in the award's terms are considered to be modifications, and modification accounting described in ASC 718-20-35 should be applied. See section SC 1.13 titled "Modifications" in Chapter SC 1 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 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.

2.1.7 Liability and Equity Classification

An ESPP with a fixed discount amount, no look back feature, and a fixed amount of employee contributions during the enrollment period 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.

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.

2.1.8 Disqualifying Dispositions

ESPPs generally do not result in a tax benefit to the employer unless there is a disqualifying disposition. See section SC 4.23.5 titled "Employee Stock Purchase Plans" in Chapter SC 4 for further guidance on disqualifying dispositions.

2.1.9 Earnings Per Share

The impact of ESPPs on EPS is discussed in section SC 5.6 titled "Employee Stock Purchase Plans (ESPPs)" in Chapter SC 5.

2.2 Accounting under ASC 505-50 for Stock-Based Transactions with Nonemployees

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 summarizes the following topics related to accounting for stock-based transactions with nonemployees:

- Overview of ASC 505-50.
- Measurement Date and Performance Commitment.
- Balance Sheet Presentation.
- Period and Manner of Recognition.
- Variability in Quantity and/or Terms prior to or on the Measurement Date.
- Variability in Award Dependent Only upon a Market Condition.
- Changes in Quantity and/or Terms after the Measurement Date.
- Accounting by an Investor for Stock-Based Compensation Granted to Employees of an Equity Method Investee.
- Accounting for Consideration Given to a Customer.
- Accounting for Nonemployee Transactions when Specific Guidance Does Not Exist.
- Classification of Stock-Based Transactions with Nonemployees.
- Accounting for Nonemployee Transactions after Performance is Complete.

2.2.1 Overview of ASC 505-50

ASC 718 does 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 section SC 1.6 titled “Employees and Nonemployees” in Chapter SC 1 for guidance on the definition of an employee.

2.2.2 Measurement Date and Performance Commitment

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.

PwC Observation: The assessment of whether a performance commitment contains a “sufficiently large disincentive for nonperformance” should be based on both quantitative and qualitative factors which are discussed further in this section. Generally, we believe situations in which “performance commitments” exist prior to performance being complete will be rare.

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 section 2.2.4, if there exists an intervening service period between the initial grant of the award and the performance completion date, interim determinations of fair value should be utilized.

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.

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.

2.2.3 Balance Sheet Presentation

ASC 505-50-S99 addresses the balance sheet presentation of arrangements where unvested, forfeitable equity instruments are issued to a counterparty as consideration for future services. The SEC staff indicated that if the issuer obtains a right to receive future services in exchange for unvested, forfeitable equity instruments, the fair value of such equity instruments should not create equity until the future services are received (i.e., the instruments are not considered "issued" for accounting purposes until they vest). Consequently, there should be no accounting recognition for these instruments at the grant date, even if a measurement date has occurred (e.g., due to the existence of a performance commitment). The fair value of the instruments would instead be recorded over the period the services are received.

2.2.4 Period and Manner of Recognition

ASC 505-50 generally does not address the period(s) or the manner (that is, capitalize versus expense) in which a company 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 the company 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). The fair values, including changes in fair values between financial reporting dates due to remeasurement, can be attributed in accordance with the graded-vesting or straight-line method; the use of either method is an accounting policy election, which should be consistently applied.

Sections 2.2.5 through 2.2.7 below discuss the accounting for awards if the quantity or terms of the equity instruments are not known upfront.

2.2.5 Variability in Quantity and/or Terms Prior to or on the Measurement Date

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. 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 55-40 illustrate the application of this guidance.

PwC Observation: 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, 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.

2.2.6 Variability in Award Dependent Only upon a Market Condition

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.

2.2.7 Changes in Quantity and/or Terms after the Measurement Date

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 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 55-16 illustrates the application of this guidance.

2.2.8 Accounting by an Investor for Stock-Based Compensation Granted to Employees of an Equity Method Investee

ASC 323-10-25-3 through 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 505-50 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.

Other non-contributing investors should recognize income equal to the amount that their interest in the investee's net book value has increased. 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.

2.2.9 Accounting for Consideration Given to a Customer

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. 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 provides 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.

2.2.10 Accounting for Nonemployee Transactions when Specific Guidance Does Not Exist

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.

PwC Observation: ASC 505 and 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, consistent with the overall measurement principles of ASC 718. We also believe that under certain facts and circumstances, it may be acceptable for a company to estimate forfeitures in accounting for both liability and equity awards granted to nonemployees.

2.2.11 Classification of Stock-Based Transactions with Nonemployees

Classification of awards issued to nonemployees while within the scope of ASC 505-50 is generally the same as awards issued to employees. See section SC 1.12 titled “Liability-Classified Awards” in Chapter SC 1 for discussion of features that cause an award to be liability-classified.

2.2.12 Accounting For Nonemployee Transactions after Performance is Complete

As discussed in section SC 1.14 titled “Transition from ASC 718 to Other Generally Accepted Accounting Principles (GAAP)” in Chapter SC 1, 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. Nonemployee awards cease being subject to ASC 718 and 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*). That guidance could require accounting for such instruments as liabilities depending on their terms. Refer to ARM 5450.2 and Chapter 2 of the Guide to Accounting for Derivative Instruments and Hedging Activities.

For example, 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.

Chapter 3: Nonpublic Companies

Chapter 3: Nonpublic Companies

This chapter discusses the key aspects of accounting for a nonpublic company's stock-based compensation awards. Per the guidance contained in ASC 718, *Compensation—Stock Compensation*, a company is defined as a nonpublic company if it (1) does not have publicly traded equity securities (domestic or foreign), (2) has not filed an initial prospectus in preparation to sell equity securities, and (3) is not controlled by a company that fulfills either of the first two criteria. Therefore, an entity with only publicly traded debt securities is a nonpublic company under ASC 718, but 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. See section SC 1.3 titled "Awards within the Scope of ASC 718" in Chapter SC 1 for further guidance on the definition of a public 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 related to accounting for stock-based compensation under ASC 718 by nonpublic companies in the following areas:

- Measurement of Fair Value
- Classification of Awards with Repurchase Features
- Book Value Plans / Formula Value Plans
- Transition from a Nonpublic Company to a Public Company
- Issues Regarding Cheap Stock and Initial Public Offerings (IPO)
- Modification of an Award Valued Using the Minimum Value Method
- Classification of Various Types of Awards Provided to Employees of "Pass-Through" Entities

3.1 Measurement of Fair Value

The selection of the appropriate measurement method depends on the classification of the award.

3.1.1 Measurement of Awards Classified as Equity

Under ASC 718, use of the fair-value method for awards classified as equity is always preferable, if practicable to apply for a nonpublic company. 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. In other cases, nonpublic companies may have sufficient information to develop a reasonable and supportable estimate of the expected volatility of their stock. Generally, nonpublic companies can look at volatility of peer group public companies to help determine a volatility assumption. 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.

If, however, 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.

When selecting an appropriate industry-sector index (e.g., from the Dow Jones Index Series), the nonpublic company's size and industry should be considered in determining which of the available indices is the most appropriate. For example, for a company that sells only a specific product (e.g., an internet search engine), a broad index (e.g., a software index) may not be appropriate. Likewise, if a nonpublic company participates in two different industries that have different volatility indexes, it would need to decide how to average those volatility indices for purposes of determining its own volatility index.

Once an appropriate index has been determined, a nonpublic company should use the volatility that corresponds to the options' expected term. For example, if the expected term of the nonpublic company's options is five years, it should use the five-year volatility of the appropriate index.

Refer to section SC 7.3.1.5 titled "Peer-Group Volatility" in Chapter SC 7 for a more detailed discussion on how to select an appropriate peer group in determining the expected-volatility assumption.

PwC Observation: A nonpublic company is permitted to use the calculated-value method for equity-classified awards if sufficient information is not available to estimate its expected volatility. It may be difficult for a company to support an assertion that it is unable to identify peer group public companies in order to estimate its expected volatility.

The use of the calculated-value method still requires that companies determine the fair value of the underlying stock and address the related potential valuation issues. This could include having valuations performed at the end of each reporting period and on grant dates. Additionally, companies will still need to develop the data for assumptions other than volatility for use in the option-pricing model.

For nonemployee awards, a company (whether public or nonpublic) should apply the provisions of ASC 505-50, *Equity—Equity-Based Payments to Non-Employees*, which requires that nonemployee awards be accounted for at fair value. In our view, if a nonpublic company grants an option to a nonemployee and estimates the fair value of that award under ASC 505-50, the company should also be able to estimate the fair value of its employee awards under ASC 718.

As discussed in section SC 1.7.8 titled "Inability to Estimate Fair Value" of Chapter SC 1, in some rare circumstances, it might not be possible to reasonably estimate the fair value or the calculated value of stock-based-compensation 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 every 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.

PwC Observation: Applying the intrinsic-value method to stock-based-compensation awards classified as equity will be equally rare for nonpublic companies and public companies. A nonpublic company will rarely issue awards with terms so complex and unique that it would be unable to reasonably determine the awards' fair value or calculated value. If, however, a nonpublic company does issue such an award, the intrinsic value of the award will introduce volatility into the company's financial statements, given that the award is remeasured at each reporting period until it is settled. Additionally, even if intrinsic value were used, a company would still be required to determine the fair value of the underlying stock on each reporting date in order to calculate the intrinsic value of its awards.

3.1.2 Changes in the Measurement Method Used

A company should apply the same measurement method for all similar awards, and over the entire life of each of those awards. If a nonpublic company used the intrinsic value for an award and subsequently believes that its new awards can be estimated using the fair-value or calculated-value method, 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. A nonpublic company's use of a valuation method for equity-classified awards is based on specific facts and circumstances.

3.1.3 Measurement of Awards Classified as Liabilities

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 the fair-value method to measure its equity-classified awards should make an accounting policy decision to measure its liability-classified awards using the fair-value method or the intrinsic-value method. A nonpublic company that uses the calculated-value method to measure its equity-classified awards (because it is not practicable for the company to estimate the expected volatility of its stock price) should measure 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.

Figure 3-1 summarizes alternative measurement methods for equity and liability awards available to a nonpublic company.

Figure 3-1: Alternative Measurement Methods by Balance-Sheet Classification (Nonpublic Companies Only)

Equity	Liability
Follow a hierarchical approach:	Decide on and disclose an accounting policy at ASC 718's adoption date: fair value* or intrinsic value.
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.	

* 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.

3.1.4 Use of SAB Topic 14's Simplified Method for Estimating Expected Term

As discussed in section SC 7.2.1 titled “SAB Topic 14's Simplified Method for Estimating Expected Term” in Chapter SC 7, 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. The simplified method is available for awards that qualify as “plain-vanilla” options. It is acceptable for a nonpublic company to use the simplified method for stock options that meet the criteria in SAB Topic 14.

PwC Observation: A nonpublic company that elects to utilize the simplified method to estimate expected term should carefully review the criteria listed in SAB Topic 14 to ensure that the use of the simplified method is appropriate. An equity-classified option with a repurchase feature that is designed to provide liquidity (e.g., a fair value repurchase feature) could meet the criteria if all other criteria are met. However, other repurchase features could preclude a company from concluding that an option meets the criteria (e.g., certain book value repurchase features).

3.2 Classification of Awards with Repurchase Features

Section SC 1.12.7 titled “Shares with Repurchase Features” in Chapter SC 1 discusses the accounting guidance for public and nonpublic companies that grant awards with repurchase features. Because most of the guidance is covered in Chapter SC 1, this section only addresses specific examples related to nonpublic companies.

3.2.1 Impact of ASC 480 on Accounting for Mandatorily Redeemable Financial Instruments

ASC 480, *Distinguishing Liabilities from Equity*, impacts how companies classify, measure, and disclose certain mandatorily redeemable financial instruments.

Depending on the terms of the instrument, ASC 480-10-65 extends or indefinitely defers the effective date for nonpublic companies that are not SEC registrants or controlled by SEC registrants (as defined in the guidance). For all financial instruments of nonpublic non-SEC registrants that are mandatorily redeemable (except for those that are mandatorily redeemable on fixed dates for amounts that are either fixed or determined by reference to an interest rate index, currency index, or another external index), ASC 480 is deferred indefinitely.

The definition of a nonpublic company is the same under ASC 480 and ASC 718. However, the deferral provisions of ASC 480-10-65 discussed above are only available to nonpublic companies that are also not SEC registrants (as defined in the guidance). For example, an entity with publicly traded debt securities is considered a nonpublic company under ASC 480 and ASC 718, but is an SEC registrant and therefore, would not qualify for the deferrals under ASC 480-10-65 described above.

The indefinite deferral provided by ASC 480-10-65 of the provisions of ASC 480 for certain mandatorily redeemable financial instruments 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 6 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. An option that would be settled, upon exercise, by issuing a mandatorily redeemable share that is subject to the deferral in ASC 480-10-65, would also 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 be appropriate to record an amount outside of permanent equity (i.e., as temporary equity in the mezzanine section of the balance sheet). See section SC 1.12.14 titled “Classification of Certain Redeemable Securities under ASR 268” in Chapter SC 1 for further discussion. Although the requirements discussed in that section apply to SEC registrants, we prefer that non-SEC registrants follow the same classification treatment.

3.3 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) the transaction is compensatory and (2) the repurchase features require the award to be classified as a liability.

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. However, 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.

To obtain the book value plan accounting treatment, we believe that 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. Additionally, if repurchase features based on the formula price exist, liability classification would be required. In general, repurchase features should be assessed to determine whether the employee bears the risks and rewards of ownership for at least six months (refer to section SC 1.12.7 titled “Shares with Repurchase Features” in Chapter SC 1).

If a company with a book value / formula value plan issues options, the options will generally be compensatory. The company would also need to assess whether the options should be classified as a liability (refer to section SC 1.12 titled “Liability-Classified Awards” in Chapter SC 1).

See ASC 718-10-55-131 through 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.

3.4 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 the calculated-value and intrinsic-value methods are not available for public companies.

3.4.1 Measurement of Awards Classified as Equity

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).

3.4.2 Measurement of Awards Classified as Liabilities

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, 2006, a calendar year company has a vested liability award which measured at its intrinsic value is \$10. On March 2, 2007, 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 recognize 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. The company should remeasure the award to its fair value at the end of the quarter and record compensation cost for any subsequent changes in fair value in the current period.

PwC Observation: 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 the above example). We believe such compensation cost should be recognized either through beginning retained earnings or as an expense in the current period.

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*. Further, ASC 250-10-45-5 provides guidance on how to account for changes in accounting principles retrospectively. However, unlike the general model in ASC 250, we believe the effects of the change described above should not be applied retrospectively since retrospective application would be impractical. ASC 250-10-45-9 states that retrospective application is impractical if assumptions about management's intent in a prior period cannot be independently substantiated. 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-based method to its awards.

3.4.3 Additional Disclosures under SAB Topic 14

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.

3.5 Issues Regarding Cheap Stock and Initial Public Offerings (IPO)

The SEC staff has challenged registrants who have issued stock, or granted stock options or warrants with exercise prices at a price significantly below the public offering price ("cheap stock"), shortly before going public. The SEC staff has also challenged accounting for awards when the option exercise price or value placed on the shares was significantly lower than the prices paid for similar stock, issued at approximately the same time.

The SEC staff will also challenge registrants who have issued convertible preferred stock shortly before the IPO where the conversion price is below the IPO price and a beneficial conversion feature (following the guidance in ASC 470, *Debt*) has not been recorded. The SEC staff believes that the guidance in ASC 470 should only be used to account for financing transactions involving beneficially convertible securities. In instances where beneficially convertible preferred securities are issued for goods or services, such transactions should be measured at fair value pursuant to ASC 718 and ASC 505-50, where applicable.

For example, a nonpublic company may grant a typical fixed, at-the-money stock option six months before its IPO under the accounting requirements of ASC 718. 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, the SEC staff may presume that the option was a cheap-stock grant. This means that, in effect, the company granted an in-the-money stock option, with the underlying stock's fair value exceeding the option's exercise price on the grant date. In this case, the company

would have to rerun its option-pricing model and record a “cheap stock” charge to reflect the fact that the option was granted in-the-money and therefore has a larger fair value than the same option granted at-the-money.

Items affecting the SEC’s decision on whether to challenge the compensation recorded (or lack thereof) will include:

- Whether there were any equity or convertible security transactions with third parties for cash within a reasonable period of time of the grant to the employee, 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 to the employee(s) 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 misperception is that the SEC staff has 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. This is simply not the case. The SEC staff has stated on a number of occasions that each situation needs to be evaluated based on its own particular facts and circumstances, and that no preconceived range of acceptable discounts should be assumed. The SEC staff expects that any value assigned to stock issued or options granted (regardless of the extent of discount from IPO price) be supported by credible evidence, not simply a “belief” that the value is less than the IPO price.

Simply put, the SEC staff expects registrants to be able to present persuasive credible evidence to support a significant change in fair value of the stock from various grant or award dates to the filing date of an IPO. 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 issued a practice aid entitled *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. The practice aid provides financial-statement preparers, valuation specialists, and auditors (internal and external) with best practice guidance for valuing privately-held-company equity securities, including stock-based-compensation awards that are within the scope of ASC 718.

Although the AICPA’s practice aid has no authoritative status, the SEC staff expects companies in the IPO process to make the disclosures that the practice aid recommends for periods preceding the IPO. 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.

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.

PwC Observation: 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:

1. the date the security was issued and to whom,
2. 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, and
3. 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.

3.5.1 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.

The SEC staff has expressed a view (codified in ASC 718-10-S99) that escrowed share arrangements are presumed to be compensatory, equivalent to a reverse stock split (refer to ARM 5570.2111) 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 (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 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.B. and Topic 5.T. (ASC 225-10-S99-3 and S99-4), 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.

3.6 Modification of an Award Valued Using the Minimum Value Method

As permitted under prior guidance, a company may have valued its stock options at the grant date using the minimum value method and disclosed those amounts in its pro forma footnote disclosures. As these nonpublic companies are required to adopt ASC 718 prospectively, they would give no recognition in the financial statements to the remaining compensation cost calculated under the minimum value method, as required by the transition guidance in ASC 718. Companies that used the minimum value method for the pro forma disclosures should continue to account for those awards under prior guidance until they are settled.

A nonpublic company may modify an award that was granted under prior guidance. If after application of the guidance in ASC 718, the company modifies a stock option that was valued using the minimum value method, the incremental fair value of the modification should be computed by comparing the fair value of the award immediately after the modification with the fair value of the award immediately before the modification (as described in ASC 718-20-35-3). The compensation cost associated with the incremental fair value of the new award should be recognized over the remaining requisite service period in addition to any remaining unrecognized compensation cost associated with the old award. However, none of the remaining unrecognized minimum value compensation cost associated with the old award should be recognized.

This approach is consistent with the adoption provisions of ASC 718 for nonpublic companies whereby expense computed under the minimum value method for unvested awards at the date of adoption is not recognized. In addition, upon modification of an award valued using the minimum value method, the company would need to apply all other provisions of ASC 718 to the modified award including, applying a forfeiture estimate and eliminating any unearned or deferred compensation (i.e., contra-equity). If the company uses the calculated-value or intrinsic-value method to measure awards under ASC 718, the above approach should be used to account for a modification, except that the company should compute the incremental value of the modification using the calculated or intrinsic value of the award, as appropriate, immediately before and after the modification.

PwC Observation: A nonpublic company that adopted ASC 718 using the prospective transition method may decide to repurchase awards that were granted prior to adoption. The transition guidance of ASC 718 requires a nonpublic company to apply ASC 718 to awards repurchased after the effective date, and as described in ASC 718-20-35-7, an award repurchased at fair value would not result in the recognition of incremental compensation cost. The cash used to settle the award is charged to equity. Thus, an at-the-money stock option granted under prior guidance prior to adoption of ASC 718 and subsequently repurchased at fair value after adoption would not result in the recognition of any compensation cost.

However, if the company demonstrates a pattern of repurchasing awards, the company should consider the impact of such pattern on its ability to assert that it does not intend to settle awards in cash. Refer also to section SC 1.13.4 titled “Repurchase of an Award for Cash.”

Figure 3-2 illustrates the accounting for the modification of an award after the adoption of ASC 718 that was previously valued using the minimum value method.

Figure 3-2: Modification of an Award Granted Prior to Adoption of ASC 718 that Was Valued Using the Minimum Value Method

Before adopting ASC 718, a nonpublic company granted an at-the-money stock option and provided the pro forma disclosure requirements of prior guidance. At the original grant date, the minimum value of the option was \$4. The stock option has a four-year cliff-vesting period. Compensation cost was not recognized in the financial statements subsequent to the adoption of ASC 718 because the company continued to account for the stock option under prior guidance in accordance with the transition guidance in ASC 718. The company uses the fair-value method to value its options under ASC 718.

After adopting ASC 718, the company modifies the option. At the modification date, three years have elapsed since the original grant date and the unamortized minimum value is \$1 (25% of \$4). Also assume that at the modification date, the fair value of the old option is \$10 and the fair value of the modified option is \$14. Under the transition guidance in ASC 718, none of the grant-date minimum value compensation cost would be recognized in the financial statements.

Calculation of the incremental compensation cost under ASC 718 would be measured at the modification date as follows:

$$\begin{array}{r} \text{Fair value of modified option} \\ - \text{Fair value of old option at modification date} \\ \hline = \text{Incremental compensation cost} \\ \$14 - \$10 = \$4 \end{array}$$

The \$4 incremental compensation cost would be recognized over the remaining one-year vesting period. The company would not recognize any portion of the \$1 unamortized minimum value as a result of the modification.

Assume the same facts as in Figure 3-2, except that the original option allowed for net-share settlement at the employee’s election, requiring the company to account

for the option as a variable award under prior guidance. After the adoption of ASC 718, the company would continue to account for the stock option as a variable award under prior guidance.

Subsequent to the adoption of ASC 718, the company modifies the option. At the date of the modification, the company would cease variable accounting under prior guidance and the accounting treatment would require two steps:

1. The option's intrinsic value would be remeasured at the modification date to determine any unamortized intrinsic value (a).
2. The fair value of the option before the modification would be compared to the fair value of the option after the modification to determine the incremental fair value of the option (b).

The company would recognize a combination of the unamortized intrinsic value under prior guidance and incremental value under ASC 718 (i.e., the sum of (a) and (b)) over the remaining requisite service period. The remaining compensation cost is fixed as of the modification date (assuming the option qualifies for equity classification) and variable accounting under prior guidance would be discontinued because the option is now subject to ASC 718 as a result of the modification.

3.7 Classification of Various Types of Awards Provided to Employees of "Pass-Through" Entities

It is often difficult to determine the classification of awards to employees of partnerships, limited liability companies ("LLCs") and similar pass-through entities. Awards to employees of 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.

In December 2006, the SEC staff noted that pre-IPO companies often create special classes of stock to provide employees with an opportunity to participate in appreciation realized through a future IPO or sale of the company. While there are no bright lines, the SEC staff noted that judgment should be used to determine whether the arrangement is more akin to a performance bonus or profit-sharing arrangement, and therefore liability classified, rather than an equity classified stock-based-compensation award.

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 arrangement is based, at least in part, on the price of the company's shares or other equity instruments, the arrangement would be accounted for under ASC 718.

If the arrangement is determined to be an in-substance stock-based compensation award within the scope of ASC 718, the guidance in ASC 718 regarding classification should also be considered in order to conclude whether the award is equity-classified

or liability-classified (refer to section SC 1.12 titled “Liability-Classified Awards” in Chapter SC 1).

PwC Observation: 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. Significant judgment is required in reaching a conclusion as to the appropriate classification. If it is determined an award predominately has characteristics of equity and is subject to the scope of stock-based compensation guidance (ASC 718), an assessment should be performed to determine whether liability classification is still required under that guidance (e.g., due to repurchase features).

Figure 3-3 provides a list of the general characteristics to consider when determining the appropriate accounting model for awards provided to employees of pass-through entities. This list is not all inclusive.

Figure 3-3: General Characteristics of Awards to Employees of “Pass-Through” Entities

Equity Characteristics:¹

1. Legal form of the security is equity.
2. Voting rights commensurate with ownership interest.
3. 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).
4. 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.
5. Distributions proportionate to ownership interest. (Instrument participates in the residual returns of the entity’s net assets in a manner consistent with equity ownership).
6. Initial investment required.

(continued)

¹ If an award (or the underlying equity) is determined to predominately have characteristics of equity, it is subject to the guidance in ASC 718. Therefore, 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 listed in this table.

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]

7. 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).
8. Claims to net assets subordinate to debt holders.
9. Interest is transferable after vesting.
10. Employee can retain vested interests on termination of service.
11. Employee is subject to risks and rewards of equity ownership.
12. Management’s intent is to provide the employee an equity ownership interest in the entity.

Liability Characteristics:

1. 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.)
 2. Repurchase features (puts/calls) based on a formula.
 3. Off-market employer call feature linked to employment. (If employer can terminate employee and call award at lower than fair value, this is not an equity-like characteristic.)
 4. Rights to share in distributions tied to employment.
 5. Other cash settlement provisions.
 6. Creditor-like features (e.g., fixed redemption date).
 7. Management’s intent is to provide a performance bonus by allowing employee to share in profits and distributions of the entity during employment.
 8. Profits interest is used in lieu of cash performance bonuses.
 9. 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.)
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Chapter 4:

Income Tax Accounting for Stock-Based Compensation

Chapter 4: Income Tax Accounting for Stock-Based Compensation

This chapter discusses the income tax accounting effects related to stock-based compensation and the reporting of those effects in a company's financial statements. The income tax consequences of stock-based compensation to employees and employers are also discussed.

4.1 Introduction

The first part of this chapter discusses income tax accounting, disclosure and related cash flow presentation for the issuance and settlement of stock-based compensation awards. This chapter also covers other corporate income tax accounting topics related to modifications of awards, transition provisions when adopting the stock-based compensation standard for income taxes, net operating loss carryforwards, valuation allowances, intraperiod tax allocation, multinational companies, and income tax disclosures. Unless otherwise noted, the discussion in this chapter addresses the income tax implications of stock-based compensation under U.S. tax law.

The remaining sections of this chapter discusses employee and employer specific income tax issues for certain types of stock-based compensation.

4.2 Background and Basics of Accounting for Stock-Based Compensation Under ASC 718 and ASC 740

The fundamental premise of ASC 718, *Compensation—Stock Compensation*, requires that companies recognize the fair value of employee stock-based compensation awards as compensation cost in the financial statements, beginning on the grant date. Compensation cost is based on the fair value of the awards the company expects to vest, recognized over the vesting period, and adjusted for actual forfeitures that occur before vesting.

ASC 718 provides specific guidance on income tax accounting and clarifies how ASC 740, *Income Taxes*, should be applied to stock-based compensation. Guidance also has been provided by the FAS 123(R) Resource Group (the "Resource Group"), an advisory group to the FASB staff that was created after the issuance of ASC 718 to discuss specific implementation issues. The objective of the Resource Group was to identify potential implementation issues, discuss such issues, reach a consensus (if possible), and elevate issues that could not be resolved to the FASB's attention. Consensuses reached by the Resource Group on significant issues related to the accounting for income taxes for stock-based compensation have been incorporated into this chapter. These consensuses do not represent authoritative guidance, but the FASB staff has publicly stated that it would not expect diversity in practice to develop in regard to a particular issue if the Resource Group was able to reach consensus on that issue.

For awards that are expected to result in a tax deduction under existing tax law, the general principle is that a deferred tax asset is established as the company recognizes compensation cost for book purposes. Book compensation cost is recognized over the award's requisite service period, whereas the related tax deduction generally occurs later and is measured principally at the award's intrinsic value. For example, in the U.S., a company's income tax deduction generally is determined on the exercise date for stock options and on the vesting date for restricted stock. For equity-classified awards under ASC 718, book compensation

cost is determined at the grant date and compensation cost is recognized over the service period. The corresponding deferred tax asset also is measured on the grant date and recognized over the service period. As a result, there will almost always be a difference in the amount of compensation cost recognized for book purposes versus the amount of tax deduction that a company may receive. If the tax deduction exceeds the cumulative book compensation cost that the company recognized, the tax benefit associated with any excess deduction will be considered a “windfall” and will be recognized as additional paid-in-capital (APIC). If the tax deduction is less than the cumulative book compensation cost, the tax effect of the resulting difference (“shortfall”) should be charged first to APIC (to the extent of the company’s pool of windfall tax benefits, as described in section SC 4.12) with any remainder recognized in income tax expense.

Figure 4-1 summarizes the key accounting events (from the grant date to the settlement date) that relate to a typical equity-classified, nonqualified stock option that generates the employer’s tax deduction upon the option’s exercise.

Figure 4-1: Key Income Tax Accounting Events for an Equity-Classified, Nonqualified Stock-Based Compensation Award

When	Step
On the option’s grant date	Measure the option’s fair value.
Over the option’s requisite service period	Recognize compensation cost and the deferred tax asset, adjusted for pre-vesting forfeitures. Potentially adjust the deferred tax asset to reflect circumstances such as a change in a company’s applicable tax rate and employee relocations to jurisdictions with different tax rates, but do not record adjustments to the deferred tax assets to reflect increases or decreases in the company’s stock price.
On the option’s settlement date (e.g., exercise or post-vesting cancellation)	Compare the tax deduction with the cumulative book compensation cost. To the extent that the tax deduction exceeds the cumulative book compensation cost, the tax benefit of the excess deduction is a windfall tax benefit. Conversely, when the tax deduction is less than the cumulative book compensation cost, a shortfall occurs.

Note that differences between the amount of the book compensation and the tax deduction for an award that result from factors other than increases or decreases in the fair value of an entity’s shares between the grant date (measurement date for accounting purposes) and the exercise date (measurement date for tax purposes) do not receive the same accounting treatment as a windfall or shortfall. This might occur, for example, in certain limited situations when a company concludes that the fair value of an award at the grant date is different under the applicable tax law than the fair value determined for book purposes at the same date. See Figure 4-7 for further discussion.

Figure 4-2 illustrates how, from the grant date to the settlement date, a company should calculate a windfall tax benefit and account for the corresponding income tax for a typical equity-classified, nonqualified stock option.

Figure 4-2: Recognition of a Deferred Tax Asset and Calculation of the Tax Deduction and Windfall Tax Benefit for an Equity-Classified, Nonqualified Stock Option

On January 1, 2006, a U.S. multinational company grants to its U.S. employees 1,000 equity-classified, nonqualified stock options that have a fair value of \$15 per option. The awards have a one-year service condition and it is assumed that all options will vest. The company has sufficient taxable income for the stock option tax deductions to reduce income taxes payable in all periods.

Step 1: Recognize compensation cost and the related deferred tax asset. During 2006, the company records \$15,000 in compensation cost (1,000 options x \$15 fair value) and also records the related deferred tax asset of \$5,250 (assuming that the applicable tax rate is 35 percent).

Step 2: Calculate the tax deduction, windfall, or shortfall. When the stock options are exercised on July 1, 2007, each option has a \$20 intrinsic value (i.e., the shares have a quoted market price that exceeds the options' exercise price by \$20). The company will receive a tax benefit of \$7,000 (1,000 shares x \$20 intrinsic value x the applicable tax rate of 35 percent). The tax benefit of the excess tax deduction is \$1,750, $(\$20,000 \text{ tax deduction} - \$15,000 \text{ compensation cost}) \times 35 \text{ percent}$ and is credited to APIC (rather than to income tax expense) as a windfall tax benefit. The remaining \$5,250 of current tax benefit offsets a like amount of deferred tax expense from the elimination of the related deferred tax asset.

The above example illustrates the calculation of an excess tax benefit when an entity is a regular taxpayer. In certain situations, an entity may be subject to the alternative minimum tax (AMT). Section SC 4.19.2 discusses accounting for windfall benefits when an entity is subject to the AMT.

4.2.1 Income Tax Accounting for Liability-Classified Awards

The income tax accounting for liability-classified awards (e.g., cash-settled stock appreciation rights) is similar to the income tax accounting for equity-classified awards. The difference is that the liability for book purposes is remeasured each reporting period and thus the related deferred tax asset and tax expense also is remeasured to reflect the effects of remeasuring the book liability. Unlike an equity-classified award, a liability-classified award generally will not be expected to generate a windfall or shortfall upon settlement because the ultimate tax deduction will equal the cumulative book compensation cost as a result of the periodic remeasurements.

4.3 Accounting for Income Taxes Related to Various Awards

An understanding of how a company's tax deduction for stock-based compensation is measured in the U.S. requires an understanding of the nature of the instrument or award that is being granted to the employee and whether the employee has made any elections with respect to the award.

This chapter gives an overview of a company's accounting for income taxes related to stock-based compensation awards with respect to nonqualified stock options, statutory stock options, restricted stock, restricted stock units, and stock appreciation rights. Under U.S. tax law, the ultimate tax deduction for these awards will almost always differ from the amounts recognized for financial reporting

because nonqualified stock options, restricted stock, restricted stock units, and stock appreciation rights generally result in a tax deduction for a company when the taxable event occurs (e.g., upon exercise or vesting). Statutory options, including incentive stock options (ISOs) and employee stock purchase plan (ESPP) purchases, however, ordinarily do not result in a tax deduction and therefore the tax effects from these awards will not be recorded unless a disqualifying disposition occurs (as described in section SC 4.5.1).

4.4 Income Tax Accounting for Nonqualified Stock Options

4.4.1 Initial Recognition and Classification of a Deferred Tax Asset

A company that grants a nonqualified stock option to an employee generally is entitled to a tax deduction equal to the intrinsic value of the option on the exercise date. Companies generally expense stock options for book purposes before a tax deduction arises, thus creating a temporary difference (and a deferred tax asset) under ASC 740. When an award is settled, the deferred tax asset is reconciled with the realized tax benefit.

PwC Observation: The amount of the deferred tax asset will almost always differ from the amount of the company's realized tax benefit. This is because the deferred tax asset is based on the compensation cost the company recorded for book purposes, which is determined based on fair value on the grant date, while the tax deduction is based on intrinsic value on the vesting date for restricted stock or the exercise date for a stock option.

For nonemployees, the fair value of a share-based payment award will generally be remeasured to reflect its current fair value on an ongoing basis until performance is complete (generally when the award is vested) or a performance commitment is reached, as discussed in more detail in Section 2.2 in SC Chapter 2. This differs from equity-classified employee awards, which generally reflect the fair value as of the grant date. The deferred tax asset and income tax expense related to nonemployee awards will likewise reflect the changes in fair value of the award through the final measurement.

Balance sheet classification of a deferred tax asset related to nonqualified stock options as either current or noncurrent depends on whether the stock option is an equity-classified award or a liability-classified award. If the stock option is equity-classified, we believe that the related deferred tax asset generally should be classified as noncurrent. Other approaches to classifying the deferred tax asset based on the expected period of realization of the related tax deduction also may be acceptable. If the stock option is liability-classified, the related deferred tax asset should follow the classification of the stock option (e.g., if the stock option is classified as a current liability, the related deferred tax asset also should be classified as current).

4.4.2 Change in Tax Rates

A deferred tax asset is adjusted when a company's applicable tax rate changes. To determine the amount of the new deferred tax asset, a company should multiply the new applicable tax rate by the amount of cumulative compensation cost that the company has recorded for all outstanding stock-based compensation awards. The difference between the new deferred tax asset and the existing deferred tax asset

should be recorded in the current-period income statement as a deferred tax benefit or expense. For example, if the applicable tax rate increases, the deferred tax asset should increase and the corresponding benefit would be reflected in the income statement in the period that the tax law change was enacted.

4.4.3 Employer Payroll Taxes

A liability for the employer's portion of payroll taxes on employee stock compensation should be recognized on the date of the event triggering the obligation to pay the tax to the taxing authority (ASC 718-10-25-22). For a nonqualified stock option, payroll taxes generally will be triggered and recorded on the exercise date. Even though the employer's payroll taxes are directly related to the appreciation of stock options, those taxes are part of the company's operating expenses and should be reflected as such in the company's income statement (ASC 718-10-25-23). SAB Topic 14 provides guidance on the presentation of compensation cost in a public company's financial statements. Under SAB Topic 14, as discussed in section SC 1.17, a company should present the expense related to the stock-based compensation awards in the same line item(s) as cash compensation paid to the same employees. We believe that employer payroll taxes payable upon the exercise of awards also should be charged to that same income statement line item.

4.4.4 Accounting for Options That Are Forfeited or Expire Unexercised

For a variety of reasons, employees may never exercise their stock options (e.g., the stock option is underwater during its contractual term, or the employee forfeits the option). When a stock-based compensation award is forfeited or expires unexercised, the accounting for the related deferred tax asset depends on whether the employee had completed the award's requisite service period at the time of settlement. If an award expires before the requisite service period has been completed and the related book compensation cost is reversed, then the deferred tax asset also is reversed in the current period to income tax expense. If an award expires after the requisite service period has been completed, the related book compensation cost is not reversed. However, the employer will no longer receive a tax deduction for the option and, therefore, there is no longer a temporary difference. Because there is no longer a temporary difference, the related deferred tax asset should be reversed. The entire deferred tax asset is a shortfall and should be recorded as a charge either to income tax expense or to APIC if there is a sufficient pool of windfall tax benefits available. Completion of the requisite service period often, but not always, coincides with the "legal vesting date." 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. For the remainder of this chapter, the legal vesting date is assumed to be the same as the completion of the requisite service period, and therefore the word "vested" will be used to refer to the event that triggers the accounting for the deferred tax asset. Figure 4-3 summarizes the pre- and post-vesting accounting for such an award.

Figure 4-3: Pre- and Post-Vesting Accounting for Awards That Are Forfeited or Expire

Item	Award Is Not Vested	Award Is Vested
Compensation cost	The compensation cost is reversed in the current period.	The compensation cost is not reversed.
Deferred tax asset	The deferred tax asset is reversed in the current period to income tax expense.	The deferred tax asset is written off. The write-off is applied first to APIC (up to the amount available for offset in the pool of windfall tax benefits), and the remainder is charged to income tax expense in the current-period income statement.

While the above figure summarizes the accounting for individual awards, a company that has a number of awards, and is appropriately applying a forfeiture estimate when recording compensation cost, would be recording compensation cost only for the number of awards it expected to vest. Accordingly, a deferred tax asset is only being recorded for the awards the company expects to vest. As long as actual forfeitures are consistent with the company's forfeiture assumptions, there would be no adjustment to compensation cost and the related deferred tax assets that have been recognized. However, if actual forfeitures caused the company to change its original forfeiture assumptions, then an adjustment to previously recognized compensation cost and the related amount of deferred tax assets should be recorded.

Figure 4-4 is a simplified illustration of the income tax accounting for a grant of an equity-classified, nonqualified stock option.

Figure 4-4: Income Tax Accounting for Nonqualified Stock Options

Background/Facts:

On January 1, 2006, a company grants 10 million equity-classified, nonqualified stock options. The \$30 exercise price equals the grant-date stock price. The terms of the award specify three-year cliff-vesting. The grant-date fair value is \$15 per option and only 8 million options are expected to (and do) vest. This grant is the first option grant in the company's history; therefore, it does not have a pool of windfall tax benefits. No additional awards are granted in 2006, 2007, and 2008. The stock price is \$50 on January 1, 2009, when all 8 million vested options are exercised.

On January 1, 2009, the company grants 10 million equity-classified, nonqualified stock options. The \$50 exercise price equals the grant-date stock price. The terms of the award specify three-year cliff-vesting. The grant-date fair value is \$25 per option and only 8 million options are expected to (and do) vest. On January 1, 2010, the stock price decreases to \$45 and the options remain underwater until they expire.

The applicable tax rate for all periods is 40 percent, and the company has sufficient taxable income for the stock option tax deductions to reduce income taxes payable in all periods.

(continued)

The company recognizes compensation cost on a straight-line attribution basis.

All the options have a contractual term of five years.

Analysis/Conclusion:

Computations of Compensation Cost, Deferred Tax Asset, and Windfall Tax Benefits for Options Granted on January 1, 2006 and 2009

	2006 Awards	2009 Awards
Compensation cost	8 million options x \$15 = \$120 million = \$40 million per year over three years	8 million options x \$25 = \$200 million = \$66.6 million per year over three years
Annual deferred tax asset recognized	\$40 million x 40% = \$16 million	\$66.6 million x 40% = \$26.6 million
Treatment of taxes upon settlement	<p>Deferred tax asset on December 31, 2008: \$120 million x 40% = \$48 million</p> <p>Tax deduction: \$50 (stock price upon exercise) – \$30 (exercise price) x 8 million (vested options) = \$160 million</p> <p>Current tax benefit: \$160 million (tax deduction) x 40% (applicable tax rate) = \$64 million</p> <p>Credit to APIC for windfall: [\$160 million (tax deduction) – \$120 million (cumulative book compensation cost)] = \$40 million x 40% = \$16 million (or \$64 million – \$48 million)</p> <p>Pool of windfall tax benefits: \$16 million</p>	<p>Deferred tax asset on December 31, 2011 (end of vesting period): \$200 million x 40% = \$80 million</p> <p>Tax deduction in 2013 (end of contractual term): Zero, because the options expired unexercised</p> <p>Shortfall: The company will write off the \$80 million deferred tax asset by charging APIC to the extent of the pool of windfall tax benefits from prior awards (\$16 million), and then by recognizing the balance (\$64 million) in income tax expense</p> <p>Pool of windfall tax benefits is reduced to zero</p>

4.5 Income Tax Accounting for Incentive Stock Options

ISOs provide an employee with significant tax benefits by allowing the employee to exercise the stock options, in limited amounts, without being taxed on the intrinsic value on the exercise date. To qualify as an ISO, an option must comply with certain Internal Revenue Code (IRC) requirements and restrictions.

Although a company treats nonqualified stock options and ISOs the same way when recognizing book compensation cost under ASC 718, it treats ISOs differently when accounting for the related income taxes. An ISO does not ordinarily result in a tax benefit for the employer, unless there is a disqualifying disposition (as described below). Therefore, a deferred tax asset is not recognized when a company recognizes compensation cost for book purposes for such options. Moreover, ISOs generally will not result in shortfalls, and windfalls can occur only upon a disqualifying disposition.

4.5.1 Disqualifying Dispositions

A disqualifying disposition for an ISO occurs if the employee does not hold the shares for the minimum holding period that is required by the IRC. When there is a disqualifying disposition, the employee recognizes ordinary income for U.S. tax purposes for the difference between the ISO's exercise price and the fair value of the shares at the time the option was exercised. The employer will receive

a corresponding tax deduction for the amount of income recognized by the employee. The tax benefit for the deduction that corresponds to the cumulative book compensation cost is credited to income tax expense. If the tax deduction is less than the cumulative book compensation cost, the amount credited to income tax expense is limited to the tax benefit associated with the tax deduction. If the tax deduction exceeds the cumulative book compensation cost, the tax benefit associated with the excess deduction (the windfall tax benefit) is credited to APIC.

One of the requirements of an ISO is that the employee must exercise the ISO within three months of terminating employment. 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. Aside from these exceptions, if the employee does not exercise the award within three months and one day, there will be a disqualifying disposition. It is not triggered, however, by the mere passage of time. Rather, the disqualifying disposition event does not occur until the employee exercises the underlying option. The employer should not anticipate a disqualifying disposition until the exercise actually occurs (refer to section SC 4.24).

PwC Observation: The analysis above also would apply to disqualifying dispositions for employee stock purchase plans.

Figure 4-5 illustrates the computation of the windfall tax benefit resulting from a disqualifying disposition. See Figures 4-11 and 4-12 for additional guidance on accounting for a disqualifying disposition of an ISO award granted before, but settled after, the adoption of ASC 718, depending on whether the long-form or short-cut method (which are discussed further in section SC 4.12) was elected for determining the historical pool of windfall tax benefits.

Figure 4-5: Income Tax Accounting for Incentive Stock Options

Background/Facts:

On January 1, 2006, a company grants 10,000 equity-classified ISOs. The exercise price of \$30 equals the grant-date stock price. The terms of the award specify one-year cliff-vesting. The grant-date fair value is \$15 per option and all 10,000 options are expected to (and do) vest.

The stock-based compensation cost is calculated as follows: 10,000 options x \$15 (grant-date fair value) = \$150,000

The stock price is \$50 on July 1, 2007 when all 10,000 vested options are exercised, and the employees immediately sell the stock in the open market, which causes a disqualifying disposition. Therefore, the option's intrinsic value on the exercise date and the net amount realized on the sale of the underlying stock are the same.

The applicable tax rate for all periods is 40 percent, and the company has sufficient taxable income for the stock option tax deductions to reduce income taxes payable in all periods.

Analysis/Conclusion:

\$150,000 of compensation cost is recognized in 2006; no deferred tax asset or tax benefit is recorded.

(continued)

Computations for the Tax Deduction, Tax Benefit, and Windfall Tax Benefit on July 1, 2007:

- Tax deduction: $[\$50 \text{ (stock price on date of disqualifying disposition)} - \$30 \text{ (exercise price)}] \times 10,000 \text{ shares} = \$200,000$
- Tax benefit: tax deduction of \$200,000 \times 40% tax rate = \$80,000
- Tax benefit recorded in income statement: \$150,000 of book compensation cost \times 40% tax rate = \$60,000
- Windfall credited to APIC: \$80,000 tax benefit – \$60,000 recorded in income statement = \$20,000

Pool of windfall tax benefits: \$20,000

4.6 Income Tax Accounting for Restricted Stock and Restricted Stock Units

Restricted stock represents shares that a company grants to an employee and are generally subject to vesting conditions. If the employee fails to vest in the shares, the employee forfeits the right to the shares.

A restricted stock unit (RSU) represents an arrangement whereby a company promises to issue shares either at the time that each underlying unit vests or sometime after vesting. RSUs do not consist of legally issued shares or comprise outstanding shares, and therefore do not give the holder voting rights. Not all RSUs are alike; some can be settled in cash or shares, and some have terms that include anti-dilutive features.

Generally, restricted stock and RSUs (a promise to deliver shares) generate a tax deduction to the employer on the vesting date because the employee has a substantial risk of forfeiture as a result of the award's vesting condition until the vesting date.

4.6.1 Initial Recognition and Classification of the Deferred Tax Asset

Similar to the accounting for deferred taxes related to a nonqualified stock option, discussed in section SC 4.4.1, a company recognizes a deferred tax asset based on the book compensation cost for restricted stock and RSUs over the requisite service period. The balance sheet classification of the deferred tax asset as either current or noncurrent should be based on the award's vesting date (i.e., when the tax deduction generally occurs), absent the employee making an IRC Section 83(b) election as discussed in section SC 4.6.2.1.

4.6.2 Measurement of Tax Deduction for Restricted Stock

The tax deduction for restricted stock generally is measured as the restrictions lapse (i.e., as the employee vests in the award). At that time, the company will determine its windfall or shortfall based on the current stock price. A shortfall occurs when the fair value of the shares decreases between the grant date and the vesting date.

4.6.2.1 IRC Section 83(b) Elections

Under IRC Section 83(b), employees may choose to have their tax liability measured on the grant date instead of the vesting date. An IRC Section 83(b) election enables an employee to pay tax on the fair market value of a restricted stock award on the

date it is granted rather than on the vesting date, as required under the normal rule of IRC Section 83(a). An IRC Section 83(b) election, however, does not 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. See further discussion of 83(b) Elections in SC Section 4.25.2.3.

If the employee makes an IRC Section 83(b) election, any appreciation in the restricted stock after the grant date will be taxed as either a long- or short-term capital gain instead of as ordinary income. 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. If the stock appreciates in value after the grant, the result of this election can be a significant reduction in the employee's taxes as a result of favorable capital gains treatment.

If an employee makes an IRC Section 83(b) election, the company measures the value of the award on the grant date and records a deferred tax liability for the value of the award multiplied by the applicable tax rate, reflecting the fact that the company has received the tax deduction from the award before any compensation cost has been recognized for financial reporting purposes. In this case, the deferred tax liability offsets the current tax benefit that the company is entitled to by virtue of the employee's IRC Section 83(b) election. As the company recognizes book compensation cost over the requisite service period, the deferred tax liability will be reduced (in lieu of establishing a deferred tax asset since the tax deduction has already occurred). If an IRC Section 83(b) election is made by an employee for an equity-classified award, there will not be a windfall or shortfall upon settlement because the tax deduction equaled the grant-date fair value. If, however, an IRC Section 83(b) election is made for liability-classified restricted stock, a windfall or shortfall likely would occur at settlement because the tax deduction is measured at the grant date, whereas the book compensation cost for a liability award is remeasured through the settlement date.

Figure 4-6 illustrates the computation of book compensation cost and the corresponding deferred tax accounting for a grant of an equity-classified restricted stock award under two scenarios (comparing between when an IRC Section 83(b) election has been made and has not been made).

Figure 4-6: Income Tax Accounting for Restricted Stock

Background/Facts:

On January 1, 2006, a company grants 10 million equity-classified restricted shares that have a grant-date fair value of \$15 per share and a three-year cliff-vesting requirement.

No forfeitures are assumed or occur during the vesting period.

The stock price is \$25 on January 1, 2009, when the requisite service period is complete.

The applicable tax rate is 40 percent during all periods.

The company recognizes compensation cost on a straight-line basis.

(continued)

The company has sufficient taxable income for the restricted stock tax deductions to reduce income taxes payable in all periods.

Analysis/Conclusion:

Computations of Compensation Cost and the Deferred Tax Asset for Restricted Stock Granted on January 1, 2006

	No IRC Section 83(b) Election	IRC Section 83(b) Election
On the grant date	No entry	Record deferred tax liability of \$60 million = 10 million shares x \$15 (grant-date fair value) x 40% (tax rate), which offsets the current tax benefit that the company received
Tax effect of recording compensation cost over the requisite service period (three years)	Record deferred tax asset of \$60 million = 10 million shares x \$15 (grant-date fair value) x 40% (tax rate) as book compensation cost is recognized in 2006, 2007 and 2008	Reduce deferred tax liability by \$60 million = 10 million shares x \$15 (grant-date fair value) x 40% (tax rate) as book compensation cost is recognized in 2006, 2007 and 2008
Deferred tax asset (liability) on December 31, 2008	\$60 million deferred tax asset	The deferred tax liability is reduced to zero and there is no deferred tax asset
Awards vest on January 1, 2009	Current tax benefit of \$100 million = \$25 (fair value on vesting date) x 10 million (number of vested shares) x 40% (tax rate) Reverse \$60 million deferred tax asset and credit APIC for windfall of \$40 million: [\$250 million (tax deduction) – \$150 million (cumulative book compensation cost) x 40 percent (tax rate)]	No entry

Under either alternative, the company will recognize \$150 million of book compensation cost over the three-year vesting period.

The example above assumes that there are no differences between the amount of the book compensation and the tax deduction that result from factors other than increases or decreases in the fair value of the entity's shares between the grant date and exercise date. For example, in the scenario in which an IRC Section 83(b) election is made, the grant-date fair value of the award is equal to the amount of the tax deduction. In the scenario in which an IRC Section 83(b) election is not made, the difference between the amount of the book compensation and the ultimate tax deduction is attributable entirely to increases in the stock price subsequent to the grant date. Figure 4-7 illustrates the accounting for the tax effects of differences between the amount of book compensation and tax deduction that result from factors other than increases or decreases in the fair value of an entity's shares between the grant date and exercise date. This might occur, for example, in certain limited situations when a company concludes that the fair value of an award at the grant date is different under the applicable tax law than the fair value determined for book purposes at the same date.

Figure 4-7: Accounting for Tax Benefits when Differences Between the Book Charge and Tax Deduction Result from Factors Other Than Increases or Decreases in the Company's Stock Price

Background/Facts:

Company X (the "Company") grants fully vested restricted stock to its employees. The award includes restrictions on the transfer of the stock that survive vesting (for example, the employee is prohibited from transferring the stock for a period of five years after the delivery of the vested stock). The Company follows the accounting guidance of ASC 718, *Compensation-Stock Compensation*, appropriately classifying such awards as equity.

For financial reporting purposes, the grant date fair value reflects the impact of the restrictions that survive vesting.¹ These restrictions are disregarded in determining the tax deduction. Therefore, the fair value of the restricted stock determined for financial reporting purposes was determined to be less than the value used for tax purposes. The difference between the book compensation and the tax deduction was due entirely to reasons other than movement in the stock price between the grant date and the measurement date for tax purposes.

How should Company X account for the difference between the book charge and the tax deduction?

Analysis/Conclusion:

A tax benefit should be recorded for the restricted stock related to the amount of the award that is tax deductible. The difference between the book compensation charge and the tax deduction results in a permanent difference in Company X's income tax provision (i.e., a current tax benefit). The permanent difference would not constitute a "windfall" with a credit potentially reflected in additional paid-in capital because it arises from factors other than the movement of the Company's stock price between the measurement date for accounting and the measurement date for tax purposes. ASC 718-740-45-2, supports this accounting by stating "...an excess of a realized tax benefit for an award over the deferred tax asset for that award shall be recognized in the income statement to the extent that the excess stems from a reason other than changes in the fair value of an entity's shares between the measurement date for accounting purposes and a later measurement date for tax purposes."

In the example above, the Company granted fully vested restricted stock. If the award had not been fully vested at the time of grant, but instead followed a vesting schedule in which the award vests over two years, the tax benefit would not be determined until the award is fully vested in the absence of an IRC Section 83(b) election. In this case, the Company would record the deductible temporary difference over the vesting period, which is measured based on the compensation cost recognized for financial reporting purposes in accordance with ASC 718-740-25-2. Once the award vests for tax purposes, the Company would need to analyze the excess tax benefit to determine the amount that is due to increases and decreases in the stock price (which would result in a windfall or shortfall) and the amount due to other factors (which would be recognized in the income statement).

(continued)

¹ ASC 718-10-30-19 states "A restricted share awarded to an employee, that is, a share that will be restricted after the employee has a vested right to it, shall be measured at its fair value, which is the same amount for which a similarly restricted share would be issued to third parties."

The accounting treatment would also be consistent with the description above if instead the grant date fair value of the fully vested restricted stock award determined for book purposes exceeded the fair value determined for tax purposes. The resulting permanent difference would not constitute a “shortfall.” Rather, the debit would be recorded to the income tax provision.

4.7 Income Tax Accounting for Stock Appreciation Rights

A stock appreciation right (SAR) confers upon an employee the contractual right to receive an amount of cash, stock, or a combination of both that equals the appreciation in a company’s stock from an award’s grant date to the exercise date. SARs generally resemble stock options in that they may be exercised at the employee’s discretion during the exercise period and do not give the employee an ownership right in the underlying stock. Unlike options, however, SARs generally do not involve payment of an exercise price. How the award is settled (in cash or in stock) also affects the classification of a SAR as either a liability or equity, as discussed in section SC 1.12.

4.7.1 Cash-Settled SARs

Under ASC 718, cash-settled SARs are classified as liability awards and therefore are remeasured at fair value each reporting period until the award is settled. The related deferred tax asset is adjusted when book compensation cost is recognized each reporting period as the cash-settled SAR is remeasured. When an employee exercises a SAR, the company’s tax deduction will equal the fair value of the SAR, which is also the amount of the book compensation liability. If the SAR is cancelled or forfeited prior to expiration, the liability is reversed and the deferred tax asset is reversed through income tax expense. If the SAR expires worthless, there would be no accounting entries at the expiration date because, prior to expiration, the SAR and the corresponding deferred tax asset would have been remeasured each reporting period and at some point in time before expiration, the SAR would have no value and there would be no liability or associated deferred tax asset on the books.

4.7.2 Stock-Settled SARs

Stock settled SARs generally are equity-classified awards under ASC 718. The income tax accounting is identical to that for an equity-classified, nonqualified stock option. Accordingly, a deferred tax asset is recorded as book compensation cost is recognized. When an employee exercises a stock-settled SAR, the company measures the amount of the tax deduction based on the award’s intrinsic value at that time, determining the amount of any windfall or shortfall.

Figure 4-8 compares the income tax accounting for cash-settled SARs and stock-settled SARs.

Figure 4-8: Income Tax Accounting Comparison of Cash-Settled SARs and Stock-Settled SARs

	Cash-Settled SAR	Stock-Settled SAR
On the Grant Date	Measure at Fair Value	Measure at Fair Value
As the award vests	Remeasure the book compensation liability at fair value and adjust it each reporting period accordingly, and recognize the corresponding deferred tax asset	Record the book compensation cost (based on the grant-date fair value) and recognize the corresponding deferred tax asset
After the award has vested but before it is settled	Remeasure the book compensation liability at fair value and adjust it each reporting period accordingly, and adjust the corresponding deferred tax asset	No accounting required
At the time of settlement	The deferred tax asset at the time of settlement should equal the current tax benefit, resulting in no windfall or shortfall	Determine the amount of windfall or shortfall and record accordingly

4.8 Accounting for the Tax Benefit of Dividends on Restricted Stock and Options

Employees, as part of stock-based compensation awards, may receive dividends on their awards during their vesting periods or, in the case of options, during the period until the exercise of their options (so-called “dividend protection”). ASC 718 provides guidance on the accounting for these dividends and states that dividends paid on restricted stock and dividend-protected options that are expected to vest are factored into the fair value of the award. The fair value of dividend-paying stock already incorporates the expected payment of dividends and therefore the company would make no adjustment to the fair value of restricted shares for the expected payment of dividends during the vesting period, refer to section SC 7.6 for additional guidance. However, the fair value of an option for stock that pays dividends should be adjusted to appropriately reflect the dividend protection. ASC 718 states that the payment of dividends on restricted stock or options should be accounted for in retained earnings if the shares are expected to vest. When the related award is not expected to vest, the payment of the dividends or dividend equivalents are recognized as additional compensation cost.

From a tax perspective, dividends paid to employees on restricted stock for which an employee has not made an IRC Section 83(b) election are not treated as dividends paid to a shareholder because the IRS does not recognize the employee as having received the restricted stock until the restriction lapses (that is, until the shares vest). Therefore, the IRC treats the payment of these dividends as compensation, and the entity is entitled to receive a deduction on the dividends paid. Likewise, dividends paid as part of a dividend-protection plan for option grants are treated as compensation for U.S. tax purposes.

Consequently, companies that pay dividends on options and restricted stock (when a Section 83(b) election is not made) during the vesting period will receive a tax benefit from the deduction on those dividends. ASC 718-740-45-8 states that a realized tax benefit from dividends, or dividend equivalents, that is charged to retained earnings and paid to employees for equity-classified restricted stock, restricted stock units,

and outstanding options should be recognized as an increase to APIC. Those tax benefits are considered windfall tax benefits under ASC 718 and would be included in the pool of windfall benefits. Pursuant to the guidance in ASC 718-740-25-10, the tax benefit would not be recognized in APIC (or included in the pool of windfall tax benefits) until the tax benefit actually reduces income taxes payable. As a company's forfeiture estimate changes, the amount of tax benefits from dividends on awards no longer expected to vest should be reclassified from APIC to income tax benefit, with a related adjustment to the pool of windfall tax benefits. The amount reclassified should be limited to the amount of the company's pool of windfall tax benefits (i.e., the pool of windfall tax benefits should not be less than zero).

PwC Observation: The tax deduction that an employer is eligible for under IRC Section 83(h) may be subject to certain limitations. For accounting guidance on these potential limitations, refer to Chapter TX 3 of PwC's "Guide to Accounting for Income Taxes."

4.9 Modification of Awards

ASC 718 defines a modification as a change in any of the terms or conditions of a stock-based compensation award, for example, a repricing, an extension of the vesting period, or a change in the terms of a performance condition. A modification of an award under ASC 718 generally will be treated as an exchange of the original award for a new award. A company should measure book compensation cost as the excess (if any) of the fair value of the new award over the fair value that the original award had immediately before its terms were modified. In addition, a company also will assess the potential effect of the modification on the number of awards expected to vest, including a reassessment of the probability of vesting.

If the entity records additional book compensation cost as a result of the modification, there will be a corresponding increase in the deferred tax asset. To the extent an equity-classified award is modified to a liability-classified award, any deferred tax asset would need to be adjusted at the date of modification to an amount which corresponds with the recognized liability. Even if the book compensation continues to be based on the grant date fair value of the original award (for example, if the fair value at the modification date is lower than the fair value at the original grant date), the deferred tax asset should be calculated based on the value of the liability. Refer to ASC 718-20-35-3 and SC 1.13 for further guidance related to modifications.

There also may be additional tax and legal ramifications of a modification. Certain modifications to an outstanding stock award at any time after the grant date may be considered a "material modification" as defined by the IRC and may impact the qualified status of ISOs. Additionally, a modification of an award may have potentially adverse tax implications to the employee under Section 409A, refer to section SC 4.29 for further guidance.

PwC Observation: Companies that plan to modify the terms of an outstanding stock award should consult with their tax advisors and/or legal counsel before completing the modification.

Certain modifications could result in an ISO losing its qualified status and in the modified award being considered a nonqualified stock option. Whereas previously no deferred taxes were recorded on compensation expense recognized related to the ISO because it does not ordinarily result in a tax deduction, if, as a result of the modification, the award would no longer be an ISO, the company would have to begin recording the related deferred taxes on the nonqualified award.

4.10 Repurchase of an Award

As further described in SC 1.13.4, the accounting for the repurchase of an award is affected by several factors, including whether the award is vested or unvested and probable of vesting.

From a tax perspective, the amount of the cash settlement is generally deductible by the employer to the extent the entity has not previously taken a tax deduction for the award. For example, a deduction would not have previously been taken by the employer for a nonqualified stock option that has not been exercised by the employee. The amount that is deductible may also be subject to the IRC Section 162(m) limitation for covered employees (see further discussion of the IRC Section 162(m) limitation in Section TX 3.2.8 of PwC's "Guide to Accounting for Income Taxes"). Generally, the entity is not entitled to an additional deduction for the cash settlement if it has previously taken a deduction on the award (for example, a restricted stock award in which the employee made an IRC Section 83(b) election).

When there is a repurchase of an award for cash, any remaining deferred tax asset (in excess of the tax benefit resulting from the repurchase, if any) related to the awards generally would be reversed as a shortfall. A cash settlement of ISOs will create a tax benefit reported in earnings (to the extent of book compensation) similar to a disqualifying disposition.

4.11 Clawback of an Award

Entities may include a "clawback" provision in stock-based compensation awards. Per ASC 718-10-55-8: "A clawback feature can take various forms but often functions as a noncompete mechanism. For example, an employee that terminates the employment relationship and begins to work for a competitor is required to transfer to the issuing entity (former employer) equity shares granted and earned in a share-based transaction." Other clawback features may require forfeiture of an award, or a portion of an award, if there is a termination for cause or as required by the Sarbanes-Oxley Act. In addition, the Dodd-Frank Act signed into law in 2010 requires stock exchanges to put rules in place requiring entities listed on the exchange to adopt certain clawback provisions in their incentive compensation plans, including stock compensation, for certain current and former executive officers. The Dodd-Frank Act and financial statement accounting considerations relating to clawback provisions are discussed in more detail in Chapter SC 8.

The income tax accounting for a clawback that has been triggered depends on the status of the award at the time of the clawback and whether the entity has previously taken the tax benefit from the stock-based compensation award. If the clawback occurs prior to the exercise of a stock option (or the vesting of restricted stock for tax purposes) and no tax deduction has been taken for the clawed-back awards,

the related deferred tax asset would be reversed through income tax expense and not considered a shortfall. If an entity has taken deduction(s) for a stock-based compensation award that is being clawed-back, taxable income resulting from the clawback would be allocated to the various components of the financial statements (e.g., continuing operations, APIC) in accordance with ASC 740-20. See Sections TX 12.2 and TX 12.2.3.2.1 of PwC's "Guide to Accounting for Income Taxes" for further discussion of the intraperiod allocation model and the treatment of tax effects related to equity items other than items of comprehensive income (e.g., APIC).

4.12 Pool of Windfall Tax Benefits

4.12.1 General Guidance

When the stock-based compensation standard was most recently revised, the transition guidance provided public companies and nonpublic companies that used the fair-value-based method for either recognition or disclosure under the prior standard with three transition alternatives: (1) modified prospective application (MPA); (2) modified retrospective application (MRA) to interim periods in the year of adoption; and (3) modified retrospective application to all prior periods. Regardless of the transition alternative chosen, companies should have determined the amount of eligible windfall tax benefits (the pool of windfall tax benefits) that were available on the adoption date to offset future shortfalls. Subsequent to the adoption of the revised standard (now codified in ASC 718), a company should continue to track the balance of the pool of windfall tax benefits based on windfalls or shortfalls incurred after the adoption date. Refer to section SC 4.13 for a discussion of the method for determining the historical pool of windfall tax benefits for nonpublic companies that adopted the stock-based compensation standard under the prospective method.

Companies could have elected to calculate their historical pool of windfall tax benefits (i.e., the amount that would have accumulated as of the adoption date) using either of two methods. The "long-form method" is discussed in section SC 4.12.2. Determining the pool of windfall tax benefits using the long-form method was complex and required a company to conduct an extensive data-gathering exercise to compile information from various sources over an extended time period. Alternatively, a "short-cut method" was provided for determining the historical pool of windfall tax benefits. The short-cut method is discussed in section SC 4.12.4. Once a company has determined its historical pool of windfall tax benefits, the long-form method is utilized for all activity subsequent to the adoption of ASC 718.

Figure 4-9 summarizes the key differences between the long-form and short-cut methods of calculating the historical pool of windfall tax benefits at the adoption date.

Figure 4-9: Key Differences When Calculating the Pool of Windfall Tax Benefits Using the Long-Form or Short-Cut Methods

	Long-Form Method	Short-Cut Method
Calculation of the historical pool of windfall tax benefits at the adoption date	Detailed annual calculation performed on an award-by-award basis and rolled forward	Two-step, short-cut calculation: (1) Net increases to APIC related to tax benefits from stock-based compensation after the effective date of the prior standard less (2) the product of cumulative incremental compensation cost under the prior standard multiplied by the current blended statutory tax rate
Transition provisions to account for the ongoing income tax effects for partially or fully vested awards as of the date of adoption ¹	“As if” accounting required to determine windfalls and shortfalls for inclusion in the pool of windfall tax benefits	Fully vested awards: The tax benefit recognized in APIC upon settlement is included in the pool of windfall tax benefits (i.e., no “as if” accounting) Partially vested awards: “As if” accounting required

¹ Applicable only to companies that adopted the stock-based compensation standard using the modified prospective application method (or the modified retrospective application method for interim periods in the year of adoption only).

ASC 718 does not require companies to disclose the amount of their pool of windfall tax benefits available to offset future shortfalls. However, the amount of the pool of windfall tax benefits is needed to determine whether shortfalls after adoption are recorded against APIC or charged to income tax expense. The pool of windfall tax benefits is not directly related to the balance in a company’s APIC account. Therefore, a company cannot assume that it has a sufficient pool of windfall tax benefits to offset shortfalls based on having a large credit balance in APIC. Likewise, a company could have a zero balance in APIC and have a pool of windfall tax benefits.

Although ASC 718 implicitly requires that recordkeeping be on an award-by-award basis, it allows the windfall tax benefits of all awards accounted for under the prior standard and ASC 718 to be aggregated for purposes of determining the pool of windfall tax benefits. Thus, any windfalls resulting from employee stock options, restricted stock, and most ESPPs that are granted on or after the effective date of the prior standard are eligible for aggregation, whereas any windfalls generated by Employee Stock Ownership Plans (ESOPs) or other stock-based arrangements that are outside the scope of ASC 718 are excluded.

The pool of windfall tax benefits should be calculated for windfalls and shortfalls generated by all entities that are included in the consolidated financial statements, without regard to tax jurisdiction (i.e., windfalls in one jurisdiction may offset shortfalls from another jurisdiction). Deferred tax accounting for stock-based compensation, however, generally should be determined on a jurisdiction-by-jurisdiction basis (and potentially on a tax-return-by-tax-return basis) consistent with how taxes are computed and paid.

When calculating the pool of windfall tax benefits, the balance of the pool can never be less than zero. For example, assume that a company has no pool of windfall

tax benefits as of the adoption date of ASC 718. In the first year after adoption, the company incurs a shortfall of \$1,500. In this case, at the end of the first year, the pool of windfall tax benefits would still be zero and income tax expense of \$1,500 would be recognized in the income statement. The company would begin the next year with a balance of zero in the pool of windfall tax benefits.

In addition, companies may have windfall tax benefits and shortfalls from both employee and nonemployee awards and should have elected as an accounting policy one of two approaches to determining the pool of windfall tax benefits. The Resource Group reached a consensus that either a one-pool approach (grouping employee and nonemployee awards together) or a two-pool approach (segregating employee and nonemployee awards into two separate pools) would be acceptable when accounting for the pool of windfall tax benefits. The accounting policy selected should be disclosed in the financial statements and followed consistently.

PwC Observation: As discussed in section SC 4.12.4, companies were only permitted to use the short-cut method for calculating their historical pool of windfall tax benefits related to employee stock-based compensation. This implies that a company did not have the ability to use the short-cut method to calculate its historical pool of windfall tax benefits related to nonemployee awards. We believe, however, that companies still have the ability to account for the pool of windfall tax benefits related to employees and nonemployees on a combined basis subsequent to the adoption of ASC 718, using the combined pool (whether or not the individual pools were calculated using the same method) as of the adoption date.

4.12.2 Determining the Pool of Windfall Tax Benefits Using the Long-Form Method

Under the long-form method, companies that did not adopt the recognition provisions of the prior stock-based compensation standard in the year that standard originally went into effect (January 1, 1995, for a calendar-year-end company) needed to determine what their pool of windfall tax benefits and the related deferred tax assets would have been on ASC 718's adoption date "as if" they had been following the recognition provisions of the prior standard since its effective date. Calculation of the pool of windfall tax benefits under the long-form method was subject to potential adjustment for net operating loss (NOL) carryforwards if such NOL carryforwards included windfall tax benefits that had not been realized (see section SC 4.16). Thus, the pool of windfall tax benefits at the adoption date of ASC 718 consisted of the net credits to APIC (both windfalls and shortfalls) that a company would have recorded under the prior standard (subject to potential adjustment for NOL carryforwards).

Using the long-form method required a company to compile various data from the effective date of the prior standard through the date it adopted ASC 718 because calculating the pool of windfall tax benefits under this method implicitly required tracking each award separately and maintaining detailed information on an award-by-award basis. To obtain much of the information necessary to calculate the pool of windfall tax benefits on the adoption date, a company needed to draw on historical records from human resources' information systems, previously filed tax returns, records for stock-based compensation plans, and data from financial reporting systems dating back to the effective date of the prior standard. When using the long-form method, awards that were granted before the effective date of the prior standard should have been excluded from the analysis unless the awards were subsequently modified.

4.12.3 Considerations for Equity-Classified Awards Granted Before but Settled After Adopting ASC 718 Under the Long-Form Method

Numerous transition issues arise for equity-classified awards granted before but settled after a company's adoption of ASC 718 if the company used the modified prospective application method (or the modified retrospective application method for interim periods in the year of adoption only). The transition considerations discussed in the following sections are not applicable to companies that adopted ASC 718 using the modified retrospective application method for all prior periods because these companies would have adjusted their financial statements for prior periods to give effect to the fair-value-based method of accounting for awards granted, modified, or settled in cash in fiscal years beginning after December 15, 1994.

Under the long-form method, there are two calculations that a company needs to complete for awards exercised after the adoption of ASC 718 that were granted prior to the adoption of ASC 718. The following sections discuss when and how each of these calculations is performed for nonqualified stock options, ISOs, and restricted stock awards.

4.12.3.1 Nonqualified Stock Options—Long-Form Method

If a company used the modified prospective application method (or the modified retrospective application method for interim periods in the year of adoption only), the deferred tax assets related to equity-classified, stock-based compensation awards should not have been adjusted at the date of adoption. If an equity-classified, nonqualified stock option was granted before but settled after the adoption of ASC 718, the first calculation is to determine the amount of the windfall the company should recognize. The tax deduction a company realizes should be compared with the amount of cumulative book compensation cost recognized in the company's financial statements (compensation cost both recognized after the adoption of ASC 718 and recognized under prior standards, if any). The windfall tax benefit of any excess deduction should be recorded in APIC. For stock options that were fully vested at the adoption of ASC 718 and did not result in any compensation expense being recorded under prior standards, the exercise of the option after adoption could not result in a recognized shortfall. However, the company could have incurred an "as if" shortfall for purposes of calculating the impact on the pool of windfall tax benefits, as discussed below.

The second calculation that a company should perform is to determine the impact of the tax deduction on the pool of windfall tax benefits. The company should calculate the windfall or shortfall by comparing the tax deduction with the total cumulative book compensation cost both recognized in the financial statements under ASC 718 and disclosed in the pro forma footnote under the prior standard (the "as if" windfall or shortfall). This "as if" windfall (or shortfall) is the windfall (or shortfall) that the company would have incurred if the company had been following the recognition provisions of the prior standard since its effective date. Any resulting "as if" windfall would increase the pool of windfall tax benefits and any "as if" shortfall would reduce the pool of windfall tax benefits. If a company does not have a pool of windfall tax benefits, there would be no further accounting for an "as if" shortfall because the pool of windfall tax benefits cannot be reduced below zero.

In some reporting periods, a company may incur both recognized shortfalls and incremental "as if" shortfalls. In some cases, the total recognized shortfalls and "as if" shortfalls may exceed the company's pool of windfall tax benefits. It is important to understand the order in which shortfalls reduce the pool of windfall tax benefits.

For example, consider a company with a pool of windfall tax benefits of \$1,400 that recognizes a shortfall of \$1,000 in its financial statements and also incurs an “as if” shortfall of \$2,500 as a result of several option exercises within one period. In this situation, the order in which the recognized and “as if” shortfalls reduce the pool may impact the amount of recognized shortfalls that are recorded as income tax expense. We believe that a company should first reduce the pool of windfall tax benefits for any recognized shortfalls and then reduce the pool for “as if” shortfalls. In this example, the recognized shortfall of \$1,000 would reduce the pool of windfall tax benefits to \$400. The incremental “as if” shortfall of \$1,500 would reduce the pool of \$400 to zero and there would be no accounting consequence of the remaining \$1,100 “as if” shortfall. Because the pool of windfall tax benefits is determined on an annual basis, recognized shortfalls should be prioritized within the annual period (i.e., within an annual period, a company should reduce the pool of windfall tax benefits for recognized shortfalls before considering the impact of any “as if” shortfalls).

Figure 4-10 illustrates the above guidance, using three different scenarios.

Figure 4-10: “As If” Deferred Tax Assets and the Pool of Windfall Tax Benefits

Background/Facts:

A calendar-year public company adopted ASC 718 on January 1, 2006, using the modified prospective application method. At the adoption date, it had only one stock-based compensation award grant outstanding. On January 1, 2004, the company granted 100,000 equity-classified, nonqualified stock options with an exercise price of \$25 (equal to the grant-date stock price) with a four-year cliff-vesting period. Because the options were at-the-money on the grant date, no compensation cost was recognized under prior standards. The grant-date fair value of each option as determined under the prior standard was \$5. Upon adopting ASC 718, the company determined it had a pool of windfall tax benefits of \$60,000. The company’s applicable tax rate for all periods is 40 percent. The company has sufficient taxable income for the stock option tax deductions to reduce income taxes payable in all periods.

Assuming straight-line attribution of compensation cost, the company would have recognized the following:

Fiscal Year	Prior Standard Pro Forma		ASC 718	
	Compensation Cost	Deferred Tax Assets	Compensation Cost	Deferred Tax Assets
2004	\$125,000	\$50,000		
2005	\$125,000	\$50,000		
2006			\$125,000	\$50,000
2007			\$125,000	\$50,000

At the end of 2007, the company has the following balances:

“As if” Deferred Tax Assets	Pool of Windfall Tax Benefits	Recognized Deferred Tax Assets
\$100,000	\$60,000	\$100,000

(continued)

The sum of “as if” and recognized deferred tax assets at the end of 2007 is \$200,000.

On January 1, 2008, all of the options are exercised. Below are three scenarios that illustrate the income tax accounting for the stock options described above.

	Scenario A	Scenario B	Scenario C
Stock price	\$ 31.25	\$ 28.75	\$ 27.00
Less: Exercise price	25.00	25.00	25.00
Intrinsic value	6.25	3.75	2.00
Tax deduction	625,000	375,000	200,000
Applicable tax rate	40%	40%	40%
Tax benefit	\$250,000	\$150,000	\$ 80,000
Calculation #1: Recognized windfall/ (shortfall) = [(Tax deduction – recognized cumulative compensation cost of \$250,000) x 40%]	\$150,000	\$ 50,000	\$ (20,000)
Calculation #2: “As if” windfall/ (shortfall) = [(Tax deduction – cumulative recognized and unrecognized compensation cost of \$500,000) x 40%]	\$ 50,000	\$ (50,000)	\$(120,000)

The previous chart illustrates that the pool of windfall tax benefits and the recognized windfall tax benefits will not equal each other for awards granted before ASC 718’s adoption date.

In Scenario A, the tax deduction of \$625,000 would be compared with the cumulative compensation cost (recognized and disclosed) of \$500,000, resulting in a \$125,000 excess deduction and a \$50,000 (\$125,000 x 40%) “as if” windfall tax benefit, which increases the pool of windfall tax benefits. As a result, the pool of windfall tax benefits would be \$110,000 and the recognized windfall tax benefit would be \$150,000 (see below).

In Scenario A, the company’s pool of windfall tax benefits would be as follows:

Pool of Windfall Tax Benefits	
Opening balance, 12/31/07	\$ 60,000
Add: “As if” windfall	50,000
Ending balance, 1/1/08	\$110,000

In Scenario A, the company would record the following journal entries:

Dr Income taxes payable	\$250,000	
Cr Deferred tax assets		\$100,000
Cr APIC		150,000

In Scenario B, the tax deduction of \$375,000 would be compared with the cumulative compensation cost (recognized and disclosed) of \$500,000, resulting in a \$125,000 deficiency and a \$50,000 (\$125,000 x 40%) “as if” shortfall, which decreases the pool of windfall tax benefits. As a result, the pool of windfall tax benefits would now be \$10,000, and the recognized windfall tax benefit would be \$50,000.

(continued)

In Scenario B, the company's pool of windfall tax benefits would be as follows:

Pool of Windfall Tax Benefits	
Opening balance, 12/31/07	\$ 60,000
Less: "As if" shortfall	50,000
Ending balance, 1/1/08	\$10,000

In Scenario B, the company would record the following journal entries:

Dr Income taxes payable	\$150,000	
Cr Deferred tax assets		\$100,000
Cr APIC		50,000

In Scenario C, the tax deduction of \$200,000 would be compared with the cumulative compensation cost (recognized and disclosed) of \$500,000, resulting in a \$300,000 deficiency and a \$120,000 (\$300,000 x 40%) "as if" shortfall, which decreases the pool of windfall tax benefits. With the balance at \$60,000, the company exhausts its pool of windfall tax benefits. Additionally, the company will have a recognized shortfall of \$20,000 because the realized tax benefit of \$80,000 is less than the recognized deferred tax assets of \$100,000 (see below).

In Scenario C, the company's pool of windfall tax benefits would be as follows:

Pool of Windfall Tax Benefits	
Opening balance, 12/31/07	\$ 60,000
Less: "As if" shortfall	120,000
Ending balance, 1/1/08	\$ (60,000) Would be zero

In Scenario C, the company would record the following journal entries:

Dr Income taxes payable	\$80,000	
Dr APIC	20,000	
Cr Deferred tax assets		\$100,000

Note: As previously discussed, when determining how recognized and "as if" shortfalls will impact the pool of windfall tax benefits and the income statement, the pool of windfall tax benefits should be reduced by recognized shortfalls before "as if" shortfalls. Therefore, the recognized shortfall is recorded as a reduction of APIC even though the "as if" shortfall exceeds the balance in the pool of windfall tax benefits.

PwC Observation: To appropriately apply the approach described above, a company should have ensured that it had the necessary records for all outstanding equity-classified awards when it determined its pool of windfall tax benefits and its "as if" deferred taxes. A company should have determined and maintained pro forma balance sheet deferred tax accounts for stock-based compensation awards that were outstanding on the date that it adopted ASC 718. Additionally, companies with a large number of vested, deep-out-of-the-money stock options should pay particular attention to the pool of windfall tax benefits because it is likely that those stock options will expire unexercised and the "as if" deferred tax assets will reduce the pool of windfall tax benefits.

4.12.3.2 Incentive Stock Options—Long-Form Method

As previously discussed, an ISO does not ordinarily result in a tax benefit for the employer unless there is a disqualifying disposition. Therefore, a deferred tax asset is not recognized when a company recognizes book compensation cost for ISOs. If and when a disqualifying disposition occurs, the employer will receive a tax deduction generally equal to the intrinsic value of the ISO on the date of the disqualifying disposition.

If an ISO was vested at the date of adoption of ASC 718 and a disqualifying disposition occurs subsequent to adoption, a company using the modified prospective application method should record the entire tax benefit in APIC. If an ISO was partially vested at the date of adoption (i.e., a portion but not all of the requisite service period has been completed) and a disqualifying disposition occurs in a period subsequent to adoption, there is a two-step process to the first calculation to determine where the tax benefit should be recognized, as follows:

- **Vested portion:** The tax benefit allocated to the portion of the ISO that was vested at the date of adoption should be recorded in APIC.
- **Unvested portion:** The tax benefit allocated to the portion of the ISO that was unvested at the date of adoption, up to the amount of compensation cost recognized after the adoption of ASC 718, is credited to income tax expense. If the pro rata portion of the tax deduction exceeds the recognized cumulative compensation cost, the excess is credited to APIC.

For example, if a calendar year-end company granted ISOs with a grant-date fair value of \$2 for the purchase of 120,000 shares on June 1, 2005, that cliff-vest in 12 months, the “vested” portion of the award as of the ASC 718 adoption date of January 1, 2006, would be \$140,000 (120,000 shares \times 7/12 \times \$2) and the “unvested” portion would be \$100,000.

The “as if” windfall that increases the pool of windfall tax benefits is calculated by comparing the tax deduction with the total cumulative book compensation cost, both recognized in the financial statements and disclosed in the pro forma footnote under the prior standard. The tax benefit associated with the excess deduction is the “as if” windfall and increases the pool of windfall tax benefits. As previously discussed, compensation cost recorded for an ISO does not result in the recognition of a deferred tax asset and therefore the settlement of an ISO will not result in either a recognized or an “as if” shortfall.

Figure 4-11 illustrates the tax implications of an ISO granted before the adoption of ASC 718, when a disqualifying disposition occurs after the adoption of ASC 718, for a company using the modified prospective application method.

Figure 4-11: Disqualifying Dispositions and the Pool of Windfall Tax Benefits

This illustration uses the same assumptions as in Figure 4-10, except the company granted 100,000 equity-classified incentive stock options on January 1, 2005.

Assuming straight-line attribution of compensation cost, the company would have recognized the following:

Fiscal Year	Prior Standard Pro Forma		ASC 718	
	Compensation Cost	Deferred Tax Assets	Compensation Cost	Deferred Tax Assets
2005	\$125,000	\$—		
2006			\$125,000	\$—
2007			\$125,000	\$—
2008			\$125,000	\$—

At the end of 2008, the company has the following balances:

"As if" Deferred Tax Assets	Pool of Windfall Tax Benefits (Long-form)	Recognized Deferred Tax Assets
\$—	\$60,000	\$—

On January 1, 2009, all of the options are exercised when the market price of the company's common stock is \$32. The employees immediately sell the stock in the open market, which causes a disqualifying disposition. The calculations of the tax implications resulting from the disqualifying disposition are summarized in the schedule below.

Calculation of Tax Benefit:

Market price of shares (\$32 x 100,000 options)	\$3,200,000
Less: Exercise price (\$25 x 100,000 options)	<u>2,500,000</u>
Intrinsic value	700,000
Applicable tax rate	40%
Tax benefit	\$ 280,000
Calculation #1, Step 1: Tax benefit that will be recorded in income statement upon disqualifying disposition = Recognized cumulative compensation cost of \$375,000 x 40%	\$ 150,000
Calculation #1, Step 2a: Recognized windfall for unvested portion of ISO as of ASC 718 adoption date = [(Tax deduction of \$700,000 x 75%) – recognized compensation cost of \$375,000] x 40%	\$ 60,000
Calculation #1, Step 2b: Recognized windfall for vested portion of ISO as of ASC 718 adoption date = [(Tax deduction of \$700,000 x 25%) – recognized compensation cost of \$0] x 40%	\$ 70,000
Calculation #2: "As if" windfall = [(Tax deduction of \$700,000 – cumulative recognized and unrecognized compensation cost of \$500,000) x 40%]	\$ 80,000

In this example, the company's pool of windfall tax benefits would be as follows:

Pool of Windfall Tax Benefits	
Opening balance, 12/31/08	\$ 60,000
Add: "As if" windfall	80,000
Ending balance, 1/1/09	\$140,000

In this example, the company would record the following journal entries:

Dr Income taxes payable	\$280,000	
Cr Income Tax Provision		\$150,000
Cr APIC		130,000

If the stock price was \$28 on the date of the disqualifying disposition and the tax deduction was \$300,000 (i.e., an amount less than the cumulative recognized and unrecognized compensation cost of \$500,000), this tax deduction would be allocated between the compensation cost reflected in the pro forma footnote under the prior standard and the compensation cost recognized in the financial statements post adoption of ASC 718. As discussed earlier in this section, the settlement of an ISO will not result in an "as if" shortfall and thus the disqualifying disposition would have no impact on the pool of windfall tax benefits because the tax deduction was less than the cumulative recognized and unrecognized compensation cost. The vested and unvested portion of the award will be used to allocate the tax benefit received upon disqualifying disposition between the periods before and after the pre- and post-adoption of ASC 718. The calculations of the tax implications resulting from the disqualifying disposition are summarized in the schedule below and followed by the corresponding journal entries.

Calculation of Tax Benefit:

Market price of shares (\$28 x 100,000 options)	\$2,800,000
Less: Exercise price (\$25 x 100,000 options)	<u>2,500,000</u>
Intrinsic value	300,000
Applicable tax rate	40%
Tax benefit	\$ 120,000
Calculation #1, Step 1: Tax benefit to be recorded in income statement upon disqualifying disposition = Recognized cumulative compensation cost of \$375,000 x 40% = \$150,000, limited to the amount allocated (\$120,000 actual tax benefit x 75%)	\$ 90,000
Calculation #1, Step 2a: Recognized windfall for unvested portion of ISO at ASC 718 adoption = [(Tax deduction of \$300,000 x 75%) – recognized compensation cost of \$375,000] x 40%. Since this would be negative, amount is zero.	\$ —
Calculation #1, Step 2b: Recognized windfall for vested portion of ISO at adoption = [(Tax deduction of \$300,000 x 25%) x 40%]	\$30,000
Calculation #2: "As if" windfall = [(Tax deduction of \$300,000 – cumulative recognized and unrecognized compensation cost of \$500,000) x 40%]. Since negative, "as if" windfall is zero; no shortfalls can result from settlement of an ISO.	\$ —

In this example, there would be no change to the company's pool of windfall tax benefits and the company would record the following journal entries:

Dr Income taxes payable	\$120,000	
Cr Income Tax Provision		\$90,000
Cr APIC		30,000

4.12.3.3 Restricted Stock—Long-Form Method

The transition considerations for an equity-classified restricted stock award are similar to those for a nonqualified stock option. As previously discussed, a company generally receives a tax deduction for restricted stock as the restrictions lapse (i.e., as the employee vests in the award). If an equity-classified restricted stock award is granted before but vests after the adoption of ASC 718, the tax deduction a company realizes should be compared with the cumulative compensation cost recognized in the company's financial statements (compensation cost recognized both before and after adoption). The windfall tax benefit of any excess tax deduction should be recorded in APIC. Because equity-classified restricted stock generally is granted with a zero exercise price, it was accounted for at fair value under prior standards. It generally will not be necessary to calculate an "as if" windfall or shortfall as a restricted stock award vests because the recognized windfall or shortfall will be equal to the "as if" windfall or shortfall.

4.12.4 Determining the Pool of Windfall Tax Benefits Using the Short-Cut Method

As noted above, companies had the option to use a short-cut method to calculate the historical pool of windfall tax benefits upon adoption of ASC 718. This method was available to companies that used the modified retrospective or modified prospective application method. Additionally, a company could have elected to use the short-cut method regardless of whether it had the information available to calculate its pool of windfall tax benefits under the long-form method.

Short-Cut Calculation

Under the short-cut method, the pool of windfall tax benefits as of the date of adoption of ASC 718 was calculated using the following two steps:

Step 1: Determine the sum of all net increases of APIC recognized in a company's annual financial statements related to tax benefits from stock-based employee compensation during fiscal periods subsequent to the adoption of the prior standard but before the adoption of ASC 718, regardless of whether the company had previously adopted the recognition provisions or disclosed the pro forma effects of applying the prior standard. If a company continued to use the intrinsic-value method, the amounts recorded to APIC under that method should be used in this step because those amounts would be the amounts recognized in the annual financial statements.

Step 2: Subtract from the amount determined in step one the cumulative incremental pretax employee compensation cost that would have been recognized if the prior standard had been used to account for stock-based employee compensation, multiplied by the company's blended statutory tax rate upon adoption of ASC 718, inclusive of federal, state, local, and foreign taxes.

The cumulative incremental compensation cost used in step two of the short-cut calculation was the total stock-based employee compensation cost included in a company's pro forma footnotes less the stock-based compensation cost included in its financial statements. If a company recorded stock-based compensation cost in its financial statements, those amounts were excluded from cumulative incremental compensation cost. In addition, cumulative incremental compensation cost should also have excluded:

- Compensation cost associated with awards that were partially vested upon the adoption of ASC 718, and
- Compensation cost associated with an award that ordinarily does not result in a tax deduction under existing tax law. A company did not need to exclude this compensation cost if (1) a tax deduction has been obtained prior to the adoption of ASC 718 or (2) a company was unable to obtain the information necessary to determine the amount of such cost. For example, compensation cost for ISOs and ESPPs would have been excluded unless there was a disqualifying disposition prior to the adoption of ASC 718. Other awards that may have qualified for exclusion in step two include awards issued in jurisdictions in which the company is not entitled to a local tax deduction.

PwC Observation: Using the short-cut method would not necessarily have approximated the amount of the pool of windfall tax benefits that would have been derived if the long-form method was used because it (1) does not adjust for the impact of equity restructurings; (2) is based on net activity over several years (as opposed to the long-form method, under which the net windfall or shortfall is calculated on an annual basis); (3) does not require a company to exclude from its pool any windfalls that did not reduce taxes payable (see section SC 4.16), but instead is based on the windfalls recorded in a company's annual financial statements prior to the adoption of ASC 718; and (4) includes windfalls related to awards issued prior to and settled after the effective date of the prior standard (such windfalls are excluded from the pool under the long-form method). Therefore, the pool of windfall tax benefits, as calculated under the short-cut method, may have been higher or lower than the amount determined by the long-form method.

4.12.4.1 Transition Considerations Under the Short-Cut Method

The transition considerations for the income tax effects of awards granted before the adoption of ASC 718 were not applicable to companies that used the modified retrospective application method for all prior periods because these companies would have adjusted their financial statements for prior periods to give effect to the fair-value-based method of accounting for awards granted, modified, or settled in cash in fiscal years beginning after December 15, 1994.

In the related guidance, the term "partially vested" was used to describe awards for which compensation cost is not fully recognized because only a portion of the requisite service period has been completed. "Fully vested" awards are awards for which compensation cost is fully recognized (generally, because the award is legally vested).

PwC Observation: For awards with graded vesting, we believe that a company should have considered whether any individual tranche is legally vested when identifying awards that were partially and fully vested at the adoption date of ASC 718. If one or more tranches were legally vested, each tranche should have been assessed separately. For example, an award that vests 25% each year over four years, with two of the four tranches vested as of the adoption date of ASC 718, should have been treated as four separate awards, two of which were fully vested and two of which were partially vested.

Companies that grant nonqualified options or restricted stock awards using the modified prospective application method (or the modified retrospective application method for interim periods in the year of adoption only) should calculate windfall tax benefits or shortfalls for purposes of determining the impact on the pool of windfall tax benefits for awards that are settled following the adoption of ASC 718 as follows:

- **Partially vested awards:** The windfall tax benefit (or shortfall) that increases (or decreases) the pool of windfall tax benefits should be determined by comparing the tax deduction for a partially vested award with the sum of the compensation cost recognized and disclosed for that award under the prior standard and ASC 718 (i.e., the “as if” windfall or shortfall).
- **Fully vested awards:** The windfall tax benefit (or shortfall) that increases (or decreases) the pool of windfall tax benefits is equal to the tax effects recognized in APIC as a result of the settlement of the award subsequent to the adoption of ASC 718 (i.e., the windfall recognized under the prior guidance).

The ongoing income tax accounting for partially vested awards as of the adoption date of ASC 718, as described above, is the same under the short-cut and long-form methods. However, an election to use the short-cut method affects the ongoing income tax accounting for awards that were fully vested as of the adoption date of ASC 718. The windfall tax benefits related to fully vested awards calculated for purposes of the roll-forward of the pool of windfall tax benefits will be calculated on an “as if” basis under the long-form method, while under the short-cut method these windfalls will be equal to the amounts recognized in APIC under the prior guidance.

Figure 4-12 illustrates the tax implications of an ISO award granted and vested before the adoption of ASC 718, when a disqualifying disposition occurs after the adoption of ASC 718 under the modified prospective application method. This company elected the short-cut method for calculating the historical pool of windfall tax benefits.

Figure 4-12: Disqualifying Dispositions and the Pool of Windfall Tax Benefits

A calendar-year public company adopts ASC 718 on January 1, 2006, using the modified prospective application method. On January 1, 2001, the company granted 100,000 equity-classified, incentive stock options with an exercise price of \$25 (equal to the grant-date stock price) with a four-year cliff-vesting period; therefore, these options were fully vested upon the adoption of ASC 718. Because the options were at-the-money on the grant date, no compensation cost was recognized. Upon adopting ASC 718, the company determines it has a pool of windfall tax benefits

(continued)

of \$60,000. The company's applicable tax rate for all periods is 40 percent. The company has sufficient taxable income for the stock option tax deductions to reduce income taxes payable in all periods.

At the end of 2007, the company has the following balances:

"As if" Deferred Tax Assets	Pool of Windfall Tax Benefits as Determined Under the Short-Cut Method	Recognized Deferred Tax Assets
\$—	\$60,000	\$—

On January 1, 2008, all of the options are exercised when the market price of the company's common stock is \$32. The employees immediately sell the stock in the open market, which causes a disqualifying disposition. The calculations of the tax implications resulting from the disqualifying disposition are similar to those in Figure 4-11 and are summarized in the schedule below.

Calculation of Tax Benefit:

Market price of shares (\$32 x 100,000 options)	\$3,200,000
Less: Exercise price (\$25 x 100,000 options)	<u>2,500,000</u>
Intrinsic value	700,000
Applicable tax rate	40%
Tax benefit	\$ 280,000
Calculation #1: Recognized windfall for vested portion of ISO at ASC 718 adoption = [(Tax deduction of \$700,000 x 100%) – recognized compensation cost of \$0] x 40%	
	\$ 280,000
Calculation #2: "As if" windfall = [(Tax deduction of \$700,000 – cumulative recognized of \$0) x 40%]	
	\$ 280,000

Note that for companies that elected the short-cut method, the recognized windfall in APIC for fully vested awards at the date of adoption of ASC 718 upon exercise of the award equals the "as if" windfall being added to the pool of windfall tax benefits.

In this example, the company's pool of windfall tax benefits would be as follows:

	Pool of Windfall Tax Benefits
Opening balance, 12/31/07	\$ 60,000
Add: "As if" windfall	280,000
Ending balance, 1/1/08	\$340,000

In this example, the company would record the following journal entries:

Dr Income taxes payable	\$280,000	
Cr APIC		\$280,000

4.12.5 Determining the Pool of Windfall Tax Benefits for Companies That Became Public Entities After the Effective Date of the Prior Standard but Before Adopting ASC 718

Companies that were not public entities as of the adoption date of the prior standard but that became public entities before adopting ASC 718 had two alternatives in calculating the historical pool of windfall tax benefits. A company's decision to apply

one of these two methods would have been an accounting policy decision. The key difference between these two alternatives was how a company treated those awards that were granted prior to becoming a public company that were valued using the minimum-value method.

Alternative 1: Under the first approach, a company would only have included in the historical pool of windfall tax benefits those awards measured using the fair value method (i.e., awards granted as a public entity). Companies could have elected either the short-cut or long-form method to calculate their ASC 718 pool of windfall tax benefits, but would have applied this method only to awards granted as a public entity. These companies would maintain a separate pool of windfall tax benefits for awards granted prior to becoming a public entity, for which they would continue to apply prior standards to calculate the windfall. Any windfalls generated from such awards would be tracked separately and would not impact the ASC 718 pool of windfall tax benefits. Similarly, if a shortfall was incurred upon exercise of an award accounted for under prior standards (after ASC 718's adoption), companies should determine the accounting for the shortfall (i.e., whether to record it in equity or the income statement) based on this separate pool of windfall tax benefits. The shortfall from this award would not impact the ASC 718 pool of windfall tax benefits.

Alternative 2: Under this approach, a company would have combined the windfall tax benefits from awards measured using the minimum-value method and fair value method when determining its historical pool of windfall tax benefits. Additionally, companies could have elected either the short-cut or long-form method and applied this method to their awards regardless of whether the awards were measured using the minimum value method or the fair value method. This alternative permits companies that were public entities on the date they adopted ASC 718, using either the modified prospective or modified retrospective transition method, to include all settlements of awards, measured previously using the minimum value or fair value method, in the pool of windfall tax benefits. Companies that elected this alternative would have maintained a separate pool of windfall tax benefits for awards granted prior to becoming a public entity, for which they will continue to apply for the prior recognition provisions.

If a shortfall is incurred upon exercise of an award accounted for under prior standards (after ASC 718's adoption), a company would account for the shortfall based on a two-step process: (1) the recognition of the shortfall (i.e., the determination of the amount and whether the shortfall is recorded in equity or the income statement) should be determined based on the prior pool of windfall tax benefits and (2) the shortfall calculated based on the award's minimum value also should be included in the ASC 718 pool of windfall tax benefits. If a windfall is incurred upon exercise of an award, the amount of the windfall to be recorded in APIC would be based on a comparison of the tax benefit with the amount of compensation cost recognized in the financial statements. The windfall would be calculated based on the award's minimum value and would be included in the ASC 718 pool of windfall tax benefits. Companies that elected this alternative are effectively required to calculate and track two pools for the exercises of minimum value awards—the prior pool and the ASC 718 pool.

4.13 Determining the Pool of Windfall Tax Benefits for Prospective Adopters

The short-cut method was available only to companies adopting under the modified prospective or modified retrospective methods and, therefore, should not have been used by a nonpublic company adopting ASC 718 under the prospective transition method. We believe that the historical pool of ASC 718 windfall tax benefits would

have been zero as of the adoption date of ASC 718 for nonpublic companies adopting under the prospective transition method because ASC 718 is applied only to awards granted or modified after the adoption date. Nonpublic companies that adopted ASC 718 under the prospective transition method should track two separate pools of windfall tax benefits: (1) windfall tax benefits generated from awards accounted for under prior standards and (2) windfall tax benefits generated from awards accounted for under ASC 718. Shortfalls incurred under ASC 718 should not be offset against windfall tax benefits generated by awards accounted for under prior standards.

4.14 Determining the Tax Benefit from Awards with Graded Vesting and Separate Fair Values

In some cases, a company may grant awards with graded vesting (e.g., 25 percent of the award vests each year for four years) and separately estimate the fair value for each vesting tranche, which could make it difficult to determine how to calculate the windfall or shortfall. If a company is unable to determine which tranche of options was exercised, the company should 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.

4.15 Business Combinations, Equity Restructurings, and Separately Reporting Subsidiaries

4.15.1 Impact of Business Combinations, Equity Restructurings, Spin-offs, Equity-Method Investments, Majority-Owned Subsidiaries and Bankruptcy on the Pool of Windfall Tax Benefits

When applying the long-form method of calculating the pool of windfall tax benefits, companies that completed business combinations or equity restructurings after the effective date of the prior standard and before adopting ASC 718 need to determine the impact of these transactions when calculating their pool of windfall tax benefits. Additionally, after the adoption of ASC 718, all companies need to consider the impact of business combinations or equity restructurings on the pool of windfall tax benefits.

ASC 718 does not provide specific guidance on the impact of these transactions on the pool of windfall tax benefits. We believe the following approaches are acceptable:

- **Business combination:** The windfall pool of an acquired company is set to zero at the acquisition date (i.e., the acquired company's historic windfall pool does not carry over).
- **Pooling of interests (for business combinations accounted for under this method prior to June 30, 2001):** Because a pooling of interests represents a transaction that combines the ownership interests, on a predecessor basis, via the exchange of equity securities, the pool of windfall tax benefits will include both companies' windfall tax benefits, determined on an annual basis.
- **Sale of a subsidiary:** If the windfall tax benefit resulted from the parent company's equity, the pool of windfall tax benefits will remain with the parent company. Alternatively, if the pool relates to the subsidiary's equity (e.g., the subsidiary had its own option program), the pool of windfall tax benefits should follow the subsidiary.

- **Spin-off of a subsidiary:** One view is that the pool of windfall tax benefits should follow the employees. For example, if the pool of windfall tax benefits generated by awards settled prior to the spin-off resulted from awards that were issued to the spinnee's employees, such amounts should be carved out of the parent company's (the spinnor's) pool of windfall tax benefits and be allocated to the spinnee. An alternative view is that if the pool of windfall tax benefits was generated as a result of parent-company equity, it should remain with the parent company. If, on the other hand, the pool of windfall tax benefit relates to the spun-off subsidiary's equity, then it should remain with the subsidiary after the spin-off. We believe either alternative, applied consistently, is acceptable.
- **Equity-method investee:** Windfall tax benefits that the investee generates should not be included in the investor's pool of windfall tax benefits.
- **Majority-owned subsidiary:** A company's majority-owned subsidiary may issue awards in the subsidiary's separate equity. The consolidated pool of windfall tax benefits should include the pools for both the parent and the majority-owned subsidiary. However, the portion of windfall tax benefits that relates to the noncontrolling interest should not be presented in the consolidated company's APIC. Instead, it should be included in the noncontrolling interest line item within the equity section of the consolidated company's balance sheet. In addition, if the majority-owned subsidiary issues separate financial statements, the pool of windfall tax benefits for purposes of the subsidiary's separate financial statements likely will differ from the pool included in the parent company's consolidated pool of windfall tax benefits.
- **Bankruptcy:** For companies that adopt fresh-start reporting upon emergence from a formal reorganization under ASC 852, *Reorganizations*, the pool of windfall tax benefit would be zero as of the date of emergence from bankruptcy.

4.15.2 Pool of Windfall Tax Benefits for Separately Reporting Subsidiaries

For separately reporting subsidiaries, the determination of the pool of windfall tax benefits will depend on the method used to allocate income taxes to the entities within the consolidated tax group. Under a separate-return method, the subsidiary determines its income tax provision as if it were a separate taxpayer. Although the separate-return method is preferable, other methods or a modification of the separate-return method may be used by some companies.

PwC Observation: We believe that subsidiaries using the separate-return method generally should calculate a "stand-alone" pool of windfall tax benefits based on windfalls generated by awards issued to the subsidiaries' employees. However, some flexibility may exist for companies that use other methods to determine a subsidiary's income tax provision. For example, such companies might adopt an accounting policy of using the consolidated pool of windfall tax benefits to determine the accounting for shortfalls in the subsidiary's financial statements. Although the amount of the pool of windfall tax benefits is not a required disclosure, a separate reporting subsidiary may want to consider disclosure of the method used to determine the pool of windfall tax benefits in its separate financial statements.

4.15.3 Tax Effects of Awards Exchanged in a Business Combination

For a discussion on the tax effects of awards exchanged in a business combination, including a discussion of the ongoing accounting for awards granted in a business

combination prior to the effective date of ASC 805, refer to sections 18.12.3 and 18.13 titled “Tax Effects of Awards Exchanged in a Business Combination” and “Ongoing Accounting for Share-Based Awards Granted Prior to the Effective Date of ASC 805,” respectively, within Chapter TX 18 of PwC’s “Guide to Accounting for Income Taxes.”

4.16 Net Operating Losses

Under ASC 740, a deferred tax asset is recorded for an NOL carryforward and is offset by a valuation allowance if it is more likely than not that the company will not have sufficient future taxable income to realize the economic benefit from the NOL carryforward.

When the settlement of an award results in an NOL carryforward, or increases an NOL carryforward, that settlement will generate a tax deduction before the realization of the tax benefit from that tax deduction. In that case, ASC 718-740-25-10 provides that the excess tax benefit and the credit to APIC for the windfall should not be recorded until the deduction reduces income taxes payable, on the basis that cash tax savings have not occurred. When a company cannot recognize the tax benefit of an excess deduction because it did not reduce income taxes payable, the NOL carryforwards for which a deferred tax asset is recorded will differ from the amount of NOL carryforwards available to the company (as disclosed in the company’s tax return). The NOL carryforwards related to windfall tax benefits will need to be tracked separately but will be included with the other available NOL carryforwards that are disclosed in the footnotes. A company also should disclose in its footnotes the amount of NOL carryforwards for which a benefit would be recorded in APIC when realized. This accounting should be applied only to the windfall portion of the deduction. The portion of the NOL that corresponds to the book compensation cost will be recorded as a deferred tax asset under ASC 740 and will be subject to normal valuation allowance considerations.

PwC Observation: This significant change in practice is applied prospectively; thus a company should apply the new guidance to awards that are settled after ASC 718 was adopted, except when determining the historical pool of windfall tax benefits using the long-form method. When determining its historical pool of windfall tax benefits using the long-form method, a company with NOL carryforwards should evaluate whether it would have recognized windfalls if it had been following the guidance in ASC 718-740-25-10. If some portion of the windfall that accumulated in APIC related to windfalls that (1) were embedded in an NOL and (2) did not reduce income taxes payable in a subsequent period, that portion should have been excluded from the historical pool of windfall tax benefits. As discussed in section SC 4.12.4, under the short-cut calculation, windfall tax benefits embedded in NOL carryforwards for which a deferred tax asset initially was recognized in accordance with ASC 740 are included in the historical pool of windfall tax benefits.

In instances where a company will claim a refund for prior taxes paid (i.e., a company will record a debit to taxes receivable) as a result of an NOL carryback that includes a windfall deduction, the company may have realized a tax benefit for the excess deduction in accordance with ASC 718-20-55-20. Although the company will not reduce income taxes payable in the current period, the windfall deduction may reduce the amount of taxes paid related to prior years. If the company were able to carry back only a portion of the losses generated in the current year (e.g., because

the income in the carryback period was less than the losses generated in the current period), ASC 718-20-55-20 would prohibit the recognition of a tax benefit for the portion of the windfall deduction that has not yet reduced cash taxes paid or payable. While authoritative literature does not directly address this situation, we believe it would be appropriate to follow an approach similar to an allocation of the IRC 162(m) limitation as discussed in TX 3.2.8.

The implications of ASC 718-740-25-10 also may impact the accounting for NOL carryforwards acquired in a business combination. For example, if a business combination results in a new book basis, and if the acquiree had NOL carryforwards that resulted partly from windfall tax benefits that were not recognized on its books because of ASC 718-740-25-10, the NOL carryforwards would lose their “taint” after the acquisition and therefore would be considered in determining the amount of the deferred tax asset that the acquirer would recognize in acquisition accounting, subject to any valuation allowance that might be necessary. This would not be the case, however, in a carryover-basis transaction such as a spin-off. In these cases, the NOL carryforwards resulting from windfall tax benefits of the spinnee that were not recognized because of ASC 718-740-25-10 would have to be realized before being recognized in the spinnee’s financial statements.

4.17 Valuation Allowances

For most stock-based compensation awards, a company will recognize a related deferred tax asset. A company should provide a valuation allowance for a deferred tax asset if, based on the weight of the available positive and negative evidence, it is more likely than not that the deferred tax asset will not be realized. Refer to Chapter TX 5 of PwC’s “Guide to Accounting for Income Taxes” for guidance on assessing the need for a valuation allowance.

When a company measures its deferred tax asset related to stock-based compensation awards or determines whether a valuation allowance is necessary, the current fair value of its stock should not be considered. A company should establish a valuation allowance only if it expects that it will not have sufficient future taxable income to realize economic benefit from the deferred tax asset.

PwC Observation: A company should not anticipate shortfalls and record a valuation allowance for an outstanding award even if it believes that there is only a remote probability that the award will result in a tax deduction. For example, on December 31, 2006, a company cannot record a valuation allowance related to an out-of-the-money award that expires on January 1, 2007. The company should wait until the award’s expiration date to adjust the related deferred tax asset. If a company expects that pending deferred tax write-offs will be material, it should disclose this expectation.

In practice, prior to the adoption of ASC 718, deferred tax assets generally were recorded for windfall tax benefits even if such amounts increased or created an NOL carryforward for which a valuation allowance was required. As discussed previously, ASC 718-740-25-10 provides that the tax benefit and the credit to APIC for the windfall tax benefit should not be recorded until the tax deduction reduces current taxes payable. Companies need to consider how ASC 718-740-25-10 impacts the reversal of any valuation allowance established for deferred tax assets related to windfall tax benefits prior to the adoption of ASC 718.

The Resource Group reached a consensus on the treatment of a valuation allowance that existed as of the adoption date of ASC 718 and was reversed after adoption. If the windfall tax benefit gave rise to an increase in the net deferred tax asset and a concurrent increase in the valuation allowance, no net tax benefit was recorded in APIC because no initial recognition had occurred. If, after the adoption of ASC 718, a company concludes that it should release some or all of its valuation allowance, it should not recognize the net deferred tax asset and corresponding credit to APIC for windfall tax benefits until such amounts are realized in accordance with ASC 718-740-25-10 (i.e., until these amounts reduce taxes payable). The Resource Group agreed that, for purposes of disclosure upon adoption of ASC 718, the company could either (1) net its NOL deferred tax asset and the related valuation allowance for the windfall tax benefit determined previously or (2) continue to reflect a deferred tax asset and valuation allowance for such NOL carryforwards.

Alternatively, if the windfall tax benefit initially was recognized in APIC and then a valuation allowance was established in a subsequent period, the valuation allowance would have been recorded as a charge to continuing operations. In this case, it would be appropriate to reverse the entire valuation allowance through continuing operations in a period after the adoption of ASC 718, including the portion that originally resulted from the windfall tax benefits.

4.17.1 Accounting for Settlements When There Is a Valuation Allowance

For a company with a valuation allowance recorded against its deferred tax assets, the company will not recognize any shortfalls upon settlement of an award. ASC 718-740-35-5 provides that the write-off of a deferred tax asset is net of any related valuation allowance. Thus, when an award is settled and the award's related deferred tax asset has a valuation allowance recorded against it, the shortfall, if any, results in no net effect on the income statement or the balance sheet because any effect from reversing the deferred tax asset is offset by reversing the corresponding valuation allowance.

4.18 Uncertain Tax Positions

Because tax laws, related regulations, and corresponding legal interpretations are voluminous and complex, it is sometimes unclear whether a particular position taken in a tax return will ultimately be sustained if the tax authorities challenge it. Such filing positions commonly are referred to as uncertain tax positions. Uncertainty as to whether deductions related to stock-based compensation will be sustained should be assessed in accordance with ASC 740's recognition and measurement criteria. Favorable or unfavorable adjustments that either increase or decrease the pool of windfall tax benefits should be recorded based on the source of the item that resulted in the uncertain tax position. Thus, the favorable or unfavorable adjustments related to windfalls for stock-based compensation should be traced backwards to APIC in accordance with ASC 740-20-45-11.

Companies should consider whether tax benefits not yet recorded should be presented as an unrecognized tax benefit in the tabular reconciliation that will be disclosed in the footnotes to the financial statements. We believe that this footnote reconciliation should include all unrecognized tax benefits, whether or not they are reflected in a tax reserve liability account or are not recognized in the financial statements pursuant to other GAAP, such as the ASC 718-740-25-10 criteria for recording a tax benefit only when it reduces taxes payable.

4.19 Intraperson Tax Allocation

Intraperson tax allocation is the allocation of income tax expense or benefit among continuing operations, discontinued operations, extraordinary items, other comprehensive income, and items charged or credited directly to equity. Complexities arise when applying the intraperson tax allocation rules in (1) considering the impact of certain tax deductions and credits (e.g., IRC Section 199 deduction and the research tax credit under U.S. tax regulations) on the calculation of the windfall tax benefit recorded in additional paid-in-capital (APIC) and (2) determining whether windfall tax benefits are realized in accordance with ASC 718-20-55-20 in periods when a company has other carryforward tax attributes (e.g., NOL, foreign tax credits (FTCs), research and development (R&D) tax credits) available. The tax deduction that corresponds to the recognized book compensation cost is accounted for in continuing operations under ASC 740.

4.19.1 Indirect Effects of Stock-Based Compensation Deductions

Under the with-and-without intraperson tax allocation rules of ASC 740, the windfall tax benefit is calculated based on the incremental tax benefit received from deductions related to stock-based compensation. Thus, the windfall tax benefit is equal to the incremental tax benefit of the excess tax deduction. This amount is measured by calculating the tax benefit both “with” and “without” the excess tax deduction, with the resulting difference between the two calculations considered the windfall.

In previous sections of this chapter, the illustrations have assumed a single tax rate applicable in all periods when calculating the windfall tax benefit resulting from the settlement of a stock-based compensation award. Companies may receive certain tax deductions that impact their effective tax rate and thus the incremental tax benefit of the excess tax deduction. For example, IRC Section 199 provides a company with a permanent tax deduction related to its qualified production activities. In accordance with ASC 740-10-55-147 through 55-148, the deferred tax asset that a company records for the book compensation cost should not be adjusted to reflect an IRC Section 199 deduction that the company is likely to receive. However, the IRC Section 199 deduction affects the incremental tax benefit of the excess tax deduction when using the with-and-without approach to calculate the windfall tax benefit.

Figure 4-13 illustrates three alternative approaches for calculating the incremental windfall tax benefit recorded to APIC when a company is entitled to an IRC Section 199 deduction.

Figure 4-13: Calculation of Windfall Tax Benefits Including Impact of IRC Section 199 Deduction

Background/Facts:

- The applicable tax rate is 35 percent.
- 4,000 stock options are granted on January 1, 2009, and all the options vest on December 31, 2009.
- Compensation cost for the award is \$400,000 and is recorded during 2009 for book purposes, along with the related deferred tax assets of \$140,000.
- Taxable income in 2010 is \$1,000,000 before the IRC Section 199 deduction.

(continued)

The stock options are exercised on July 1, 2010, when the intrinsic value (and the related tax deduction) is \$500,000. Thus, the excess or windfall tax deduction is \$100,000.

- The IRC Section 199 deduction is fully phased in at 9 percent.

Analysis/Conclusion:

Calculation of the Windfall Tax Benefit:

With Excess Deduction		Without Excess Deduction (\$100,000)	
Taxable income (pre-IRC Section 199)	\$1,000,000	Taxable income (pre-IRC Section 199)	\$1,100,000
Less: IRC Section 199 deduction	(90,000)	Less: IRC Section 199 deduction	(99,000)
Taxable income	910,000	Taxable income	1,001,000
Tax rate	35%	Tax rate	35%
Income tax expense	\$ 318,500	Income tax expense	\$ 350,350

- **Alternative A:** Under this approach, a company would calculate the windfall tax benefit as the difference between the “without” calculation of \$350,350 and the “with” calculation of \$318,500, or \$31,850. The IRC Section 199 deduction results in an in-substance reduction of the tax rate to 31.85 percent, or 91 percent of the statutory rate. Therefore, another way to measure the windfall in this example is to compare the deferred tax asset of \$140,000 with the tax benefit of \$175,000 (\$500,000 x 35%) and then multiply such difference (or \$35,000) by 91 percent.
- **Alternative B:** A second approach to calculating the windfall tax benefit would be to compare the recorded deferred tax asset with the incremental tax benefit of the deduction. In the example above, the \$500,000 intrinsic value would result in a tax benefit of \$159,250 (\$500,000 tax deduction x the 35 percent statutory rate x 91 percent). The tax benefit of \$159,250, compared with the deferred tax asset of \$140,000, would result in an excess of \$19,250, which would be recorded as the windfall tax benefit.
- **Alternative C:** Under a third approach, a company could elect to consider only the direct effects of the stock option deduction and ignore the impact of IRC Section 199. In this case, the windfall would be measured by comparing the tax deduction of \$500,000 with the cumulative book compensation cost of \$400,000. The tax benefit of the excess deduction, or \$35,000 (\$100,000 x 35 percent), is the windfall tax benefit calculated under this approach.

Until new authoritative guidance (if any) is issued, we believe that a company could elect to use any of the above approaches to calculate windfall tax benefits. The approach a company elects to use should be treated as an accounting policy decision which should be consistently followed and disclosed.

A similar allocation question arises when a company calculates the effect of the research tax credit under U.S. tax regulations. Strict application of the with-and-without approach would appear to require allocating the benefit of the incremental research tax credit to APIC under either an Alternative A or Alternative B approach. Some companies, however, do not segregate this credit when measuring the windfall tax benefit; instead, they follow the practice of recognizing the full effect of the research tax credit in income from continuing operations, following the logic of Alternative C. The approach a company elects to use should be applied consistently to all indirect effects of stock-based compensation deductions.

PwC Observation: A policy decision to use the approach described under Alternative C is likely to be less complex for companies to apply because, under this approach, the indirect effects of stock-based compensation deductions are not considered for purposes of measuring the windfall at settlement of the award. While simpler to apply, Alternative C is likely to cause more volatility of income tax expense reported in continuing operations, as the indirect tax effects of stock-based compensation deductions would be reflected in the income tax provision and not in APIC.

4.19.2 Effects of Windfall Tax Benefits Under Alternative Minimum Tax

In certain situations, a company may not be a regular taxpayer because it has substantial NOL carryforwards; however, it may be subject to the alternative minimum tax (AMT). Regardless of whether the company pays a regular tax or AMT, the amount recognized as a windfall tax benefit (assuming no valuation allowance is needed) is the amount that reduces regular taxes payable, with the determination of the benefit subject to the policy election of tax law ordering or the with-and-without approach. That is, the tax saving from windfalls is measured at the regular tax rate (even though the company may be paying AMT) since the windfalls effectively “save” an equivalent amount of regular NOL carryforwards that would otherwise have been used (Figure 4-14 below illustrates this accounting). However, when any AMT credit carryforwards would be offset by a full valuation allowance, we believe the benefit recorded to APIC should be measured based on the amount of AMT savings that is a result of the windfalls.

Consider the following illustration:

Figure 4-14: Income Tax Benefit under Alternative Minimum Tax

Background/Facts:

- The company has NOL carryforwards of \$100 million and no valuation allowance.
- The company establishes deferred taxes for temporary differences at the regular tax rate (40 percent) in accordance with ASC 740-10-30-10.
- The company has a current-year deduction from the exercise of nonqualified stock options of \$10 million. These options were granted and exercised post-adoption of ASC 718 and resulted in book compensation expense of \$6 million, with a corresponding deferred tax asset of \$2.4 million.
- Regular taxable income before the option deduction and NOLs is \$30 million.
- AMT income is \$30 million, prior to considering the effects of the stock option deduction and the allowable NOL (90 percent).
- The company has made a policy election to utilize the tax law ordering approach to calculate realized excess tax benefits from option exercises.

(continued)

Calculation of the AMT tax:

AMT taxable income (pre-stock option deduction)	\$ 30,000,000
Nonqualified stock option deduction	(10,000,000)
AMT taxable income (pre-NOL)	20,000,000
Application of allowable NOLs (90%)	(18,000,000)
AMT taxable income	2,000,000
AMT tax rate	20%
AMT tax	\$ 400,000

After considering the above, the company will owe no regular taxes and will owe \$400,000 in AMT tax.

Analysis/Conclusion:**Determination of Windfall Tax Benefit:**

The company has a realized excess tax benefit of \$1.6 million and should record a credit to APIC for this amount. This amount is equal to the \$4 million excess deduction multiplied by the company's regular tax rate of 40 percent.

It may appear that the excess tax benefit reduced current taxes by only \$200,000 because, without the excess stock option deduction, the company would have paid \$600,000 in AMT tax (\$30 million in AMT taxable income reduced by NOLs up to 90 percent multiplied by 20 percent) but ultimately paid only \$400,000. However, for this company (and all companies that do not expect to be AMT taxpayers perpetually), the AMT is prepaid regular tax because the company receives a credit against future regular tax due for any AMT tax paid. Therefore, the realized excess tax deduction should be the amount by which the excess tax deduction reduced *regular taxes payable*—not AMT taxes payable. In this example, the entire excess stock compensation reduced regular taxes payable. Therefore, the company should record \$1.6 million of excess tax benefit in APIC. The \$10.4 million credit to the deferred tax asset is calculated based on a 40% tax rate applied to the \$20 million of taxable income in the table above (\$8 million) plus \$2.4 million from the options noted in the third bullet point in the background/facts section above.

The company would record the following journal entry to recognize the tax benefit from the exercise of the stock options and the deferred tax asset related to the AMT taxes paid:

Dr Current tax provision (continuing operations)	\$ 400,000	
Dr Deferred tax asset—AMT credit	\$ 400,000	
Dr Deferred tax provision (continuing operations)	\$11,600,000	
Cr Income tax payable		\$ 400,000
Cr Deferred tax asset		\$10,400,000
Cr APIC		\$ 1,600,000

It should be noted that, if the company had a policy of applying the with-and-without approach to determine realized tax benefits, none of the current-year stock option deductions would have been deemed to reduce regular taxes payable. This is because, under the with-and-without approach, the company's NOL carryforwards would be deemed to reduce taxes payable prior to any windfall tax benefits.

4.19.3 Utilization of Tax Attributes

ASC 718-20-55-20 provides that the tax benefit and credit to APIC for a windfall tax benefit should not be recorded until the deduction reduces income taxes payable. In some cases, a company may have current-year windfall tax benefits and NOL carryforwards (related to operating losses) from earlier years, both of which are available to offset taxable income in the current year. In the U.S., the current-year stock compensation deduction (which would encompass the windfall tax benefit) would be used to offset taxable income before the NOL carryforwards because all current-year deductions take priority over NOL carryforwards in the tax return. A with-and-without approach, however, gives primacy to continuing operations and, as a result, the windfall tax benefits would not offset current-year taxable income—and a benefit would not be recorded in APIC—if the amount of available NOL carryforwards generated from continuing operations was sufficient to offset the current-year taxable income before considering windfall tax benefits. Because the stock compensation deductions were used first in the tax return, this treatment would result in the windfall tax benefits “taint” normally flowing from the stock compensation deductions instead of being attached to the NOL carryforwards that remain.

For this situation, the Resource Group agreed that either of the following two approaches would be acceptable to determine the order in which tax attributes should be considered:

- **With-and-without approach:** Follow the with-and-without intraperiod tax allocation approach as described in ASC 740-20-45-7, which would result in windfall tax benefits being utilized last. That is, a windfall benefit would be recognized in APIC only if an incremental benefit was provided after considering all other tax attributes presently available to the company.
- **Tax law ordering approach:** Apply the tax law. That is, allocate the benefit based on provisions in the tax law that identify the sequence in which those amounts are utilized for tax purposes.

A company should treat its decision to adopt either approach as an accounting policy decision, which should be followed consistently. The table below provides a simplified illustration of the differences between the with-and-without and tax law ordering approaches for a company with no valuation allowance (Company A) and a company with a full valuation allowance (Company B).

Figure 4-15: With-and-Without and Tax Law Ordering Approaches

Background/Facts:

- The applicable tax rate is 40 percent in all periods.
- Income taxes payable are zero at the beginning of the period.
- Taxable income before the excess tax deduction for stock-based compensation is \$700,000.
- Current-year excess tax deduction for stock-based compensation is \$200,000.
- NOL carryforward from prior years' operating losses is \$1,000,000 (deferred tax asset of \$400,000).

(continued)

Analysis/Conclusion:

Company A: No Valuation Allowance

- Following the with-and-without approach, windfall tax benefits are the last item to be utilized to offset taxable income. The NOL carryforward generated from operations in prior years is sufficient to offset current-year taxable income before consideration of windfall tax benefits. Therefore, the excess tax deduction for stock-based compensation does not reduce taxes payable, and Company A would not record a windfall tax benefit to APIC. The deferred tax asset would be reduced by \$280,000 (the \$700,000 of taxable income assumed to be offset by NOL carryforwards multiplied by the 40 percent tax rate). The windfall tax benefit of \$80,000 (\$200,000 excess tax deduction multiplied by the 40 percent tax rate) would not be recognized until such time as that deduction was deemed to produce a reduction in taxes payable. At this point, while the NOL carryforward has been reduced to \$300,000 for book purposes, \$500,000 of NOL carryforward remains on the return (on the tax return, the \$200,000 stock-based compensation deduction reduces taxable income to \$500,000 and only \$500,000 of the NOL carryforward is used). The \$200,000 difference must be tracked “off-balance-sheet” and, when it is utilized in subsequent periods, the reduction in taxes payable is credited to APIC.
- Following the tax law ordering approach, the current-year excess tax deduction for stock-based compensation would be used to offset taxable income before utilization of the NOL carryforward. The excess tax deduction of \$200,000 would reduce taxable income, and Company A would record the windfall tax benefit of \$80,000 to APIC. In addition, the deferred tax asset would be reduced by \$200,000 (\$500,000 of NOL carryforward utilized to offset remaining taxable income multiplied by the 40 percent tax rate).

The differences between the with-and-without approach and the tax law ordering approach for Company A can be summarized as follows:

	Company A	
	With-and-Without	Tax Law Ordering
Income taxes payable before reduction for NOL carryforward and excess tax deductions for stock-based compensation (\$700,000 x 40%)	\$ 280,000	\$ 280,000
Less: Utilization of NOL carryforward deferred tax asset	(280,000)	(200,000)
Less: Windfall tax benefit recorded in APIC	—	(80,000)
Income taxes payable	—	—
Income tax expense (\$700,000 x 40%)	280,000	280,000
Remaining NOL carryforward deferred tax asset on books	\$ 120,000	\$ 200,000

Company B: Full Valuation Allowance

The same assumptions apply to Company B, except that Company B has a full valuation allowance recorded against its deferred tax assets.

Following the with-and-without approach, Company B would record the same entries as Company A except that Company B also would release \$280,000 of the valuation allowance related to the NOL carryforward that was utilized. The release of the valuation allowance would reduce income tax expense to zero in the current period. The windfall tax benefit of \$80,000 (\$200,000 excess tax deduction multiplied by the

(continued)

40 percent tax rate) would not be recognized until such time as that deduction was deemed to produce a reduction in taxes payable. As in the “no valuation allowance” scenario, the \$200,000 difference between the NOL carryforward for book and tax purposes must be tracked “off-balance-sheet” and, when it is utilized in subsequent periods, the reduction in taxes payable is credited to APIC.

Following the tax law ordering approach, Company B would record the same entries as Company A except that Company B would release only \$200,000 of the valuation allowance related to the NOL carryforward that was utilized. In this scenario, Company B’s financial statements would reflect \$80,000 of income tax expense in the current period (income tax expense of \$280,000 less release of the valuation allowance of \$200,000).

The differences between the with-and-without approach and the tax law ordering approach for Company B can be summarized as follows:

	Company B	
	With-and-Without	Tax Law Ordering
Income taxes payable before reduction for NOL carryforward and excess tax deductions for stock-based compensation (\$700,000 x 40%)	\$ 280,000	\$ 280,000
Less: Utilization of NOL carryforward deferred tax asset	(280,000)	(200,000)
Less: Windfall tax benefit recorded in APIC	—	(80,000)
Income taxes payable	—	—
Income tax expense before release of valuation allowance (\$700,000 x 40%)	280,000	280,000
Less: Release of valuation allowance	(280,000)	(200,000)
Income tax expense	—	\$ 80,000
Remaining NOL carryforward deferred tax asset, net of valuation allowance	\$ —	\$ —

PwC Observation: A policy decision to account for utilization of windfall tax benefits based on tax law ordering should be less complex than following the with-and-without intraperiod allocation approach. Following the tax law ordering approach should reduce the need to track differences between the treatment of NOL carryforwards for book purposes as compared with the treatment of NOL carryforwards for tax return purposes. Using the amounts in the illustrative example, a with-and-without accounting policy would necessitate tracking the \$200,000 of NOL carryforward considered to be “off-balance-sheet” stock option deductions for book purposes.

Even in cases where the tax law ordering approach is followed, there will be occasions when only a portion of an NOL carryforward attributed to a given tax year is utilized. In these cases, a convention will need to be adopted for purposes of determining how much, if any, of the NOL carryforward that was utilized should be deemed to relate to windfall tax benefits. We believe that it is generally appropriate in this scenario to consider the windfall tax benefit to be the last portion of the NOL carryforward utilized consistent with the incremental approach, whereby items relating to other components of income enter into intraperiod allocation last. For example, assume a company had an NOL carryforward from the prior year

of \$1,000,000 that resulted from operating losses of \$600,000 and excess tax deductions of \$400,000, the latter of which was not reflected as a deferred tax asset in light of the requirements of ASC 718-20-55-20 (which would prohibit the recording of a deferred tax asset on net operating loss carryforwards created by windfall tax benefits). In the current year, the company generated taxable income of \$700,000. Following an approach of utilizing windfall tax benefits last, the company would be deemed to have utilized all of the available NOL carryforward from operations and would recognize a windfall tax benefit in APIC related to only \$100,000 of the total available excess deductions of \$400,000.

The determination of whether a windfall tax benefit has been realized is not only affected by NOL carryforwards but also by other carryforwards (e.g., foreign tax credit and R&D credit carryforwards). Determination of whether a windfall benefit has been realized when there are credit carryforwards is influenced by whether the tax law ordering or the with-and-without approach is being followed. The logic in Figure 4-15 that was used to determine whether a windfall tax benefit was realized when the windfall interacted with an NOL carryforward may also be used to determine whether a windfall tax benefit is realized when the windfall interacts with these other carryforwards.

For example, a windfall tax deduction might reduce taxable income on the tax return, and therefore limit utilization of R&D credits that were generated during the year, thereby creating an R&D credit carryforward. If the tax law ordering approach is followed, the windfall tax deductions are considered to be used before the R&D credits, in which case the stock option windfall deduction would be recorded in the financial statements through APIC and a deferred tax asset is recorded for the R&D credit carryforward. If the with-and-without approach is followed, the R&D credits are considered to be used before the windfall tax deductions and no benefit is recognized in APIC. The R&D credit carryforward on the tax return must be tracked “off-balance-sheet” and, when it is utilized in subsequent periods, the reduction in taxes payable is credited to APIC.

4.20 Interim Reporting

When a company calculates its estimated annual effective tax rate, it should not anticipate or estimate the incremental effects of windfalls or shortfalls that may occur over the balance of the year. For example, if an option is due to expire in the current year, the company should not anticipate that it will be exercised and that a windfall will be recognized, even though the fair value of the underlying stock exceeds the exercise price of the option. Similarly, if a company had disqualifying dispositions for incentive stock options (ISOs) or employee stock purchase plans (ESPPs) in the past, it should not anticipate that future disqualifying dispositions will occur in the future. Instead, the company should recognize windfalls and shortfalls discretely in the period in which they occur.

For example, if a company does not have a sufficient pool of windfall tax benefits at the beginning of the year, any shortfall should be recorded in the income statement in the period in which the shortfall occurred. If a windfall is recognized later in the year, the shortfall that was recognized earlier in the year should be reversed in the subsequent quarter to the extent that it can be offset against the windfall. (This is because the pool of windfall tax benefits is determined on an annual basis.)

Figure 4-16 illustrates how a company should record windfalls and shortfalls during interim periods.

Figure 4-16: Windfalls and Shortfalls During Interim Periods

Assume the following:

- The company has a calendar year-end.
- No pool of windfall tax benefits is available at December 31, 20X6.
- The company's taxable income is sufficient for the stock option tax deductions to reduce income taxes payable.
- The company has no other windfall or shortfall activity during the year.

Exercise Date	Tax Benefit ¹	Deferred Tax Asset ²	Shortfall	Windfall	Timing and Calculation of Tax Effect of Shortfall or Windfall
1/2/20X7	\$ 300	\$ 400	\$(100)		In the first quarter: Recognize income tax expense of \$100.
4/2/20X7	1,200	900		\$300	In the second quarter: Record \$100 of income tax benefit to reverse income tax expense recognized during the first quarter. Credit \$200 (year-to-date net windfall) to APIC.
7/2/20X7	200	560	(360)		In the third quarter: Offset \$200 of the shortfall against the pool of windfall tax benefits by a debit to APIC. Recognize income tax expense for the remaining \$160.
10/2/20X7	1,440	900		540	In the fourth quarter: Record \$160 of income tax benefit to reverse income tax expense recognized during the third quarter. Credit \$380 (year-to-date net windfall) to APIC.
Totals	\$3,140	\$2,760	\$(460)	\$840	

¹ The tax benefit is calculated by multiplying the intrinsic value of the option by the tax rate of 40 percent.

² The deferred tax asset is calculated by multiplying the compensation cost by the tax rate of 40 percent.

Companies should also consider the guidance in ASC 718-740-25-10, which states that a windfall tax benefit should not be recognized until it reduces taxes payable. When applying this guidance on a quarterly basis, we believe that companies should consider their estimated annual income taxes payable. If a company incurs a net loss for the period and experiences a windfall tax benefit in the early quarters of a fiscal year, the company should still be able to recognize the windfall tax benefit from those

exercises as long as the company expects to have taxable income for the full year. We believe that the requirements of ASC 718-740-25-10 should be applied within the context of a fiscal year, not just an interim period. This is consistent with the requirement to determine the tax provision on an annual basis.

Figure 4-17: Recognition of Prior Year Windfall Tax Benefits in Interim Periods

Background/Facts:

Company A, a calendar year-end public company, grants nonqualified stock option awards to its employees. In the past, a U.S. federal windfall tax deduction was generated (i.e., an excess tax deduction to Company A) as the intrinsic value of the options exercised exceeded the cumulative compensation cost for those awards. In accordance with ASC 718-740-25-10, none of the windfall tax benefits were recognized as an increase to additional paid-in capital (APIC) because Company A had a net operating loss carryforward (NOL) in prior years which resulted in the windfall deductions merely increasing the NOL instead of reducing taxes payable.

Company A has no valuation allowance on its deferred tax assets and forecasts, as of the first quarter, taxable income for the current fiscal year which will allow for utilization of all of the off-balance sheet NOLs that arose from the windfall deductions claimed in prior years. There are no unrecognized tax benefits for uncertainties related to the deductions.

Question:

When should Company A recognize the increase in APIC related to windfall tax benefits that are expected to reduce taxes payable in the current fiscal year?

Analysis/Conclusion:

We believe there is diversity in practice with respect to recognizing, in interim periods, windfall tax benefits that originated in prior years and are expected to reduce taxes payable in the current year. Two acceptable approaches are as follows:

Approach 1: Company A should recognize the prior year windfall tax benefits as the related income occurs during the current year. This view effectively assumes that estimated tax payments would generally be reduced by the windfall tax deduction at applicable quarterly intervals throughout the year. The windfall tax benefits should generally be sequenced as the last benefits to be recognized against year-to-date taxes payable. So, for example, if there were \$120 of NOLs that included \$20 of windfall tax deductions, and current full year income of \$120 is expected to occur ratably (\$30 per quarter), this would mean that no windfalls would be recognized in APIC until the fourth quarter. Recognizing windfall tax benefits on this basis appears consistent with the intent of ASC 718-740-25-10, which provides that the credit to APIC not be recognized until it reduces taxes payable.

Approach 2: Company A should recognize the prior year windfall tax benefits that are expected to reduce taxes payable for the entire current year in the first quarter. This view is premised on the notion that the requirements of ASC 718-740-25-10 should be applied in the context of a fiscal year and is consistent with the general treatment of recording windfalls in APIC on a discrete basis in the interim period in which the windfall deduction occurs. In this case, since Company A is now in an annual period in which it anticipates being able to reduce taxes payable with NOLs that arose from windfall deductions, the prohibition on recognition of the windfalls

(continued)

in APIC no longer applies and the estimated amount of windfall benefits that will be used in the current year would be recognized in its entirety.

The view chosen represents an accounting policy that, once established, would be consistently applied. Company A should also consider the impact of the accounting policy on its statement of cash flows. ASC 230-10-45-14e requires that the windfall tax benefits from stock-based compensation awards be classified as cash inflows from financing activities while ASC 230-10-45-17c requires the same amount to be shown as cash outflows from operating activities.

Note: In cases where only a portion of the tax attributes will be used, the accounting policy elected by the company would determine the order in which the tax attributes are utilized. Section TX 12.2.2.2.3.3 indicates that either the with-and-without approach or the tax law ordering approach would be acceptable to determine the order in which tax attributes should be considered.

4.21 Capitalized Compensation Cost

U.S. generally accepted accounting principles require that, in certain cases, compensation cost be capitalized in the balance sheet, such as when employees devote significant time to a particular project (e.g., manufacturing inventory or constructing fixed assets). If the related stock-based compensation award will give rise to a tax deduction, ASC 718-740-25-2 specifies that compensation cost that is capitalized as part of the cost of an asset will be considered part of the tax basis of that asset for financial reporting purposes. With respect to the determination of windfalls and shortfalls and the corresponding income statement and APIC presentation, and with respect to the impact on the pool of windfall tax benefits, upon realizing a tax deduction for awards for which the underlying compensation cost was capitalized, a company would apply the same income tax accounting methodology as for awards whose compensation costs were expensed.

Figure 4-18 illustrates the journal entries that will be recorded to account for compensation expense related to a nonqualified option that is capitalized as part of an asset.

Figure 4-18: Capitalization of Compensation Cost Related to an Equity-Classified Nonqualified Option

Background/Facts:

A company grants nonqualified stock options to employees involved in the self-construction of a fixed asset, and \$1,000 of compensation cost is capitalized as part of the fixed asset. The asset has a 10-year life and the awards are fully vested on the grant date. The company will receive a tax deduction for the amount of the intrinsic value when the option is exercised.

The company has a 40 percent tax rate and has sufficient taxable income to realize the deduction.

At the end of the first year, the company records \$100 of incremental depreciation expense and has a \$900 book basis in the portion of the carrying amount of the equipment that relates to the stock options. Pursuant to ASC 718-740-25-2, the company's corresponding tax basis is presumed to be \$1,000, which is not

(continued)

depreciated for tax-return purposes; therefore, a \$40 deferred tax asset is recorded [(\$1,000 tax basis – \$900 book basis) multiplied by the 40 percent tax rate].

At the end of the second year, the employees exercise the options when the intrinsic value is \$5,000 and an additional \$100 of incremental book depreciation expense has been recorded. The company receives a tax deduction for the intrinsic value of the options when they are exercised. Thus at the end of the second year, the company's tax basis is zero and book basis is \$800, resulting in a \$320 deferred tax liability. This deferred tax liability would be reversed as book depreciation is recognized.

The following journal entries illustrate how a company would account for this transaction and record the tax benefit.

Grant Date:

1) To record capitalized compensation cost on the grant date		
Dr Fixed asset	\$1,000	
Cr APIC		\$1,000

Depreciation—Years 1 and 2

2) To record incremental depreciation in year 1		
Dr Depreciation expense	\$ 100	
Cr Accumulated depreciation		\$ 100
Dr Deferred tax asset	\$ 40	
Cr Deferred tax expense		\$ 40
To record depreciation in year 2		
Dr Depreciation expense	\$ 100	
Cr Accumulated depreciation		\$ 100
Dr Deferred tax asset	\$ 40	
Cr Deferred tax expense		\$ 40

Exercise at the End of Year 2

3) To record the income tax effects of the exercise ¹		
Dr Income taxes payable	\$2,000	
Cr APIC		\$1,600
Cr Current tax expense		\$ 400
Dr Deferred tax expense	\$ 400	
Cr Deferred tax asset		\$ 80
Cr Deferred tax liability		\$ 320

¹ If the tax law required the intrinsic value of the award to be added to the tax basis of the asset instead of being deducted when exercised, then the windfall tax benefit would be recorded over time as the tax basis of the asset is deducted and the windfall tax benefit is realized (ASC 718-740-25-10). The deferred tax asset or liability related to the temporary difference in the PP&E would be based on the book compensation amount of \$1,000 (i.e., it would not include the windfall). To illustrate, assume the same facts as in this example, except that instead of being immediately deductible when the award is exercised, the intrinsic value is added to the tax basis in the fixed asset. At the end of Year 2, the book basis would be \$800 (\$1,000 original basis – \$200 depreciation), and the tax basis for purposes of measuring temporary differences for financial reporting would be \$1,000, which is equal to the book compensation amount, (this assumes no catch-up depreciation on the tax return). This would yield a deferred tax asset of \$80 [(\$1,000 tax basis – \$800 book basis) x 40%], which has already been recorded (in Years 1 and 2). The windfall tax benefit of \$1,600 [(\$5,000 deduction less \$1,000 of compensation cost) x 40%] will be credited to APIC in subsequent periods as the tax basis is depreciated and the windfall benefit is realized.

- The deferred tax asset that has already been established is removed from the books.

(continued)

- A deferred tax liability is recorded for the taxable temporary difference of \$800, which will be expensed for book purposes over the remaining eight years.
- APIC, and the pool of windfall tax benefits, increased by \$1,600 (related to the excess deduction of \$4,000 [\$5,000 deduction for the intrinsic value at exercise less \$1,000 of compensation cost]).

Exercise at the End of Year 2

4) To record depreciation and reverse the deferred tax liability over years 3–10

Dr Depreciation expense	\$800	
Dr Deferred tax liability	\$320	
Cr Accumulated depreciation		\$800
Cr Deferred tax expense		\$320

The tax accounting related to the capitalization of compensation cost for an ISO is different because an ISO is not ordinarily expected to result in a tax deduction and therefore the tax effects are recorded only upon a disqualifying disposition. As an ISO is not expected to result in a tax benefit to the company, no deferred tax benefit is established either at the outset or as the compensation cost is either capitalized or recognized in the income statement (through amortization or depreciation). Upon a disqualifying disposition, a company will receive a tax deduction. Assuming the related capitalized asset is not fully amortized or depreciated and the book compensation expense will be recognized over a future period, upon the disqualifying disposition a company will have to establish a deferred tax liability that will be recognized as deferred tax expense as the amortization or depreciation expense is recognized.

Figure 4-19 illustrates the journal entries that will be recorded to account for the compensation cost from an ISO that is capitalized as part of an asset that results in a disqualifying disposition when the asset has not been fully amortized or depreciated when the disqualifying disposition occurs.

Figure 4-19: Capitalization of Compensation Cost Related to an Equity-Classified ISO That Later Has a Disqualifying Disposition

Background/Facts:

A company issues an ISO award to an employee where the compensation cost is capitalized because the employee provides services on the self-construction of one of the company's fixed assets. Compensation cost of \$1,000 will be capitalized as part of the fixed asset. The asset has a 10-year life, the company uses straight-line depreciation, and the awards are vested on the grant date.

The company has a 40 percent tax rate and has sufficient taxable income to absorb a tax deduction in the event that there is a disqualifying disposition.

At the end of the first year, the employee exercises the options when the intrinsic value is \$5,000 and enters into a same-day sale, resulting in a disqualifying disposition.

The following journal entries illustrate how a company would account for this transaction and record the tax benefit from the disqualifying disposition.

(continued)

Grant Date

- 1) To record capitalization compensation cost on the grant date. There are no tax entries recorded because an ISO does not ordinarily result in a tax deduction

Dr Fixed asset	\$1,000	
Cr APIC		\$1,000

Depreciation—Year 1

- 2) To record incremental depreciation in year 1. There are no tax entries recorded because an ISO does not ordinarily result in a tax deduction

Dr Depreciation expense	\$ 100	
Cr Accumulated depreciation		\$ 100

Disqualifying Disposition at the End of Year 1

- 3) To record the income tax effects of the disqualifying disposition

Dr Taxes payable	\$2,000	
Cr Current tax expense		\$ 400
Cr APIC		\$1,600
Dr Deferred tax expense	\$ 360	
Cr Deferred tax liability		\$ 360

- The recognized income tax benefit is limited to the amount of compensation cost that has been expensed for book purposes (\$100) (i.e., depreciation expense). Accordingly, a \$40 tax benefit has been recognized (i.e., \$400 current tax benefit (\$1,000 book compensation costs x 40%) partially offset by \$360 deferred tax expense). The remaining tax benefit will be recognized as depreciation expense is recorded for book purposes.
- A deferred tax liability is recorded for the difference between the tax deduction of \$900 and the book basis, which will be reversed for book purposes over the remaining nine years.
- The pool of windfall tax benefits increased by \$1,600 ((\$5,000 deduction – \$1,000 book compensation cost) x 40%).

Depreciation—Years 2–10 (Cumulative Entry)

- 4) To record depreciation expense and reverse the deferred tax liability in years 2–10

Dr Depreciation expense	\$ 900	
Dr Deferred tax liability	\$ 360	
Cr Accumulated depreciation		\$ 900
Cr Deferred tax expense		\$ 360

4.22 Multinational Companies

U.S. multinational companies face several income tax issues involving stock-based compensation for non-U.S.-based employees. Income tax laws in each country are unique and may provide for tax deductions that differ from those permitted under U.S. tax law. This may result in a different income tax accounting treatment than for a stock-based compensation award issued to U.S. employees.

A non-U.S. subsidiary generally must bear the cost of a stock-based compensation award in order to be eligible for a local corporate income tax deduction. If the costs of a stock-based compensation award are recharged to the non-U.S. subsidiary, in

return for cash, the recharge should be treated as the parent company's issuance of capital stock in exchange for cash or property, and generally should not result in a taxable transaction in the U.S.

When a U.S. multinational company issues stock-based compensation to its employees in non-U.S. subsidiaries and it expects to receive a tax deduction in the local jurisdiction, the non-U.S. subsidiary should record a deferred tax asset, based on the local tax rate, as it recognizes book compensation cost over the requisite service period. At the time of settlement, the non-U.S. subsidiary would determine its windfall or shortfall based on the local jurisdiction tax deduction and account for such amount in accordance with ASC 718.

Stock-based compensation deductions incurred by non-U.S. subsidiaries also may have an indirect effect on the ultimate U.S. taxes paid by the U.S. parent company. For example, such deductions may reduce the non-U.S. subsidiary's earnings and profits for U.S. tax purposes and thereby reduce the amount of U.S. taxes paid when cash is distributed from non-U.S. subsidiaries (i.e., the deduction will affect the portion of a cash distribution from the non-U.S. subsidiary that would be considered a dividend versus a return of capital for tax purposes). In other cases, amounts that are charged back to the U.S. parent under transfer pricing arrangements that are determined on a "cost plus" basis might include a deduction for stock-based compensation, thereby providing the U.S. parent with a greater tax deduction than would have been the case absent the award. The Resource Group agreed that such indirect tax effects of awards should not be considered for purposes of either (1) establishing the deferred tax asset over the requisite service period or (2) measuring the windfall or shortfall at settlement of the award (i.e., the tax benefit is limited to the tax benefit of the deduction taken on the local tax return).

4.23 Cost-Sharing Pool

Affiliated companies that plan to share the cost of developing intangible property may choose to enter into a cost-sharing agreement whereby one company bears certain expenses on behalf of another company and is reimbursed for those expenses. U.S. tax regulations specify the expenses that should be included in a pool of shared costs; such expenses include costs related to stock-based compensation awards granted in tax years beginning after August 26, 2003.

U.S. tax regulations provide two methods for determining the amount and timing of stock-based compensation that is to be included in the pool of shared costs: the exercise method and the grant method.

Under the exercise method, the timing and amount of the allocated expense are based on the intrinsic value that the award has on the exercise date. Under this method, the tax deduction and initial deferred tax asset recorded are directly affected by the cost-sharing arrangement and, accordingly, the amounts are recorded net of any impact of the arrangement.

Companies that elect to follow the grant method use grant-date fair values that are determined based on the amount of book compensation cost to be included in a pool of shared costs. Effectively, all shared costs related to stock options will be included in U.S. taxable income in the same amount (and at the same time) as the expenses that a company concurrently records for book purposes. Companies should include such costs in U.S. taxable income regardless of whether the options ultimately are exercised by the holder and result in a U.S. tax deduction.

PwC Observation: Several taxpayers have challenged the IRS's position that stock-based compensation should be included in the pool of shared costs. On August 30, 2005, a U.S. tax court issued an opinion in favor of one taxpayer, finding that the allocation of stock option costs to cost-sharing agreements is contrary to the arm's-length standard. However, the decision is limited to years prior to the issuance of Regulation Section 1.482-7 of the U.S. tax code, which requires the inclusion of stock-based compensation cost in the pool of shared costs. Furthermore, in August 2006, the IRS filed to appeal this case to a higher court. In March 2010, the U.S. Court of Appeals for the Ninth Circuit affirmed the U.S. tax court's opinion in favor of the taxpayer that stock-based compensation need not be included in the pool of costs shared under a cost-sharing agreement prior to August 26, 2003.

The following example illustrates the income tax accounting for cost-sharing payments for Company A (the parent company) and Company B (an affiliate of the parent company).

Company A, which is located in the U.S., enters into a cost-sharing arrangement with Company B, which is located in Switzerland. Under the arrangement, the two companies share costs associated with the research and development of certain technology. Company B reimburses Company A for 30 percent of the research and development costs incurred by Company A. The U.S. tax rate is 40 percent. Cumulative book compensation for a vested option is \$100 for the year-ended December 31, 2006. The award is exercised during 2007, when the intrinsic value of the option is \$150.

The tax accounting impact is as follows:

- **Exercise method:** On December 31, 2006, Company A has recorded a \$28 deferred tax asset related to the option [$\$100 \text{ book compensation cost} \times 70 \text{ percent (percentage not reimbursed)} \times 40 \text{ percent}$]. In 2007, when the option is exercised, any tax benefit associated with the excess tax deduction is a windfall. The company is entitled to a U.S. tax benefit (net of the inclusion) of \$42 [$\$150 \text{ intrinsic value when the option is exercised} \times 70 \text{ percent (percentage not reimbursed)} \times 40 \text{ percent}$]. Accordingly, the windfall tax benefit is \$14 [$\$42 \text{ U.S. tax benefit (net of the inclusion)} - \$28 \text{ deferred tax asset}$].
- **Grant method:** On December 31, 2006, Company A has recorded a \$40 deferred tax asset related to the option ($\$100 \text{ book compensation cost} \times 40 \text{ percent}$). The cost-sharing impact is an increase of currently payable U.S. taxes each period; however, in contrast to the exercise method, the cost sharing should have no direct impact on the carrying amount of the U.S. deferred tax asset related to stock-based compensation. If there was \$100 of stock-based compensation during 2006, the impact on the December 31, 2006, current tax provision would be \$12 [$\$100 \text{ book compensation cost} \times 30 \text{ percent (percentage reimbursed)} \times 40 \text{ percent}$]. The net impact on the 2006 income statement is a tax benefit of \$28 ($\$40 - \12). At settlement, the windfall tax benefit is \$20 [$\$60 (\$150 \text{ intrinsic value when the option is exercised} \times 40 \text{ percent}) - \$40 \text{ deferred tax asset}$]. In this example, the cost-sharing reimbursement under the grant method is smaller and provides a \$6 greater tax benefit.

This example considers only the U.S. tax implications. Company B's accounting is not considered. In measuring deferred tax assets and potential windfalls, companies also need to consider any possible tax benefit in the foreign jurisdiction where the compensation charge has been allocated.

4.24 Income Tax Disclosures and Cash Flow Statement Presentation

The following should be disclosed related to the tax effects of stock-based compensation awards:

- The amount of cash resulting from the settlement of the awards, and the corresponding tax benefit that the company realized for the current year.
- The total compensation cost that the company recognized in income, as well as the total recognized tax benefit for all income statements that the company presented.

4.24.1 Cash Flow Statement Presentation

Windfall tax benefits from stock-based compensation cost should be classified, under both the direct and indirect methods of reporting cash flows, as cash inflows from financing activities. The amount shown in the financing section of the statement of cash flows should equal the sum of the gross windfall tax benefits that the company realized from awards, even though the shortfalls are netted against the pool of windfall tax benefits in the statement of stockholders' equity.

A non-public company that previously used the minimum value method to measure its share-based awards and adopted ASC 718 using the prospective method should report windfall tax benefits from those exercised awards as operating cash flows. Prior to the effective date of ASC 718, prior guidance² stipulated that the reduction of income taxes paid as a result of the deduction triggered by employee exercise of stock options (i.e., windfall tax benefit) should be classified as an operating cash flow. While ASC 718 changed this guidance, the prior accounting treatment should continue to be applied to awards accounted for under the prospective method.

In certain cases where the tax benefit from a stock option relates to awards that were exchanged in a business combination consummated prior to the effective date of ASC 805, the tax benefit may be recorded as a reduction of goodwill. The tax benefit in this situation would be shown as an operating activity, because ASC 230, *Statement of Cash Flows*, requires that all income tax-related matters be shown as operating activities, with the only exception being for the excess tax benefit received from stock-based compensation, which is required to be shown as a financing activity.

If a company elects to use the long-form method to calculate its historical pool of windfall tax benefits, the windfall amounts disclosed as cash inflows from financing activities should be based on the "as if" windfall tax benefits calculated by comparing the tax deduction with the sum of the compensation recognized and disclosed under the prior standard and ASC 718. The "as if" windfall is the windfall that increases the pool of windfall tax benefits (as discussed in section SC 4.12).

Companies that elected to use the short-cut method to calculate their historical pool of windfall tax benefits should have calculated the windfall amounts disclosed as cash inflows from financing activities, as follows:

- **Partially vested awards as of ASC 718 adoption:** The windfall tax benefit or shortfall should be determined by comparing the tax deduction for a partially vested award with the sum of the compensation cost recognized and disclosed

² EITF Issue No. 00-15, *Classification in the Statement of Cash Flows of the Income Tax Benefit Received by a Company upon Exercise of a Nonqualified Employee Stock Option*.

for that award under the prior standard and ASC 718 (i.e., the “as if” windfall or shortfall).

- **Fully vested awards as of ASC 718 adoption:** The windfall tax benefit is equal to the tax effects recognized in APIC as a result of the settlement of the award subsequent to the adoption of ASC 718 (i.e., the recognized windfall).

Figure 4-20 illustrates how a windfall and a shortfall should be shown in the statement of cash flows.

Figure 4-20: Windfall and Shortfall Presentation in the Statement of Cash Flows

Background/Facts:

The pool of windfall tax benefits is zero at December 31, 2006. Individual employees at a calendar-year company exercised the following four nonqualified stock options during 2007 (i.e., one employee award was exercised during each quarter). All awards were granted post-adoption and no other awards were exercised during the period. The following table depicts the results of the awards exercised:

Analysis of Shortfalls and Windfalls				
Exercise Date	Total Deferred Tax Assets	Tax Benefit	Shortfall	Windfall
1/2/2007	\$ 400	\$ 500		\$100
2/2/2007	900	450	\$(450)	
4/2/2007	560	1,000		440
5/2/2007	990	500	(490)	
Totals	\$2,850	\$2,450	\$(940)	\$540
Period	Amount Reported in Financing Section			
First quarter ended March 31, 2007	\$100			
Six months ended June 30, 2007	\$540			

Note: The company recognized in its income tax provision a net tax shortfall of \$400 (\$940 less \$540) for the six months ended June 30, 2007.

4.25 Employee's Taxable Income

4.25.1 Basic Rules for Employee's Taxable Income

An understanding of how employees are taxed for stock-based compensation in the U.S. 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 below), determines when a taxable event occurs and the amount that should be taxed.

4.25.1.1 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.³ 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 below) 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 below.

4.25.1.2 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.⁴ A transfer of property occurs when an employee acquires a beneficial ownership interest in the property.⁵

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.⁶ 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.⁷ 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

³ Treasury Regulation Section 1.451-2(a).

⁴ Treasury Regulation Section 1.83-3(e).

⁵ Treasury Regulation Section 1.83-3(a).

⁶ Treasury Regulation Section 1.83(d).

⁷ Treasury Regulation Section 1.83-3(c)(1).

a substantial risk of forfeiture, as well as provides examples of conditions that do not cause a substantial risk of forfeiture.

4.25.2 Restricted Stock

4.25.2.1 Ordinary Income Tax

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 section SC 1.3 titled "Awards within the Scope of ASC 718" in Chapter SC 1, 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 (this means that the employee has voting, dividend, and liquidation rights), 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.⁸

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 stock⁹ (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.¹⁰ 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.¹¹

Once the employee is vested, the employer must report the income to the IRS on a timely basis using Form W-2 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 section SC 1.12.10 titled "Minimum Statutory Tax Withholding Requirements" in Chapter SC 1, if an employer withholds an amount that exceeds the minimum statutory requirements, the stock-based compensation award would be classified as a liability under ASC 718. The service recipient must report income earned by independent contractors on Form 1099-MISC. There is no required withholding for compensation earned by an independent contractor unless the backup withholding rules apply where the independent contractor has not furnished a correct taxpayer identification number to the company.

⁸ Treasury Regulation Section 1.83-3(a).

⁹ Treasury Regulation Section 1.83-3(a).

¹⁰ Treasury Regulation Section 1.83-1 further clarifies that the fair market value of the property is determined without regard to any lapse restriction when the amount of taxable income is computed.

¹¹ IRC Section 83(f) and Treasury Regulation Section 1.83-4(a).

4.25.2.2 Capital Gains Tax

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.

4.25.2.3 IRC Section 83(b) Elections

An IRC Section 83(b) election enables an employee to pay 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. 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.

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 and a copy must be attached to the employee's tax return for the taxable year in which the election is made.

PwC Observation: 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)¹² 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.

4.25.2.4 Dividend Treatment

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 above (i.e., ordinary income to the employee). Once the restricted shares are vested, the dividends will receive normal dividend

¹² Treasury Regulation 1.83-2(a) and 1.83-4(b).

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.

4.25.3 Restricted Stock Units

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. Some employers will hold the shares in a funded trust rather than distributing the shares to the employees. If the shares are held in a funded trust, IRC Section 402(b) provides that the employees will have compensation income on their beneficial interest in the trust on the vesting date.

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. Under IRC Section 409A, RSUs are considered deferred compensation and any deferral beyond the vesting date must comply with the IRC Section 409A rules. RSUs that do not comply with IRC Section 409A may result in an additional 20 percent income tax to the recipient, additional underpayment penalties, and an acceleration of taxation to the vesting date. Refer to section SC 4.29 titled “Summary of IRC Section 409A” for further discussion of IRC Section 409A.

PwC Observation: There are a number of non-U.S. 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.

4.25.3.1 Dividend Equivalents

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.

4.25.4 Stock Options

In the U.S., 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.

PwC Observation: IRC Section 409A somewhat limits the flexibility of nonqualified stock options. Under IRC Section 409A, if a nonqualified stock option is: (1) granted on stock other than “service recipient stock,” or (2) with an exercise price that is (or could be at some point in the future) less than the stock’s fair market value on the grant date, or (3) the option has a feature that will defer the employee’s income tax to a date after exercise of the option, 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 percent penalty tax (refer to SC 4.29 for additional information). A dividend equivalent right provision may also cause the nonqualified stock option to fail to meet the exception. ISOs, qualified ESPPs, and restricted-stock awards are specifically excluded from the definition of deferred compensation under IRC Section 409A.

4.25.4.1 Nonqualified Stock Options

Treasury Regulation Section 1.83-7 establishes special rules for nonqualified stock options. The employee’s tax treatment of nonqualified stock options depends on whether the option has a readily ascertainable fair market value on the grant date. To have a “readily ascertainable fair market value” under IRC Section 83, an option must meet one of the following two conditions:

1. The option must either be actively traded on an established market, or
2. The option must fulfill all of the following requirements on the grant date:
 - The optionee may transfer the option.
 - The optionee may immediately exercise the option in full.
 - Neither the option nor the underlying property may be subject to any restrictions that significantly affect the option’s value.
 - The fair market value of the option privilege must be ascertainable in accordance with the guidance in Treasury Regulation 1.83(b)(3).¹³

Under IRC Section 83(a), options that have a readily ascertainable fair market value are included in the employee’s gross income on the grant date. Historically, employers avoided granting options that have a readily ascertainable fair market value on the grant date; most stock option awards have therefore been taxed upon the transfer of the vested underlying shares after the option is exercised.¹⁴ Such options will be taxed at exercise even if the fair market value becomes readily ascertainable after the grant date but before the option is exercised.

¹³ Treasury Regulation Section 1.83-7(b).

¹⁴ Treasury Regulation Section 1.83-7(a).

If, upon exercising the option, the stock that the employee receives is not fully vested, the tax rules pertaining to restricted stock will apply. Under IRC Section 83(a), the employee will be taxed when the stock is vested. Alternatively, the employee could make an IRC Section 83(b) election, thereby including the unvested stock in taxable income when the option is exercised.

PwC Observation: Like the U.S., 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 U.S.). Multinational companies should understand the tax rules that apply to option awards to employees in all of its 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, 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.¹⁵ 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.¹⁶

PwC Observation: 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 section SC 1.12.11 for more information on this type of program). Loans can also result in a number of accounting issues as described in Sections SC 1.7.9 through 1.7.11.

4.25.4.2 Statutory Stock Options

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

¹⁵ Revenue Ruling 2004-37.

¹⁶ IRC Section 7872(f)(9).

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),¹⁷ 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.

4.25.4.3 Incentive Stock Options

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.** 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, 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 percent of the fair market value of the stock at the grant date (110 percent in the case of options that are granted to shareholders that hold 10 percent of the company’s stock). A reasonable, good-faith means 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 under 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.
- **Only a limited number of ISOs may be granted.** Not more than \$100,000 worth of ISOs, valued at the grant date, may vest or otherwise become exercisable in any year. Any stock options granted that exceed the \$100,000 vesting limit will be treated as nonqualified stock options. This limit applies to on an aggregate basis all plans of the employer, its parent, and subsidiaries.
- **The ISO plan must be approved by the company’s shareholders within one year after the board of directors adopts the plan.** 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.

¹⁷ IRC Sections 422(a) and 423(a)(1).

- **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.¹⁸ 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.¹⁹

If an employee fails to meet the statutory holding-period requirements (i.e., if the employee sells his shares within two years after the grant date or one year after the exercise date), 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 lesser 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. Section 251(a) of the American Jobs Creation Act of 2004 amended IRC Section 3121(a) to clarify that no income tax or employment tax needs to be withheld for ISOs or ESPPs, regardless of whether the employee has made a qualifying or disqualifying disposition.

Treasury Regulations provide the following:

- The employment relationship is regarded as continuing without a break while an individual is on military leave, sick leave, or another bona fide leave of absence that lasts up to three months, so long as the individual's right to re-employment is guaranteed by contract or statute.
- A plan need only specify the maximum aggregate number of shares that will be issued under ISO grants, not the maximum number of shares that can be issued under other forms of stock-based compensation, such as nonqualified stock options and restricted stock.
- If, as a result of a corporate transaction, the new combined entity issues ISOs (previously issued by one of the parties to the transaction), the transaction should be treated as the creation of a new plan that requires shareholder approval. If the plan is fully disclosed in the transaction documents, shareholder approval of the transaction may be sufficient to approve the ISO plan.

¹⁸ IRC Section 421(a).

¹⁹ IRC Section 56(b)(3).

4.25.5 Employee Stock Purchase Plans

ESPPs allow employees to purchase company stock (usually via a payroll deduction) at a discount that does not exceed 15 percent.²⁰ 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.²¹
- 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 five percent may not participate in the plan.²²
- 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).²³

PwC Observation: Because ESPPs must be granted to all employees of U.S. 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 U.S. 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 percent of the stock's fair market value at the time that the option is exercised.²⁴

²⁰ Pursuant to IRC Section 423(b)(6), the purchase price cannot be below the lesser of (1) 85 percent of the fair market value that the stock had when the option was granted or (2) 85 percent of the fair market value that the stock had when the option was exercised.

²¹ IRC Section 423(b)(5).

²² IRC Section 423(b)(3).

²³ IRC Section 423(b)(4).

²⁴ If the terms of the grant provide that the option price is to be at least 85 percent of the fair market value at the time the option is exercised, the option period can be up to five years after the grant date.

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.²⁵

PwC Observation: 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.²⁶

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.

4.26 Employer's Income Tax Deductions

4.26.1 Background

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

²⁵ An option with a multi-year exercise period may allow a participant to exercise more than \$25,000 in a later year of the option. Treasury Regulation 1.423-2(i).

²⁶ IRC Section 423(c).

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.

4.26.2 Overview of the Rules

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 162.²⁷ 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. If the employer timely reports the income on the employee's Form W-2 or on Form 1099 for independent contractors (e.g., leased employees or vendors), (1) the employee is deemed to have included the compensation in gross income and (2) the employer 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.²⁸ 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 will 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.

PwC Observation: 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. ASC 718-740-25-10 requires that the windfall tax benefit for stock-based compensation should not be recognized in the financial statements until the award's exercise reduces tax payable.

²⁷ A deduction is generally allowed under IRC Section 162 for all the "ordinary and necessary" expenses that, during the taxable year, were paid or incurred in connection with carrying on any trade or business.

²⁸ IRC Section 83(h) and Treasury Regulation 1.83-6(a)(1).

4.26.3 Deductions for Restricted Stock, Restricted Stock Units, and Stock Options

4.26.3.1 Restricted Stock

The timing of the deduction for restricted stock 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.

4.26.3.2 Restricted Stock Units

Similar to restricted stock, the timing of the deduction for RSUs will correspond with the employee's recognition of income upon vesting. As discussed previously, 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 that the employee will have taxable compensation and the employer is eligible to claim a tax deduction. 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.

4.26.3.3 Nonqualified Stock Options

Nonqualified stock options are not treated as property on the grant date for purposes of IRC Section 83, assuming that the options have no 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, 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). The general rule considers the employee's tax year first, allowing the employer to take its deduction in the taxable year during which (or with which) the employee's taxable year ends.

4.26.3.4 Statutory Stock Options

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.²⁹ 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.³⁰

PwC Observation: Most 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. The loss of a tax deduction and the difficulties in tracking disqualifying dispositions as well as the propensity of employees to use cashless exercise programs have caused many companies to stop granting ISOs. Those 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.

4.27 Limitations on Stock-Based Compensation Tax Deductions

4.27.1 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 paid to individual covered employees in excess of \$1 million during the taxable year is not tax deductible.

PwC Observation: Recent legislation, including the Emergency Economic Stabilization Act (EESA), Troubled Asset Relief Program (TARP), Patient Protection and Affordable Care Act (PPACA), and the Health Care and Education Reconciliation Act (HCERA), have modified these rules as they apply to certain companies (particularly the healthcare and financial services industries). For example, certain health insurance providers may be subject to additional executive compensation restrictions under PPACA. Legislative changes may be considered for other industries and companies should monitor these changes to determine applicability to an entity's specific facts and circumstances.

A determination regarding which employees qualify as covered employees is made as of the last day of the taxable year. Covered employees include the chief executive officer and the company's three other most highly-compensated officers other than the chief executive officer, pursuant to the SEC's rules for executive-compensation disclosures in the annual proxy statement.³¹ The Section 162(m) limitation, however,

²⁹ See Treasury Regulation Section 1.421-2(b).

³⁰ Additional reporting is also required for both ISOs and ESPPs. IRC Section 6039).

³¹ IRS Notice 2007-49. Although the principal financial officer (PFO) is a named executive officer for purposes of the corporation's proxy, the PFO is not a covered employee under IRC Section 162(m).

does not apply to certain types of performance-based compensation. Generally, to qualify as performance-based compensation, compensation, including restricted stock and restricted stock units, must be payable solely upon attainment of one or more performance goals, but only if:

1. The goals are determined by a compensation committee consisting solely of two or more outside directors;
2. The material terms under which the compensation is to be paid, including the performance goals and the number of shares that can be awarded to any covered employee during a stated period of time, are disclosed to the shareholders and approved by a majority in a separate vote before payment is made;
3. Before any payment is made, the compensation committee must certify that the performance goals and any other material terms have been met;³²
4. The award is payable only if one or more objective performance goals are achieved; and³³
5. The performance goals are established in writing by the compensation committee, consisting solely of two or more outside directors, within 90 days of the beginning of the performance period (the outcome must be substantially uncertain at the time the goal is established).³⁴

It is possible to structure stock options and stock appreciation rights in a way that will qualify them for the exception that is granted for performance-based compensation; however, the requirements for these types of awards are different. For stock options or stock-appreciation rights to qualify as performance-based compensation, the plan must be approved by shareholders as noted above as well as meeting the following requirements:

1. The plan under which the award was granted must state the maximum number of shares with respect to which options or rights may be granted, during a specified period, to any employee.
2. The amount of compensation the recipient could receive under the award is based solely on an increase in the value of the stock after the grant date.

PwC Observation: A service condition, as defined by ASC 718, will not meet the performance-based compensation exception of the IRC because the service condition is a time-based vesting requirement. However, the performance and market conditions discussed in ASC 718 generally would meet the performance-based compensation exception as long as the vesting requirement of the performance or market condition was objectively determinable and not subject to management discretion. The interaction of the three ASC 718 conditions and the performance-based compensation exception of the IRC should be studied in detail, not only by tax professionals, but also by the finance/accounting department and by the stock-plan administrator, all of whom can then make a coordinated effort to address the accounting and tax ramifications of any plan designs.

³² IRC Section 162(m)(4)(C).

³³ A performance goal is objective if a third party having knowledge of the relevant facts could determine whether the goal is met.

³⁴ A performance goal will not satisfy this criteria if it is established after 25 percent of the performance period has elapsed.

If the compensation program is properly designed and implemented, the company should generally recognize the deferred tax assets related to the full amount of the individual covered employee's compensation because all of the compensation will result in a tax deduction to the employer. If, however, annual compensation includes both cash compensation and stock-based compensation, and there is an expectation that a portion of the company's compensation cost would not be deductible as a result of Section 162(m), then a company should first assess whether or not a covered employee's compensation will be subject to the Section 162(m) limitation. The anticipated effect of the Section 162(m) limitation should be considered, using one of three methods (as discussed below), 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.

4.27.2 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 individual³⁵ 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.³⁶

³⁵ An individual is a disqualified individual with respect to a corporation if at any time during the disqualified individual determination period under IRC Section 280G the individual is a highly compensated employee, officer or shareholder of the corporation and meets certain other requirements. See Treasury Regulation Section 1.280G-1, Q&A 15.

³⁶ An individual's base amount is the average annual compensation (as defined in Treasury Regulation Section 1.280G-1, Q&A 21) that was included in gross income for the taxable years in the base period (i.e., box 1 of Form W-2). The base period encompasses the five most recent taxable years ending before the date of the change in control; if there have been fewer than five taxable years, the base period will comprise the number of years that the individual has been employed by the company.

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 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.³⁷

PwC Observation: 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.

4.28 Awards to Employees of Non-U.S. Subsidiaries

Stock-based compensation that is granted to the employees of a U.S. company's non-U.S. subsidiaries will generally not result in a U.S. 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-U.S. employee provides services only to the non-U.S. subsidiary and such services benefit only the non-U.S. subsidiary's business operations, the U.S. parent company will not be entitled to a tax deduction for such awards.
- In certain countries, the non-U.S. subsidiary may be entitled to a corporate tax deduction that can be calculated in the same manner as the U.S. deduction. In many jurisdictions, the non-U.S. 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-U.S. 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-U.S. subsidiary, the recharge of stock-based compensation costs to the non-U.S. 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.³⁸ According to IRC Section 1032(a) and Treasury Regulation Section 1.1032-1(a), the U.S. parent company would be allowed to receive cash payments from its non-U.S. 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.

PwC Observation: 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

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³⁷ See Treasury Regulation Section 1.280G-1, Q&A 5.

³⁸ Treasury Regulation Section 1.1032-1(a).

the recharge. There may also be a number of recordkeeping issues with such recharge agreements to ensure that costs are appropriately charged to the correct local entity and that proper employee income tax withholding has been addressed. Additionally, companies should consider whether statutory accounting requirements may impact the timing or amount of the deduction. For example, in 2006, the International Financial Reporting Interpretations Committee released Interpretation 11, which provides guidance on the accounting for stock-based compensation in subsidiary financial statements. Amendments were subsequently made to IFRS 2 to incorporate this guidance and further considerations. This guidance may impact the timing and amount of a corporate tax deduction in certain jurisdictions. Consultation with local accounting and tax advisors is recommended to determine how the different requirements interact.

4.29 Summary of IRC Section 409A

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 the Act 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 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.

PwC Observation: 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. A SAR plan is not considered deferred compensation if:

- The compensation payable under the awards cannot be greater than the difference between the fair market value of the stock (disregarding lapse restrictions under Reg. 1.83-3(i)³⁹) on the date of grant and the fair market value

³⁹ Pursuant Treasury Regulation Section 1.83-3(i), “lapse of restriction” means a restriction that carries a substantial risk of forfeiture. A substantial risk of forfeiture is a condition which if not met can cause a forfeiture of the property.

of the stock (disregarding lapse restrictions under Reg. 1.83-3(i)) on the date the stock-appreciation right is exercised, with respect to the number of shares fixed on or before the date of grant;

- The exercise price can never be less than the fair market value of the stock (disregarding lapse restrictions under Reg. 1.83-3(i)) on the date of grant; and
- The SAR does not include any feature for the deferral of compensation other than the deferral of recognition of income until the award is exercised.

Under the regulations, both cash-and stock-settled SARs of public and private companies are eligible for the exemption described above.

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 stock⁴⁰ of the employing company or another company directly up the corporate chain.⁴¹ 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 Depositary Receipt or American Depositary 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 described above is 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 percent tax. IRC Section 409A is generally effective for amounts deferred after December 31, 2004. The final Treasury Regulations contain complex transition rules for certain awards; these rules should be considered in determining whether IRC Section 409A applies to a particular stock-based compensation award.

⁴⁰ Preferred stock does not qualify as “service recipient stock.” Treasury Regulation Section 1.409A-1(b)(5)(iii).

⁴¹ Treasury Regulation Section 1.409A-1(b)(5)(iii)(E)(1).

Chapter 5: Earnings Per Share

Chapter 5: Earnings Per Share

One of the most common measures of financial performance, earnings per share (EPS), reflects the impact of expensing stock-based compensation under ASC 718, *Compensation—Stock Compensation*. Given the importance ascribed to EPS, the following chapter is devoted to providing guidance on how stock-based compensation impacts the computation of EPS by covering the following:

- General Guidance
- Assumed Proceeds under the Treasury Stock Method
- Restricted Stock
- Stock Options
- Stock-Appreciation Rights
- Employee Stock Purchase Plans (ESPPs)
- Participating Securities
- Impact of Award Modifications on EPS
- Illustrations

5.1 General Guidance

ASC 260, *Earnings per Share*, provides guidance on the computation and disclosure of EPS and defines EPS as “the amount of earnings attributable to each share of common stock.” Because compensation expense is recognized in the income statement for share-based payment awards, the numerator (net income) for both the basic EPS and diluted EPS computations is affected. Basic EPS is computed by dividing income that is available to common shareholders by the weighted average number of common shares that are outstanding during the period, while diluted EPS gives effect to all dilutive potential common shares that are outstanding during a period. The computation of the denominator when using the treasury stock method is also affected, as the unrecognized compensation expense and potential windfall tax benefits are considered additional proceeds.

PwC Observation: Although compensation cost is recognized only for awards that are expected to vest (determined by applying the pre-vesting forfeiture rate assumption), all options or shares outstanding that have not been forfeited are included in diluted EPS. In other words, the amount of stock-based compensation cost in the numerator includes a forfeiture rate assumption while the number of shares in the denominator does not.

For diluted EPS, each issue or series of issues of potential common shares is considered in sequence from the most dilutive to the least dilutive. That is, dilutive potential common shares with the lowest “earnings add-back per incremental share” is included in diluted EPS before those with a higher earnings add-back per incremental share. Each issue or series of issues of awards must be considered separately, rather than in the aggregate.

Questions often arise with respect to how stock-based compensation impacts reported EPS. For example, what amounts are included in assumed proceeds? Is restricted stock included in basic EPS and diluted EPS? How do stock option awards

impact EPS? The following sections provide answers to these and other frequently asked questions regarding EPS and stock-based compensation.

5.2 Assumed Proceeds under the Treasury Stock Method

When a company calculates diluted EPS, the dilutive effect of restricted stock and stock options on the denominator is determined through application of the treasury stock method. The treasury stock method assumes that a company uses the proceeds from the exercise of awards to repurchase common stock at the average market price during the period. Thus, an increase in the amount of assumed proceeds increases the number of shares a company could repurchase, and decreases the number of dilutive shares included in the denominator of the diluted EPS calculation.

The assumed proceeds under the treasury stock method include:

- The purchase price that the grantee will pay in the future, if any (e.g., the exercise price of a stock option).
- Average unrecognized compensation cost for future service that the company has not yet recognized.
- Any windfall tax benefits that would be credited to APIC when the award generates a tax deduction. The windfall tax benefit is calculated using the average stock price for the period. If there would be a charge to APIC (i.e., shortfall), such an amount would be a reduction of proceeds. Shortfalls that would be charged to income tax expense (i.e., because there is no pool of windfall tax benefits) should not be included as a reduction of proceeds.

Under ASC 260, pre-vesting forfeitures do not impact the calculation of assumed proceeds until the forfeiture actually occurs. Although companies are required to estimate pre-vesting forfeitures for purposes of recognizing compensation costs under ASC 718, the unrecognized compensation expense and potential windfall tax benefit (or shortfall) included in the assumed proceeds under the treasury stock method should not take into account the pre-vesting forfeiture-rate assumption. See Example 5 later in this chapter for an illustration of the difference between the compensation cost recorded for share-based payment awards in the income statement and the amounts included in the assumed proceeds calculation.

When calculating the assumed proceeds under the treasury stock method, companies should not include potential windfall tax benefits if the award does not ordinarily result in a tax deduction (e.g., an incentive stock option) or if the company does not believe that it is more likely than not that such benefits will ultimately be realized. This analysis should include consideration of the impact of ASC 718-740-25-10, which does not permit a company to record windfall tax benefits until the deduction reduces taxes payable (see section SC 4.14 titled “Net Operating Loss Carryforwards” in Chapter SC 4 for further guidance), as well as consideration of future taxable income. Further, the approach the company elects when evaluating the potential impact of ASC 718-740-25-10 (i.e., with-and-without or tax law ordering) should also be used for calculating the assumed proceeds. Consideration of ASC 718-740-25-10 should be based on estimated annual taxable income.

PwC Observation: The accounting literature did not provide transition guidance (under the “long-form” and “short-cut” methods to calculate the historical pool of windfall tax benefits, respectively) for calculating the potential windfall tax benefit or shortfall under the treasury stock method for awards that were partially or fully vested on the adoption date of ASC 718. If a company adopted ASC 718 under the MPA transition method, it should have made an accounting policy decision to calculate potential windfalls and shortfalls under the treasury stock method either: (1) including the impact of pro forma deferred tax assets (i.e., the “as if” windfall or shortfall) or (2) excluding the impact of pro forma deferred tax assets (i.e., the windfall or shortfall that would be recognized in the financial statements upon exercise of the award).

Applying the treasury stock method to in-the-money options could be anti-dilutive if the sum of the proceeds, including the unrecognized compensation and windfall tax benefits, exceeds the average stock price. In that case, those options would be excluded from the calculation of diluted EPS. For example, if the average market price of the underlying stock was \$12, an option with an exercise price of \$10 (i.e., \$2 in-the-money), average unrecognized compensation for the period of \$4, and an estimated tax windfall of \$1 would be anti-dilutive because the assumed proceeds of \$15 ($\$10 + \$4 + \1) is greater than the average market price of the underlying share of \$12. As a result, these awards should be excluded from the diluted EPS denominator.

Conversely, it is possible that applying the treasury stock method to out-of-the-money options could be dilutive as a result of the potential tax shortfall that is included in the assumed proceeds calculation. The FAS 123(R) Resource Group reached a consensus that out-of-the-money options should not be included in the calculation of diluted EPS, even if the treasury stock method would result in the options having a dilutive effect. However, this conclusion should not be analogized to other aspects of EPS, for example, the effects of potentially dilutive convertible debt under the if-converted method even if the conversion price is out-of-the-money.

Additionally, when applying the treasury stock method, the calculation of assumed proceeds for an award may result in “negative proceeds” (e.g., if the potential shortfall exceeds the sum of the exercise price and average unrecognized compensation expense). In a situation where the assumed proceeds calculation results in a negative value, the company cannot repurchase any common stock as a result of the exercise/vesting of the award. Therefore, all outstanding shares for the award would be included in diluted EPS. We do not believe it would be appropriate to assume a hypothetical “sale of common stock” equal to the negative value of the assumed proceeds for the award such that the number of shares included in diluted EPS exceeds the total number of shares issuable under the award.

PwC Observation: Because the dilutive effect of each award must be determined individually rather than for all outstanding awards in the aggregate, companies will need to maintain detailed records of each award, including the amount of unrecognized compensation cost and tax attributes associated with each award. As discussed above, applying the treasury stock method to in-the-money options could be anti-dilutive. Therefore, a company cannot assume that all in-the-money options should be included in the calculation of diluted EPS.

5.3 Restricted Stock

Unvested restricted stock is excluded from the denominator in the computation of basic EPS because the shares have not yet been earned by the employee (i.e., there is still a further “payment” in the form of future employee services). Although the shares may be considered legally issued and outstanding under the terms of the restricted stock agreement, they are still excluded from the computation of basic EPS. Once vested, the shares are included in basic EPS as of the vesting date. Share-settled RSU's are included in basic EPS once they are vested, regardless of whether the shares have been issued.

A company should include unvested restricted stock with service conditions in the calculation of diluted EPS using the treasury stock method, as well as unvested restricted stock with a performance or market condition that are considered contingently issuable shares pursuant to ASC 260-10-45-48 (as further discussed below under “Stock Options” in section SC 5.4). Assumed proceeds under the treasury stock method would include unamortized compensation cost and potential windfall tax benefits or shortfalls. If dilutive, the stock would be considered outstanding as of the grant date for diluted EPS computation purposes. If anti-dilutive, it would be excluded from the diluted EPS computation.

PwC Observation: Unvested restricted stock that immediately vests upon an employee's retirement should be included in the denominator in the computation of basic EPS at the earlier of: (1) the stated vesting date or (2) the date the employee becomes eligible for retirement. At the date the employee becomes eligible for retirement, any remaining stated vesting period is considered nonsubstantive because issuance of the shares is not contingent on any service after that date (i.e., all necessary conditions have been satisfied). Accordingly, the shares should be included in basic EPS pursuant to the guidance in ASC 260-10-45-13. Refer to section SC 1.9.6 titled “Retirement Eligible Employees” in Chapter SC 1 for discussion of the accounting for awards that vest upon retirement.

5.4 Stock Options

Stock options are not included in the computation of the denominator when computing basic EPS because stock options are not considered outstanding shares. Stock options with service conditions are included in the computation of the denominator of diluted EPS using the treasury stock method if the option is dilutive. For purposes of calculating diluted EPS under ASC 260, companies should include all outstanding options that are dilutive, without considering the impact of a forfeiture-rate assumption applied for purposes of recognizing compensation cost under ASC 718.

PwC Observation: The substance of all awards should be considered when determining the appropriate EPS treatment, rather than the legal form. For example, unvested stock options that allow the employee to “early exercise,” but which the Company has the right to repurchase prior to vesting, should not be included in the denominator in the computation of basic EPS prior to the stated vesting date. Although the shares may be considered legally issued and outstanding under the terms of the agreement at the date the employee

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early exercises the award, the shares are not considered issued for accounting purposes. Accordingly, the shares should be treated as contingently returnable pursuant to the guidance in ASC 260-10-45-13 and still subject to a substantive vesting period, and, therefore, should not be included in basic EPS. Rather, the shares would be included in diluted EPS to the extent the shares are dilutive.

Similarly, shares purchased via a nonrecourse loan (see section SC 1.7.10 titled “Nonrecourse Notes” for further discussion) should be excluded from basic EPS and treated as an outstanding option for diluted EPS purposes.

Stock options with performance or market conditions are included in the computation of diluted EPS if the options are dilutive and if their conditions (1) have been satisfied at the reporting date (the events have occurred) or (2) would have been satisfied if the reporting date was the end of the contingency period (for example, the number of shares that would be issuable based on current period earnings or period-end market price). When making that determination, a company should not use projections that look beyond the current reporting period.

For example, assume that a stock option has a performance condition under which the option vests when earnings before interest, taxes, depreciation, and amortization (EBITDA) reaches \$15 million. At the end of the third quarter, EBITDA is \$13 million and the company believes that EBITDA will be \$17 million at the end of the year. That option is excluded from the third quarter diluted EPS computation because the performance condition was not achieved as of the end of that period, as required by ASC 260-10-45-51.

If the performance or market condition was satisfied or would have been satisfied if the performance or market metric was measured as of the reporting date, the stock options are included in diluted EPS from the beginning of the period (or date of grant, if later) using the treasury stock method if the option is dilutive.

Stock options often contain both performance and market conditions. If the award vests if either condition is met (i.e., the performance or market condition), then the award will be included in the computation of diluted EPS if the options are dilutive and if either condition has been satisfied at the reporting date or would have been satisfied if the reporting date was the end of the contingency period. Conversely, if both conditions must be met (i.e., the performance and market condition) in order to vest, then the award will be included in the computation of diluted EPS if the options are dilutive and both conditions have been satisfied at the reporting date or would have been satisfied if the reporting date was the end of the contingency period.

The accounting treatment for options with performance conditions under ASC 718 requires a probability assessment of whether the option will vest; the accounting treatment under ASC 260 does not call for an assessment of the probability of vesting. Therefore, the numerators in the basic EPS and diluted EPS computations may include compensation cost related to the performance awards, but the performance awards themselves may be excluded from the denominator.

5.5 Stock-Appreciation Rights

Stock-appreciation rights (SARs) may be settled in cash or in stock. If a SAR will be settled in cash, the only effect that the cash-settled SAR would have on basic and diluted EPS is through the recognition of compensation cost in net income. If a SAR

will be settled in stock, it will not be included in the computation of basic EPS but will be included in the computation of diluted EPS (if the award is dilutive) based on the net number of shares issuable using the average stock price for the period. Because an employee typically does not pay to exercise a stock-settled SAR, only unrecognized compensation expense and any windfall tax benefits or shortfalls are considered proceeds when calculating the dilutive effect under the treasury stock method.

If the company or the employee can decide whether a SAR will be settled in cash or in stock, the determination of whether such awards are potential common shares would be based on the provisions in ASC 260-10-45-45 through 45-46 and ASC 260-10-55-32 through 55-36. A company would presume share settlement when it is the company's choice to settle in cash or shares. The presumption can be overcome if practice or a stated policy indicates that it is probable that contracts will be paid in cash. When the employee controls the means of settlement, the more dilutive of the methods (typically share settlement) should be used; past experience or a stated policy is not determinative.

Some cash and share-settled SARs may be treated differently for determining the classification of an award and related compensation cost to be recorded and for EPS purposes. For example, a SAR that provides the employee with the choice of settlement method is a liability-classified award; however, EPS will be computed on the assumption that the award will be settled in shares because it is more dilutive. In accordance with ASC 260-10-55-33, the EPS numerator should not be adjusted in that situation.

5.6 Employee Stock Purchase Plans (ESPPs)

The following guidance pertains to both compensatory and non-compensatory ESPPs. The only difference is that a non-compensatory ESPP does not give rise to any compensation cost to include as assumed proceeds in the treasury stock method calculations.

5.6.1 Basic EPS

If employees can withdraw the amount of salary withheld during the offering period or must remain employed through the end of the offering period in order to purchase the shares, their continued participation in the plan is a contingency that can only be satisfied at the end of the offering period. Until then, the contingency has not been met, and shares calculated based on the employees' withholding and the ESPP's terms would not be included in the denominator when computing basic EPS. In such circumstances, the withholdings are a liability of the company that can be settled in cash or shares at the option of the employee. To be included in the computation of basic EPS, the shares have to be unequivocally issuable by the company.

If, however, the employee's participation is irrevocable (even if employment was to terminate) and the employee had no ability to obtain a refund of the amounts withheld, there is no contingency. The company has received cash and has an irrevocable obligation to issue the shares. Therefore, shares would be included in the computation of basic EPS based on the amounts withheld and the ESPP's purchase price formula.

PwC Observation: Based on our experience, it is unusual for an ESPP to allow an employee to continue to participate in the plan after termination of employment; as a result, the employee is generally refunded any amounts withheld upon termination. Therefore, shares issuable under an ESPP will typically not be included in basic EPS until the shares are actually purchased.

5.6.2 Diluted EPS

Under ASC 718, ESPPs are treated as options which are granted at the start of the offering period. Similarly, ESPPs should be considered options to be included in diluted EPS using the treasury stock method because granting an employee the ability to purchase stock at a defined price through an ESPP is very similar to a conventional employee stock option with a vesting period. Both awards give the employee the ability to purchase company stock in the future at a potentially discounted price. Accordingly, an ESPP represents potential common shares that should be included in the denominator for the computation of diluted EPS.

Because the vesting of an ESPP is typically based on service, not performance, the plan should be considered in the denominator for EPS purposes from the start date of the offering period. The fact that employees have amounts withheld from their paychecks to pay for the shares over time is a funding mechanism for the ultimate payment of the exercise price; it does not change the nature of the potentially dilutive option arrangement.

At each reporting date during the offering period, the guidance in ASC 260-10-45-48 through 45-52 for contingently issuable shares and ASC 260-10-45-22 through 45-26 for the treasury stock method should be applied. Under this guidance, the number of incremental potential common shares included in diluted EPS is based on the number of shares that would be issuable if the reporting date were the end of the contingency period, net of the hypothetical shares that could be repurchased under the treasury stock method.

The employees' withholding elections at period-end, the stock price at the beginning of the offering period and at the reporting date, and the purchase price formula for the ESPP will determine the number of shares issuable under the plan, consistent with ASC 260-10-45-52, for market price contingences. Therefore, if the plan requires the purchase price to be the lesser of the beginning or ending stock price in the offering period, the company would compare the stock price at the beginning of the offering period to the stock price at the reporting date and use the lower of those two stock prices in the calculation of purchase price.

The assumed proceeds under the treasury stock method should be calculated based on the sum of (1) cash assumed to be received over the course of the offering period and (2) the average unrecognized compensation expense related to the ESPP during the period. There should typically be no income tax effects for the shares issued because ESPPs generally are qualified plans for tax purposes and are not expected to result in a tax deduction for the company. Disqualifying dispositions should not be recognized until they occur and, therefore, no deferred tax assets are recognized for qualified plans. The total assumed proceeds are divided by the average stock price for the reporting period to determine the hypothetical number of shares that can be repurchased under the treasury stock method.

PwC Observation: In calculating the dilutive effect of an ESPP on EPS, the number of shares issued would be based on the aggregate expected amount of withholdings during the entire offering period, rather than only the withholding amount received up to the reporting date. The entire offering period is considered because the ESPP is treated as an option for both accounting and EPS purposes.

Accordingly, all amounts to be withheld from employees to purchase shares under the plan, both current withholdings and expected withholdings, are considered part of the assumed proceeds under the treasury stock method for EPS. Because the amount withheld from employees is recorded by the company as a liability (as it belongs to the employees until the offering period has ended), it is not considered a prepayment of the purchase price of the shares for EPS purposes and therefore, continues to be included in the assumed proceeds for the treasury stock method calculation.

At the beginning of the ESPP offering period, management can determine, based on the employees' withholding elections and the current stock price, how many shares of stock will eventually be purchased, assuming that the employees continue their employment through the offering period. Changes to employee withholding elections are considered modifications for EPS purposes, and are reflected in EPS on a prospective basis.

Accordingly, in order to determine the ESPP's impact on EPS, the company should:

- Assess employment status and employee participation as of the reporting date to ensure that employees' elections are appropriately considered in the computation.
- Determine the exercise price by utilizing the stock price as of the beginning of the offering period, the stock price at the reporting date, and the purchase price formula defined in the ESPP.
- Project total withholdings over the course of the offering period.
- Calculate the number of shares to be issued under the ESPP and hypothetical repurchases under the treasury stock method (considering total expected withholdings and average unrecognized compensation expense as assumed proceeds).

5.7 Participating Securities

Before calculating EPS, a company should determine if it has any participating securities and whether earnings should be allocated to those securities. A participating security is a security other than common stock that may participate in the distribution of earnings together with common stock in its current form, whether that participation is conditioned upon the occurrence of a specified event or not. An example of a participating security is preferred stock with dividend participation rights whereby the holder would receive a cash dividend when dividends are declared on common stock.

ASC 260 defines a participating right as the right that a holder of a financial instrument would have to receive dividends if the company were to declare dividends, even if (1) earnings were not actually going to be distributed as dividends from an economic or practical perspective and (2) the company's ability to pay dividends were legally or contractually limited (e.g., by debt covenants or state

law). Unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents are also participating securities.

All securities that meet this definition of a participating security, regardless of whether the securities are convertible, non-convertible, or potential common stock securities, should be considered when a company is computing basic EPS via the two-class method described in ASC 260-10-45-60 through 45-68B. Refer to section 5.9.8 for an illustration on applying the two-class method.

PwC Observation: Generally, losses should only be allocated to participating securities if there is a contractual obligation to participate in the losses (ASC 260-10-45-67 specifies when a contractual obligation exists), which is unusual in our experience. Losses should not be allocated to unvested restricted shares with nonforfeitable rights to dividends because, in its current form, an unvested restricted share does not share in residual net assets and therefore, does not economically absorb the loss until it vests.

However, if the participating security is a second class of common stock that shares equally in residual net assets, then we believe losses would generally be allocated equally to each class of common stock.

Dividends or dividend equivalents may also be transferred to the holder of a share-based payment award in the form of a reduction in the exercise price of the award. Such a feature would not be considered a participation right because the award does not represent a nonforfeitable right to participate in earnings absent the exercise of the award. That is, a right to dividends or dividend equivalents in the form of a reduction in exercise price is a contingent transfer of value. Similarly, if payment of dividends or dividend equivalents is contingent upon vesting in the share-based award, it is also considered forfeitable and not a participating security.

5.8 Impact of Award Modifications on EPS

For purposes of calculating diluted EPS, a company should treat the modification of a share-based award as if there was a cancellation and new issuance of an award. Consistent with the approach described in ASC 260-10-45-26, the company should treat the “before” and “after” awards (i.e., the original and the modified awards) separately and include each for the weighted average period that each was outstanding.

Therefore, two treasury stock method calculations will be performed: one based on the terms of the award prior to the modification (weighted for the appropriate period), and one based on the terms of the award after the modification (weighted for the appropriate period). The sum of the two calculations will equal the number of incremental shares to be included in the diluted EPS calculation. This “as if” cancellation and reissuance is done for any share-based payment award whose terms have changed.

5.9 Illustrations

The following examples illustrate the effect of various stock-based-compensation awards. Examples 1 through 7 do not address basic EPS because the facts in those examples are that none of the shares are vested at the reporting date, and because stock options are typically not included in the denominator of basic EPS. Those examples also do not present the calculation of the numerator, which includes

the related compensation cost, but do present the calculation of the diluted EPS denominator. The awards in the following examples are not considered participating securities with the exception of Example 8. For simplicity, the calculations are all on an annual basis, although EPS would be computed each quarter for public companies. Additionally, all compensation cost has been expensed over the requisite service period.

5.9.1 Example 1: Restricted Stock with a Service Condition and an 83(b) Election

Assumptions:

- 10,000 shares of restricted stock are granted on January 1, 2006. The shares are legally issued and outstanding and the employee is not required to pay for the restricted stock. 10,000 shares are expected to and actually vest.
- 25 percent of the shares vest each year over a four-year period. The employee must be employed by the company on each vesting date to become vested in each tranche. The company has elected a policy of straight-line attribution.
- The market price of the company's common stock is: \$10 on January 1, 2006; \$20 on December 31, 2006; \$15 average for 2006.
- The tax deduction will equal book compensation cost because the employee made an IRC Section 83(b) election for tax purposes and thus will be taxed based on the grant-date fair value of the restricted stock (i.e., there will not be a windfall tax benefit upon settlement of the award).
- Applicable tax rate is 40 percent for all periods.
- In each year, there is sufficient taxable income so that the company realizes any windfall tax benefits generated.

Expense computation:

- Total book compensation cost = \$100,000 = \$10 (fair value per share on January 1, 2006) multiplied by 10,000 shares.
- Compensation cost will be expensed ratably over four years (\$25,000 per year).
- Unrecognized compensation expense at December 31, 2006, is \$75,000 (\$100,000 minus \$25,000).

Question—How many shares should be included in diluted EPS for the year ended December 31, 2006, assuming the shares are dilutive at the end of 2006?

Diluted EPS

The unvested shares are included in the diluted EPS computation by applying the treasury stock method and assuming that the proceeds will be used to buy back shares. Proceeds equal the average unrecognized compensation plus any purchase price and windfall tax benefits.

- Average unrecognized compensation for 2006 = \$87,500 = average of \$100,000 (unrecognized compensation at January 1, 2006) and \$75,000 (unrecognized compensation at December 31, 2006).

- There are no assumed proceeds from exercise price or windfall tax benefits (because of the IRC Section 83(b) election).
- Assumed repurchase = 5,833 shares = \$87,500 (assumed proceeds) divided by \$15 (2006 average stock price).
- Incremental shares to be included in the December 31, 2006, diluted EPS computation = 4,167 shares = 10,000 (unvested shares outstanding) minus 5,833 shares (assumed repurchased).

5.9.2 Example 2: Restricted Stock with a Service Condition and Windfall Tax Benefits

All of the assumptions are the same as in Example 1, except the employee did not make an IRC Section 83(b) election.

Question—How many shares should be included in diluted EPS for the year ended December 31, 2006 assuming the shares are dilutive at the end of 2006?

Diluted EPS

- Average unrecognized compensation for 2006 = \$87,500 = average of \$100,000 (unrecognized compensation at January 1, 2006) and \$75,000 (unrecognized compensation at December 31, 2006).
- There are no assumed proceeds from exercise price because the employee is not required to pay for the restricted stock.
- Deferred tax asset once all compensation expense has been recorded = \$40,000 = 10,000 unvested shares outstanding multiplied by \$10 grant date fair value multiplied by 40 percent applicable tax rate.
- Potential windfall tax benefit = \$20,000 = (10,000 unvested shares outstanding multiplied by \$15 average stock price multiplied by 40 percent tax rate) less \$40,000 (deferred tax asset once all compensation expense has been recorded).
- Assumed proceeds = \$107,500 = \$20,000 (potential windfall tax benefit) plus \$87,500 (average unrecognized compensation).
- Assumed repurchase = 7,166 shares = \$107,500 (assumed proceeds) divided by \$15 (2006 average stock price).
- Incremental shares to be included in the December 31, 2006, diluted EPS computation = 2,834 shares = 10,000 shares (unvested shares outstanding) minus 7,166 shares (assumed repurchased).

5.9.3 Example 3: Restricted Stock with a Performance Condition and Example 3: Restricted Stock with a Performance Condition and

All of the assumptions are the same as in Example 1, except that the vesting provision now includes a performance condition that requires the company's revenues to exceed \$100 million in 2006; \$115 million in 2007; \$130 million in 2008; and \$145 million in 2009 for the respective year's award to vest. The requirements for a grant date are met on January 1, 2006, for all tranches. Additionally, each tranche is based on performance within that year; therefore, each tranche is treated as a separate award with a service inception date of January 1 of each year and a one-year requisite service period. The company recognizes compensation cost for each

tranche over the respective one-year requisite service period if it is probable that the target established for that year will be met. The company's revenues for the year ended December 31, 2006 were \$120 million.

Question—How many shares should be included in diluted EPS for the year ended December 31, 2006, assuming the shares are dilutive at the end of 2006?

Diluted EPS

The diluted EPS computation would reflect the number of shares, using the treasury stock method, that would be issued based on the assumption that the current amount of revenue achieved will remain unchanged through the end of the performance period. The company's revenues for 2006 were \$120 million. Therefore, the 2006 performance condition for revenues exceeding \$100 million has been satisfied at the reporting date, and the 2007 performance condition for revenues exceeding \$115 million would have been satisfied if the reporting date was the end of the contingency period. The performance conditions for 2008 and 2009 would not have been satisfied by revenue of \$120 million. Therefore, 5,000 shares (2006 and 2007 tranches) are included in the diluted EPS calculation process. The 2008 and 2009 tranches are not included.

- Average unrecognized compensation for 2006 = \$37,500 = average of \$50,000 (unrecognized compensation at January 1, 2006, related to shares for which achievement of the performance condition is assumed) and \$25,000 (unrecognized compensation at December 31, 2006, related to shares for which achievement of the performance condition is assumed). The unrecognized compensation related to shares for which achievement of the performance condition is assumed includes unrecognized compensation for shares related to the 2006 and 2007 performance goals. The unrecognized compensation related to the 2008 and 2009 performance goals are excluded because it is assumed those performance goals will not be met.
- There are no assumed proceeds from exercise price or windfall tax benefits (because of the IRC Section 83(b) election).
- Assumed repurchase = 2,500 shares = \$37,500 (assumed proceeds) divided by \$15 (2006 average stock price).
- Incremental shares to be included in the December 31, 2006, diluted EPS computation = 2,500 shares = 5,000 (unvested shares outstanding for which achievement of the performance condition is assumed) minus 2,500 shares (assumed repurchased).

5.9.4 Example 4: Restricted Stock with a Market Condition and an 83(b) Election

All of the assumptions are the same as in Example 1, except that the vesting provision is a market condition that all of the restricted stock will cliff vest if the stock price is higher than \$18 on December 31, 2009, and the recipient is still employed at that date.

Assumptions:

- Each share of restricted stock has an \$8 fair value on the grant date; the effect of the market condition is reflected (i.e., discounted) in the award's fair value.
- The market price of the underlying stock is \$20 on December 31, 2006.

Expense computations:

- Total book compensation cost = \$80,000 = \$8 (fair value per share on January 1, 2006) multiplied by 10,000 shares.
- Expense will be recognized ratably over four years (\$20,000 per year).
- Unearned compensation at December 31, 2006, is \$60,000 (\$80,000 minus \$20,000).

Question—How many shares should be included in diluted EPS for the year ended December 31, 2006, assuming the shares are dilutive at the end of 2006?

Diluted EPS

The diluted EPS computation should reflect the number of shares, using the treasury stock method, that would be issued based on comparing the market price at the end of the period to the market condition metric. Because the stock price at the end of 2006 is higher than the threshold price, all of the restricted shares are included in the calculation.

- Average unrecognized compensation for 2006 = \$70,000 = average of \$80,000 (unrecognized compensation at January 1, 2006) and \$60,000 (unrecognized compensation at December 31, 2006).
- There are no assumed proceeds from exercise price or windfall tax benefits (because of the IRC Section 83(b) election).
- Assumed repurchase = 4,666 shares = \$70,000 (assumed proceeds) divided by \$15 (2006 average stock price).
- Incremental shares to be included in December 31, 2006, diluted EPS calculation = 5,334 shares = 10,000 (unvested shares outstanding) minus 4,666 shares (assumed repurchased).

If the stock price is below \$18 at the end of 2006, which is less than the threshold price, then none of the restricted shares would be included in the diluted EPS calculation.

5.9.5 Example 5: Stock Option with a Service Condition and Windfall Tax Benefits**Assumptions:**

- 10,000 nonqualified stock options granted January 1, 2006, with an exercise price of \$10.
- Each stock option has a \$4 fair value at the grant date.
- 25 percent of the shares vest each year over a four-year period. The employee must be employed by the company on each vesting date to become vested in each tranche.
- The company has elected a policy of straight-line attribution of compensation cost.
- Assumed forfeiture rate of 5 percent each year; total options expected to vest are 8,809.

- The market price of the company's common stock is: \$10 on January 1, 2006; \$26 on December 31, 2006; \$18 average for 2006.
- No options were forfeited during 2006.
- Applicable tax rate is 40 percent for all periods.
- In each year, there is sufficient taxable income so that the company realizes any windfall tax benefits generated from the exercise of an award.

Treasury stock computation:

EPS calculations use actual forfeitures rather than the forfeiture assumption used for compensation cost recognition purposes. The results of the calculations below are hypothetical for EPS purposes and would not agree to the financial statement amounts. For example, total compensation cost expected to be recognized in the financial statements would be \$35,236 (8,809 shares multiplied by \$4 the grant-date fair value), as compared to the \$40,000 of unrecognized compensation expense to be used in the treasury stock method. The calculations are only used to determine the number of options to include in the diluted EPS calculation.

- Hypothetical total book compensation expense = \$40,000 = \$4 (fair value per option on grant date) multiplied by 10,000 (options outstanding).
- Hypothetical expense will be recognized ratably over four years (\$10,000 per year).
- Hypothetical unrecognized compensation expense at December 31, 2006 = \$30,000 (\$40,000 minus \$10,000).
- Hypothetical future total deferred tax asset = \$16,000 = \$40,000 (total stock-based compensation expense for all outstanding options) multiplied by 40 percent applicable tax rate.

Question—How many stock options should be included in diluted EPS for the year ended December 31, 2006, assuming the shares are dilutive at the end of 2006?

Diluted EPS

The options are included in the diluted EPS computation by applying the treasury stock method and assuming that the proceeds will be used to buy back shares. Proceeds equal the hypothetical average unrecognized compensation plus exercise price and hypothetical windfall tax benefits (or a reduction for shortfalls that would be credited to APIC).

- Hypothetical average unrecognized compensation for 2006 = \$35,000 = average of \$40,000 (hypothetical unrecognized compensation expense at January 1, 2006) and \$30,000 (hypothetical unrecognized compensation at December 31, 2006).
- Hypothetical tax benefit at December 31, 2006 = \$32,000 = 10,000 shares (options assumed exercised) multiplied by (\$18 (2006 average stock price) less \$10 (exercise price)) multiplied by 40 percent (applicable tax rate).
- Hypothetical windfall tax benefit = \$16,000 = \$32,000 (hypothetical tax benefit) less \$16,000 (hypothetical deferred tax asset once all compensation expense has been recorded).

- Assumed proceeds = \$151,000 = \$100,000 (exercise price) plus \$35,000 (hypothetical average unrecognized compensation) and \$16,000 (hypothetical windfall tax benefit).
- Shares assumed repurchased = 8,389 shares = \$151,000 (assumed proceeds) divided by \$18 (2006 average stock price).
- Incremental shares to be included in the December 31, 2006 diluted EPS computation = 1,611 shares = 10,000 (shares outstanding) minus 8,389 (shares assumed repurchased).

5.9.6 Example 6: Stock Option with a Service Condition and a Shortfall

All of the assumptions are the same as in Example 5 except that the market price of the company's common stock is \$17 per share on December 31, 2006.

Assumptions:

- The market price of the company's common stock is: \$10 on January 1, 2006; \$17 on December 31, 2006; \$13.50 average for 2006.
- The company's pool of windfall tax benefits as of December 31, 2006, is \$1,500.

Question—How many stock options should be included in diluted EPS for the year ended December 31, 2006, assuming the shares are dilutive at the end of 2006?

Diluted EPS

The options are included in the diluted EPS computation by applying the treasury stock method and assuming that the proceeds will be used to buy back shares. Proceeds equal the hypothetical average unrecognized compensation plus exercise price and hypothetical windfall tax benefits (or a reduction for shortfalls that would be credited to APIC).

- Hypothetical average unrecognized compensation for 2006 = \$35,000 = average of \$40,000 (hypothetical unrecognized compensation expense at January 1, 2006) and \$30,000 (hypothetical unrecognized compensation at December 31, 2006).
- Hypothetical tax benefit at December 31, 2006 = \$14,000 = 10,000 shares (options assumed exercised) multiplied by (\$13.50 (2006 average stock price) less \$10 (exercise price)) multiplied by 40 percent (applicable tax rate).
- Hypothetical shortfall = \$2,000 = \$14,000 (hypothetical tax benefit) less \$16,000 (hypothetical deferred tax asset once all compensation expense has been recorded). The company should assess whether the shortfall would be recorded as a reduction of APIC based on the company's current pool of windfall tax benefits. Since the company's pool of windfall tax benefits is only \$1,500, \$500 of the hypothetical shortfall would be recognized in income tax expense. Therefore, only \$1,500 of the hypothetical shortfall should be included as a reduction of assumed proceeds.
- Assumed proceeds = \$133,500 = \$100,000 (exercise price) plus \$35,000 (hypothetical average unrecognized compensation) less \$1,500 (hypothetical shortfall charged to APIC).

- Shares assumed repurchased = 9,889 shares = \$133,500 (assumed proceeds) divided by \$13.50 (2006 average stock price).
- Incremental shares to be included in the December 31, 2006, diluted EPS computation = 111 shares = 10,000 (shares outstanding) minus 9,889 (shares assumed repurchased).

5.9.7 Example 7: Employee Stock Purchase Plan

Assumptions:

- The company's ESPP begins its six-month offering period on September 1, 2006, which ends on February 28, 2007.
- The ESPP allows employees to elect to withhold a certain amount of their salary (up to 15 percent) to purchase the company's stock at a discounted price.
- The ESPP provides for shares to be purchased at 85 percent of the lesser of the stock price at the beginning or end of the offering period (i.e., a look-back option) and is considered compensatory. Since the plan is compensatory, the company recognizes compensation cost for the ESPP.
- Employees are allowed to withdraw from the ESPP at any time during the offering period, are required to withdraw if terminated, and upon withdrawal will be reimbursed any amount withheld.
- The ESPP is a qualified plan under Section 423 of the Internal Revenue Code. Therefore, no windfall tax benefits should be assumed for purposes of applying the treasury stock method.
- The stock price on September 1, 2006, the beginning of the six-month offering period, is \$25. After applying the ESPP's discount the formula price would be \$21.25 ($\$25 \times 85 \text{ percent} = \21.25).
- The stock price on December 31, 2006, the reporting date, is \$20. After applying the ESPP's discount the formula price would be \$17 ($\$20 \times 85 \text{ percent} = \17).
- Employee withholdings at December 31, 2006, total \$4,500,000. Expected withholdings for the remaining offering period, based on current employee elections, is \$2,300,000. Therefore, the expected total withholdings are \$6,800,000.
- Average stock price during the period from September 1 to December 31, 2006, is \$22.
- Average unrecognized compensation expense at December 31, 2006 = \$1,650,000.

Question—How many shares should be included in diluted EPS for the year ended December 31, 2006, assuming the shares are dilutive at the end of 2006?

Diluted EPS

- The number of shares projected to be issued at December 31, 2006, under the ESPP = 400,000 = \$6,800,000 (expected total withholding amount) divided by \$17 (purchase price per share determined by the ESPP purchase price formula). The formula price of \$17 per share on the reporting date is used because the ESPP contains a look-back option and this price is lower than the formula price at

the beginning of the offering period. If the stock price on the reporting date was greater than the stock price at the beginning of the offering period, the company would have used the formula price at the beginning of the offering period to calculate the shares projected to be issued due to the look-back option.

- The total assumed proceeds = \$8,450,000 = \$6,800,000 (expected total withholding amount) plus \$1,650,000 (average unrecognized compensation expense during the reporting period).
- There are no assumed proceeds from windfall tax benefits because the ESPP is a qualified plan.
- Shares assumed repurchased = 384,091 shares = \$8,450,000 (assumed proceeds) divided by \$22 (average stock price).
- Incremental shares to be included in the December 31, 2006, diluted EPS computation = 15,909 shares = 400,000 (gross number of shares to issued under the ESPP) minus 384,091 shares (assumed repurchased).

PwC Observation: Because most ESPPs provide for the purchase of shares at a discount to the market price, there is typically a dilutive effect on EPS. However, the inclusion of unrecognized compensation expense in the calculation of assumed proceeds tends to mitigate the impact, particularly in the earlier portions of the offering period. Once there is an obligation to issue shares (on March 1 in the above example), the shares would be included in basic EPS on a prospective basis. During the quarter ending March 31, along with being included in basic EPS for the one month from March 1 to March 31, the ESPP would also affect diluted EPS on a weighted average basis for the period from January 1 to February 28.

5.9.8 Example 8: Participating Securities

Assumptions:

- The company has 25,000 shares of common stock and 5,000 unvested share-based payment awards outstanding during 2008 and reported net income of \$100,000.
- The share-based payment awards participate in any dividends on a 1:1 per-share ratio with common stock, and the dividends are nonforfeitable by the holder of the share-based payment awards.
- As of the beginning of 2008, the company estimated that the requisite service period will not be provided for 200 of the 5,000 share-based payment awards outstanding.
- At the end of 2008, the company adjusts its estimate to reflect an increased expected forfeiture rate and now expects that the requisite service period will not be provided for 300 awards. It recognizes the cumulative effect of this change in compensation cost in the current period.
- The company paid a \$1.50 per-share dividend at the end of 2008. Net income includes an expense of \$450 related to dividends paid to the awards for which the requisite service is not expected to be rendered.

Question—How should the company calculate basic EPS using the two-class method?

Because the share-based awards participate in dividends on a nonforfeitable basis, they are considered participating securities. In accordance with ASC 260-10-45-65, the distributed and undistributed earnings of the company must be allocated between the classes of securities to calculate earnings attributable to the common shareholders for EPS purposes as follows:

Net income		\$100,000
Less dividends paid:		
Common Stock	\$37,500	
Unvested share-based payment awards	<u>7,050(a)</u>	
		<u>\$ 44,550</u>
Undistributed earnings		\$ 55,450

- (a) This reflects the dividends paid to unvested share-based payment awards (\$7,500 = 5,000 unvested share-based payment awards × \$1.50 dividend per share) less the dividends paid to awards for which the requisite service is not expected to be rendered (\$450 = 300 share-based payment awards for which the requisite service is not expected to be rendered × \$1.50 dividend per share). Dividends paid on awards for which the requisite service is not expected to be rendered are already recognized in net income as additional compensation cost.

Allocation of undistributed earnings:

- To unvested share-based payment awards:

$$5,000 / (5,000 + 25,000) \times \$55,450 = \$9,242$$

$$\$9,242 / 5,000 \text{ total unvested share-based payment awards} = \$1.85 \text{ per award}$$

- To common:

$$25,000 / (5,000 + 25,000) \times \$55,450 = \$46,208$$

$$\$46,208 / 25,000 \text{ shares of common stock} = \$1.85 \text{ per share}$$

where 5,000 = the number of unvested share-based payment awards outstanding,
25,000 = the number of shares of common stock outstanding and \$55,450 = the amount of undistributed earnings

Basic EPS calculation:

	Participating Securities	Common Stock
Distributed Earnings	\$1.41(b)	\$1.50
Undistributed Earnings	<u>\$1.85</u>	<u>\$1.85</u>
	<u>\$3.26</u>	<u>\$3.35</u>

- (b) \$7,050 of distributed earnings allocated to the unvested share-based payment awards divided by 5,000 total unvested share-based payment awards = \$1.41. Although all unvested share-based payment awards received a payment of \$1.50 per award, totaling \$7,500, only dividends on awards for which the requisite service is expected to be rendered are considered distributed earnings as that term is used in ASC 260-10-45-60B(a). Dividends paid on awards for which the requisite service is not expected to be rendered are recognized in net income as additional compensation cost.

Note that in this illustrative example, application of the two-class method presents an EPS calculation for both the common stock and the participating security, that is, the unvested share-based payment awards. This presentation is for illustrative purposes only. The presentation of EPS in the company's financial statements is only required for each class of common stock.

However, the presentation of basic and diluted EPS for a participating security other than common stock is not precluded. The disclosure in the notes to financial statements of actual distributions to unvested share-based payment awards, rather than the amount presented as distributed earnings, also is not precluded to reconcile earnings per common share and per unvested share-based payment awards. For example, the company in the example above may disclose that actual distributions to unvested share-based payment awards were \$7,500 and that \$450 of those distributions was included in net income as compensation cost related to awards for which the requisite service is not expected to be rendered. Disclosure on a per-share basis also is not precluded.

PwC Observation: The unvested share-based payment awards that meet the definition of a participating security in this example will be more dilutive when calculating basic EPS using the two-class method than when applying the treasury stock method for the purposes of calculating diluted EPS. Therefore, when calculating diluted EPS, the company will have the same basic and diluted EPS calculation because using the treasury stock method for those awards would be anti-dilutive. This is due to the fact that the unvested awards are allocated the same amount of income as if they were outstanding shares for the basic EPS calculation using the two-class method, whereas, the treasury stock method results in a less than equal allocation because the calculation considers the hypothetical buy-back of shares using the exercise proceeds and unamortized compensation costs.

Chapter 6: Estimating Fair Value Using Black-Scholes and Lattice Models

Chapter 6: Estimating Fair Value Using Black-Scholes and Lattice Models

Because observable market prices are generally not available for employee stock options, companies will need to use an option-pricing model to estimate the fair value of employee stock options. Other types of stock-based compensation, such as restricted stock with market conditions, may also require option-pricing models, depending on the terms of the award. The best known valuation techniques are the Black-Scholes-Merton (Black-Scholes) model and lattice (e.g., binomial) models.

This chapter discusses the considerations involved in selecting an option-pricing model, the theoretical underpinnings of the Black-Scholes and lattice models, and how to apply the option-pricing models when estimating the fair value of employee stock options. While the choice between the Black-Scholes and lattice models is important, the fair value estimates produced by either model are largely dependent upon the assumptions used in the model. The assumptions often have a greater impact on fair value than the choice of option-pricing model. Developing assumptions for use in an option-pricing model is discussed in Chapter SC 7.

6.1 Selecting an Option-Pricing Model

ASC 718, *Compensation—Stock Compensation* permits companies to select the option-pricing model that best fits their unique circumstances so long as the valuation technique (ASC 718-10-55-11):

- is applied in a manner consistent with the fair value measurement objectives and other requirements of this Topic,
- is based upon established principles of financial theory, and
- reflects all the substantive terms and conditions of the award.

As a result, for most employee stock options, companies will have flexibility in selecting the option-pricing model used to estimate the fair value of their stock-based compensation awards.

The SEC staff in SAB Topic 14 expressed their support for the flexibility offered by ASC 718 in selecting the option-pricing model used, provided it meets the three criteria noted above. The Black-Scholes and lattice models are generally considered to meet these requirements.

In certain circumstances, a lattice model may be required because the Black-Scholes model may not appropriately estimate fair value. In most cases, however, companies will need to weigh the advantages and disadvantages of each model in order to choose a model that fits appropriately with 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 model it selects. For example, it is generally appropriate for most “plain-vanilla” stock options to continue to be valued using either model. However, only lattice models should be used for some other awards, including those with market conditions, as well as options with payoff functions limited in certain ways (such as maximum value options, as discussed in section SC 8.4 titled “Plan Design Alternatives”).
- **Data Availability:** The principal advantage offered by 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 data reflecting employee exercise behavior in order to develop appropriate assumptions required by a lattice 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. Additionally, in SAB Topic 14, the SEC provides a simplified method, subject to certain conditions, to calculate an expected term assumption for “plain-vanilla” options, making the continued use of the Black-Scholes model significantly less difficult and time consuming.

- **Cost-Benefit Analysis:** Although lattice models may provide a technically better model for some fact patterns, companies should weigh the costs involved before switching from the Black-Scholes model to a lattice model. Based on the above factors, some companies may determine that the costs of trying to refine the estimated fair value of their stock options outweigh the benefits of using a lattice model. Companies may change that decision as (1) they begin to migrate toward more complex awards, (2) software and analytical improvements occur, and (3) lattice model best practices develop.

PwC Observation: For liability and equity-classified awards with typical service conditions and some, but not all, performance conditions, the Black-Scholes model will produce a reasonable estimate of fair value if the company has performed sufficient diligence to develop reasonable and supportable assumptions. Accordingly, we believe that companies can use the Black-Scholes model for the most common types of awards. Lattice models should be used by those companies that wish to develop more refined estimates of fair value. Additionally, companies that issue awards with market conditions or payoff functions that are limited (e.g., maximum value options) should use lattice models because those models can better incorporate assumptions about exercisability in relation to the price movements of the underlying stock.

Companies may decide to change from one option-pricing model to a different one (e.g., from Black-Scholes to a lattice). A change in option-pricing model is not a change in accounting principle and therefore does not require a preferability letter. Any model that a company uses should comply with the three requirements of ASC 718-10-55-11. 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 the same company uses a lattice model for an option with a market condition.

See section SC 1.7.2 for consultation requirements for engagement teams, if a company does not use an option-pricing model to estimate the fair value of employee stock options (i.e., Step One or Step Two of the hierarchy discussed in Section SC 1.7.2 is used).

PwC Observation: SAB Topic 14 requires companies to disclose any changes to the option-pricing model they use and the reasons for the change. Because 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 lattice model to value a type of award, it would be difficult to support switching back to the Black-Scholes model to value that type of award.

6.2 The Financial Theory Behind Option-Pricing Models

Both the Black-Scholes and lattice models stem from the same financial concept: that a portfolio can be built that exactly replicates the payoff on an option at each point along the time spectrum that extends from the option's grant date through its expected term. Both models use many of the same variables (assumptions) to estimate an option's fair value. These include the option's exercise price and expected term, the price of the underlying stock, the stock's expected volatility, the risk-free interest rate, and the dividend yield over the option's expected term.

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 it 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. Put simply, the principal advantage of lattice models is that they 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.

6.3 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 for six variables at the measurement date (generally the grant date—see section SC 1.9.1 titled “Grant Date” and SC 7 “Developing Assumptions for Option-Pricing Models”):

- Per share fair market value of the underlying stock
- Exercise price of the option
- Expected term of the option
- Annual risk-free interest rate over the option's expected term
- Expected annual dividend yield on the underlying stock over the option's expected term
- Expected stock price volatility over the option's expected term

The stock price is simply its 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, while the exercise price is typically defined by the terms of the award. The impact of these two variables on an option's fair value is straightforward. For example, an option on a share of stock worth \$2 on the grant date has twice the value of an option on a share worth \$1, so long as the exercise price equals the stock price at the grant date and all other assumptions and conditions of the award at that date are equal.

Developing assumptions for the remaining four variables requires judgment.

Figure 6-1 summarizes the impact of each of those four assumptions a company makes to estimate fair value, assuming all other inputs are held constant and the option holder does not receive dividends on the underlying stock prior to exercise. The option's expected term and the expected volatility of its underlying stock often have the most impact. Those two assumptions generally require judgment to estimate though in some cases SAB Topic 14's simplified method can be used for determining the expected term as discussed below and in section SC 7.2 titled "Developing the Expected Term Assumption."

Figure 6-1: Impact of Black-Scholes Assumptions that Require Judgment

Assumptions	Impact on Option's Fair Value as Assumption Increases	Impact on Option's Fair Value	
		Less Significant	More Significant
Expected term	Increase		X
Expected volatility	Increase		X
Expected dividend yield	Decrease	X*	
Risk-free interest rate	Increase	X	

* For a large change in dividend yield (e.g., a change from 3% to 6%) this assumption can become more significant.

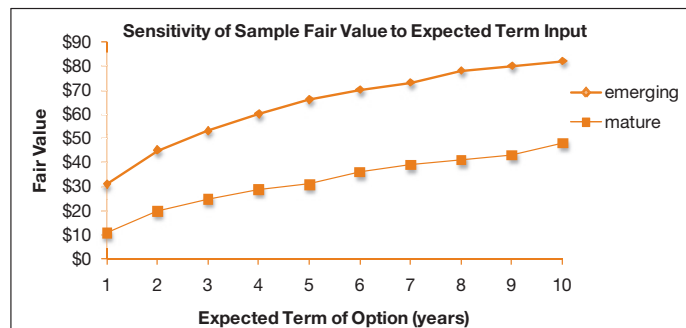
6.3.1 Expected Term

The Black-Scholes model uses a single input for the 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 an employee option's fair value. 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 vesting date. However, as employees may exercise options at widely varying times, developing the expected term assumption is highly judgmental.

In SAB Topic 14, the SEC staff provides registrants with a simplified method to calculate the expected term assumption for "plain-vanilla" options when no relevant exercise experience exists. If a company cannot apply this simplified method, it should begin developing its expected term assumption by analyzing its employees' past exercise patterns for similar options. Section SC 7.2 titled "Developing the Expected Term Assumption" in Chapter SC 7 discusses the SEC staff's 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 6-2 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 of an option will result in a bigger percentage increase or decrease in the 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 than for options for a higher volatility stock, and the fair value is more linear in relation to expected term.

Figure 6-2



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%

6.3.2 Expected Volatility

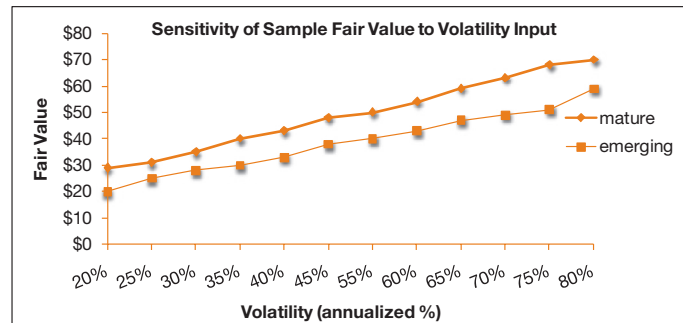
Stock price volatility is another key concept in all option-pricing models. ASC 718-10-20 defines volatility as “a measure of the amount by which a ... price has fluctuated ... or is expected to fluctuate ... during a period,” and also as “a probability-weighted measure of the dispersion of returns about the mean.” In 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 than a less volatile one, an option on a high-volatility stock has greater value than an option on a low-volatility stock, 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).

Option values are sensitive to changes in volatility assumptions. Figure 6-3 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; depending upon how much lower the expected volatility assumption is for the mature company. For example, the fair values of

options for the two companies shown in Figure 6-3 would be equivalent (about \$50) if the expected volatilities of the emerging company and the mature company were approximately 73% and 53%, respectively.

Figure 6-3



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

6.3.3 Risk-Free Interest Rate and Dividend Yield

Management should determine the expected term of an option before it can select the risk-free interest rate because ASC 718 requires that the assumed risk-free interest rate be based on the yield on the measurement date of a zero-coupon U.S. Treasury bond with a maturity period equal to the option's expected term. The higher the risk-free rate, the higher the fair value of the option.

Under ASC 718, the dividend yield assumption usually reflects a company's historical dividend yield (i.e., average annual 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. Because option holders typically do not receive dividend payments, a higher dividend yield assumption will reduce the fair value of an option if all other assumptions and conditions of the award are equal.

6.3.4 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.

6.3.5 Intrinsic Value

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 U.S. 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 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.

6.3.6 Time Value

The second component of the fair value of an employee stock option is time value. There are two sub-components to an option's time value: the first captures the difference between the option's intrinsic and minimum value, while the second reflects the additional impact of volatility on fair value (volatility value).

6.3.6.1 Minimum Value

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.

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. Figure 6-4 computes the minimum value of an option with a six-year expected term.

Figure 6-4: Illustration of Minimum-Value

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

PwC Observation: Computing an option's intrinsic and minimum value does not require any particular assumptions about the movement of the underlying stock (i.e., expected volatility); in fact, the one significant judgment required is an estimate of the option's expected term. However, under ASC 718, volatility is considered when calculating an option's fair value. 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 fair value.

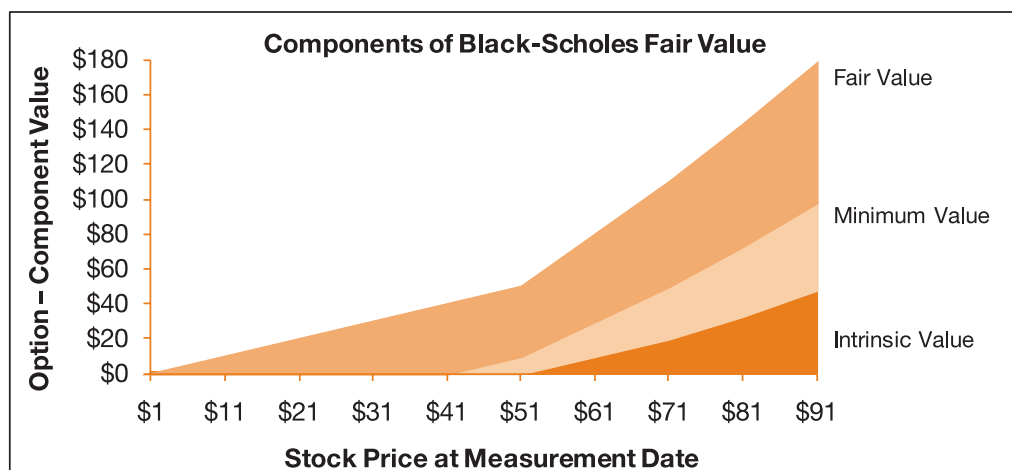
6.3.6.2 Volatility Value

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 close to zero. Many software-versions of the Black-Scholes model will not allow an input of zero volatility, so a very small number (e.g., 0.00001) may be used as the volatility input to demonstrate this equivalence. The volatility measure relates to an option's upside potential and the smaller downside risk of principal loss compared with the risk of holding the underlying stock. The volatility assumption should reflect the degree of uncertainty about possible future returns on the underlying stock.

The specific formula inherent in the Black-Scholes model, while not presented here, adds additional value as the volatility assumption increases, since a higher volatility raises the potential for a higher payoff. For example, if a volatility assumption at 20 percent, 50 percent, and 80 percent were added in Figure 6-4 above, the Black-Scholes fair values would be \$11.52, \$23.17, and \$32.59, respectively.

Figure 6-5 illustrates the relationship between intrinsic value, minimum value, and fair value as the price of the underlying stock varies, using the assumptions from Figure 6-4 and 50 percent volatility. The volatility value is represented by the difference between the fair value and minimum value. The options may be in-the-money, at-the-money, or out-of-the-money depending on current stock price, because the exercise price remains fixed at \$50.

Figure 6-5: Relationship between Volatility, Intrinsic, and Minimum Values



6.4 Lattice Models

Lattice models, which are refinements of the Black-Scholes model, 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. 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 a four-input array (contractual term, vesting period, exercise-multiple, and post-vesting termination rate), but a more complex lattice model could incorporate considerably more information. (The exercise-multiple, also known as the sub-optimal exercise factor, 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 represents 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.) 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 sections 718-10-55-17 through 55-18 recognize that, in many cases, lattice models may better incorporate information necessary to more

accurately value the features of employee stock options than the Black-Scholes model. As a result, a small but growing number of companies are already using lattice models to estimate the fair value of their stock-based compensation awards.

PwC Observation: Many companies considering using a lattice model engage an outside consultant to develop the model and analyze the necessary assumptions. We believe that management should understand the consultant's methodology, take responsibility for the assumptions used in the model, and conclude the results are in conformity with the requirements of ASC 718 and SAB Topic 14.

Despite their flexibility, lattice models may not produce a significantly different fair value than the Black-Scholes model for typical, plain-vanilla options. Frequently, any differences in fair value appear to be a function of whether, on average, a company used the low or high end of the reasonable range in developing its assumptions for the Black-Scholes model, especially with respect to an option's expected term. Companies that historically have chosen the high end of the range (i.e., longer) expected term estimates under the Black-Scholes model may find that switching to a lattice model decreases the fair value of an option, all else being equal. Conversely, companies that historically have chosen the low end of the range (i.e., shorter) expected term estimates may find that switching to a lattice model increases the option's estimated fair value.

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; this approach is called Monte Carlo modeling. This guide focuses on the binomial model, the simplest of these approaches. 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.

6.4.1 A Highly Simplified Binomial Model

To better understand how binomial models work, consider the following assumptions regarding a stock option grant:

Figure 6-6: 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%

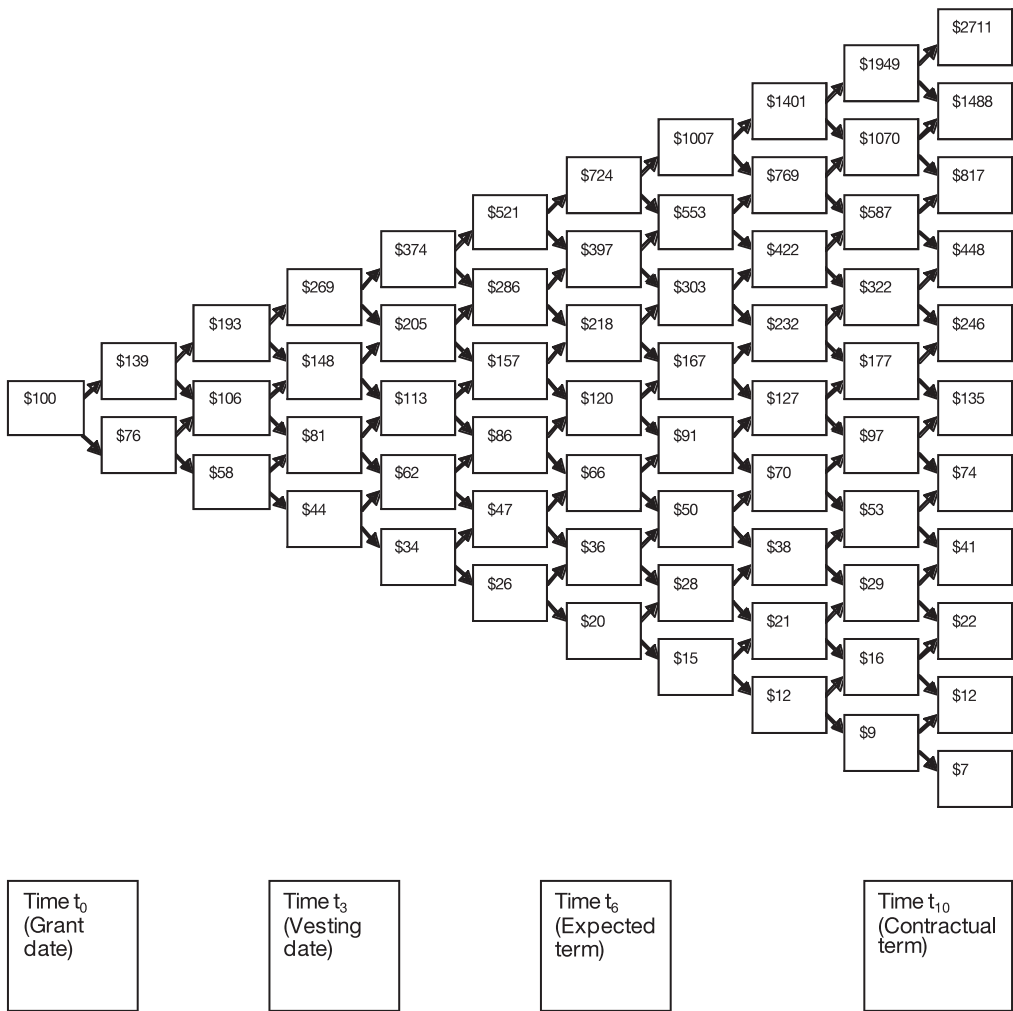
The Black-Scholes model using the assumptions in Figure 6-6 yields an estimated fair value of \$35.29. Employee early exercise patterns, post-vesting cancellations, and the other factors affecting the expected term assumption are reflected only indirectly in the expected term of six years. Regardless 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.

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 6-7 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.

Lattice models require two computations, called "binomial tree-diagrams," in order to value a stock option. Figure 6-7 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. Figures 6-8 to 6-11 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 6-7, the binary forks in the tree-diagram determine the assumed prices to which the stock can move. Had the tree-diagram been drawn with more nodes, these finite price points would resemble a smooth probability distribution. For basic tree-diagrams such as those presented in Figures 6-7 to 6-11, 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 percent volatility assumption. If the volatility was assumed to be 50 percent, 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 6-7: Simplified Binomial Model of Potential Stock Prices



In Figure 6-8, 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 Figures 6-9 to 6-11). However, Figure 6-8 is presented only over the expected term in order to provide a comparison to the fair value determined using the Black-Scholes model.

The diagram illustrates a binomial tree for stock price evolution. The tree starts at Time t_0 (Grant date) with a value of \$36. It branches out to Time t_3 (Vesting date) and continues to Time t_6 (Expected term). The values in the boxes represent the stock price at each node, and the arrows indicate the progression of time.

Time t_0 (Grant date)	Time t_1	Time t_2	Time t_3 (Vesting date)	Time t_4	Time t_5	Time t_6 (Expected term)
\$36	\$63	\$108	\$178	\$280	\$424	\$624
						\$189
		\$17	\$33	\$62	\$111	
	\$14		\$29	\$8	\$20	
			\$3	\$0	\$0	
	\$7	\$1	\$0	\$0	\$0	\$0
\$0						
		\$0	\$0	\$0		

The option-values for times 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 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 .

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\$35.29 value obtained with Black-Scholes (given the small number of time-steps in the tree). 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 widely varying assumptions were used in the lattice model.

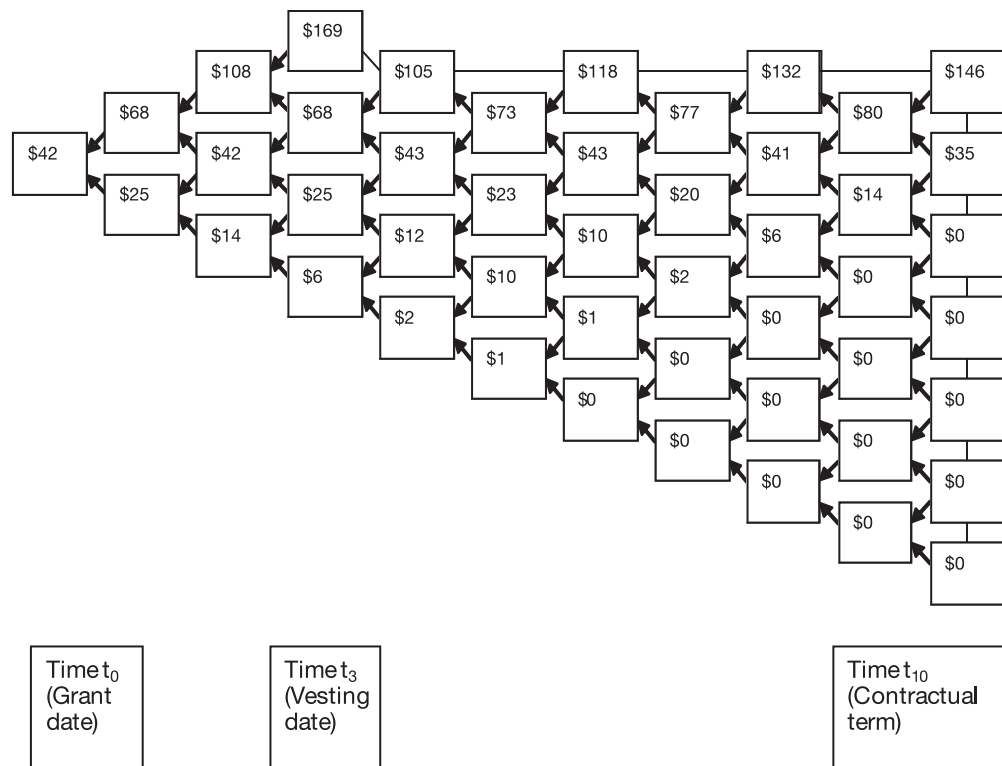
PwC Observation: In practice, a binomial model would typically incorporate a large number of very short time periods to reflect a realistic range of possible prices that a share could achieve over the option's contractual term, which could result in several thousand total nodes. In addition, various probabilities could be assigned to each node to reflect the impact that a node is expected to have in conjunction with exercise and post-vesting termination assumptions. An iterative technique called a Monte Carlo simulation can also be used. This involves the use of large samples (e.g., 100,000 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 samples to minimize sampling error. Accordingly, it is important that the number of samples used is sufficiently large.

6.4.2 Impact of Varying Exercise Patterns

The example in Figure 6-8 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 6-8, the estimates of fair value produced by the Black-Scholes model and the simplified binomial model converge.

One method to adjust for 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 6-8. Figure 6-9 shows another option valuation 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 "barrier" at which exercise is assumed to occur). The option value tree-diagram now covers the entire 10-year contractual life of the option instead of the 6-year expected term as in Figure 6-8, 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.

Figure 6-9: Option Tree—Ten-Year Contractual Term with a 2.0 Assumed Exercise Multiple

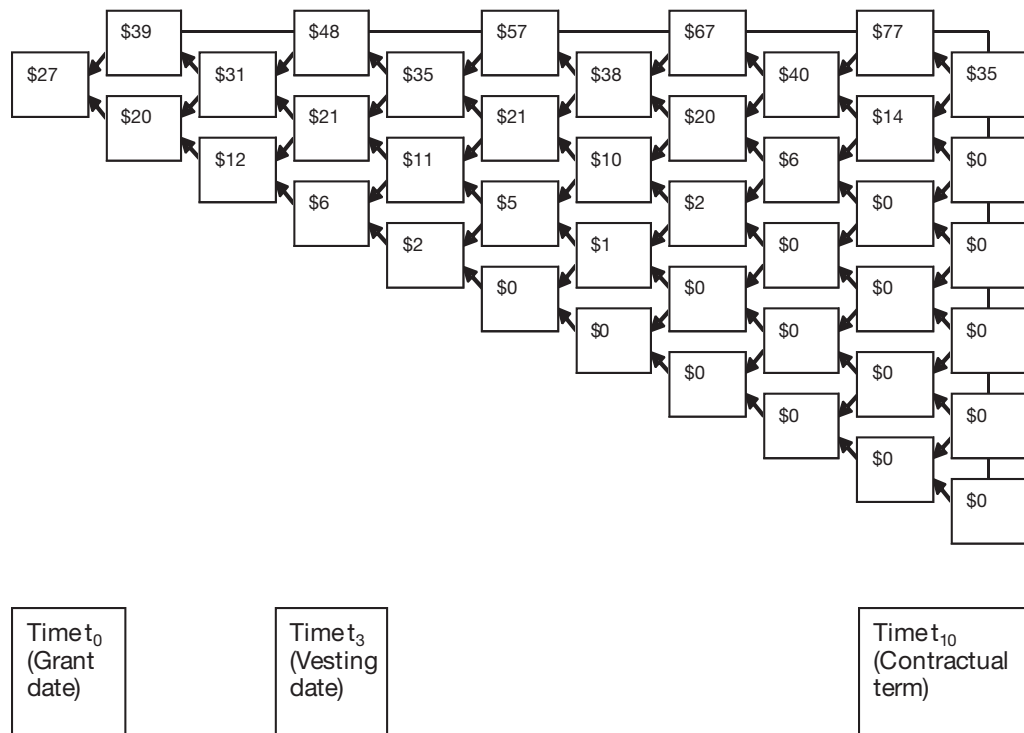


The values along the bold line in Figure 6-9 will equal the option's intrinsic value (the greater of the stock price minus \$100 or zero), similar to the values at time t_6 in Figure 6-8. This bold line may be thought of as the “exercise frontier” (i.e., the points along the price-time continuum at which exercise is assumed to occur). 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, less than the assumed exercise threshold of \$200. Refer to the corresponding node in Figure 6-7, which illustrates the potential stock prices; the values in Figure 6-9 above represent potential option-values.

The calculation shown in Figure 6-9 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 6-8. The use of an early-exercise assumption will reduce the estimated fair value of an option versus the fair value of an option over its full contractual life of ten years (in the absence of dividend payments, which can make it advantageous to exercise early in some circumstances). However, depending on where the assumed exercise multiple is set when exercise 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 6-10 presents another example, identical to the scenario presented in Figure 6-9, 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 6-10: Option Tree—Ten-Year Contractual Term with a 1.3 Assumed Exercise Multiple

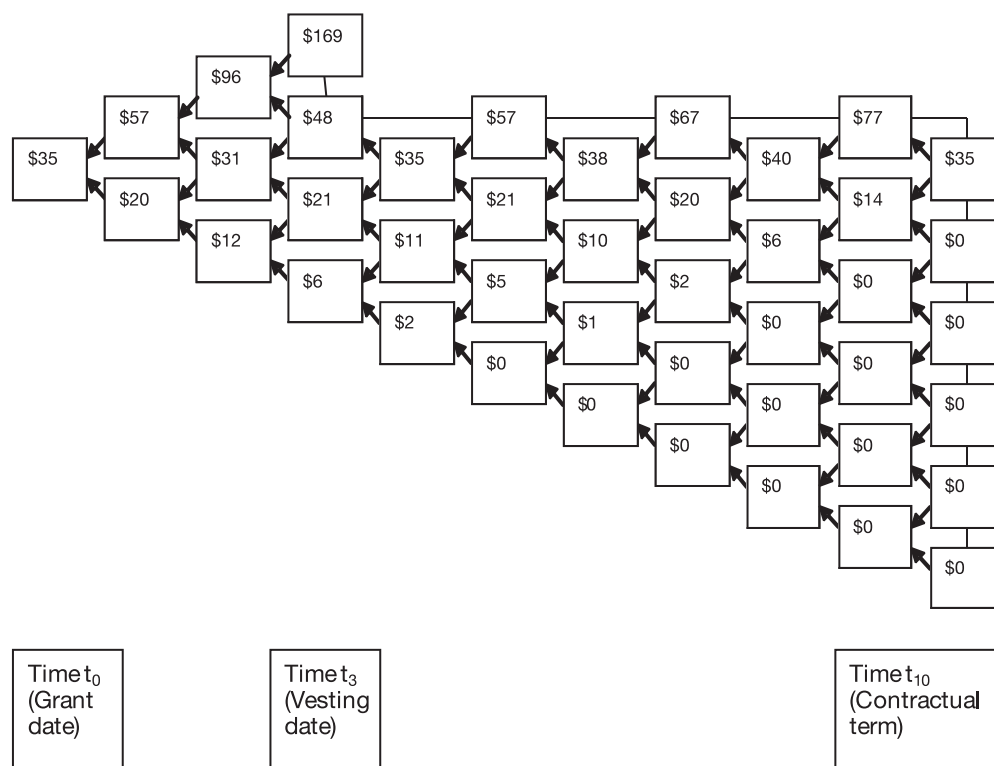


The calculations in Figure 6-10 result in a fair value of approximately \$27, 36% lower than the fair value of approximately \$42, calculated in Figure 6-9 (using an assumed exercise multiple of 2.0). This dramatic decrease shows the sensitivity of fair value to the assumed exercise multiple. However, the calculation in Figure 6-10 may require further adjustment to reflect the terms and conditions associated with the award being granted. The exercise frontier shown in Figure 6-10 indicates immediate exercise if the stock price rises to its upper node one year after grant (i.e., to a price of \$139, as shown from the same point in Figure 6-7). However, this node precedes the vesting date, given the three-year cliff vesting condition. Therefore, the calculation is based on assumptions that are not consistent and reflective of the terms and conditions of the award.

Figure 6-11 illustrates the appropriately adjusted calculation for the exercise multiple of 1.3 and also includes the effects of the option's 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, regardless of whether the stock went to the upper or the lower node at time t_3 . The resulting calculation moves the estimated fair value back to approximately \$35, very near its original value with a 6-year static expected term of approximately \$36 in Figure 6-8, which properly reflects the impact of the vesting condition.

Figure 6-11: Option Tree—Ten-Year Contractual Term with a 1.3 Assumed Exercise Multiple Adjusted for Three-Year Cliff-Vesting Condition



The results of the calculations in Figures 6-9 through Figure 6-11 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 more numerous, shorter time-steps. The model in Figure 6-8 with one-year time steps resulted in a fairly close result to the Black-Scholes value of a simple six-year option with no refined exercise assumptions. In contrast, for the exercise-assumptions in Figures 6-9 through 6-11, a lattice model with smaller steps produces values that differ in some cases by approximately 20% from those shown above. This is because the lattice-values shown above with the large time-steps may imply a significant stock-price jump over an assumed exercise multiple in a single time-step. The values shown in the figures above are rough approximations illustrating the general relationship between results and model-inputs with 3-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).

PwC Observation: The lattice model also may be used to develop an 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 6-9 is approximately 8.2 years. Using another method, the risk-neutral expected life method, the inferred expected term assumption is approximately 8.3 years (however, for typical options, the theoretical, inferred, risk-neutral expected term is much larger 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.

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 section SC 7.2.3 titled "Pre-Vesting Forfeitures versus Post-Vesting Cancellations."

PwC Observation: While academic papers have discussed complex binomial models that reflect the correlation of stock price and early exercise, software that performs such modeling is only now beginning to appear in the marketplace. As discussed further in section SC 7.1 titled "Background," developing these models and the underlying assumptions will require considerable time and effort and should be supported by reasonable and objective evidence.

6.4.3 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 option's contractual term.
- **Options 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).
- **Options with caps:** Maximum value options 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 options. 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 employees may realize, the fair value of a maximum value option may be significantly lower than an ordinary option.

- **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 section 6.4.5 below 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 patterns. Companies considering whether to use a lattice model or the Black-Scholes model should bear in mind that in certain circumstances (for example, options for companies with relatively low stock price volatilities and longer vesting schedules), a simple lattice model may not yield a more refined estimate of fair value than the Black-Scholes model if sufficient analysis is performed to develop an appropriate weighted-average expected term assumption to be used in the Black-Scholes model. Further, not all companies will have the necessary historical data required to support a more complex lattice model. Lastly, as discussed in section SC 7.2 titled "Developing the Expected Term Assumption," SAB Topic 14 provides public companies with a simplified method to calculate the expected term for "plain-vanilla" options.

PwC Observation: Despite their relative success in generating more refined estimates of fair value, the use of lattice models may or may not be practical or worthwhile when valuing more ordinary types of options, such as options with only service conditions, because the differences between lattice results and Black-Scholes results are, in many cases, small, provided that comparable weighted-average assumptions are used in both models. We have observed that when vesting periods are very short (e.g., one year), particularly when volatility is relatively high, use of a lattice model may, in some cases, make a greater difference, as opposed to using the Black-Scholes model. As a general matter, however, the development of reasonable and supportable assumptions for use in a Black-Scholes or lattice model is more critical than the model itself for many typical option grants. Chapter SC 7 discusses the factors to be considered in the development of the assumptions.

6.4.4 Ways to Incorporate Future 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 percent 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 sub-optimal exercise factor(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 that is used in the Black-Scholes model.

PwC Observation: Companies that utilize lattice models should decide how much complexity to incorporate into the models and gather the additional information needed to support more sophisticated assumptions. In practice, the simpler types of lattice models do not always produce results that are comparable to results from more complex lattice models that incorporate additional assumptions. In fact, very simple lattice models may be less reliable than the Black-Scholes model with simple but well-supported assumptions. Accordingly, companies that consider using a simplified lattice model may have to test more complex scenarios to determine if the simplified lattice model yields a reasonable estimate of fair value.

As described earlier, the exercise-multiple (or sub-optimal 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 sub-optimal because traditional financial theory suggests that the optimum behavior is to hold an option until its contractual expiration date. Although it may be reasonable for an employee to exercise stock options early, given an individual's risk tolerance or liquidity needs and the fact that typical employee options cannot be sold or hedged, early exercise is, in a narrow financial sense, sub-optimal. For example, a sub-optimal 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 percent above its price on the grant date. Typically, larger sub-optimal exercise factors are associated with higher volatility stocks. The use of a specific sub-optimal exercise factor in a lattice model will need to be reasonable and supportable.

In addition to the other assumptions, appropriate lattice models include an assumed post-vesting termination rate. Under most option plans, employees who terminate their employment are given 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. The assumed post-vesting termination rate used to model this behavior should be supportable.

In order to maximize the precision provided by a lattice model, more complex assumptions may need to be developed to reflect sub-optimal 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 sub-optimal 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 sub-optimal exercise factor of 1.3, one-third at 1.6 and one-third at 1.9.

The following sections illustrate the use of sub-optimal exercise factor(s) and the assumed post-vesting termination rate in a lattice model.

6.4.5 Dynamic Sub-Optimal Exercise Factors and Post-Vesting Termination Rate

Figure 6-12 expands the binomial approach to reflect sub-optimal 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 at sub-optimal 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 6-12 illustrates an equally-weighted probability distribution using three different sub-optimal 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 sub-optimal exercise factor, an additional one-third of the outstanding vested options will be exercised when the stock price is at least equal to the middle sub-optimal exercise factor, and the remaining third will be exercised when the stock price is at least equal to the highest sub-optimal 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 percent probability of early exercise of the outstanding vested options on the trading days when the stock price is between the lowest and middle sub-optimal exercise-factors, a 67 percent probability of exercise when the stock price is between the middle and highest sub-optimal exercise factors and a 100 percent 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 larger binomial lattice than was used in the previous examples (Figures 6-7 through 6-11). In order to incorporate an early exercise assumption, the binomial model used with the assumptions shown below has 252 time-points per year over a full ten-year period, so there are approximately three million possible nodes, as opposed to the 28 nodes in Figure 6-8. Monte Carlo techniques were used to simulate probabilistic early exercise in Figure 6-12.

Figure 6-12: Binomial Model with Probability-Based Exercise Distributions of Sub-Optimal 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%

(continued)

Years After Grant Date	Sub-Optimal 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%

In Figure 6-12, the assumed sub-optimal exercise factors decline, gradually at first, then more sharply, 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 6-12 also assumes a constant post-vesting termination rate for simplicity.

Based on the assumptions in Figure 6-12, the fair value per option is approximately \$36.21. The increase over the fair value discussed in Figure 6-11 (\$34.56) reflects the wider array of potential exercise multiples and negative correlation between the time remaining on the option and the stock-price appreciation necessary to bring about voluntary exercise. In this model, employees who exercise their options earlier realize relatively larger gains than those who do so later. Also, the probability of exercise at various price levels affects fair value. These effects would go undetected using a binomial model with a single sub-optimal exercise factor, and thus this dynamic sub-optimal exercise factor represents a further refinement of the lattice model.

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. Other methods for calculating expected term may also be used.

PwC Observation: Companies should be cautious about using a single sub-optimal 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 prices) 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 both actually building such models—like the example in Figure 6-12—and doing all the work required 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.

6.4.6 Awards with Market Conditions

The terms of some awards require that exercise or vesting depends on achieving a market condition. For example, an option with a market condition may provide that the option cannot be exercised unless the grant-date stock price rises by 50 percent. Performance shares (generally, a promise to issue shares if certain performance targets are met) may also contain market conditions requiring a lattice model 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. Awards containing market conditions should generally be valued using a lattice model.

Figure 6-13 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 6-13: Option Where Vesting Depends on Achieving Targeted Stock Price within Three Years

Stock price at grant	\$100
Exercise price	\$100
Targeted (threshold) stock price	\$150
Vesting period (cliff-vesting)	After 3 years 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 3.5 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 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 to simulate an appropriately large binomial model that reflects these conditions 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 Figures 6-7 through 6-11).

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 6-13). 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.

Certain assumptions should be tailored for stock options with market conditions. For example, in Figure 6-13, because the options vest based on stock price movements, using a fixed expected term would not be reasonable. Rather, a lattice model 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 complex, refined early exercise assumptions also could be implemented.

A lattice model should also be used to value an option that involves the achievement of both (1) a market condition and (2) a service or performance condition. For example, an option that will vest if the share price doubles within the next ten years and the employee stays with the company for seven years should be viewed as one award, similar to a tandem award, with a fair value determined by a lattice model.

PwC Observation: Market conditions are typically modeled using a lattice approach that incorporates a Monte Carlo simulation (involving a series of random trials that may take different future price paths over the option'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 6-13, each simulated stock price path was checked to determine whether the stock reached the \$150 threshold during the vesting period. When the stock price achieves the threshold in each 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 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 many Monte Carlo trials.

6.5 References for Further Study

Readers wishing to pursue a deeper understanding of the theory of financial derivatives may wish to study further literature on the subject. One well-known textbook in this area is:

Options, Futures and Other Derivatives (currently in 6th edition), by John C. Hull (Prentice Hall, 2006).

The author of this book has also published several papers supporting the use of lattice models for the valuation of employee stock options. One of these is cited as follows:

John Hull and Alan White, "How to Value Employee Stock Options," **Financial Analysts' Journal**, Vol. 60, No. 1, January/February 2004, pages 114–119. This paper is also currently available for free download from the first author's website.

Another textbook with a collection of articles that carefully presents the arguments underlying the theory is:

Financial Options: From Theory to Practice, edited by Stephen Figlewski, William L. Silber and Marti G. Subrahmanyam (Irwin Professional Publishing, 1990).

Chapter 7:

Developing Assumptions for Option-Pricing Models

Chapter 7: Developing Assumptions for Option-Pricing Models

The assumptions a company develops when measuring the fair value of employee stock options generally will have more impact on fair value than the choice of option-pricing model. This chapter discusses the key assumptions that drive fair value, certain simplifying alternatives available in limited circumstances under SAB Topic 14, 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.

7.1 Background

As discussed in Chapter SC6, both the Black-Scholes and lattice models require inputs for four assumptions which require significant management judgment:

- Expected term (including early exercise and post-vesting termination behavior).
- Expected volatility.
- Risk-free interest rates.
- Expected dividend yield on the underlying stock.

The two remaining inputs into the models—exercise price and the fair value of the underlying stock on the measurement date—are defined by the terms of the award and by observable market prices (at least for publicly traded securities), respectively, and are not discussed in this chapter.

ASC 718, *Compensation—Stock Compensation* explicitly requires that the assumptions used in an option-pricing model be reasonable and supportable. The assumptions should also reflect the substantial characteristics of the award and all other relevant facts and circumstances.

SAB Topic 14 assists registrants by simplifying some of the implementation challenges of ASC 718, including using judgment to develop assumptions for option-pricing models. In SAB Topic 14, the SEC staff acknowledges that:

- There is a range of conduct that a reasonable registrant may use to make estimates and valuations.
- Different conduct, conclusions, or methodologies in a given situation does not itself raise an inference that a company is acting unreasonably.
- The zone of reasonable conduct is not unlimited.
- It will be rare when there is only one acceptable choice to estimate the fair value of an award.

SAB Topic 14 also provides registrants with certain alternatives for expected volatility and expected term that reduce the amount of judgment that they must apply, subject to certain conditions. These alternatives are discussed in sections SC 7.2.1 titled “SAB Topic 14’s Simplified Method for Estimating Expected Term” and SC 7.3 titled “Expected Volatility,” respectively, in this chapter. If a company cannot or chooses

not to use the SAB Topic 14 simplifying alternatives (subject to the limitations in SAB Topic 14), then it should develop its assumptions starting with consideration of its own relevant historical data and adjusting that data for its future expectations.

Developing assumptions generally involves:

- Analyzing all available historical data.
- Considering whether historical data is relevant to predicting future behavior.
- Making appropriate adjustments to historical data for future expectations.
- Supplementing or replacing company-specific historical data with data from other supportable sources.
- Appropriately weighting each of the inputs.

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 carefully consider all relevant factors when developing its assumptions but, in some cases, the best estimate will not be obvious. Lattice 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 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.

7.2 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 section SC 7.2.10 titled "Other Considerations," 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 in the Black-Scholes model or in developing the group of assumptions related to the expected exercise patterns in a lattice model:

- Vesting period(s) 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 often 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 differ from the past.
- The relative weight to be assigned to each factor.

Because employees typically cannot exercise an option until it vests, the vesting date represents the low end of the range of possible exercise dates, whereas the contractual term represents the high 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. A company should use its relevant historical information, as listed above, for similar options and employee-groups. If a company's specific information is insufficient, ASC 718-10-55-32 and SAB Topic 14 allow the company to use published data (e.g., financial statements of similar companies or published academic research). For example, if a company had a history of option grants and exercises that included only periods in which the company's stock price was rising sharply, the exercise behavior related to those options should not be the sole basis to form the expected term assumption for current option grants. The reason is that future option exercises will clearly be influenced by stock price paths that occur in the future, which may differ substantially from history in this example. In a case like this, the company might instead rely on academic studies, disclosures from similar companies with similar grants to like employee-groups, or might elect to use the SAB Topic 14 simplified method as discussed in SC 7.2.1.

PwC Observation: When a company uses published academic research or industry data to estimate employee's exercise behavior, it should consider how the awards and companies in the data compare to its own awards for vesting periods, contractual terms, blackout periods, stock-price volatility and demographics of employee populations (which may affect employee's risk-preferences and patterns of exercise), and other company-specific attributes that can affect employee exercise behavior. It may be difficult to identify similar companies that grant similar types of awards to similar populations of employees, such that the comparison is deemed reasonable and supportable.

SAB Topic 14 also 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 for "plain-vanilla" options is only acceptable provided a company does not have appropriate exercise data on which to base its own estimate or 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 more relevant general information (e.g., published academic or industry-sponsored research) becomes available on employee exercise patterns.

The following subtopics relating to the development of the expected term assumption apply mainly to the Black-Scholes model; assumption development for early exercise and post-vesting termination behavior under lattice models is discussed later in this chapter.

7.2.1 SAB Topic 14's Simplified Method for Estimating Expected Term

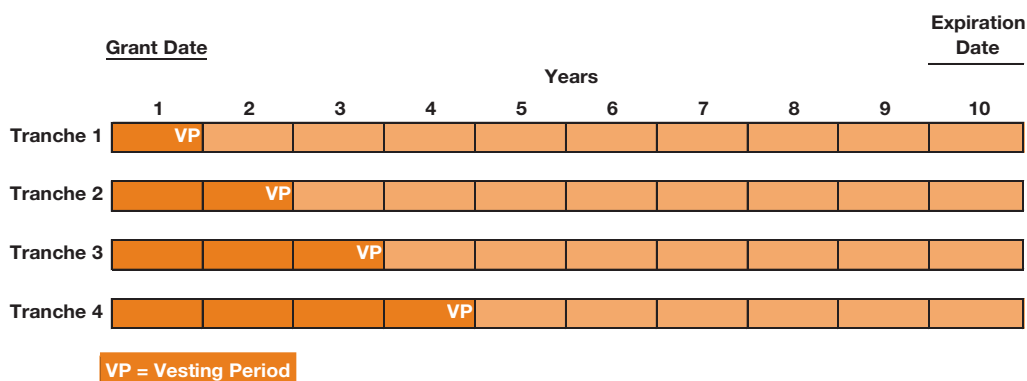
SAB Topic 14 (Section D.2, question 6) provides a simplified method that companies may use to estimate the expected term assumption for “plain-vanilla” options assuming certain conditions are met. Under SAB Topic 14, a stock option qualifies as a “plain-vanilla” option when all of the following criteria are met:

- Stock options are granted at-the-money.
- Exercisability is conditional only on completing a service condition through the vesting date.
- Employees who terminate their service prior to vesting forfeit the options.
- Employees who terminate their service after vesting are granted limited time to exercise their stock options (typically 30–90 days).
- Stock options are nontransferable and nonhedgeable.

If a company grants awards that do not meet the SAB Topic 14 definition of a plain-vanilla option, the simplified method cannot be used and historical exercise data is required to be the starting point to develop the expected term assumption. See section SC 3.1.4 titled “Use of SAB Topic 14's Simplified Method for Estimating Expected Term” for guidance regarding the use of the simplified method by nonpublic companies. When the SEC staff first permitted the simplified method, they believed that alternative sources of data would become available within a short time after the issuance of ASC 718, and initially limited the availability of the simplified method to options granted prior to 2008. At the end of 2007, the SEC staff revised the scope of the simplified method. SAB Topic 14 now provides that companies without a reasonable basis for their own historical estimates of exercise patterns may use the simplified method, subject to the continuing scarcity of relevant published data. Factors that could support the use of the simplified method under SAB Topic 14 may include insufficient historical experience for option grants overall, substantial changes in the contractual terms or vesting periods of options granted, or changes in a company's business or employee population, rendering existing 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 is based on the vesting period and the contractual term for each grant, or for each vesting-tranche for awards with graded vesting. The mid-point between the vesting date and the maximum contractual expiration date is used as the expected term under this method. For awards with multiple vesting-tranches, the times from grant until the mid-points for each of the tranches may be averaged to provide an overall expected term. Figure 7-1 illustrates how a company would apply the simplified method of estimating the expected term of an award with a four-year, graded-vesting schedule (see footnote 77 of SAB Topic 14). Subject to the limitations in SAB Topic 14, this simplified method can be used for plain-vanilla options, regardless of the attribution method used to recognize compensation cost (see section SC 1.11 titled “Graded-Vesting Features” in Chapter SC 1).

Figure 7-1: Application of the Simplified Method of Estimating Expected Term



The following is the calculation of the expected term by vesting tranche:

Expiration Date + Vesting Period / 2 = Mid-point by Tranche

$$\text{Tranche 1 } (10 + 1) / 2 = 5.5$$

$$\text{Tranche 2 } (10 + 2) / 2 = 6$$

$$\text{Tranche 3 } (10 + 3) / 2 = 6.5$$

$$\text{Tranche 4 } (10 + 4) / 2 = 7$$

$$\text{Total} \quad \quad \quad 25$$

The following is the calculation of the expected term for all vesting tranches:

Total Mid-point / Total Number of Tranches = Simplified Expected Term

$$25 / 4 = 6.25 \text{ years}$$

7.2.2 Evaluating Historical Exercise Data

Because most public companies have historical data on their employees' exercises of stock options, they develop a more refined expected term assumption. If a company does not apply the SAB Topic 14 simplified method, it should begin developing the expected term assumption by analyzing its own historical data. When completing its 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 the award's terms made during the historical period. In order to appropriately develop the expected term assumption for a new award, a company should analyze historical information on options whose recipients would expect to exhibit similar exercise and post-vesting termination behavior, contractual term to expiration, vesting schedule, and other contractual provisions similar to the award being granted. Additionally, a company should consider whether it has an anomalous historical stock price path that may indicate that its historical exercise patterns may not be predictive of future exercise patterns (for example, if options were underwater during most of the available exercise period or there was a continual sharp increase in the company's stock price over a long period of time). See sections SC 7.2.5 titled "Adjustments for Inadequate Samples" and SC 7.2.6 titled "Adjustments for Stock Prices" below.

Once this information is collected and analyzed, a company can estimate a historical average holding period for its vested options.

In some cases, a company should make adjustments to historical exercise data before arriving at an expected term assumption, because the purpose of this analysis is to estimate the expected exercise behavior of those employees receiving new awards. For example, if the groups of employees receiving options have changed over time, the company could base its expectations concerning the current group of employees on historical data adjusted to reflect this fact (for example, by using data that includes the experience of only employees who are similar to the current covered group, or by re-weighting the expected term calculations appropriately). 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. The behavior of employees affected by a merger or spin-off may be different from what the company can expect from its current employees, assuming that those transactions will not recur.

7.2.3 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 because compensation cost for vested awards is not reversed under ASC 718's accounting model. 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 underwater while the holder is still an employee. In computing historical average holding periods, a company should count these expired vested options as though they were exercised at expiration, because it reflects the period the awards were held by the employee.

In summary, a company should do the following when analyzing its historical exercises:

- Include vested options that are cancelled, exercised or expire unexercised, because the expected term should reflect all post-vesting events.
- Exclude pre-vesting forfeitures.

PwC Observation: Companies should carefully consider the important distinction between pre-vesting forfeitures and post-vesting cancellations when developing its 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.

7.2.4 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.

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 terms (between the later of vesting date and date of the analysis, and the contractual expiration date of each option).** This method is a more refined approach for estimating expected term. However, although it is acceptable in most cases, it should not be used 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 that were exercised over a given period in a partial life-cycle (e.g., during the fourth year for options granted in 1999) in relation to all options for that grant year available to be exercised in each given period. These percentages can be averaged over the grant years. A company can estimate a complete set of marginal exercise rates as long as it has some information about complete life-cycles. These estimated exercise rates can then be 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.

Case Study 1: Estimating Expected Term with Partial Life-Cycle Data

Company X is developing its expected term assumption for options it granted in December, 2004. Company X has been granting options since 1996, most of the time in December, with few grants issued in other months. Because all of the awards have ten-year contractual terms, Company X has no complete life-cycle data.

The first step is for Company X to consider each historical award's terms and conditions. While most awards had three-year graded-vesting features (one-third of the options vesting on the first, second, and third anniversary of the grant date), a few options had a five-year vesting schedule. Company X excludes from its analysis (1) the grants with five-year vesting schedules because the 2004 grants have three-year vesting schedules and (2) unvested options granted to employees who terminated prior to the vesting date. However, forced early exercises and post-vesting cancellations of vested options with three-year graded vesting (due to reasons such as employee terminations) are included in the analysis.

Having assembled the relevant data, Company X determines the elapsed time between each grant date and each exercise or post-vesting cancellation date and then groups those times by subtracting fractional years from these intervals. For example, if there were 2.7 years between the grant and the exercise, then the option would be considered as having been exercised in "Year 2." The results of this analysis are shown in Figure 7-2. (This process may sometimes require companies to match historical grants to exercises and vested cancellations in separate databases, depending on how this data is tracked.)

A separate analysis of when exercises and post-vesting cancellations occurred within each of these life-cycle years determined that these events were reasonably uniformly distributed within the one-year periods being captured. Thus, a midpoint-average is used to estimate the effect of a given life-cycle year's data on the overall expected time from grant until exercise. In other words, for all the options exercised or cancelled during "year 2" (the period between one and two years after their respective grants), an average time of 1.5 years (the midpoint of this period) is used to estimate the contribution to expected term due to these options. For those with exercises in "year 3," 2.5 years will be used, and so on.

Figure 7-2: Available Exercise History Data for Company X

Year of Grant	Number of Options Granted*	Number of Options Exercised in Each Available Life-Cycle Year of Exercise** (including post-vesting cancellation events)								Number of Options Outstanding at 12/31/2004
		1	2	3	4	5	6	7	8	
1996	763,243	0	54,104	142,472	210,321	45,231	32,123	65,421	112,011	101,560
1997	548,166	0	78,541	137,042	65,211	1,000	92,685	67,739		105,948
1998	922,955	0	64,571	0	45,321	189,456	63,455			560,152
1999	708,962	0	0	2,100	97,439	77,123				532,300
2000	735,416	0	750	138,503	82,113					514,050
2001	916,355	0	172,275	186,936						557,144
2002	582,391	0	125,215							457,176
2003	527,724	0								527,724
2004	725,783	0								725,783
Totals	6,430,995	0	495,456	607,053	500,405	312,810	188,263	133,160	112,011	4,081,837

(continued)

Average times from grant until exercise:***

Calculated using all data (grants from 1996 to 2004): 3.47 years

Calculated using data from fully vested grants (grants from 1996 to 2001): 3.59 years

- Notes:** *
- The number of options granted excludes options that were forfeited prior to vesting.
 - ** Life-cycle years are calculated by determining the year in which exercise or cancellation occurred, and subtracting the grant date from the exercise or cancellation date, and rounding to the nearest year.
 - *** The estimated average times from the grant date until exercise or cancellation are calculated as follows:

Step 1: Multiply the number of options exercised or cancelled by the number of life-cycle years since the grant date (e.g., 112,011 times 7.5 for the 1996 grants exercised or cancelled in life-cycle year 8, which equals 840,083). This calculation should be repeated for each life-cycle year as follows:

Total Number of Options Exercised in each Available Life-Cycle Year of Exercise (including post-vesting cancellation)									
Total by Life-Cycle Year	0	495,456	607,053	500,405	312,810	188,263	133,160	112,011	2,349,158
Multiplied by year	.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	
Total Option- Years	0	743,184	1,517,633	1,751,418	1,407,645	1,035,447	865,540	840,083	8,160,950

Step 2: Total the results of step 1 for all years included in the analysis (e.g., 0 plus 743,184 plus 1,517,633, etc.) which equals 8,160,950, in this example as shown in the table above.

Step 3: Divide the total from step 2 of 8,160,950 by the number of options exercised or cancelled that are included in this analysis of 2,349,158 (shown above, and represents the 6,430,995 options granted less the 4,081,837 outstanding) to get 3.47 years, which equals the average times from grant until exercise using all data in the analysis. Alternatively, using only data for fully vested options (granted prior to December, 2001) results in an average of 3.59 years.

The average times from grant to exercise calculated in Figure 7-2 probably understate the expected term assumption because they do not reflect the large number of options that are outstanding at December 31, 2004. The outstanding options should generally have a longer expected term, on average, because they have not been exercised during the period from the grant date to the date of the analysis. Company X adjusts the historical data to account for this understatement by assuming that the outstanding options will be exercised evenly over the remaining life-cycle years for each year's grants. That is, the number of options outstanding from each grant year is divided by the number of years for which data is not yet available at December 31, 2004 (e.g., two years for 1996 grants, three years for 1997 grants, etc.). This simulation spreads future exercises uniformly over these missing years, as shown in Figure 7-3, where the average expected terms increase significantly from Figure 7-2.

Figure 7-3: Available Exercise History Data for Company X With Adjustment to Account for Partial Life-Cycle Effects

Year of Grant	Number of Options Granted*	Number of Options Exercised in each Year After Grant Date**									
		1	2	3	4	5	6	7	8	9	10
1996	763,243	0	54,104	142,472	210,321	45,231	32,123	65,421	112,011	50,780	50,780
1997	548,166	0	78,541	137,042	65,211	1,000	92,685	67,739	35,316	35,316	35,316
1998	922,955	0	64,571	0	45,321	189,456	63,455	140,038	140,038	140,038	140,038
1999	708,962	0	0	2,100	97,439	77,123	106,460	106,460	106,460	106,460	106,460
2000	735,416	0	750	138,503	82,113	85,675	85,675	85,675	85,675	85,675	85,675
2001	916,355	0	172,275	186,936	79,592	79,592	79,592	79,592	79,592	79,592	79,592
2002	582,391	0	125,215	57,147	57,147	57,147	57,147	57,147	57,147	57,147	57,147
2003	527,724	Data for 2003 grants is not extrapolated since no exercise history is available.									
2004	725,783	Data for 2004 grants is not extrapolated since no exercise history is available.									
Totals	6,430,995	0	495,456	664,200	637,144	535,224	517,137	602,072	616,239	555,008	555,008

Average times from grant until exercise:***

Calculated using all data (grants from 1996 to 2004): 5.49 years

Calculated using data from fully vested grants (grants from 1996 to 2001): 5.55 years

Notes: * The number of options granted excludes options that were forfeited prior to vesting.

** The number of options exercised in each year after the grant date includes all post-vesting cancellations and exercise data and uniform simulated exercise date in life-cycle years.

*** See Figure 7-2 for details on how these estimates were calculated.

In Figure 7-3, Company X calculates two expected term estimates: one for the complete data set (result = 5.49 years) and one for fully vested options (result = 5.55 years). For the options granted in 2003 and 2004, it is assumed in both Figures 7-2 and 7-3 that no options will be exercised in the first year after the grant date, because this would be inconsistent with the vesting provisions associated with the grant. The second estimate (5.55 years) is used so that the partially-vested grants (i.e., those made in 2002, 2003 and 2004) are not included in the analysis. Since there is very little history available for these grants, the principal effect of using this period in the analysis would be simply to extrapolate nearly all of these grants over their entire possible lives, rather than using data on actual exercises.

Another approach to adjust for potential bias in the data would be to separate each year's grants by vesting-tranche and calculate expected exercise patterns in the remaining life-cycle years as shown above. For example, for the 582,391 options granted in 2002, there are three tranches. Most of the first tranche (125,215 out of 194,132 options) are exercised in the first year after these options vest. The remainder of 68,917 (194,132 minus 125,215) would be spread evenly over the period from the end of 2004 until their expiration in 2012. For the second and third tranches, none have vested as of the date of the analysis. The anticipated exercise of those options would be spread over the periods from their respective vesting dates through the contractual term to their expiration dates.

This extrapolation method for outstanding options might be used by companies that have very limited exercise data and are combining their limited data with a simplified estimate for many unvested options.

Company X also considers whether it should adjust its historical analysis to reflect anticipated future changes, but decides it is not necessary because the group of employees receiving the 2004 awards is demographically similar to the group of employees who received and exercised past awards, no major restructuring or acquisition has occurred, and the historical exercise period is not considered extraordinary (e.g., is not dominated by an extreme bull or bear market). Because Company X concluded that its past history is a good indicator of future expectations, the expected term of approximately 5.6 years—the number based on the vested data—is its best estimate of the expected term of the options granted in December 2004. This reflects its historical analysis along with the necessary adjustment for partial life-cycle data.

7.2.5 Adjustments for Inadequate Samples

The sample size of historical exercises should be large enough to generate a reliable expected term assumption. How large is large enough depends on facts and circumstances. The requisite 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 profoundly affected exercise patterns.

PwC Observation: 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 and industry associations are compiling databases of exercise information collected from a large sample of companies of various sizes in different industries in order to (1) supplement the handful of academic studies on this subject and (2) give companies the basis for selecting more reliable expected term assumptions than those based on company-specific data.

Companies that conclude they have inadequate exercise history to use as a basis for assuming expected exercise behavior and that they have no recourse to alternative sources of appropriate information may use the simplified method discussed in SAB Topic 14 as an acceptable alternative if certain criteria are met. For example, if a company has significant history of option grants but nearly all of those grants have been nearly continuously out-of-the-money, the sample of available windows when exercises could have occurred may be negligible. To take a different example, if a new company has made significant grants but most are still unvested, with only a few options vested at the time when a new valuation is being prepared, it may be unreasonable to base an expected term on the narrow window of exercise-data available.

7.2.6 Adjustments for Stock Prices

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 (up or down). Accordingly, a company should not base the expected term of new options on historical data that excessively reflects a bull or a bear market in the company's stock-price history, as such bull markets tend to generate estimates that understate the expected term while such bear markets tend to generate estimates that overstate it.

Lattice models, by their very design, directly address this over/understatement problem, although they present challenges of their own in developing needed assumptions. When the Black-Scholes model is used, three ways that are generally appropriate to deal with stock-price movements that affect historical exercise patterns in a manner perceived to be biased relative to future expectations are as follows:

- Use more historical information to dilute the effect due to periods strongly influenced by unusual market movements.
- Use data from academic or compensation consultants' studies as a basis for (or consideration in) the expected term assumption.
- An approach similar to the SAB Topic 14 simplified method may also be another potential method for estimating expected term in cases where a company's own exercise experience is considered unreasonable as a basis for forecasting and where reliable information from other sources cannot be obtained.

In general, it would not be appropriate for companies to use certain small portions of their relatively recent available 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 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.

7.2.7 Using Historical Exercise Data to Calculate the 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.

7.2.8 Stratifying the Employee Population

Although the above discussion focuses on obtaining a single expected term assumption for the entire employee population, using different expected term assumptions for different groups of employees will likely yield a more refined estimate of exercise behavior because different groups of employees (e.g., management and non-management, or employees grouped by age or geographic location) may have different appetites for risk and thus different propensities to exercise early. Employees can be classified by their position, salary range, geography, age, or any other factor that could affect exercise behavior. The degree to which stratifying employees affects an option's fair value depends upon how much the identified characteristic influences the expected term assumption. If all the sub-groups have the same expected term, there will be no effect on the resultant fair value.

PwC Observation: 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. As Figure 7-4 below describes, the Black-Scholes model's fair values based on a single average expected term of six years are slightly greater than values based on separate expected terms of four and one-half and seven and one-half years for two equally weighted classes of employees. Although the weighted average per share fair value 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 of unvested options. 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 separate expected term assumptions should be considered for each major sub-group of the employee population, provided there is relevant data upon which to develop these stratified assumptions.

Figure 7-4: Example of Stratification of Employee Groups

If two groups of employees with equal numbers of options granted have expected terms of 4.5 years and 7.5 years, using the Black-Scholes model, the fair values of options granted to each group will be about 45 percent and 57 percent of the grant-date stock price, respectively (assuming exercise price is equal to stock price at grant, volatility is 51 percent, risk-free interest rate is 3 percent, and no dividends are expected).

The fair value for a similar option with a six-year expected term (determined by computing the average expected terms of the two groups) is 52 percent of grant-date stock price compared to the average of the fair values for the two groups considered separately of 51 percent. By separating the groups and calculating separate fair values based on separate expected terms, a slightly lower aggregate compensation cost will result when compared to calculating one fair value for all options granted (51 percent when separate versus 52 percent when averaged together).

Under ASC 718, a company should aggregate individual awards into relatively homogenous groups with respect to exercise and post-vesting employment termination behaviors for the purpose of refining the expected term assumption, regardless of the valuation technique used to estimate the fair value.

SAB Topic 14 clarifies that a company may generally make a reasonable fair value estimate with as few as one or two groupings. The SEC staff believes that the focus should, however, be on groups of employees with significantly different expected exercise behavior (e.g., executives and non-executives). In addition, as discussed above, the expected forfeiture rates of different significant employee groups should be considered when deciding whether or not to stratify the expected term assumption.

7.2.9 Stratifying by Vesting Tranche

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. Regardless of the term assumption used, companies can apply an accounting policy of straight-line or graded attribution for the aggregate compensation cost over the requisite service period for awards with graded vesting and service conditions only.

The practice of stratifying by vesting tranches will tend to maximize the small reduction in aggregate compensation cost discussed in Figure 7-4 that is typical when stratification is employed, because stratifying by vesting tranche can separate early-exercising options from later-exercising options. When analyzing exercises by vesting tranche, one potential challenge is that this attribute is often not tracked. For example, if an employee is vested in two tranches and then exercises a portion of those vested options, typically there are no detailed records of which tranche of options were actually exercised. In this situation, companies should 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.

7.2.10 Other Considerations

Companies may consider using different volatility assumptions over the 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, it is possible to adjust historical exercise data to reflect the assumption that future volatility will differ from recent stock-price volatility (as described in section SC 7.3 titled “Expected Volatility” in this chapter).

The expected term may also correlate with 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, where the exercise price is returned to the employee and the stock is forfeited if termination of employment occurs prior to vesting. For accounting purposes, that exercise is not considered substantive. Therefore, any historical analysis of exercise activity should reflect such an exercise as occurring at the vesting date if the options vest and exclude the option from the analysis if the stock is forfeited.

7.2.11 Comparing Expected Term Assumptions Under Black-Scholes and Lattice Models

The preceding discussion addressed the development of the expected term assumption for use in the Black-Scholes model and highlighted certain factors, like the partial life-cycle effect, that should also be considered for lattice models. Because of the intricacies of these potential assumptions, lattice models will be covered in summary form only in the discussion that follows, using illustrative examples to show some of the considerations involved.

Lattice models are generally thought to be more accurate than the Black-Scholes model because they have the capacity to incorporate assumptions that vary over time and over potential stock prices. However, they also create the potential for more opportunities for bias to occur. Moving from the Black-Scholes model to a lattice model also requires developing more complex assumptions concerning early exercise behavior.

Lattice models replace the single expected term assumption of the Black-Scholes model with a set of assumptions that describes employees’ early exercise behavior, which 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. Most options include a clause that accelerates the contractual expiration of the award to a period of 60 to 90 days

upon termination of employment. The post-vesting termination rate (or series of rates that change over the contractual term), which is reflected indirectly in the single expected term assumption in the Black-Scholes model, 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 section SC 6.4 titled “Lattice Models,” this latter variable is called the sub-optimal exercise factor and is usually expressed as a multiple of the exercise price. Sub-optimal 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 sub-optimal 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 (1) to be exercised immediately at any point after vesting when the sub-optimal exercise factor is reached; (2) to be exercised on expiration if in-the-money but the sub-optimal exercise factor is not reached; and (3) to expire worthless if out-of-the-money.

A more elaborate set of assumptions to be used in a lattice model could involve either multiple sub-optimal exercise factors (and/or post-vesting cancellation assumptions) that change over time, or probability distributions.

Figure 7-5 presents an illustrative distribution of the probability of exercise for an award that cliff vests after one year of service.

Figure 7-5: Illustration of Probability Distribution of Early Exercise

Sub-optimal 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 7-5, 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 percent 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 percent.

Typically, a company that offers options with graded-vesting features would construct a separate probability distribution for each vesting tranche because the vesting date—which is 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 indirectly affected by vesting, to the extent that the vesting period affects the expected term assumption.

Developing a probability distribution like the one shown in Figure 7-5 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 approach or data from outside sources.

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 7.2.2), because such rapid stock price appreciation is not expected to recur. Under the lattice model, the same historical stock price path might result in sub-optimal 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.

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.

PwC Observation: Because lattice models treat post-vesting cancellations and voluntary exercises separately, an analysis should be performed to separate a company's history of employee exercise behavior into two categories: voluntary exercise and forced exercise that results from termination of employment. Under the Black-Scholes model, forced early exercises are reflected in the expected-term assumption and the analysis should be based on combined data for all exercises, post-vesting cancellations, and expirations.

A simpler, less refined form of lattice modeling assumes that early exercise occurs 100 percent of the time when the stock price first reaches a level represented by a single sub-optimal 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. As a result, this simplified approach may understate the expected term because a single sub-optimal exercise factor can accommodate only a limited amount of information on early-exercise behavior.

PwC Observation: 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, developing assumptions, and potential adjustments necessary to mitigate data biases and deficiencies.

Finally, lattice models may incorporate other predictors for 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.

PwC Observation: Special care must be taken in translating and comparing expected terms using a lattice model since these outputs may differ according to the type of stock price movements assumed in the modeling. A common assumption called "risk-neutral valuation" is considered acceptable for valuation purposes, but will produce expected term estimates that may, in some cases, be substantially overstated. These estimates may be considered sufficient to meet the requirements of ASC 718 for expected term as a disclosure item while still requiring adjustment for purposes of comparing models and for assessing the reasonableness or comparability of an option's fair value under a Black-Scholes model.

7.3 Expected Volatility

Unlike the expected term assumption, 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. Volatility is a measure of the tendency of investment returns to vary around a long-term average rate. Both the Black-Scholes model and lattice models use a volatility input that may come from a variety of sources (e.g., historical data, implied volatility, peer group information). 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 volatility does not reflect actual prices, but instead reflects the variation in returns expressed as a percentage, annualized volatilities can be compared across stocks regardless of how frequently the prices are measured or the length of the measurement period.

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-reversion of volatility estimates 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 volatility. According to SAB Topic 14, a company should consider all available information and 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.

7.3.1 Using Historical Stock Prices to Estimate Volatility

7.3.1.1 Calculation of Historical Volatility

Companies commonly estimate volatility by calculating 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 policy 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 section SC 7.3.1.9 for detailed considerations related to the term structure of volatility. Because volatilities usually change 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.

7.3.1.2 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.
- Insufficient reliable historical stock price data.
- Peer-group volatility.
- Newly public companies.
- Nonrecurring one-time events.
- M&A, divestiture and changes in financial leverage.
- Mean-reversion and term structure of volatility.

7.3.1.3 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 are usually 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, because the smaller adjustment to annualize a volatility estimate based on lower frequency data will have less of an effect. This adjustment may potentially skew a company’s analysis when volatility estimates differ greatly by frequency.

PwC Observation: 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 or weekly data could provide a reasonable sample, though daily data may be more appropriate when there is an expected term shorter than two years. Therefore, a company should consider the SEC staff’s preference for considerably more data points (two years includes 104 weeks or approximately 500 trading days) when it determines the frequency of volatility measures.

When estimates based upon daily, weekly and/or monthly intervals differ significantly, a company may consider averaging the annualized estimates based on multiple data-frequency volatility estimates. Such a mean estimate should be used only when there is adequate available history (e.g., five years of historical prices). 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 close prices are available and that sufficient trading occurs on each day to make these quotes reliable market indicators. Regardless of which volatility frequency measure is selected, a company should consistently use the same frequency of measurement.

PwC Observation: Some volatility software programs automatically use daily stock prices. Companies should consider making alternate volatility computations using longer measuring periods (weekly, bi-weekly, monthly) because these alternative estimates may differ somewhat and also be relevant. This may represent a change in policy for many companies and should be considered carefully, as establishing consistent forecast methods is important for purposes of comparability.

7.3.1.4 Insufficient Reliable Historical Stock Price Data

Some companies do not have reliably determined historical stock prices for a period that is at least equal to the expected term or do not believe that their recent historical

volatility fairly reflects future expectations (for example, a company that has been public for only two years and has estimated the expected term of its options to be five years). While estimating volatility based on two years of historical data may be sufficient in some rare cases to forecast volatility over the next five years, it is not adequate if one year of data should be excluded because of a nonrecurring event that increased volatility, such as going public. In such cases, it may be appropriate to blend the company's volatility estimate based on its historical data with that of a peer group of public companies, which may provide additional information about potential future stock-price movements. When using a peer group, some of the factors to consider would be that 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 and geographical markets. If companies meeting all of the criteria cannot be found, a company should use the closest available matches.

7.3.1.5 Peer-Group Volatility

To compute historical 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, peer-group volatility data are usually averaged, with each company given equal weight. For example, 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 volatility data two-fifths of the weight and its own historical volatility data 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.

7.3.1.6 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 the companies listed in an industry sector index (e.g., for a computer vendor, if there is a NASDAQ Computer Index) that represents its industry and size. However, the company may not use the volatility of the index itself as a substitute.
- Should use the volatility of 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.

7.3.1.7 Nonrecurring One-Time Events

SAB Topic 14 and ASC 718 cite other instances where it may be appropriate to adjust historical volatility for past events that a marketplace participant would likely discount, such as a discrete one-time 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 highly volatile six-month period 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 options being granted. However, SAB Topic 14 (Section D.1, question 2(s)) 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.

PwC Observation: This guidance on excluding historical volatility data around significant events has occasionally been interpreted as applying to extraordinary market conditions, such as the overall stock market volatility that followed the bursting of the technology bubble in 2000, the events of September 11, 2001, and the effects of the credit crunch in 2008. We generally believe that data should only be considered for exclusion when related 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 these events are considered extremely unlikely to recur. In addition, data from periods of significant stock price changes over a short period of time due to such causes as lawsuits, failed product trials, or recalls, generally should not be excluded from consideration.

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 these price breaks 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.

7.3.1.8 Mergers, Acquisitions, Sales, Spin-offs and Changes in Financial Leverage

Another common difficulty in estimating volatility occurs when companies merge, sell or spin-off major units. 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 volatility is appropriate, with the volatility of each company weighted by its total market capitalization. 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. If peers with leverage similar to the company cannot be found, adjustment of peer volatilities to reflect leverage may be necessary.

7.3.1.9 Mean-Reversion and Term Structure of Volatility

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 from short-term temporary highs to short-term temporary lows over varying periods that may last for several years and generally is expected to exhibit mean-reversion. 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 market.

Term structure refers to varying volatilities over historical sub-periods, when analyzing the volatility over an overall historical period, in determining the volatility assumption during 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 percent, but average annual volatility over the previous five years was 40 percent, the annual volatility assumption for each of the next five years might be closer to 20 percent at the beginning of the expected term and eventually move toward 40 percent. An explicit term structure of volatility might be used in a more refined lattice model instead of a single fixed volatility assumption, where exercises and vested cancellations 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 estimating 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 estimates are obtained by using periods of varying lengths, or if estimates exhibit no clear pattern over various sub-periods of 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, because term-structure either has little impact or may be difficult to apply. 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 at a larger 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) could introduce errors due to long-term, non-cyclical, company-specific, or general industry changes.

PwC Observation: 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 compared to volatility measured over the entire expected term may be helpful in assessing whether a mean-reversion adjustment is appropriate.

7.3.2 Using Implied Volatility

As described 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 the use of implied volatility with historical volatility or, in some cases solely using 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 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 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.

7.3.2.1 Calculation of 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 even exchange-traded options on the company's stock with the longest remaining contractual life. Exchange-traded options are also often thinly traded, so reliable price quotes may be lacking even when option terms are comparable.

To calculate the 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.

PwC Observation: One pragmatic approach to deciding whether implied volatility is stable enough to rely upon is to perform at least several measurements using the longest-lived, market-traded at or near-the-money options (perhaps using the longest-lived at-the-money traded options at dates spaced several days apart during the two-to-three week period before the grant date) to assure 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 be weighted significantly less than 100% when blended with historical volatility.

7.3.2.2 Exclusive Reliance on Implied Volatility

SAB Topic 14 (Section D.1, questions 1, 3, 4, and 5) 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 the guidance in SAB Topic 14, 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.

PwC Observation: The term "actively traded" is not defined in SAB Topic 14; however, Rule 101c of SEC Regulation M provides criteria 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 listed above, (2) how much longer the expected term of the employee option is than the remaining contractual life of the exchange-traded options, and (3) historical comparability of implied volatility levels with longer term observed 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.

Implied volatility may be considered credible when based on options that are traded with sufficient regularity to provide reliable price quotes on or near the employee stock option's grant date. It is best to use at-the-money or near-the-money traded options, which are typically the most actively traded as well as the closest match to employee stock options since employee stock options are usually granted at-the-money. However, if information on at-the-money traded options is not available, implied volatilities may be averaged for traded options with average exercise prices close to the exercise price of the employee stock options (for example, from both the in-the-money and out-of-the-money exchange-traded options with exercise prices closest to the price of the company's stock on the measurement date).

The SEC staff noted in SAB Topic 14 that when valuing an employee stock option, the implied volatility derived from a traded option with a similar term would be the most relevant. If there are no traded options with a term similar to the employee stock option's expected term, SAB Topic 14 states that the company should consider only traded options with a maturity of six months or greater (unless a term-structure is being explicitly estimated using at least some data based on options with remaining terms longer than six months). If implied volatility is based on traded options that differ substantively from the employee stock options (or is based on traded options with terms between six months and one year), it would be inappropriate to rely solely on implied volatility in determining the volatility assumption. In addition, for employee options with expected terms significantly greater than the remaining contractual terms of existing traded options, it may be more appropriate to blend implied and historical volatility weighted to reflect the difference between the contractual term of the traded options and the expected term of the employee stock options.

PwC Observation: As discussed above, if a company cannot identify an at- or near-the-money traded option, SAB Topic 14 allows a company to select multiple traded options with an average exercise price close to the exercise price of the employee share option. However, we believe that use of "close" in this context should be interpreted narrowly. It would not be appropriate for a company to use an average volatility based on traded options with a wide range of exercise prices. For example, footnote 48 of SAB Topic 14 illustrates the weighting of two traded options with exercise prices within the range of \$50 to \$55.

Some consultants develop forecasts based on implied volatilities for multiple companies so that companies without implied volatility can be matched to the most similar companies for which implied volatility information is available (a process similar to peer-group matching for companies with insufficient relevant historical data for expected term). Such implied volatility peer-group comparisons will involve identifying several levels of comparison (company-to-company, and traded option-to-employee option) and require careful consideration before determining that it is reasonable and supportable for the particular company that wishes to use this method.

7.3.3 Blended Volatility

After assessing all available information on historical and implied volatility, a company may conclude that a combination of both historical and implied volatilities provides its best estimate of expected volatility. The company's implied volatility may be used, but should be blended with other information (such as historical or peer group data), when based on traded options with terms between six-months and one-year.

Blending of implied and historical volatility also should be considered whenever there is not robust trading activity in exchange-traded options, or when the expected term of employee options is significantly longer than the remaining contractual term of traded options, or when the term structure of implied volatility exhibited with traded options of varying contractual terms is unstable.

SAB Topic 14 stresses that a company's process to gather and review available information to estimate expected volatility should be consistently applied. However, 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. In other words, a change in the relative weightings of contributory sources of information about volatility (for example, switching from a 50%/50% average of historical and implied volatility, either to a 100% historically-based estimate or to a 100% implied-based estimate) would need to be accompanied by sound rationale supporting the new estimate being more appropriate than the previous estimate.

PwC Observation: Situations occasionally arise in which shifts in methodology will be necessary (for example, when previously-used historical or implied information is no longer currently available or has changed greatly in its apparent reliability). However, changes in a company's volatility estimation-method should, in general, be rarely made and in each case need to be accompanied by clear reasoning based on objective circumstances related either to the availability and reliability of source information (or to development of new methods that can be shown to predict volatility with greater accuracy). Large swings in historical and implied volatility levels do not by themselves comprise a reason why changes in estimation methods would be considered justified. Companies should therefore select their method for estimating volatility with care and apply it consistently, as both historical and implied volatility will inevitably fluctuate over time.

PwC Observation: When estimating expected volatility, if (i) a company has some, but not all, of the SAB Topic 14 conditions to exclusively rely on historical or implied volatility, (ii) the term structure of implied volatility is unstable, or (iii) the expected option life is significantly greater than the contractual term of traded options, the company should consider using a blended method. A combination of both volatility measures may provide the best estimate of expected volatility because it captures the mean reversion concept by weighing both (longer term) historical and (near term future) implied 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 the following case study.

Case Study 2: An Approach for Estimating Volatility Using Multiple Data Sources

In early 2005, Company A acquires 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 during 2004. Once the deal closes, the combined company's shares become less volatile, eventually approaching Company B's more stable historical volatility levels.

On January 1, 2008, the combined company issues employee stock options. Because it has only three years of data as a combined company, it also looks at peer-group volatility data for the post-acquisition period. During this time, average historical estimated one-year volatilities for the peer-group of companies were consistently below the average historical estimated one-year volatility of the combined company. This scenario is illustrated as follows:

Pre-Acquisition Volatility (based on weekly prices)

Year	Company A	Company B
2002	65.4%	33.8%
2003	77.3%	43.3%
2004	69.7%	71.1%

Post-Acquisition Volatility (based on weekly prices)

Year	Combined Company	Average Peer Group
2005	56.5%	48.1%
2006	53.8%	45.8%
2007	39.3%	33.5%
Three-year historical estimates	50.8%	43.3%
Two-year historical estimates	48.0%	39.0%

The volatility of exchange-traded options on the combined company's shares is also assessed for dates near the end of December 2007. These traded options have contractual terms of four to eight months. Management excludes from its analysis information on thinly traded options and uses 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 2007.

The implied volatilities calculated from the traded options are lower than the historical volatilities of either the predecessor company or of the peer group:

Trade Date	Remaining Term (as of Trade)	Implied Volatility
December 28, 2007	8 months	32.4%
December 29, 2007	4 months	31.3%
December 30, 2007	8 months	29.8%
Average		31.2%
Average (excluding four-month option)		31.1%

How does management use this data to develop an expected volatility assumption for the options granted in early 2008 with a three-year expected term, a ten-year contractual term, and a one-year cliff-vesting service condition? Because the company uses the Black-Scholes model, it will develop a single volatility estimate for the options' expected term. It begins with the combined company's historical three-year volatility of 50.8 percent.

Management believes that the average combined companies' stock-price volatility was elevated during the year prior to and the year after the acquisition (2004 and 2005) due to uncertainties surrounding the integration. Because the combined

company does not envision an acquisition of this magnitude in the foreseeable future, it expects near term future volatility to be much lower, perhaps as low as the 2007 level of 39.3 percent. The consistently lower peer-group volatilities from 2005 to 2007 appear to support this assumption.

However, because management recognizes 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 (2006 through 2007) is considered 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 in 2002 and 2003 after considering the cyclical market/industry downward volatility trend over the past six years. Using these latter two years' data, management arrives at a two-year historical estimate of 48.0 percent, despite the fact that there is a three-year expected term assumption, noting that the peer group three-year historical volatility was 43.3 percent.

Next, management considers 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 decides to consider all of the above factors when estimating its expected volatility estimate. As a result, the company applies its judgment and devises a weighting scheme to combine historical and implied volatility. Giving the average implied volatility (using only available exchange-traded options with remaining contractual terms to expiration that are greater than 6 months in length) a weight of one-quarter to one-half is considered reasonable, given the differences between the exchange-traded options and employee options, the mid-point of these possible weightings is used. This results in a 37.5 percent weighting for the implied volatility estimate and a 62.5 percent weighting for the two-year historical volatility estimate.

Using these percentages to weight the average implied volatility for traded options with eight-month terms and the two-year historical average yields the following blended volatility estimate:

$$\begin{aligned} \text{Implied} + \text{Historical} &= \text{Expected} \\ (31.1\% \times 37.5\%) + (48.0\% \times 62.5\%) &= 41.7\% \end{aligned}$$

The company uses this weighted-average as the expected volatility assumption in determining the fair value of the company's new employee stock options. The historical three-year-average peer-group volatility of 43.3 percent is not used directly but helps corroborate the reasonableness of this approach. Also, the company could have considered peer group implied volatility, but deemed it unnecessary.

7.3.4 Comparing Expected Volatility Assumptions under Black-Scholes and Lattice Models

As described in section SC 7.1 titled "Background," the Black-Scholes model uses a single number to represent the expected volatility of the underlying stock price over an option's expected term. By 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 Case Study 2, 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.

PwC Observation: In many cases, companies may continue to use a constant volatility assumption in a lattice model because accurately predicting year-by-year changes in volatility may be difficult. However, when recent short-term historical volatility (or implied volatility) differs greatly from longer-term volatility, and a lattice model is being used, the explicit use of year-by-year volatility estimates or the term structure of volatility over the entire contractual term of an option should be considered in order to optimize the ability of the lattice model to provide a more refined fair value estimate.

7.4 Additional Disclosures under SAB Topic 14

A company that elects to use the SAB Topic 14 simplified method for estimating expected term for its “plain-vanilla” options should disclose in its footnotes to the financial statements: the use of this method, the reason why it was used, which stock options were valued using this method if all stock options were not valued using this method and the periods it was used if it was not used in all periods. If a company does not use the SAB Topic 14 simplified method, then its use of historical company experience, peer group experience and/or implied volatility should be disclosed.

Under ASC 718, a company should disclose in the footnotes to its financial statements how it determined the expected volatility assumption (e.g., whether it used only implied volatility, historical volatility and for what time period(s), or a combination of both and the respective weighting). Under SAB Topic 14, a company should additionally consider the implications of its expected volatility analysis under critical accounting policies and estimates in MD&A, which may include:

- An explanation of the method used to estimate the expected volatility of its stock price; and
- The basis for the company’s determination or change in methodology to use historical volatility, implied volatility, or a combination of both, including a summary of its evaluation of the factors listed above.

7.5 Risk-Free Interest Rates

7.5.1 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. The Black-Scholes model typically uses the implied rate on the grant date for a traded zero-coupon U.S. Treasury bond 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. Companies issuing options with exercise prices denominated in a foreign currency should use a local foreign rate on a risk-free instrument that has one payment, or may possibly use forward currency exchange rates combined with U.S. risk-free rates. If an option’s expected 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.

7.5.2 Risk-Free Interest Rates in Lattice Models

Lattice models require risk-free interest rates for all potential times of exercise obtained by using a grant-date yield curve. 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.

7.6 Expected Dividend Yields

7.6.1 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 the amount of cash dividend payments at the grant date will be constant in the future. Under some common circumstances, the dividend yield assumption may be determined as an average of several recent dividend payments divided by the stock price on their respective declaration dates. This method works as long as 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 percent. This company could estimate its dividend yield over a longer period, perhaps one as long as 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 forecast a continuation of those increases regardless of future changes in the stock price. 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.

7.6.2 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 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.

7.6.3 Dividend-Protected Awards

Generally, option holders are not entitled to receive dividends that are paid on the underlying shares of the option. Certain stock options 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 may result in somewhat larger effects. Companies should assess the impact of other features on the fair value of the stock option, taking into account the form of dividend protection provided. See section SC 1.15 titled "Accounting for Dividends Paid on Stock-Based Compensation Awards" for guidance on the accounting treatment of cash dividend payments received by option holders.

Chapter 8:

Plan Design Considerations

Chapter 8: Plan Design Considerations

For many companies, implementation of ASC 718, *Compensation—Stock Compensation* was the first step in reconsidering their compensation strategy. Companies addressed the practical implementation challenges and some have reduced compensation cost by limiting the number of stock-based compensation awards they grant or by granting awards with features that result in lower fair values. Subsequently, companies have been reassessing the design of their stock-based compensation plans with a focus on the plans' overall effectiveness for stakeholders, including shareholders, while optimizing the efficiencies of these plans.

Companies are now faced with a new set of challenges for plan design with respect to valuation, share utilization, target setting and preparation for upcoming regulatory challenges on the horizon such as convergence of U.S. and International accounting standards. In many cases, there is often disparity between the cost of these equity programs reflected in the financial statements and the value perceived by employees, which is forcing companies to consider alternative plans, vehicle mixes, and opportunity levels.

By mandating that companies recognize compensation cost for all forms of stock-based compensation, ASC 718 eliminated the historic bias toward fixed stock options with time-based vesting conditions that existed previously. ASC 718 therefore allows a company to design its stock-based compensation plans on an accounting cost-neutral basis and to consider forms of stock and/or cash awards that previously resulted in unfavorable accounting consequences, as part of its effort to meet the objectives of attracting and retaining key employees, pursuing business and compensation strategies, and ultimately driving greater increases in shareholder value.

In addition to accounting requirements, other regulatory and external forces influence compensation strategies. As discussed in section SC 4.27 titled "Summary of IRC Section 409A" in Chapter SC4, Congress enacted deferred compensation income tax legislation (IRC Section 409A) that treats stock-based compensation as deferred compensation and, for certain forms of awards, increases the employee's tax burden. Similarly, investors' greater emphasis on corporate governance and stock-based compensation plan transparency also influence the design of compensation plans. The Dodd-Frank Wall Street Reform and Consumer Protection Act was signed into law on July 21, 2010. The Act requires that all U.S. public companies incorporate clawback provisions into their incentive compensation arrangements for executive officers, and also provides for further disclosures around executive compensation, as well as subjecting compensation plans to periodic shareholder advisory votes. Finally, SEC proxy disclosure rules require companies to disclose relevant information so that investors and other parties can readily determine the total amount of compensation that is awarded to executive officers and how the compensation committee reached its decisions.

This chapter is intended to assist companies and the designers of stock-based compensation plans to better understand the key issues that are likely to affect how stock- and cash-based long-term incentive plans are designed in light of ASC 718. It covers the following topics:

- Recent Developments in Stock-Based Compensation.
- The Role of Stock-Based Compensation under ASC 718.
- Plan Design Process: An Expanded Set of Constituents.

- Plan Design Alternatives.
- Stock-Based Compensation Benchmarking Challenges.

8.1 Recent Developments in Stock-Based Compensation

Over the past decade, we have seen dramatic changes regarding the role of stock-based compensation. Beginning in 2002, as a consequence of lower stock valuations, investors' concerns about dilution to existing shareholders, and the issuance of new accounting rules for stock-based compensation, companies started to reduce their use of fixed stock options and grant other instruments, such as restricted stock or restricted stock units.

Many companies are reconsidering the impact of long-term incentive vehicles (cash vs. equity), and in the case of equity, the impact to the employee and company upon grant. If a company is considering making changes to its compensation plans, it should consider the following factors:

Increased Use of Restricted Stock: The decline in the stock market in the early 2000s tempered many employees' belief that they would become wealthy through appreciated stock options. This lowered or eliminated employees' perceived value of their stock options (i.e., perceived value reflects the employee's expectation about future stock-price increases) and adversely affected a company's ability to deliver competitive levels of compensation through stock options. As a result, many companies, particularly in industries with flat or declining stock prices, have begun to grant restricted stock (or restricted-stock units) in place of, or as a supplement to, stock options.

Institutional investors and their advisors have consistently expressed concern that significant use of restricted stock provides too much downside protection for employees (i.e., it provides employees with value even if the company's stock price declines sharply) and creates excessive costs for investors. It is important for companies to strike the right balance on the use of restricted stock to address employee retention issues and the concerns of shareholders.

Performance Conditions for Restricted Stock/Units: IRC Section 162(m) provides that a public company cannot deduct compensation that it pays to its top officers if the compensation exceeds \$1 million per year, unless certain requirements are met. The requirements that apply to an at-the-money stock option are relatively easy to meet. However, companies that switched from granting stock options to granting restricted stock have discovered that the requirements to achieve the tax deduction for restricted stock are much harder to meet. Companies that wished to avoid losing the federal income tax deduction for restricted stock discovered it necessary to adopt performance condition vesting requirements to make restricted stock tax deductible, as discussed in section SC4.25 titled "Limitations on Stock-Based Compensation Tax Deductions" in Chapter SC4.

Performance condition vesting requirements also address some of the concerns that investors have regarding the risk profile and cost of restricted stock/units. Performance condition vesting requirements have primarily been used for relatively senior-level employees, although we have seen expanded use of more, and more complex, performance awards to broader employee populations.

PwC Observation: As discussed in section SC1.8.2 titled “Definitions of Vesting Conditions” in Chapter SC1, ASC 718 defines market conditions, performance conditions, and service conditions as factors affecting 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” will raise both tax and accounting considerations and will therefore require integration of human resources, tax, and finance personnel.

Improved Corporate Governance and Transparency: Shareholders, institutional investors, and regulators have heightened their scrutiny of executive behavior. They question whether stock-based compensation, and specifically options, cause executives to make decisions primarily to drive increases in stock price or manipulate stock plans to take advantage of stock price volatility. This has caused some companies to redesign their compensation plans, alter grant practices, and enhance disclosures related to their plans to address or mitigate these concerns. Specific changes undertaken by companies include lengthening the vesting schedules, setting mandatory holding periods, establishing guidelines for net share retention, and adding clawback provisions. As part of the SEC executive compensation proxy disclosure rules, the Compensation Discussion and Analysis (“CD&A”) section is to provide clarity and transparency and help readers of the proxy to understand the rationale behind the company’s compensation decisions. The CD&A is to be written in clear, concise language without “legalese.” The CD&A should cover the compensation program’s objectives, specific elements of compensation, what the program is designed to reward, why the specific pay elements are chosen, how the award amount is determined, and how each element fits into the overall compensation objectives. The SEC states that the purpose is to “provide material information about the compensation objectives and policies for named executive officers without resorting to boilerplate disclosure.” The intent is to eliminate any ambiguity that may have previously existed.

Focus on Compensation Risk Alignment

Regulatory guidance from the Federal Reserve (for financial services companies) and from the SEC (for all public companies) has resulted in companies reviewing how the design and structure of their compensation programs as well as the underlying processes that govern these plans are aligned with broader risk management principles. Among the principles emerging from this guidance are the following:

- Greater emphasis on risk adjustment in the determination and delivery of compensation.
- Stronger alignment of the time horizons under which compensation is delivered and the underlying profitability (e.g., through more significant and longer term deferrals).

These reviews have an impact on equity compensation. First, companies may make greater use of equity compensation as a delivery mechanism for incentive compensation, with performance-based and/or longer term time-based vesting criteria. This will create a greater appetite for equity and may ultimately put pressure on the overall dilution of investors arising from equity incentive plans.

Second, companies have been making greater use of clawback provisions. Such provisions allow companies to reclaim previously awarded compensation if circumstances later indicate the compensation might not have been appropriately earned.

Sarbanes-Oxley

Some clawback features have long been part of compensation arrangements as Sarbanes-Oxley called for clawbacks of CEO and CFO compensation in the case of restatements. 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 an executive from bringing other employees along to a new employer).

The Dodd-Frank Act

The Dodd-Frank Act requires national security exchanges to adjust their listing standards 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 would have been paid to current or former 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 *misconduct* leading to restatement of the financial statements.

Although the SEC has not yet issued the detailed regulations to implement the Dodd-Frank requirement, companies are currently developing contracts with new clawback provisions to address:

- Conduct that is detrimental to the company;
- Actions that result in restatement of the financial statements or other financial harm to the company;
- Whether expected profits have actually been achieved, when considered in hindsight against performance-based measures;
- Violations of established risk management policies, considering both quantitative and qualitative measures; and
- Other factors that, in the discretion of management or the compensation committee, represent improper behavior.

These new 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.

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(s) who failed to catch the error.

If clawbacks are to be tied to performance-based measures, the company will 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. Finally, since clawbacks entail recovering compensation that has already been awarded, enacting a clawback may result in litigation.

As discussed in section SC1.7.12 titled "Other Measurement Issues: Reloads and Clawback Features" in chapter 1, the accounting guidance for many clawbacks is generally straightforward. However, the new breed of clawback features may pose accounting challenges. For example, depending on the level of discretion or subjectivity built into the clawback, the accounting "grant date" of a stock-based compensation award could be delayed, possibly resulting in mark-to-market accounting until the grant date is established. In addition, if the clawback could be considered a performance condition of the award (i.e., a prerequisite for earning the award), the recognition of the compensation expense could be altered.

Executive compensation disclosures: The Dodd-Frank Act requires companies to describe in the proxy statements the relationship between executive compensation actually paid and the company's financial performance. A comparison between actual pay and financial performance may cause companies to rethink their compensation structures and the disclosure in their MD&A to include graphical presentations that demonstrate the relationships between actual pay and performance in various elements of compensation.

Responses to Tax Legislation: As discussed in section SC4.27 titled "Summary of IRC Section 409A" in Chapter SC4, changes in the tax law altered the timing of the employee's taxation for awards such as discounted stock options and cash-settled SARs. Under IRC Section 409A, these awards are taxed on the date of vesting, even if they have not yet been exercised. Because this places an income tax burden on employees, and requires that the employer withhold and pay the income tax to the IRS, most companies are avoiding or discontinuing granting discounted stock options and cash-settled SARs.

8.2 The Role of Stock-Based Compensation under ASC 718

Stock options, restricted stock, and other long-term incentives have become 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. While ASC 718 and other recent developments have accelerated the rate of change in the design and implementation of new long-term incentive strategies, stock-based incentives continue to be a very important way for companies to compensate and motivate key employees.

Distilled to its essence, compensation serves three principal objectives:

- Attracts, motivates, and retains employees.
- Rewards employees for achieving objectives that, directly or indirectly, drive long-term shareholder value.
- Represents an acceptable cost for the company's owners.

The benefits of stock-based compensation are being re-evaluated in light of ASC 718 and these objectives. Comparisons to alternative forms of compensation (including alternative forms of equity), cash, and broader employee benefits are also being performed.

Stock-based compensation will continue to be important for a number of reasons:

- Companies in certain high-growth and emerging industries will continue to use stock options as an important means of compensation, both to build a broad ownership culture and to respond to near-term cash flow constraints.
- Compensation packages for top officers and key employees will continue to be highly biased towards stock-based compensation, with an emphasis on long-term stock ownership to address risk management concerns and achieve close alignment with shareholders.
- Employee ownership that is supported through different forms of stock-based compensation offers various tangible and intangible benefits to employers and employees.

On the other hand, a cost/benefit analysis may highlight that current stock-based compensation awards do not provide perceived value to the employee commensurate with their cost to the company, which may move companies away from fixed at-the-money options and to a broader array of stock-based compensation designs. A cost/benefit analysis may also lead to different conclusions for various employee demographics, resulting in different stock-based compensation programs across those groups. The tax and accounting implications of alternative plan designs should be considered as plan design changes are proposed. Figure 8-1 summarizes these matters for 15 major categories of employee stock-based compensation awards.

Figure 8-1: 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 (Nonqualified) 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
<div>Description</div> <div>Stock option with exercise price equal to stock price at grant date, vests based on continuous employment over specified time period</div>	<div>Same as nonqualified at-the-money stock option except for special tax treatment if the option complies with IRC requirements</div>	<div>Stock option with exercise price less than stock price at grant date</div>	<div>Option with exercise price set higher than grant date stock price</div>	<div>Employee receives stock equal to intrinsic value at exercise; otherwise identical to nonqualified stock option; may be at-the-money, discounted or premium exercise price</div>	<div>Same as stock-settled SAR except intrinsic value at exercise paid in cash</div>	<div>Grant of shares (restricted stock) or promise to issue shares (RSUs) upon completion of service condition</div>	<div>Restricted stock or units that vest based on time-based vesting plus attainment of non-stock-price-related performance conditions (e.g., revenue or EPS)</div>
<div>Pros</div> <div>Employee benefits from stock price increases; can be issued to employees and directors; simple to understand; provides more 'upside' potential than restricted stock; easily qualifies for IRC Section 162(m)</div>	<div>Same as nonqualified at-the-money option except employee may receive capital gain treatment instead of being taxed as ordinary income</div>	<div>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</div>	<div>No value to employee unless stock price rises above premium; increases motivation; reduces fair value</div>	<div>Same as nonqualified stock option plus exercise price need not be paid by employee, and reduces dilution compared to broker-assisted exercise</div>	<div>Same pros as stock-settled SAR except for accounting under ASC 718 and no share dilution</div>	<div>Simple for employees to understand; provides value if stock price declines; less share usage as compared to stock options</div>	<div>No expense unless performance target attained; employee motivated to reach targets; shareholders also benefit if targets reached</div>

At-the-Money Stock Options (Nonqualified) 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	
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

(continued)

At-the-Money Stock Options (Nonqualified) 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
U.S. 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 income	Employee: Under IRC Section 409A, discounted options treated as deferred compensation with employee taxed at vesting Employer: Deduction equal to employee's income	Same as nonqualified at-the-money 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 expiration 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 appreciation 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
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

(continued)

Performance Shares with Market Conditions		Options with Performance Conditions	Awards with Vesting Accelerators	Indexed Option	Reload Options	Maximum Value Options	Phantom Stock
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
U.S. 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	Same as nonqualified options or restricted stock

Figure 8-2 outlines the cost/benefit relationship that should be considered as plan design changes are proposed. Figure 8-3 summarizes some of the practical implications of ASC 718 on plan design.

Figure 8-2: The Cost/Benefit Relationship

Companies should attempt to estimate the perceived value for its employees of its stock-based compensation plans 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 and the perceived value related to stock-based compensation:

- 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).
 - Empirical data regarding observed trades of cash for stock-based compensation over the past 15 years confirms that the stock-based compensation in such trades typically has a premium placed on it (e.g., \$12,000 of stock-based compensation is 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 equity and cash compensation. Perceived value is a temporal notion that hinges on current economic and market factors.
-

Figure 8-3: Practical Implications of ASC 718 for Stock-Based Compensation 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, compensation cost, cash flow, and administrative costs.
- Re-evaluate the total compensation mix (e.g., cash vs. equity) to optimize value for total compensation cost.

(continued)

- 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-U.S. 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.
-

8.3 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 8-4 summarizes the roles of the members of a company's plan design team.

Figure 8-4: 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 U.S. 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

PwC Observation: 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.

8.4 Plan Design Alternatives

8.4.1 Stock Option Variations

Many companies grant stock options as their primary or only long-term incentive compensation. These companies should evaluate whether prior stock option grant practices and/or stock option terms should move away from the traditional 10-year at-the-money option to reduce compensation cost without significantly affecting the options' value for the plan's employees, through the use of the following strategies:

Reduced-Term Stock Options: Historically, most stock options had a contractual term of ten years. A company may reduce compensation cost by shortening the option's contractual term (e.g., from ten years to five years). However, this approach is effective only if employees are expected to modify their exercise behavior in a like manner. For example, if a company's employees typically exercise their ten-year contractual-term options within four years of the grant date, reducing the contractual term from ten years to five years may have little or no effect on the expected term of the options and consequently have little or no impact on the associated compensation cost.

Premium-Price Stock Options: The exercise price for premium options is set above the company's stock price on the grant date (i.e., the option is granted out-of-the-money). Increasing the exercise price, all else held constant, reduces the option's fair value. However, this award also reduces the employee's perceived value because the option is underwater on the grant date. Some companies have granted premium options to encourage employees to drive stock-price increases and to reduce the company's compensation cost.

Indexed Stock Options: The exercise price for indexed stock options varies with an index (e.g., the S&P 500 or an industry-specific index). The theory behind indexed options is that the rewards are isolated from the broad effects of a market or industry, thereby providing a more precise measure of the issuer's performance. A stock price that increases, but that does so to a lesser degree than the corresponding index, will result in no gain to the employee. On the other hand, a stock price that decreases, but does so to a lesser degree than the corresponding index, will create a positive reward. Indexed options typically have a fair value that is lower than a fixed stock option, but they will also have a lower perceived value as well.

Performance Targets: As discussed in section SC1.8 titled "Equity-Classified Awards" in Chapter SC1, awards with performance and market conditions have different valuation and attribution requirements under ASC 718 but generally result in fixed compensation cost.

Maximum Value Stock Options: Employee stock options typically do not limit the growth of an option's intrinsic value. So, if the price of the underlying stock increases tenfold, the employee is entitled to the intrinsic value that reflects the tenfold increase in the underlying stock's price. Limiting the employee's potential gain by capping the maximum value that the option can generate (e.g., if the intrinsic value of the award exceeds \$50, the employee can only capture a gain of \$50) reduces the option's fair value, especially for highly volatile stocks.

8.4.2 Other Forms of Stock-Based Compensation

Stock-Settled SARs: A stock-settled SAR provides the employee with the intrinsic value of the award on the exercise date. This gain is settled by the company

delivering shares of the company's stock to the employee. The economics and compensation cost of a stock-settled SAR are identical to the economics of a stock option, except that in the case of a stock-settled SAR, the participant need not purchase shares (at the exercise price), and fewer shares are issued upon exercise (only shares equal to the intrinsic value are issued). Therefore, the dilution to the existing shareholders that results from stock-settled SARs is less than the dilution resulting from a similar grant of stock options. Lastly, stock-settled SARs can be designed with many of the same variations that are described above for stock options.

Restricted Stock or Restricted Stock Units: Restricted stock, unlike a stock option, provides employees with protection against declines in the underlying stock. Therefore, it takes fewer restricted shares to provide the same fair value and perceived value that a larger number of stock options provide. In a variety of market environments, the likelihood that employees will retain restricted stock is greater than the likelihood that they will hold onto stock options, since restricted stock has value even if stock prices decrease. On the other hand, a restricted stock grant has less upside potential and leverage than a stock option grant of equal fair value.

Additionally, restricted stock provides a means of rewarding employees through dividends, which are typically not provided to option holders. For public companies with a substantial dividend yield, restricted stock represents a more efficient means of providing employees with a total return security. However, if dividend rights are non-forfeitable (meaning that once paid, recipients retain the cash paid for dividends even if the shares are ultimately forfeited for failure to meet the vesting requirements), there may be an adverse impact on EPS under ASC 260—*Earnings Per Share*. Therefore, companies may consider designing a plan to make dividends forfeitable until the restricted stock vests.

Restricted stock units (RSUs) provide the same economic value as restricted stock but represent a promise to deliver shares in the future rather than a grant of shares (with voting and dividend rights). RSUs that are settled in stock are accounted for exactly the same under ASC 718 as restricted stock. Companies that grant stock-based compensation awards globally may receive more favorable tax treatment in certain tax jurisdictions by using RSUs. Another possible benefit of using RSUs is that the employee's taxation can be deferred beyond the vesting date (as long as elections and distributions are made in accordance with IRC Section 409A).

In their most common form, restricted stock or RSUs vest upon completion of a service condition. For this reason, grants of restricted stock or RSUs are often criticized as having a limited performance incentive when compared with stock options. Further, institutional shareholders are more likely to limit the number of shares that are available for grants of restricted stock than to limit the number of shares available for stock options, since the transfer of value per share is greater in the case of restricted stock. Finally, companies with restricted stock must comply with additional requirements, as compared to stock options, to be exempt from the limitations of IRC Section 162(m).

Restricted Stock/RSUs with a Performance or Market Condition: Restricted stock with a performance or market condition (generally characterized as performance shares) represent a variation of restricted stock/RSUs. With performance shares, vesting is conditional on the fulfillment of a performance or market condition, which can be based on various metrics, typically over a multi-year period. Vesting can further be expressed as a sliding scale—less than the targeted number of shares for performance that lags expectations and more than the targeted

number of shares for performance that exceeds expectations. Performance shares, therefore, allow participants to be rewarded both for increases in the company's stock price as well as for operating achievements.

As noted in section SC1.8 titled "Equity-Classified Awards" in Chapter SC1, the accounting treatment for performance shares depends on whether the metrics are based on a performance condition (such as net income, EPS, etc.) or on a market condition (such as the underlying stock performance relative to an index).

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 percent and eliminating the look-back provision (results in no charge).
- Keeping the 15 percent discount 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)).

8.4.3 Adding Performance and Market Conditions to Long-Term Incentives

There are a number of ways to incorporate performance and market conditions into long-term-incentive plans, while still resulting in a fixed measurement of fair value at the grant date. These include the following:

Performance-Based Grants: Under this approach, the number of awards that are granted or earned varies with the fulfillment of the performance condition (a sliding scale of achievement might be used). This type of grant also allows companies to calibrate compensation cost for stock-based compensation to financial or operating performance.

Performance-Based Vesting / Exercisability: As with an award in a performance-based grant, an award under this approach vests or becomes exercisable only if performance and/or market-based targets are achieved during the designated period. Again, a sliding scale of achievement can be used. If the threshold performance condition is not fulfilled, the awards are forfeited.

Performance-Accelerated Vesting: Under this approach, an employee’s vesting in an award is based on time (i.e., a service condition), and vesting accelerates if performance and/or market-based conditions are achieved prior to the completion of the service condition. If the performance target is not achieved, the award vests based on the service condition.

Under each of these approaches, companies must establish appropriate metrics, as well as calibrate the threshold, target, and premium levels of achievement.

Operating metrics should be comprehensive in nature (e.g., taking into account both the level of and growth in profitability, as well as reflecting capital utilization and risk) and linked to the company’s business strategy.

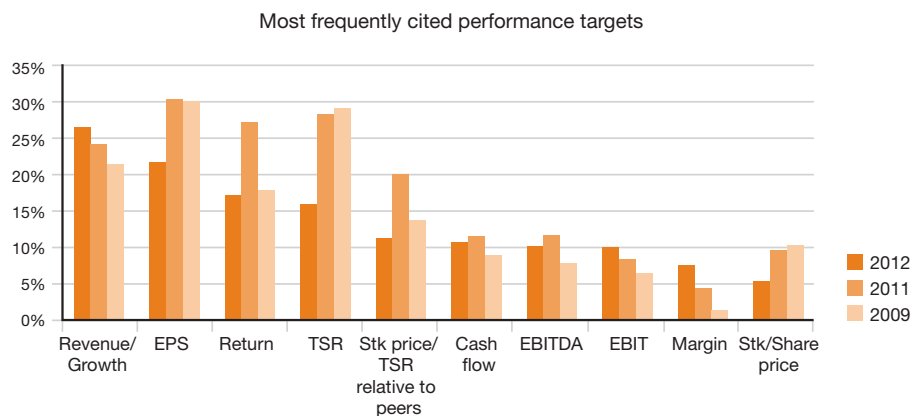
Calibration of either a performance or market condition should take into account a company’s strategic plan, investor expectations, peer performance, and volatility in results, all of which should add up to probable outcomes in the desired incentive zone.

Multi-year awards based on performance targets in future years pose a special challenge. If the targets for future years are to be set at a future date (e.g. at the beginning of each relevant year), then the award may not qualify as having a grant date until the performance target for the year is set, as discussed in section SC1.9.1 titled “Grant Date” in Chapter SC1. But setting future year targets in advance can limit the effectiveness of the performance incentive. Companies wishing to issue such awards will need to carefully consider their structure and the related accounting against the goals of the plan.

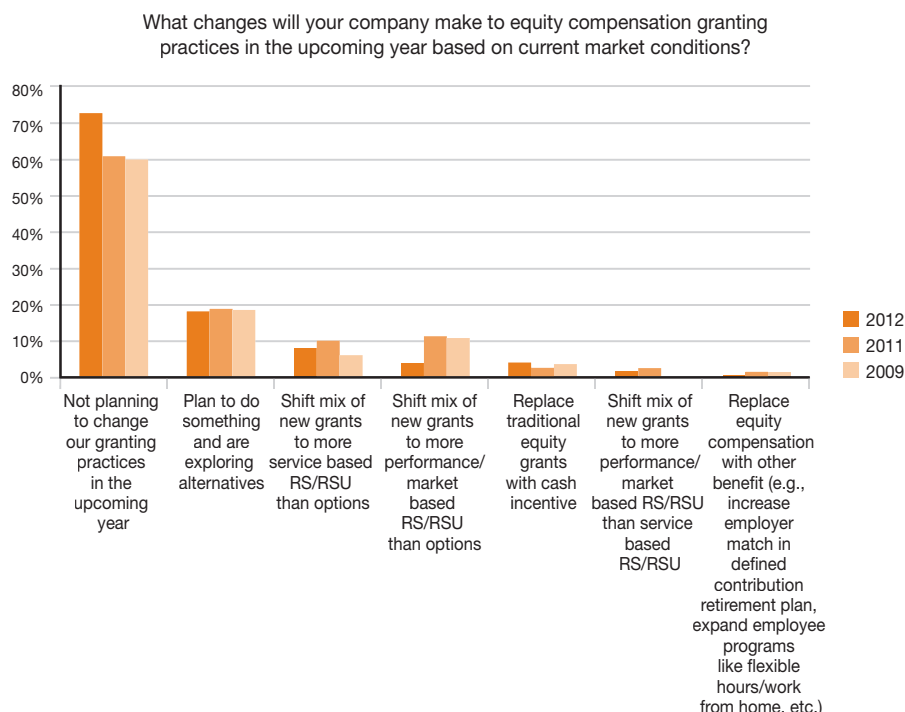
8.4.4 Recent Trends Within Equity Compensation

The 2012PwC Global Equity Incentives Survey reflects that participation in service and market based plans continued to be prevalent in 2012 as compared to 2009, with companies generally granting more equity to employees at all staff levels. Companies continue to focus on performance-based awards based on various performance targets to align recipients with shareholder interests.

The chart below summarizes the trend of performance and market targets from 2009 to 2012. The biggest shift in performance targets is to revenue growth and earnings per share.



The chart below summarizes what the survey participants are doing in terms of redesigning future plans as a result of the current environment. Approximately 25% percent are planning on doing some kind of redesign to their plans.



8.5 Stock-Based Compensation Benchmarking Challenges

The proliferation of alternative stock-based compensation designs makes benchmarking stock-based compensation, long-term incentive compensation, and total compensation challenging. When most companies relied on a single form of stock-based compensation (fixed stock options), determining relative values of long-term incentives across companies was relatively straightforward. As companies begin offering combinations of stock options, restricted stock, and awards with performance and market conditions, with each component carrying different risks, it is more difficult to consolidate and compare data across companies. The following issues should be addressed to assess a company's plan design against other companies:

- The lack of available information may make it difficult to collect enough detailed information to develop benchmark data about new plan designs and about forms and sizes of employee awards.
- For instance, current market surveys and proxy data generally lag the actual market by about a year, making it difficult to ensure that collected data actually reflect the current economic landscape.
- Although the executive compensation proxy disclosure rules require more extensive disclosure of performance metrics and "degree of difficulty" of achieving target and maximum levels under these metrics, disclosures remain difficult to compare across companies, resulting in continued benchmarking challenges relative to the grant date value of performance-based equity grants.
- Published surveys regarding companies' plans, grant practices, and award levels may provide inadequate data for the type of analysis that would help companies resolve difficult and complex plan-design questions.

Chapter 9: Illustrations

Chapter 9: Illustrations

This chapter presents four examples of the accounting that ASC 718, *Compensation—Stock Compensation*, requires for certain common situations. Each example consists of explanatory text and sample journal entries. Because not all stock-based compensation awards are the same, these examples should not be relied on for all types of transactions or events. The examples address the following transactions:

- A Nonqualified Stock Option with Graded-Vesting Attribution.
- A Nonqualified Stock Option with Straight-Line Attribution.
- A Nonqualified Stock Option with a Performance Condition.
- Cash-Settled SARs with a Performance Condition.

This chapter also presents an example of the accounting for a share-based payment award to a nonemployee under ASC 505-50.

For examples related to a business combination, refer to PwC's A Global Guide to Accounting for Business Combinations and Noncontrolling Interests, section BCG3.4.

The assumptions presented below should be used for the examples related to employee awards unless noted otherwise. The same assumptions are used in Figure 6-6 of Chapter SC6. For the sake of simplicity, long-term vs. 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 section SC9.5 for the assumptions for the nonemployee award example.

Assumptions:

A U.S. public company has a calendar year-end. All of the awards granted in the following examples were granted to the U.S. employees of the company. As of December 31, 2009, the company determined that it has no pool of windfall tax benefits.

For Examples 1 and 2, the award is granted on January 1, 2010 and is a nonqualified stock option that has only a service condition. The pre-vesting annual forfeiture assumption on the grant date is 5 percent.	For Example 3, the award is based on similar assumptions, except that it has a performance condition.	For Example 4, the award is based on the same assumptions as those used in Examples 1 and 2 except that the award in Example 4 is a cash-settled SAR with a performance condition.
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The company's common stock has a par value of \$0.01 per share.

The company has an applicable tax rate of 40 percent. In each year, there is sufficient taxable income so that the company realizes any windfall tax benefits generated from the exercise of an award and it is more likely than not that the deferred tax assets will be realized (i.e., there is no valuation allowance). The company has elected to consider only the direct tax effects of stock-based compensation deductions when calculating windfall tax benefits and shortfalls.

(continued)

Number of options granted	100,000
Stock price on grant date	\$ 100
Exercise price	\$ 100
Vesting period	3 years, 33% at the end of each year
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.

9.1 Example 1: A Nonqualified Stock Option with Graded-Vesting Attribution

This example reflects the application of the graded-vesting attribution method to a nonqualified equity-classified stock option with a service condition. Each tranche (group of awards with the same features) has a different requisite service period during which employees will vest in the awards. At the end of 2010, employees will vest in 100 percent of Tranche 1, and will have completed 50 percent of the requisite service period for Tranche 2 and 33 percent of the requisite service period for Tranche 3, and so on in future years. The company applies an annual forfeiture-rate assumption of 5 percent to each tranche, which means that, at the grant date, the company expects that 95 percent of Tranche 1, 90 percent (.95 x .95) of Tranche 2, and 86 percent (.95 x .95 x .95) of Tranche 3 will vest.

The following three schedules present the number of options expected to vest, the related compensation cost, and the related income tax effects that are estimated from the grant date through the end of the requisite service period based upon the relevant assumptions.

Tranche	Number of Options	Proportion of Compensation Cost Recognized Each Year		
		2010	2011	2012
1	31,667	100%		
2	30,083	50%	50%	
3	28,579	33%	33%	33%
Totals	90,329			

Using fair value estimate of \$35.29 per option (certain amounts rounded):

Tranche	Number of Options	Compensation Cost Recognized Each Year		
		2010	2011	2012
1	31,667	\$1,117,528		
2	30,083	530,832	\$530,797	
3	28,579	336,184	336,184	\$336,185
Totals	90,329	\$1,984,544	\$866,981	\$336,185

(continued)

Tranche	Number of Options	Income Tax Effects Recognized Each Year		
		2010	2011	2012
1	31,667	\$447,011		
2	30,083	212,333	\$212,319	
3	28,579	134,474	134,473	\$134,474
Totals	90,329	\$793,818	\$346,792	\$134,474

The following schedule summarizes option activity throughout the entire contractual term of the award, showing the number of options each year that legally vest and the number of options exercised and cancelled.

Date	Vested	Exercised	Post-vesting Cancellations
12/31/2010	31,667		
12/31/2011	30,083		
12/31/2012	28,579		
12/31/2013			(6,000)
12/31/2014			(15,000)
12/31/2015		(50,000)	
12/31/2016			(4,000)
12/31/2017			(2,000)
12/31/2018			(329)
12/31/2019			(13,000)
Totals	90,329	(50,000)	(40,329)

(Note: The journal entries use the acronym SBC for the term “stock-based compensation.”)

(Note: From 2010 to 2012, actual forfeitures occur at a 5 percent annual rate, which equals the number of options that, on the grant date, the company estimated would be forfeited by employees because of their failure to complete the requisite service periods. The company, therefore, did not have to adjust its expected compensation cost to true-up its estimate of pre-vesting forfeitures.)

(continued)

Grant-Date and Requisite-Service-Period Entries

The following entries relate to option activity from 2010 through 2012:

	Dr	Cr
1) To recognize compensation expense in 2010 for the 2010 SBC award		
Dr Compensation expense	\$1,984,544	
Cr Additional paid-in capital		\$1,984,544
2) To recognize tax effects of SBC expense in 2010		
Dr Deferred tax assets	\$ 793,818	
Cr Deferred tax provision		\$ 793,818
3) To recognize compensation expense in 2011 for the 2010 SBC award		
Dr Compensation expense	\$ 866,981	
Cr Additional paid-in capital		\$ 866,981
4) To recognize tax effects of SBC expense in 2011		
Dr Deferred tax assets	\$ 346,792	
Cr Deferred tax provision		\$ 346,792
5) To recognize compensation expense in 2012 for the 2010 SBC award		
Dr Compensation expense	\$ 336,185	
Cr Additional paid-in capital		\$ 336,185
6) To recognize tax effects of SBC expense in 2012		
Dr Deferred tax assets	\$ 134,474	
Cr Deferred tax provision		\$ 134,474

Post-Vesting Cancellations

On October 1, 2013, employees who, collectively, had yet to exercise 6,000 options terminated their employment. The options remain underwater through December 31, 2013, resulting in the cancellation of the 6,000 options because of the provision in the option agreement truncating the contractual term to 90 days upon an employee's termination. Previous compensation expense is not reversed because the terminated employees completed the three-year service condition. The deferred tax assets to be written-off for the 6,000 cancelled options equal \$84,696 (6,000 options x \$35.29 x 40%) and is charged to income tax expense because the company does not have a pool of windfall tax benefits.

7) To write off deferred tax assets for the post-vesting cancellation of 6,000 options		
Dr Income tax provision	\$ 84,696	
Cr Deferred tax assets		\$ 84,696

On October 1, 2014, employees who, collectively, had yet to exercise 15,000 options terminated their employment. The options were underwater through December 31, 2014, resulting in the cancellation of the 15,000 options. The deferred tax assets that the company will write-off for those 15,000 cancelled options equal \$211,740 (15,000 options x \$35.29 x 40%) and is again charged to income tax expense because the company does not have a pool of windfall tax benefits.

(continued)

8) To write off deferred tax assets for the post-vesting cancellation of 15,000 options			
Dr Income tax provision		\$ 211,740	
Cr Deferred tax assets			\$ 211,740

Exercised Options

On December 31, 2015, employees exercised 50,000 options, when the market price of the company's common stock is \$140 per share.

The calculations of the tax implications resulting from the exercise of the options are summarized in the schedule below and followed by the corresponding journal entries:

Calculation of tax benefit:

Market price of shares (\$140 x 50,000 options)	\$ 7,000,000
Less: Exercise price (\$100 x 50,000 options)	5,000,000
Intrinsic value	\$ 2,000,000
Multiplied by applicable tax rate	40%
Tax benefit	\$ 800,000

Calculation of windfall tax benefit:

Intrinsic value	\$ 2,000,000
Less: Cumulative compensation cost (\$35.29 x 50,000 options)	1,764,500
Excess tax deduction	\$ 235,500
Multiplied by applicable tax rate	40%
Windfall tax benefit	\$ 94,200

9) To recognize the exercise of 50,000 options at an exercise price of \$100; the par value of the common stock is \$0.01			
Dr Cash	\$5,000,000		
Cr Common stock		\$ 500	
Cr Additional paid-in capital			\$4,999,500

10) To recognize windfall tax benefit for the 50,000 exercised options and to reverse the related deferred tax assets of \$705,800 (\$1,764,500 x 40%)			
Dr Income taxes payable	\$ 800,000		
Cr Additional paid-in capital		\$ 94,200	
Cr Deferred tax assets			\$ 705,800

Post-Vesting Cancellations

On October 1, 2016, employees who, collectively, had not yet exercised 4,000 options terminated their employment. The options remain underwater through December 31, 2016, resulting in the cancellation of their 4,000 out-of-the money options.

(continued)

Because the company now has a pool of windfall tax benefits of \$94,200 that were generated from the option exercises in 2015 (journal entry 10), the deferred tax assets can be charged to the pool of windfall tax benefits. The deferred tax assets related to the 4,000 cancelled options is \$56,464 ($4,000 \times \$35.29 \times 40\%$). The pool of windfall tax benefits will have an ending balance of \$37,736 ($\$94,200 - \$56,464$) as of December 31, 2016.

11) To write off the deferred tax assets for the post-vesting cancellation of 4,000 options		
Dr Additional paid-in capital	\$56,464	
Cr Deferred tax assets		\$56,464

On October 1, 2017, employees who, collectively, held 2,000 options terminated their employment without exercising those options. The options remain underwater through December 31, 2017, resulting in their cancellation.

Because the company still has a pool of windfall tax benefits of \$37,736, the deferred tax asset can be charged to the pool of windfall tax benefits. The deferred tax asset related to the 2,000 cancelled options is \$28,232 ($2,000 \times \$35.29 \times 40\%$). The pool of windfall tax benefits will have an ending balance of \$9,504 ($\$37,736 - \$28,232$) as of December 31, 2017.

12) To write off the deferred tax assets for the post-vesting cancellation of 2,000 options		
Dr Additional paid-in capital	\$28,232	
Cr Deferred tax assets		\$28,232

On October 1, 2018, employees who, collectively, held 329 options terminated their employment without exercising those 329 options. The options remain underwater through December 31, 2018, resulting in their cancellation.

Because the company still has a pool of windfall tax benefits of \$9,504, the deferred tax asset related to the 329 cancelled options of \$4,644 ($329 \times \$35.29 \times 40\%$) can be charged to the pool of windfall tax benefits. The pool of windfall tax balances will have an ending balance of \$4,860 ($\$9,504 - \$4,644$) as of December 31, 2018.

13) To write off the deferred tax assets for the post-vesting cancellation of 329 options		
Dr Additional paid-in capital	\$ 4,644	
Cr Deferred tax assets		\$ 4,644

Expiration

On December 31, 2019, the remaining 13,000 vested options expired unexercised because they were out-of-the-money.

Prior to December 31, 2019, the deferred tax assets balance was \$183,508 ($13,000 \times \$35.29 \times 40\%$). However, the company's pool of windfall tax benefits is only \$4,860. Therefore, the pool of windfall tax benefits will be reduced to zero and the remaining balance of the deferred tax assets (\$178,648) will be charged to the income tax provision in the income statement.

(continued)

14) To write off the deferred tax assets related to the 13,000 options that expired unexercised		
Dr Income tax provision	\$178,648	
Dr Additional paid-in capital	4,860	
Cr Deferred tax assets		\$183,508

The deferred tax assets roll-forward schedule summarizes the journal entries to record the tax effects of expense attribution, exercises, and cancellations.

	Dr	Cr	Cumulative
12/31/2010	\$793,818		\$ 793,818
12/31/2011	346,792		1,140,610
12/31/2012	134,474		1,275,084
12/31/2013		\$ (84,696)	1,190,388
12/31/2014		(211,740)	978,648
12/31/2015		(705,800)	272,848
12/31/2016		(56,464)	216,384
12/31/2017		(28,232)	188,152
12/31/2018		(4,644)	183,508
12/31/2019		(183,508)	—

9.2 Example 2: A Nonqualified Stock Option with Straight-Line Attribution

This example reflects the straight-line attribution method of accounting for a nonqualified equity-classified award that has a service condition and graded-vesting features (one-third vests each year). The straight-line attribution method allows the company to recognize expense over a single three-year requisite service period for the entire award, which is the period of time for the last tranche to vest. The company applies an annual forfeiture-rate assumption of 5 percent to each tranche, which means that, at the grant date, the company expects that 95 percent of Tranche 1, 90 percent (.95 x .95) of Tranche 2, and 86 percent (.95 x .95 x .95) of Tranche 3 will vest.

The following schedules present the number of options expected to vest, the related compensation cost, and the related income tax effects that are estimated from the grant date through the end of the requisite service period.

Fair value estimate of \$35.29 per option

Tax rate = 40 percent

	Compensation Cost Recognized Each Year Based on Number of Options Expected To Vest			
	Total	2010	2011	2012
Compensation Cost	\$3,187,710	\$1,117,528	\$1,061,629	\$1,008,553
Number of Options	90,329	31,667	30,083	28,579

Even though the company elected the straight-line attribution method, the expected vesting pattern reflects the application of an annual forfeiture-rate assumption to each tranche. As reflected above, annual compensation cost decreases as the number of options expected to vest in each year decreases due to application of the annual forfeiture rate. The calculations for the options expected to vest are:

(continued)

- For 2010: 31,667 (100,000 x 1/3 x 95%)
- For 2011: 30,083 (100,000 x 1/3 x 95% x 95%)
- For 2012: 28,579 (100,000 x 1/3 x 95% x 95% x 95%)

Straight-line attribution of expense that reflects the application of an annual forfeiture rate to each tranche will result in the recognition of more compensation cost in the earlier years because more awards are expected to vest in the earlier tranches. Using this approach, the company is more likely to comply with the requirement in ASC 718 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. Other approaches for determining and applying a forfeiture rate in this scenario may be acceptable.

	Income Tax Effects Recognized Each Year			
	Total	2010	2011	2012
Income tax benefits	\$1,275,084	\$447,011	\$424,652	\$403,421

The following schedule summarizes option activity throughout the entire contractual term of the award:

	Vested	Exercised	Post-Vesting Cancellations
12/31/2010	31,667		
12/31/2011	30,083		
12/31/2012	28,579		
12/31/2015		(50,000)	
12/31/2019			(40,329)
Totals	90,329	(50,000)	(40,329)

(Note: From 2010 to 2012, actual forfeitures occur at a 5 percent annual rate, which equals the number of options that, on the grant date, the company estimated would be forfeited by employees because of their failure to complete the requisite service periods. The company therefore did not have to adjust its expected compensation cost to true-up its estimate of pre-vesting forfeitures).

The journal entries are as follows:

	Dr	Cr
1) To recognize compensation expense in 2010 for the 2010 SBC award		
Dr Compensation expense	\$1,117,528	
Cr Additional paid-in capital		\$1,117,528
2) To recognize tax effects of SBC expense in 2010		
Dr Deferred tax assets	\$ 447,011	
Cr Deferred tax provision		\$ 447,011
3) To recognize compensation expense in 2011 for the 2010 SBC award		
Dr Compensation expense	\$1,061,629	
Cr Additional paid-in capital		\$1,061,629
4) To recognize tax effects of SBC expense in 2011		
Dr Deferred tax assets	\$ 424,652	
Cr Deferred tax provision		\$ 424,652

(continued)

	Dr	Cr
5) To recognize compensation expense in 2012 for the 2010 SBC award		
Dr Compensation expense	\$1,008,553	
Cr Additional paid-in capital		\$1,008,553
6) To recognize tax effects of SBC expense in 2013		
Dr Deferred tax assets	\$ 403,421	
Cr Deferred tax provision		\$ 403,421

During 2013 and 2014, no options are exercised or cancelled; therefore, no journal entries are required.

Exercised Options

On December 31, 2015, employees exercised 50,000 options, when the market price of the company's common stock is \$160 per share.

The calculations of the tax implications resulting from the exercise are summarized in the schedule below and followed by the corresponding journal entries:

Calculation of tax benefit:

Market price of shares (\$160 x 50,000 options)	\$ 8,000,000
Less: Exercise price (\$100 x 50,000 options)	<u>5,000,000</u>
Intrinsic value	\$ 3,000,000
Multiplied by applicable tax rate	<u>40%</u>
Tax benefit	\$ 1,200,000

Calculation of windfall tax benefit:

Intrinsic value	\$ 3,000,000
Less: Cumulative compensation cost (\$35.29 x 50,000 options)	<u>1,764,500</u>
Excess tax deduction	\$ 1,235,500
Multiplied by applicable tax rate	<u>40%</u>
Windfall tax benefit	\$ 494,200

7) To recognize the exercise of 50,000 options at an exercise price of \$100; the par value of the common stock is \$0.01		
Dr Cash	\$5,000,000	
Cr Common Stock		\$ 500
Cr Additional paid-in capital		\$4,999,500
8) To recognize windfall tax benefit for the 50,000 exercised options and to reverse the related deferred tax assets of \$705,800 (\$1,764,500 x 40%)		
Dr Income taxes payable	\$1,200,000	
Cr Additional paid-in capital		\$ 494,200
Cr Deferred tax assets		\$ 705,800

As a result of this exercise, on December 31, 2015, the company's pool of windfall tax benefits is \$494,200.

During 2016, 2017 and 2018, no options are exercised or cancelled; therefore, no journal entries are required.

(continued)

Expiration

On December 31, 2019 (the end of the options' contractual term), the remaining 40,329 vested options expire unexercised because they were out-of-the-money.

Prior to December 31, 2019, the deferred tax assets balance is \$569,284 (40,329 x \$35.29 x 40%). However, the company's pool of windfall tax benefits is only \$494,200. Therefore, the pool of windfall tax benefits will be reduced to zero and the remaining balance of the deferred tax assets (\$75,084) will be charged to the income tax provision in the income statement.

9) To write off the deferred tax assets related to the 40,329 expired options		
Dr Additional paid-in capital	\$494,200	
Dr Income tax provision	75,084	
Cr Deferred tax assets		\$569,284

9.3 Example 3: A Nonqualified Stock Option with a Performance Condition and Service Condition

On January 1, 2010, the company grants 100,000 nonqualified equity-classified stock options to its five vice presidents (Albert, Betty, Carl, David, and Elaine). Each vice president is granted 20,000 options. Vesting is contingent upon each vice president's fulfillment of a performance condition unique to that individual and the condition that the vice president is employed on the date the performance condition is fulfilled (i.e., a service condition).

Each vice president must meet the performance condition by achieving annual sales targets for 2010, 2011, and 2012 that are determined on the grant date and communicated to each vice president at the time of grant. If a vice president does not achieve his or her annual target, that tranche is forfeited, along with all future tranches. For example, if a vice president does not achieve the annual sales target for 2011 but did achieve the annual target for 2010, that vice president's 6,667 options (Tranche 1 for 2010) will vest and 13,333 options (Tranches 2 and 3) will be forfeited. Last, employees must exercise their vested portion of options, under the award's terms, within 90 days upon terminating their employment or the options expire.

Because a mutual understanding of the key terms and conditions is reached on January 1, 2010, all tranches have a grant date of January 1, 2010. The requisite service period for the options held by each vice president varies by tranche. For example, Tranche 3 of the award has a requisite service period of three years, because the targets are associated with achieving each of the three-year sales targets for 2010, 2011, and 2012 and therefore each year's tranche is interdependent with the other years. Because the awards have performance conditions and graded-vesting features, the company should use the graded-vesting attribution method.

Based on its analysis on the grant date and historical experience, management believes that 100 percent of the performance conditions will be achieved and that none of the vice presidents will stop working for the company before vesting in the options (i.e., the pre-vesting forfeiture assumption is zero).

The following schedules present the estimated number of options expected to vest, the related compensation cost, and the related income tax effects that are estimated from the grant date through the end of the requisite service period.

(continued)

Tranche	Number of Options	Proportion of Compensation Cost Recognized Each Year		
		2010	2011	2012
1	33,335	100%		
2	33,335	50%	50%	
3	33,330	33%	33%	
Totals	100,000			33%

Fair value estimate of \$35.29 per option

Tax rate = 40 percent

Tranche	Number of Options	Compensation Cost Recognized Each Year (certain amounts rounded)		
		2010	2011	2012
1	33,335	\$1,176,392		
2	33,335	588,214	\$588,178	
3	33,330	392,072	392,072	\$392,072
Totals	100,000	\$2,156,678	\$980,250	\$392,072

Tranche	Number of Options	Income Tax Effects Recognized Each Year		
		2010	2011	2012
1	33,335	\$470,557		
2	33,335	235,286	\$235,271	
3	33,330	156,829	156,829	\$156,829
Totals	100,000	\$862,672	\$392,100	\$156,829

The following schedule summarizes the actual option activity over the contractual term of the award as described on the following pages:

Date	Vested	Forfeited	Exercised	Post-Vesting Cancellations	Outstanding
12/31/2010	33,335				100,000
12/31/2011	33,335				100,000
01/02/2012		(6,666)	(13,334)		80,000
12/31/2012	19,998	(6,666)			73,334
12/31/2013				(20,000)	53,334
12/31/2014					53,334
12/31/2015					53,334
12/31/2016			(53,334)		—
Totals	86,668	(13,332)	(66,668)	(20,000)	

(Note: Although the company revises its probability assessment on 1/25/2012 and estimates the forfeiture of 6,666 options, the actual forfeiture of these options does not occur until 12/31/2012, when Betty fails to vest in Tranche 3 of her awards.)

(continued)

The journal entries for 2010 and 2011 are determined as follows:

	Dr	Cr
1) To recognize compensation expense in 2010 for the 2010 SBC award		
Dr Compensation expense	\$2,156,678	
Cr Additional paid-in capital		\$2,156,678
2) To recognize tax effects of SBC expense in 2010		
Dr Deferred tax assets	\$ 862,672	
Cr Deferred tax provision		\$ 862,672
3) To recognize compensation expense in 2011 for the 2010 SBC awards		
Dr Compensation expense	\$ 980,250	
Cr Additional paid-in capital		\$ 980,250
4) To recognize tax effects of SBC expense in 2011		
Dr Deferred tax assets	\$ 392,100	
Cr Deferred tax provision		\$ 392,100

In both fiscal 2010 and 2011, all of the vice presidents achieved their respective targets and vested in their portions (i.e., the first two years) of the entire award.

In January 2012, the following events occur:

1. On January 2, 2012, Albert unexpectedly resigns, thereby forfeiting his unvested options. He immediately exercises his vested options (which the terms of the options allowed).
2. On January 25, 2012, management reassesses the probability that Betty will vest in Tranche 3 of her awards. Management bases its reassessment on revised forecasts that reflect a future significant decrease in sales for Betty's segment because its most important product will become obsolete in the next six months, which was not expected in management's reassessment completed on December 31, 2011.
3. On January 29, 2012, Congress enacts an income tax-rate change that went into effect on January 1, 2012 (the rate changed from 40 percent to 36 percent).

Note that factors which occur shortly after period end often impact the determination of probability as of the reporting date. For illustration purposes, no adjustment to the year-end probability assessment has been made for events #1 and #2 above in this example.

Each event and its implications are described below, in chronological order:

1. Albert Unexpectedly Resigns

Albert exercises his vested options of 13,334 (the sum of the options in Tranche 1 and Tranche 2) and forfeits his unvested portion of 6,666 options. Because Tranches 1 and 2 are vested, the company will not reverse the compensation cost of \$470,556 related to these tranches.

(continued)

The following schedule summarizes the amount of compensation cost and deferred tax assets that the company recognized from January 1, 2010 to December 31, 2011, based on Albert's vesting schedule:

Tranche	Number of Options	Compensation Cost Recognized Each Year	
		2010	2011
1	6,667	\$235,278	
2	6,667	117,639	\$117,639
3	6,666	78,415	78,414
Totals	20,000	\$431,332	\$196,053
Deferred tax assets		\$172,533	\$ 78,421

Albert forfeits his Tranche 3 awards before vesting. Consequently, the company will need to reverse the compensation cost that it recognized for Tranche 3 during 2010 and 2011 (\$78,415 + \$78,414 = \$156,829) and the related deferred tax assets as shown below.

(Note: This schedule is a roll-forward of the deferred tax assets for only Albert's options):

Opening balance 1/1/2010	—
Deferred tax assets recognized in 2010	\$172,533
Deferred tax assets recognized in 2011	78,421
Ending balance 12/31/2011	\$250,954
Less: Tranche 3's portion of deferred tax assets (Compensation cost of \$156,829 x 40% tax rate)	(62,732)
Remaining portion of deferred tax assets on Albert's 13,334 vested options (Tranches 1 and 2)	\$188,222

The company will therefore record the following journal entries for Albert's pre-vesting forfeitures. Because Albert did not complete the requisite service period for Tranche 3, the company will reverse previous compensation expense and the related deferred tax assets for just that tranche.

5) To reverse compensation expense for Tranche 3 of Albert's award		
Dr Additional paid-in capital	\$156,829	
Cr Compensation expense		\$156,829
6) To reverse deferred tax assets for Tranche 3 of Albert's award		
Dr Deferred tax provision	\$62,732	
Cr Deferred tax assets		\$ 62,732

On January 2, 2012, Albert also exercises his 13,334 vested options, when the market price of the company's common stock is \$145 per share. The calculations of the tax implications resulting from the exercise are summarized in the schedule below and followed by the corresponding journal entries:

(continued)

Calculation of tax benefit:

Market price of shares (\$145 x 13,334 options)	\$1,933,430
Less: Exercise price (\$100 x 13,334 options)	<u>1,333,400</u>
Intrinsic value	\$ 600,030
Multiplied by applicable tax rate	<u>40%</u>
Tax benefit	\$ 240,012

Calculation of windfall tax benefit:

Intrinsic value	\$ 600,030
Less: Cumulative compensation cost (\$35.29 x 13,334 options)	<u>470,556</u>
Excess tax deduction	\$ 129,474
Multiplied by applicable tax rate	<u>40%</u>
Windfall tax benefit	\$ 51,790

- 7) To recognize the exercise of 13,334 options at an exercise price of \$100; the par value of the common stock is \$0.01

Dr Cash	\$1,333,400	
Cr Common stock		\$ 133
Cr Additional paid-in capital		\$1,333,267

- 8) To recognize the windfall tax benefit of the 13,334 exercised options and to reverse the related deferred tax assets of \$188,222 (\$470,556 x 40%)

Dr Income taxes payable	\$ 240,012	
Cr Additional paid-in capital		\$ 51,790
Cr Deferred tax assets		\$ 188,222

2. Management Revises Its Probability Assessment

At the end of each reporting period, management reassesses the probability that the award holders will vest in the outstanding awards. At the end of fiscal year 2011, management continues to believe that all of the remaining vice presidents will achieve their targets and vest in their awards.

On January 25, 2012, a major competitor introduces a new product that is more advanced and less expensive than the top-selling product that is sold by Betty's segment. The competitor's product is expected to replace Betty's segment's top-selling product, making it obsolete, which in turn will significantly decrease sales for Betty's segment. As a consequence, the sales forecast for Betty's segment is revised. Management determines that, due to the formerly top-selling product's expected obsolescence, it is not probable that Betty will achieve her sales targets for 2012 and thus it is not probable that she will fulfill the award's performance condition. As a result, management revises the estimated compensation cost to reflect that only three of the remaining four vice presidents (Carl, David, and Elaine) will achieve their 2012 performance targets.

(continued)

The company therefore expects that 86,668 of the 100,000 originally granted options will ultimately vest, because (1) 6,666 options were forfeited by Albert and (2) Betty is not expected to vest in the third tranche of her options (6,666) in 2012.

As expected, Betty does not achieve her 2012 target and therefore, does not vest in Tranche 3 of her awards. Carl, David, and Elaine achieve their 2012 targets.

The following charts below reflect management's revised expectations (as of January 25, 2012).

Tranche	Number of Options	Proportion of Compensation Cost Recognized Each Year		
		2010	2011	2012
1 (vested)	33,335	100%		
2 (vested)	33,335	50%	50%	
3 (expected to vest)	19,998	33%	33%	33%
Totals	86,668			

Fair value estimate of \$ 35.29 per option

Tranche	Number of Options	Compensation Cost Recognized (certain amounts rounded)		
		2010	2011	2012
1 (recognized)	33,335	\$1,176,392		
2 (recognized)	33,335	558,214	\$588,178	
3 (to be recognized)	19,998	235,243	235,243	\$235,243
Totals	86,668	\$1,999,849	\$823,421	\$235,243

From January 1, 2010 to January 25, 2012, the company recognized the following compensation cost:

Fiscal year 2010: Compensation cost of 100,000 options that are expected to vest	\$2,156,678
Fiscal year 2011: Compensation cost of 100,000 options that are expected to vest	980,250
Less: Reversal of compensation cost for Albert's Tranche 3 options (6,666 options)	(156,829)
Cumulative compensation cost as of 01/25/2012 (a)	\$2,980,099

Note that for simplicity, the calculations above reflect compensation cost through December 31, 2011. Actual calculations would reflect compensation cost through the date of the probability reassessment.

(continued)

Given the revised estimates as of January 25, 2012, which project that now only 86,668 options will vest (instead of the original 100,000 options), the company should have recognized, as of January 25, 2012, compensation cost of \$2,823,270:

Fiscal year 2010: Revised compensation cost of 86,668 options	\$1,999,849
Fiscal year 2011: Revised compensation cost of 86,668 options	823,421
Revised cumulative compensation cost as of 01/25/2012 (b)	<u>\$2,823,270</u>
The company must make an adjustment to reflect this change in estimate: (a – b)	\$ 156,829

The company should record the following journal entries to adjust compensation cost based on its revised estimates reflecting that Betty will not vest in Tranche 3 (6,666) of her options:

9) To reverse compensation expense for Betty's options that are no longer expected to vest	
Dr Additional paid-in capital	\$156,829
Cr Compensation Expense	\$ 156,829

After adjusting compensation cost, the company should adjust the deferred tax assets by \$62,732 (\$156,829 x 40%).

10) To reverse the deferred tax assets for Betty's options that are no longer expected to vest	
Dr Deferred tax provision	\$ 62,732
Cr Deferred tax asset	\$ 62,732

3. The Tax Rates Change

On January 29, 2012, a new tax bill is signed into law. As a result, new lower tax rates will be in effect for the company when the options are expected to be settled. The company expects its applicable tax rate to change from 40 percent to 36 percent.

The following schedule reflects the amount that the company should record to adjust the deferred tax assets so that they reflect the company's new tax rate. The schedule is followed by the corresponding journal entry.

Cumulative compensation cost as of 01/29/2012	\$2,823,270
Less: Compensation cost related to Albert's exercised Tranche 1 and 2 options	(470,556)
Cumulative compensation cost for outstanding options	<u>\$2,352,714</u>
True-up for deferred tax asset balance (pre-adjustment) [\$2,352,714 revised cumulative compensation cost x 40% original tax rate]	\$ 941,086
Deferred tax asset balance (post-adjustment) [\$2,352,714 revised cumulative compensation cost x 36% revised tax rate]	<u>846,977</u>
Net adjustment to reflect the deferred tax assets at the new tax rate	\$ 94,109

(continued)

Note that for simplicity, the calculations above reflect cumulative compensation cost and related deferred tax asset through December 31, 2011. Actual calculations would reflect cumulative compensation cost and related deferred tax assets through the date of the tax rate change.

In accordance with ASC 740-10-45-15, the effect of a change in tax law on deferred tax balances should be recorded in income in the period the new tax law is enacted.

11) To reflect the tax effect resulting from the change in the enacted tax rate from 40% to 36%			
Dr Deferred tax provision		\$ 94,109	
Cr Deferred tax assets			\$ 94,109

As shown in management's revised compensation schedule dated January 25, 2012, only 19,998 options in Tranche 3 (for Carl, David, and Elaine) are expected to vest. Therefore, assuming that the 2012 targets are achieved by the three vice presidents, the company should recognize the revised 2012 compensation cost as shown in the schedule above as reflected in the following journal entry.

12) To recognize compensation expense in 2012 for the 2010 SBC awards			
Dr Compensation expense		\$235,243	
Cr Additional paid-in capital			\$235,243

The company would use the new tax rate of 36 percent for fiscal year 2012's compensation cost to determine the related deferred tax assets of \$84,687 (\$235,243 x 36%), as reflected in the following journal entry.

13) To recognize tax effects of SBC expense in 2012			
Dr Deferred tax assets		\$ 84,687	
Cr Deferred tax provision			\$ 84,687

Post-Vesting Cancellations

On October 1, 2013, Elaine resigns but does not exercise any of her vested options because they are out-of-the-money. Under the terms of the option, she has until December 31 (90 days) to exercise her vested options. The options remain out-of-the-money and expire. Because Elaine's options were vested, the company should write off the related deferred tax assets and cannot reverse any previously recognized compensation cost. The following schedule reflects the write-off at December 31, 2013, followed by the corresponding journal entry:

Deferred tax asset associated with 20,000 fully vested options at \$35.29 per option and at a tax rate of 36%	\$254,088
Less: Pool of windfall tax benefits (from past exercises during 2012)	(51,790)
Remaining portion of the write-off of deferred tax assets charged to income tax expense	\$202,298

(continued)

14) To write off deferred tax assets related to post-vesting cancellations		
Dr Additional paid-in capital	\$ 51,790	
Dr Income tax provision	\$ 202,298	
Cr Deferred tax assets		\$ 254,088

As a result of the write-off of the deferred tax assets related to the post-vesting cancellations, the company's pool of windfall tax benefits has been reduced to zero.

Exercised Options

In fiscal years 2014 and 2015, Betty, Carl, and David do not exercise their options. No journal entries are required.

On December 31, 2016, Betty, Carl, and David exercise all of their vested options (53,334 options), when the market price of the company's common stock is \$110 per share.

The calculations of the tax implications resulting from the exercise are summarized in the schedule below and followed by the corresponding journal entries:

Calculation of tax benefit:

Market price of shares (\$110 x 53,334 options)	\$ 5,866,740
Less: Exercise price (\$100 x 53,334 options)	<u>5,333,400</u>
Intrinsic value	\$ 533,340
Multiplied by applicable tax rate	36%
Tax benefit	<u>\$ 192,002</u>

Calculation of windfall tax benefit (shortfall):

Intrinsic value	\$ 533,340
Less: Cumulative compensation cost (\$35.29 x 53,334 options)	<u>1,882,157</u>
Shortfall	\$(1,348,817)
Multiplied by applicable tax rate	36%
Windfall tax benefit (shortfall)	<u>\$ (485,574)</u>

15) To recognize the exercise of 53,334 options at an exercise price of \$100; the par value of the common stock is \$0.01		
Dr Cash	\$5,333,400	
Cr Common stock		\$ 533
Cr Additional paid-in capital		\$5,332,867
16) To recognize the tax shortfall of 53,334 exercised options and to reverse the related deferred tax assets (\$1,882,157 x 36%)		
Dr Income taxes payable	\$ 192,002	
Dr Income tax provision	\$ 485,574	
Cr Deferred tax assets		\$ 677,576

The tax shortfall is recorded to income tax provision because there is no pool of windfall tax benefits.

(continued)

The following deferred tax asset roll-forward schedule summarizes the related journal entries:

Date	Dr	Cr	Cumulative Balance
12/31/2010	\$862,672		\$ 862,672
12/31/2011	392,100		1,254,772
01/02/2012		\$ (62,732)	1,192,040
01/02/2012		(188,222)	1,003,818
01/25/2012		(62,732)	941,086
01/29/2012		(94,109)	846,977
12/31/2012	84,687		931,664
12/31/2013		(254,088)	677,576
12/31/2014			677,576
12/31/2015			677,576
12/31/2016		(677,576)	—

9.4 Example 4: Cash-Settled SARs with a Performance Condition and Service Condition

On January 1, 2010, the compensation committee grants 100,000 cash-settled SARs 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, 2012 (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 the company before vesting. All five employees continue employment for the three-year requisite service period and achieve their targets for vesting in the SARs.

The company 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 recorded or reversed each year to adjust the liability to the appropriate ending balance. Similarly, the deferred tax asset represents the tax benefit that the company expects to realize upon the SARs exercise. Under U.S. tax law, the company expects to receive a tax deduction based on the intrinsic value of the SAR upon exercise. The company's applicable tax rate for all years is 40 percent.

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

(Abbreviations: BOY = Beginning of the fiscal year; EOY = End of the fiscal year; O/S = Outstanding)

(continued)

Fiscal Year	Granted	SARs O/S	Fair Value per SAR At EOY	% Requisite Service Provided	Ending Liability Balance	Annual Compensation Cost*	Deferred Tax Assets	
							EOY Balance	Annual
2010	100,000	100,000	\$12	33%	\$ 400,000	\$400,000	\$160,000	\$160,000
2011	—	100,000	\$14	67%	\$ 933,333	\$533,333	\$373,333	\$213,333
2012	—	100,000	\$17	100%	\$1,700,000	\$766,667	\$680,000	\$306,667

* Ending liability balance (i.e., the cumulative compensation cost) = the number of SARs outstanding x percentage of requisite service provided x 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.

Fiscal Year	SARs Exercised	SARs O/S	Fair Value per SAR		Exercised SARs: Cash Settlement	Liability Balance**	Annual Compensation Cost	Deferred Tax Assets		
			At BOY	At EOY				Effects for Cash Settlement***	EOY Balance	Annual
2013	60,000	40,000	\$17	\$21	\$(1,020,000)	\$840,000	\$160,000	\$(408,000)	\$336,000	\$ 64,000
2014	20,000	20,000	\$21	\$18	\$ (420,000)	\$360,000	\$ (60,000)	\$(168,000)	\$144,000	\$(24,000)
2015	20,000	—	\$18		\$ (360,000)	\$ 0	\$ 0	\$(144,000)	\$ 0	\$0

** Liability balance is presented net of cash payouts of \$1,020,000, \$420,000, and \$360,000 that are made on January 1 in the years 2013, 2014, and 2015, respectively. For example, \$1,700,000 – \$1,020,000 + 160,000 = \$840,000 balance for 2013. Since the awards are fully vested, the ending liability for each year 2013 – 2015 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.

***Deferred tax asset entry for exercised SARs = number of SARs exercised x fair value per SAR at BOY x 40 percent.

The company records the following journal entries:

	Dr	Cr
1 To recognize compensation expense in 2010 for the 2010 SBC award		
Dr Compensation expense	\$400,000	
Cr SBC liability		\$400,000
2) To recognize tax effects of SBC expense in 2010		
Dr Deferred tax assets	\$160,000	
Cr Deferred tax provision		\$160,000
3) To recognize compensation expense in 2011 for the 2010 SBC award		
Dr Compensation expense	\$533,333	
Cr SBC liability		\$533,333
4) To recognize tax effects of SBC expense in 2011		
Dr Deferred tax assets	\$213,333	
Cr Deferred tax provision		\$213,333

(continued)

	Dr	Cr
5) To recognize compensation expense in 2012 for the 2010 SBC awards		
Dr Compensation expense	\$ 766,667	
Cr SBC liability		\$ 766,667
6) To recognize tax effects of SBC expense in 2012		
Dr Deferred tax assets	\$ 306,667	
Cr Deferred tax provision		\$ 306,667

On January 1, 2013, 60,000 SARs are exercised at a fair value of \$17 per SAR, resulting in a cash payment of \$1,020,000 (60,000 x \$17).

7) To recognize exercise of 60,000 SARs at a fair value of \$17 in 2013		
Dr SBC liability	\$1,020,000	
Cr Cash		\$1,020,000

Upon the exercise of 60,000 SARs on January 1, 2013, the related deferred tax assets on the SARs in the amount of \$408,000 (60,000 x \$17 x 40%) became a current tax benefit.

8) To recognize the income tax effects of the exercised SARs in 2013 for exercised SBC awards		
Dr Income taxes payable	\$ 408,000	
Cr Deferred tax assets		\$ 408,000

On December 31, 2013, the fair value of each SAR is \$21 for the 40,000 SARs that are outstanding. The company should recognize additional compensation expense for the \$4 increase in the fair value.

9) To recognize compensation expense in 2013 for the 2010 SBC awards		
Dr Compensation expense	\$ 160,000	
Cr SBC liability		\$ 160,000
10) To recognize the tax effects of SBC expense in 2013		
Dr Deferred tax assets	\$ 64,000	
Cr Deferred tax provision		\$ 64,000

On January 1, 2014, 20,000 SARs are exercised at a fair value of \$21 per SAR, resulting in a cash payment of \$420,000 (20,000 x \$21) and a current tax deduction for that amount.

11) To recognize exercise of 20,000 SARs at a fair value of \$21 in 2014		
Dr SBC liability	\$ 420,000	
Cr Cash		\$ 420,000
12) To recognize the income tax effects of the exercised SARs in 2014 for exercised SBC awards (\$420,000 x 40%)		
Dr Income taxes payable	\$ 168,000	
Cr Deferred tax assets		\$ 168,000

(continued)

On December 31, 2014, the fair value of the 20,000 SARs that remain outstanding is \$18 each. The company 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.

13)	To adjust the SBC liability to its fair-value amount at the end of 2014		
	Dr SBC liability	\$ 60,000	
	Cr Compensation expense		\$ 60,000
14)	To adjust the deferred tax assets related to the SBC liability at the end of 2014		
	Dr Deferred tax provision	\$ 24,000	
	Cr Deferred tax assets		\$ 24,000

On January 1, 2015, 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 x \$18) and a current tax deduction for that amount.

15)	To recognize exercise of 20,000 SARs at a fair value of \$18 in 2015		
	Dr SBC liability	\$360,000	
	Cr Cash		\$360,000
16)	To recognize the income tax effects of the exercised SARs in 2015 for exercised SBC awards (\$360,000 x 40%)		
	Dr Income taxes payable	\$144,000	
	Cr Deferred tax assets		\$144,000

Note that because the liability awards and related deferred tax assets are adjusted each period, the benefit of the actual tax deduction upon exercise equals the deferred tax asset. Therefore, there is no windfall tax benefit or shortfall upon exercise.

9.5 Example 5: Nonemployee Stock Option Award

This example illustrates the application of ASC 505-50 to an award of stock options to a nonemployee. The quantity and terms of the equity instrument are known up front, and there is no performance commitment.

Assumptions:

A company 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, 2011 and completes service at the end of four years. A measurement date, as defined in ASC 505-50-30, does not occur until the end of the fourth year. The stock options are revalued each period and are measured at their

(continued)

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 company has no pool of windfall tax benefits. The company has an applicable tax rate of 40 percent. In each year, there is sufficient taxable income so that the company realizes any windfall tax benefits generated from the exercise of an award and it is more likely than not that the deferred tax assets will be realized (i.e., there is no valuation allowance). The company has elected to consider only the direct tax effects of stock-based compensation deductions when calculating windfall tax benefits and shortfalls.

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, the Company 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)
1/1/2011	\$10	1,000	\$10,000	0%	\$ 0	\$ 0	\$ 0
12/31/2011	\$15	1,000	\$15,000	25%	\$ 3,750	\$ 0	\$ 3,750
12/31/2012	\$30	1,000	\$30,000	50%	\$15,000	\$ 3,750	\$11,250
12/31/2013	\$35	1,000	\$35,000	75%	\$26,250	\$15,000	\$11,250
12/31/2014	\$25	1,000	\$25,000	100%	\$25,000	\$26,250	\$ (1,250)

The Company records the following journal entries:

	Dr	Cr
1) To recognize compensation expense in 2011		
Dr Compensation expense	\$ 3,750	
Cr Additional paid-in capital		\$ 3,750
2) To recognize tax effects of SBC expense in 2011		
Dr Deferred tax assets	\$ 1,500	
Cr Deferred tax provision		\$ 1,500
3) To recognize compensation expense in 2012		
Dr Compensation expense	\$11,250	
Cr Additional paid-in capital		\$11,250
4) To recognize tax effects of SBC expense in 2012		
Dr Deferred tax assets	\$ 4,500	
Cr Deferred tax provision		\$ 4,500
5) To recognize compensation expense in 2013		
Dr Compensation expense	\$11,250	
Cr Additional paid-in capital		\$11,250
6) To recognize tax effects of SBC expense in 2013		
Dr Deferred tax assets	\$ 4,500	
Cr Deferred tax provision		\$ 4,500

(continued)

	Dr	Cr
7) To recognize compensation expense (benefit) in 2014		
Dr Additional paid-in capital	\$ 1,250	
Cr Compensation expense		\$ 1,250
8) To recognize tax effects of SBC expense in 2014		
Dr Deferred tax provision	\$ 500	
Cr Deferred tax asset		\$ 500

On December 31, 2014, the contractor completes service and the stock options are vested. The award is measured at its then-current fair value and is no longer adjusted. The Company evaluates the award under ASC 815-40 and determines that equity classification continues to be appropriate.

Exercised Options

On December 31, 2015, the contractor exercises all 1,000 options, when the market price of the company's common stock is \$100 per share.

The calculations of the tax implications resulting from the exercise are summarized in the schedule below and are followed by the corresponding journal entries:

Calculation of tax benefit:

Market price of shares (\$100 x 1,000 options)	\$100,000
Less: Exercise price (\$30 x 1,000 options)	<u>30,000</u>
Intrinsic value	\$ 70,000
Multiplied by applicable tax rate	<u>40%</u>
Tax benefit	\$ 28,000

Calculation of windfall tax benefit:

Intrinsic value	\$ 70,000
Less: Cumulative compensation cost	<u>25,000</u>
Excess tax deduction	\$ 45,000
Multiplied by applicable tax rate	<u>40%</u>
Windfall tax benefit	\$ 18,000

9) To recognize the exercise of 1,000 options at an exercise price of \$30; the par value of the common stock is \$0.01		
Dr Cash	\$30,000	
Cr Common stock		\$ 10
Cr Additional paid-in capital		\$29,990
10) To recognize windfall tax benefit for the 1,000 exercised options and to reverse the related deferred tax assets of \$10,000 (\$25,000 x 40%)		
Dr Income taxes payable	\$28,000	
Cr Additional paid-in capital		\$18,000
Cr Deferred tax assets		\$10,000

(continued)

This example illustrated the accounting when the award cliff vests, and therefore the entire award is marked to market each period until the measurement date is reached. In many instances, the award vests in tranches over time as the service is provided. Consider the above example, but with the following modified assumptions:

Assumptions:

A company 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, the awards associated with the uncompleted service are 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, 2011 and completes service at the end of four years. A measurement date, as defined in ASC 505-50-30, for each tranche of options occurs at the end of each year when the work associated with that year is complete and the corresponding options vest. The fair value of the vested awards is fixed as of the vesting date. Unvested awards continue to be marked to market until the relevant vesting date of each tranche. The company elects to record compensation expense using the straight line method.

The company has no pool of windfall tax benefits. The company has an applicable tax rate of 40 percent. In each year, there is sufficient taxable income so that the company realizes any windfall tax benefits generated from the exercise of an award and it is more likely than not that the deferred tax assets will be realized (i.e., there is no valuation allowance). The company has elected to consider only the direct tax effects of stock-based compensation deductions when calculating windfall tax benefits and shortfalls.

As noted above, the fair value of each tranche of awards is ultimately fixed at each respective vesting date (as that is the measurement date in this example). Accordingly, the fair value of each tranche is fixed at the following values:

Tranche	Vesting Date	Fair Value Per Option	Number of Options in Tranche	Fair Value of Options in Tranche
1	12/31/11	\$15	250	\$3,750
2	12/31/12	\$30	250	\$7,500
3	12/31/13	\$35	250	\$8,750
4	12/31/14	\$25	250	\$6,250

Unvested tranches are remeasured each period at their then-current fair value.

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, the Company would also be required to perform interim reporting following a similar methodology.

(continued)

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
12/31/11	\$15	1,000	\$15,000	25%	\$ 3,750	\$ 0	\$3,750
12/31/12	\$30	1,000	\$26,250	50%	\$13,125	\$ 3,750	\$9,375
12/31/13	\$35	1,000	\$28,750	75%	\$21,562	\$13,125	\$8,437
12/31/14	\$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	2011 Calculation of Aggregate Fair Value	2012 Calculation of Aggregate Fair Value	2013 Calculation of Aggregate Fair Value	2014 Calculation of Aggregate Fair Value
1	250	250 x \$15 = \$3,750 (2)	250 x \$15 = \$3,750 (2)	250 x \$15 = \$3,750 (2)	250 x \$15 = \$3,750 (2)
2	250	250 x \$15 = \$3,750 (3)	250 x \$30 = \$7,500 (2)	250 x \$30 = \$7,500 (2)	250 x \$30 = \$7,500 (2)
3	250	250 x \$15 = \$3,750 (3)	250 x \$30 = \$7,500 (3)	250 x \$35 = \$8,750 (2)	250 x \$35 = \$8,750 (2)
4	250	250 x \$15 = \$3,750 (3)	250 x \$30 = \$7,500 (3)	250 x \$35 = \$8,750 (3)	250 x \$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

The Company records the following journal entries:

	Dr	Cr
1) To recognize compensation expense in 2011		
Dr Compensation expense	\$3,750	
Cr Additional paid-in capital		\$3,750
2) To recognize tax effects of SBC expense in 2011		
Dr Deferred tax assets	\$1,500	
Cr Deferred tax provision		\$1,500
3) To recognize compensation expense in 2012		
Dr Compensation expense	\$9,375	
Cr Additional paid-in capital		\$9,375
4) To recognize tax effects of SBC expense in 2012		
Dr Deferred tax assets	\$3,750	
Cr Deferred tax provision		\$3,750
5) To recognize compensation expense in 2013		
Dr Compensation expense	\$8,473	
Cr Additional paid-in capital		\$8,473
6) To recognize tax effects of SBC expense in 2013		
Dr Deferred tax assets	\$3,375	
Cr Deferred tax provision		\$3,375

(continued)

	Dr	Cr
7) To recognize compensation expense in 2014		
Dr Compensation expense	\$ 4,688	
Cr Additional paid-in capital		\$ 4,688
8) To recognize tax effects of SBC expense in 2014		
Dr Deferred tax asset	\$ 1,875	
Cr Deferred tax provision		\$ 1,875

Exercised Options

On December 31, 2015, the contractor exercises all 1,000 options, when the market price of the company's common stock is \$100 per share.

The calculations of the tax implications resulting from the exercise are summarized in the schedule below and followed by the corresponding journal entries:

Calculation of tax benefit:

Market price of shares (\$100 x 1,000 options)	\$100,000
Less: Exercise price (\$30 x 1,000 options)	<u>30,000</u>
Intrinsic value	\$ 70,000
Multiplied by applicable tax rate	<u>40%</u>
Tax benefit	\$ 28,000

Calculation of windfall tax benefit:

Intrinsic value	\$ 70,000
Less: Cumulative compensation cost	<u>26,250</u>
Excess tax deduction	\$ 43,750
Multiplied by applicable tax rate	<u>40%</u>
Windfall tax benefit	\$ 17,500

9) To recognize the exercise of 1,000 options at an exercise price of \$30; the par value of the common stock is \$0.01		
Dr Cash	\$30,000	
Cr Common stock		\$ 10
Cr Additional paid-in capital		\$29,990
10) To recognize windfall tax benefit for the 1,000 exercised options and to reverse the related deferred tax assets of \$10,500 (\$26,250 x 40%)		
Dr Income taxes payable	\$28,000	
Cr Additional paid-in capital		\$17,500
Cr Deferred tax assets		\$10,500

Appendix A:

Technical References and Abbreviations

Appendix A: Technical References and Abbreviations

FASB Accounting Standards Codification

On July 1, 2009, the *FASB Accounting Standards Codification*TM was launched as the single official source of authoritative, nongovernmental U.S. GAAP. While not intended to change U.S. GAAP, the Codification combines and replaces the body of accounting standards that have evolved over the last 50+ years.

The Codification is organized by accounting topic and utilizes a standardized Codification referencing scheme consisting of numbered topics (XXX), subtopics (YY), sections (ZZ), and paragraphs (PP). Throughout this Guide, references to the Codification use that scheme, where each citation includes the letters “ASC” followed by the Codification reference number (XXX-YY-ZZ-PP) associated with the particular topic, subtopic, section and paragraph, as applicable. For example:

- ASC 205 references the topic “205-Presentation of Financial Statements.”
- ASC 205-10 references the subtopic “10-Overall” within ASC 205.
- ASC 205-10-50 references the section “50-Disclosure” within ASC 405-10.
- ASC 205-10-50-1 references the first paragraph within ASC 205-10-50.

The following table should be used as a reference for the abbreviations utilized throughout the guide:

SEC	
ASR 268	Accounting Series Release, Presentation in Financial Statements of “Redeemable Preferred Stocks”
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
Sarbanes-Oxley	Sarbanes-Oxley Act of 2002
Exchange Act	Securities Exchange Act of 1934
SAB Topic 14	Staff Accounting Bulletin Topic 14: Share-Based Payment
Securities Act	Securities Act of 1933
Other Abbreviations	
AICPA	American Institute of Certified Public Accountants
ASC	Accounting Standards Codification
EITF	FASB Emerging Issues Task Force
FASB	Financial Accounting Standards Board
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
IRC	Internal Revenue Code
IRS	Internal Revenue Service
PCAOB	Public Company Accounting Oversight Board
SEC	Securities and Exchange Commission

PricewaterhouseCoopers Accounting Guides	
BCG	Accounting for Business Combinations and Noncontrolling Interests: Application of the U.S. GAAP and IFRS Standards
DH	Accounting for Derivative Instruments and Hedging Activities
FV	Fair Value Measurements
SC	Accounting for Stock-based Compensation
TS	Accounting for Transfers and Servicing of Financial Assets
TX	Accounting for Income Taxes
VE	Accounting for Variable Interest Entities
Key Terms	
APIC	Additional paid-in capital
EBITDA	Earnings before interest, taxes, depreciation and amortization
EPS	Earnings per share
ESOPs	Employee stock ownership plans
ESPPs	Employee stock purchase plans
ISOs	Incentive stock options
MD&A	Management's Discussion and Analysis
NOLs	Net operating losses
RSUs	Restricted stock units
SARs	Stock-appreciation rights
IPO	Initial public offering
FMV	Fair market value

Appendix B:
Principal Differences in Share-based Payments
Between U.S. GAAP and IFRS

Appendix B: Principal Differences in Share-based Payments Between U.S. GAAP and IFRS

Although the U.S. GAAP and IFRS guidance in this area is similar at a macro conceptual level, many significant differences exist at the detailed application level.

The broader scope of share-based payments guidance under IFRS leads to differences associated with awards made to nonemployees, impacting both the measurement date and total value of expense to be recognized.

Differences within the two frameworks may result in differing grant dates and/or different classifications of an award as a component of equity or as a liability. Once an award is classified as a liability, it needs to be remeasured to fair value at each period through earnings, which introduces earnings volatility while also impacting balance sheet metrics and ratios. Certain types of awards (e.g., puttable awards and awards with vesting conditions outside of service, performance, or market conditions) are likely to have different equity-versus-liability classification conclusions under the two frameworks.

In addition, companies that issue awards with graded vesting (e.g., awards that vest ratably over time, such as 25 percent per year over a four-year period) may encounter accelerated expense recognition and potentially a different total value to be expensed (for a given award) under IFRS. The impact in this area could lead some companies to consider redesigning the structure of their share-based payment plans. By changing the vesting pattern to cliff vesting (from graded vesting), companies can avoid a front-loading of share-based compensation expense, which may be desirable to some organizations.

The deferred income tax accounting requirements for share-based payments vary significantly from U.S. GAAP. Companies can expect to experience greater variability in their effective tax rate over the lifetime of share-based payment awards under IFRS. This variability will be linked with, but move counter to, the issuing company's stock price. For example, as a company's stock price increases, a greater income statement tax benefit will occur, to a point, under IFRS. Once a benefit has been recorded, subsequent decreases to a company's stock price may increase income tax expense within certain limits. The variability is driven by the requirement to remeasure and record through earnings (within certain limits) the deferred tax attributes of share-based payments each reporting period.

This appendix summarizes the principal differences between U.S. GAAP and IFRS. The practical application of the standards may identify more detailed differences.

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Scope	<p>The guidance is focused on/driven by the legal definition of an employee with certain specific exceptions/exemptions.</p> <p>ASC 718 applies to awards granted to employees. ASC 505-50 applies to grants to nonemployees.</p>	<p>IFRS focuses on the nature of the services provided and treats awards to employees and others providing employee-type services similarly. Awards for goods from vendors or nonemployee-type services are treated differently.</p> <p>IFRS 2 includes accounting for all employee and nonemployee arrangements. Furthermore, under IFRS, the definition of an employee is broader than the U.S. GAAP definition.</p>	<p>Companies that adopt IFRS 2 will apply that standard to all arrangements, regardless of whether the counterparty is a nonemployee.</p> <p>Some awards categorized as nonemployee instruments under ASC 505-50 will be treated as employee awards under IFRS 2. The measurement date and expense will be different for awards that are categorized as nonemployee instruments under U.S. GAAP as compared to IFRS.</p>
Measurement of awards granted to employees by nonpublic companies	<p>Equity-classified</p> <p>ASC 718 allows nonpublic companies to measure stock-based compensation awards by using the fair-value (preferred) method or calculated-value method.</p> <p>Liability-classified</p> <p>ASC 718 allows nonpublic companies to make an accounting-policy decision on how to measure stock-based compensation awards that are classified as liabilities. Such companies may use the fair-value method, calculated-value method, or intrinsic-value method.</p>	<p>IFRS 2 does not include such alternatives for nonpublic companies and requires the use of the fair-value method in all circumstances.</p>	<p>Companies that adopt IFRS will not have alternatives in choosing a measurement method.</p>

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Measurement of awards granted to nonemployees	<p>ASC 505-50 states that the fair value of an equity instrument issued to a nonemployee should be measured as of the date at which either:</p> <p>(1) a commitment for performance by the counterparty has been reached; or</p> <p>(2) the counterparty's performance is complete.</p> <p>Nonemployee transactions should be measured based on the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable.</p>	<p>Transactions with parties other than employees should be measured at the date(s) on which the goods are received or the dates(s) on which the services are rendered. The guidance does not include a performance commitment concept.</p> <p>Nonemployee transactions are generally measured at the fair value of the goods or services received, since it is presumed that it will be possible to reliably measure the fair value of the consideration received. If an entity is not able to reliably measure the fair value of the goods or services received (i.e., if the presumption is overcome), fair value of the award should be measured indirectly by reference to the fair value of the equity instrument granted as consideration.</p> <p>When the presumption is not overcome an entity is also required to account for any unidentifiable goods or services received or to be received. This would be the case if the fair value of the equity instruments granted exceeds the fair value of the identifiable goods or services received and to be received.</p>	Both the measurement date and the measurement methodology may vary for awards granted to non-employees.

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Classification of certain instruments as liabilities or equity	<p>In certain situations, puttable shares may be classified as equity awards.</p> <p>Liability classification is required when an award is based on a fixed monetary amount settled in a variable number of shares.</p> <p>ASC 718-10-25-8 through 28-19 contains guidance on determining whether to classify an award as equity or a liability. ASC 718 also references the guidance in ASC 480 for assessing classification of an award.</p>	<p>Puttable shares are always classified as liabilities.</p> <p>Share-settled awards are classified as equity awards even if there is variability in the number of shares due to a fixed monetary value to be achieved.</p> <p>IFRS 2 follows a similar principle of equity/liability classification as ASC 718. However, while IAS 32 has similar guidance to ASC 480, companies applying IFRS 2 are out of the scope of IAS 32. Therefore, equity/liability classification is determined wholly on whether awards are ultimately settled in equity or cash, respectively.</p>	<p>Although ASC 718 and IFRS 2 contain a similar principle for classification of stock-based compensation awards, certain awards will be classified differently under the two standards. In some instances, awards will be classified as equity under ASC 718 and a liability under IFRS 2, while in other instances, awards will be classified as a liability under ASC 718 and equity under IFRS 2.</p>
Awards with conditions other than service, performance or market conditions	<p>Under ASC 718, if an award contains vesting conditions other than service, performance, or market conditions (referred to as “other” conditions), it is classified as a liability award.</p>	<p>Under IFRS 2, if an award of equity instruments contains conditions other than service, performance, or market vesting conditions, it is still classified as an equity-settled award.</p> <p>Such conditions may be non-vesting conditions. Non-vesting conditions are taken into account when determining the grant date fair value of the award.</p>	<p>Certain awards classified as liabilities under U.S. GAAP may be classified as equity under IFRS.</p>

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Service— inception date, grant date, and requisite service	ASC 718 provides specific definitions of service-inception date, grant date, and requisite service which, when applied, will determine the beginning and end of the period over which compensation cost will be recognized. Additionally, the grant date definition includes a requirement that the employee begins to be affected by the risks and rewards of equity ownership.	IFRS 2 does not include the same detailed definitions or the requirement that the employee begins to be affected by the risks and rewards of equity ownership in the grant date definition.	Because of the differences in the definitions, there may be differences in the grant date and the time period over which compensation cost is recognized.
Attribution— awards with service conditions and graded-vesting features	ASC 718 permits companies to make an accounting policy election regarding the attribution method for awards with service conditions and graded-vesting features. The choice in attribution method is not linked to the valuation method that the company uses. For awards with graded vesting and performance or market conditions, the graded-vesting (i.e., accelerated) attribution approach is required.	IFRS 2 does not include a choice over which valuation or attribution method is applied to awards with graded-vesting features. Companies should treat each installment of the award as a separate grant. This means that each installment will be separately measured and attributed to expense over the related vesting period.	The alternative included in ASC 718 provide for differences in both the measurement and attribution of compensation costs when compared to the requirements under IFRS.

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Certain aspects of modification accounting	An “improbable-to-probable” Type III modification can result in recognition of compensation cost that is less than the estimated fair value of the award on the original grant date. When a modification makes it probable that a vesting condition will be achieved, and the company does not expect the original vesting conditions to be achieved, the grant-date fair value of the award would not be a floor for the amount of compensation cost recognized.	Under IFRS 2, if the vesting conditions of an award are modified in a manner that is beneficial to the employee, this would be accounted for as a change in only the number of options that are expected to vest (from zero to a new amount of shares), and the award’s full original grant-date fair value would be recognized over the remainder of the service period. That result is the same as if the modified performance condition had been in effect on the grant date.	Differences between the two standards for improbable to probable modifications may result in differences in the compensation costs that are recognized.
Alternative vesting triggers	An award that becomes exercisable based on the achievement of either a service condition or a market condition is treated as a single award. Because such an award contained a market condition, compensation cost associated with the award would not be reversed if the requisite service period is met.	An award that becomes exercisable based on the achievement of either a service condition or a market condition is treated as two awards with different service periods, fair values, etc. Any compensation cost associated with the service condition would be reversed if the service was not provided. The compensation cost associated with the market condition would not be reversed.	It is likely that awards that become exercisable based on achieving one of several conditions would result in a revised expense recognition pattern (as the awards would be bifurcated under IFRS).

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Cash-settled awards with a performance condition	For cash-settled awards with a performance condition, where the performance condition is not probable, there may be no liability recognized under U.S. GAAP.	For cash settled awards even where the performance condition is not probable (i.e., greater than zero but under 50% probability), a liability is recognized under IFRS based upon the fair value of the instrument (considering the likelihood of earning the award).	For a cash-settled award where the performance condition is not probable, liability and expense recognition may occur earlier under IFRS.
Derived service period	ASC 718 contains the concept of a derived service period for awards that contain market conditions. Where an award containing a market condition is fully vested and deep-out-of-the-money at grant date but allows employees only a limited amount of time to exercise their awards in the event of termination, ASC 718 presumes that employees must provide some period of service to earn the award. Since there is no explicit service period stated in the award, a derived service period must be determined by reference to a valuation technique. The expense for the award would be recognized over the derived service period and reversed if the employee does not complete the requisite service period.	IFRS 2 does not define a derived service period for fully vested, deep-out-of-the-money awards. Therefore, the related expense for such an award would be recognized in full at the grant date since the award is fully vested at that date.	For an award containing a market condition that is fully vested and deep-out-of-the-money at grant date, expense recognition may occur earlier under IFRS.

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Tax withholding arrangements—impact to classification	Under ASC 718, an award containing a net settled tax withholding clause could be equity-classified so long as the arrangement limits tax withholding to the company's minimum statutory rate. If tax withholding is permitted at some higher rate, then the whole award would be classified as a liability.	IFRS 2 does not contain a similar exception. When an employer settles an employee's tax withholding liability using its own cash, the award is bifurcated between a cash-settled portion and an equity-settled portion. The portion of the award relating to the estimated tax payment is treated as a cash-settled award and marked-to-market each period until settlement of the actual tax liability. The remaining portion is treated as an equity settled award.	There could be a difference in award classification as a result of tax withholding arrangements.

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Accounting for income tax effects	<p>The ASC 718 model for accounting for income taxes requires companies to record deferred taxes as compensation cost is recognized. The measurement of the deferred tax asset is based on an estimate of the future tax deduction, if any, based on the amount of compensation cost recognized for book purposes. Changes in the stock price do not impact the deferred tax asset or result in any adjustments prior to settlement or expiration. Although they do not impact deferred tax assets, future changes in the stock price will nonetheless affect the actual future tax deduction (if any).</p> <p>Excess tax benefits ("windfalls") upon settlement of an award are recorded in equity. "Shortfalls" are recorded as a reduction of equity to the extent the company has accumulated windfalls in its pool of windfall tax benefits. If the company does not have accumulated windfalls, shortfalls are recorded to income tax expense.</p> <p>In addition, the excess tax benefits upon settlement of an award would be reported as cash inflows from financing activities.</p>	<p>The measurement of the deferred tax asset in each period is based on an estimate of the future tax deduction, if any, for the award measured at the end of each reporting period (based upon the current stock price if the tax deduction is based on the future stock price).</p> <p>When the expected tax benefits from equity awards exceed the recorded cumulative recognized expense multiplied by the tax rate, the tax benefit up to the amount of the tax effect of the cumulative book compensation expense is recorded in the income statement; the excess is recorded in equity.</p> <p>When the expected tax benefit is less than the tax effect of the cumulative amount of recognized expense, the entire tax benefit is recorded in the income statement. IFRS 2 does not include the concept of a pool of windfall tax benefits to offset shortfalls.</p> <p>In addition, all tax benefits or shortfalls upon settlement of an award are generally reported as operating cash flows.</p>	<p>Companies reporting under IFRS 2 will have greater volatility in their deferred tax accounts over the life of the awards due to the related adjustments for stock price movements in each reporting period.</p> <p>Companies reporting under ASC 718 could potentially have greater volatility arising from the variation between the estimated deferred taxes recognized and the actual tax deductions realized.</p> <p>There are also differences in the presentation of the cash flows associated with an award's tax benefits.</p>

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Recognition of social charges (e.g., payroll taxes)	Under ASC 718, a liability for employee payroll taxes on employee stock-based compensation should be recognized on the date of the event triggering the measurement and payment of the tax (generally the exercise date for a nonqualified option).	Under IFRS 2, social charges, such as payroll taxes levied on the employer in connection with stock-based compensation plans, are expensed in the income statement when the related compensation expense is recognized. The guidance in IFRS 2 for cash-settled share-based payments would be followed in recognizing an expense for such charges.	The timing of recognition of social changes will generally be earlier under IFRS than U.S. GAAP.
Valuation—SAB Topic 14 guidance on expected volatility and expected term	SAB Topic 14 includes guidance on expected volatility and expected term, which includes (1) guidelines for reliance on implied volatility and (2) the “simplified method” for calculating expected term for qualifying awards.	IFRS 2 does not include comparable guidance.	Companies that report under ASC 718 may place greater reliance on implied short-term volatility to estimate volatility. Companies that report under IFRS 2 do not have the option of using the “simplified method” of calculating expected term provided by SAB Topic 14. As a result, there may be differences in estimated fair values.

Principal Differences Between U.S. GAAP and IFRS

	U.S. GAAP	IFRS	Implications
Employee stock purchase plan (ESPP)	<p>Under ASC 718, ESPPs are compensatory if terms of the plan:</p> <ol style="list-style-type: none"> 1. Either: (a) are more favorable than those available to all shareholders or (b) if the discount from the market price exceeds the percentage of stock issuance costs avoided (discount of 5% or less is a safe harbor) 2. Do not allow all eligible employees to participate on an equitable basis, or 3. Include any option features (e.g., look backs). <p>While in our experience most ESPPs are compensatory, plans that do not meet the above criteria are non-compensatory.</p>	<p>ESPPs are compensatory and treated like any other equity-settled share-based payment arrangement. IFRS 2 does not permit any safe-harbor discount for ESPPs.</p>	<p>ESPPs will generally be deemed compensatory more often under IFRS 2 than under ASC 718.</p>
Group share-based payment transactions	<p>Generally, push down accounting of the expense recognized at the parent level would apply to the separate financial statements of the subsidiary.</p> <p>For liability classified awards at the parent company, the mark to market expense impact of these awards should be pushed down to the subsidiary's books each period, generally as a capital contribution from parent. However, liability accounting at the subsidiary may be appropriate depending on the facts and circumstances.</p>	<p>For the separate financial statements of the subsidiary, equity or liability classification is determined based on the nature of the obligation each entity has in settling the awards even if the award is settled in parent equity.</p> <p>The accounting for a group cash-settled share-based payment transaction in the separate financial statements of the entity receiving the related goods or services, when that entity has no obligation to settle the transaction, would be as an equity-settled share-based payment. The group entity settling the transaction would account for the share-based payment as cash-settled.</p>	<p>Under U.S. GAAP, push-down accounting of the expense recognized at the parent level generally would apply. Under IFRS, the reporting entity's obligation will determine the appropriate accounting.</p>

Principal Differences Between U.S. GAAP and IFRS

U.S. GAAP	IFRS	Implications
	<p>The accounting for a group equity settled share-based payment transaction is dependent on which entity has the obligation to settle the award.</p> <p>For the entity that settles the obligation, a requirement to deliver anything other than their own equity instruments (equity instruments of a subsidiary would be “own equity”) would result in cash-settled (liability) treatment.</p> <p>Therefore, a subsidiary that is obligated to issue its parent’s equity would treat the arrangement as a liability, even though in the consolidated financial statements the arrangement would be accounted for as an equity-settled share-based payment.</p> <p>Conversely, if the parent is obligated to issue the shares directly to employees of the subsidiary, then the arrangement should be accounted for as equity-settled in both the consolidated financial statements and the separate standalone financial statements of the subsidiary.</p> <p>Hence, measurement could vary between the two sets of accounts.</p>	

Appendix C:

Summary of Changes from 2012 Edition

Appendix C: Summary of Changes from 2012 Edition

The 2013 edition of PricewaterhouseCoopers' (PwC) *Guide to Accounting for Stock-based Compensation* (the Guide) has been updated as of March 31, 2013 to reflect new and updated authoritative and interpretive guidance since the 2012 edition. This appendix includes a brief description of the Codification and a summary of other noteworthy revisions to this Guide.

Noteworthy Revisions

The listing below highlights noteworthy revisions made to this edition of the Guide.

Chapter 1: Accounting and Disclosure under ASC 718

- **Section 1.13.3.1** was updated to better clarify the accounting for modifications of performance or service conditions that affect vesting.
- **Section 1.13.3.1.1** was added to include guidance for modifications in connection with termination of employment.
- **Section 1.13.3.4** was renamed and expanded to include modifications to add a "change in control" provision and modifications in connection with the sale of a business unit.
- **Section 1.13.3.7** was added to include guidance for modifications by nonpublic companies.

Chapter 4: Income Tax Accounting for Stock-Based Compensation

- **Section 4.20** was updated to incorporate an example to illustrate the accounting for the recognition of prior year windfall tax benefits in an interim period.

How PwC Can Help

PwC is uniquely qualified to address the broad spectrum of business, accounting, tax and human resource issues related to stock-based compensation programs. PwC has the necessary expertise in accounting and tax, as well as extensive experience in advising financial and human resource management on these issues.

PwC has helped numerous companies address the challenges of ASC 718, *Compensation—Stock Compensation*. This experience places us at the forefront of understanding the complex issues that are involved with this accounting topic, making us better prepared to help companies choose among the various valuation models that are now available, select assumptions under those models, and deal with a host of other application decisions. PwC can also help companies consider potential changes in their compensation programs.

If you have questions on accounting for stock-based compensation programs, valuation techniques, FASB developments, plan design, tax implications, or any of the complex issues that this guide covers, or if you would like help in assessing the impact that the accounting rules have on your company, please contact your PwC engagement partner or nearest PwC office.

About PwC

PwC United States helps organizations and individuals create the value they're looking for. We're a member of the PwC network of firms in 158 countries with more than 180,000 people. We're committed to delivering quality in assurance, tax and advisory services. Tell us what matters to you and find out more by visiting us at www.pwc.com/US.