Accounting for Employee Stock Options: Part I

Microsoft's decision to grant restricted stock rather than options, and to expense that compensation, has bolstered the FASB's position. Intel and Cisco Systems are firmly opposed to expensing and are leaders of the International Employee Stock Options Coalition.

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In 1992, stock options were 27% of total executive compensation; by 2000, this had increased to 60%. There can be little doubt that this growth was fuelled, in part, by the idea that options are "free" to the company, as most traditional employee stock options result in no compensation expense to the company. Alan Greenspan has said:

The seemingly narrow accounting matter of option expensing is, in fact, critically important for the accurate representation of corporate performance. And accurate accounting, in turn, is central to the functioning of free-market capitalism. I fear that the failure to expense stock option grants has introduced a significant distortion in reported earnings — and one that has grown with the increasing prevalence of this form of compensation.

On November 18, 2002, the Financial Accounting Standards Board (FASB) issued an Invitation to Comment, Accounting for Stock-Based Compensation: A Comparison of FASB Statement No. 123, Accounting for Stock-Based Compensation, and its Related Interpretations, and IASB Proposed IFRS, Share-based Payment. Comments were requested by February 1, 2003.

The Invitation to Comment analyzes similarities of and differences between Statement 123 (and its related interpretations) and the Proposed International Financial Reporting Standard (IFRS) issued on November 16, 2002, by the International Accounting Standards Board (IASB) with respect to accounting for stock-based compensation. FASB received nearly 300 comment letters in response to the Invitation to Comment:

Most commentators from industry that made general observations about the accounting for stock-based compensation, many of whom were from the high-technology industry, were generally against mandatory expense recognition of all stock-based compensation. In contrast, most commentators that were users of financial statements, including individual investors, pension funds, mutual funds, creditors, and financial analysts, were generally supportive of mandatory recognition of all employee stock options.

According to the IASB, "Few countries have standards on the topic. This is of particular concern in Europe, where the use of share-based payment has increased in recent years and continues to spread."

Beginning January 1, 2005, all listed companies in the European Union (EU) will be required to adopt IASB standards. Other countries outside the EU, including Australia and Russia, are also expected to adopt IASB standards. Other national accounting standard setters around the world, including those in Canada, are expected to adopt new requirements for accounting for employee stock options that are the same as or similar to those adopted by the IASB.

On March 12, 2003, FASB added to its agenda a project on employee stock options. The Board also decided that the project should be undertaken in cooperation with the IASB in order to achieve maximum convergence to a single, high-quality accounting standard on stock-based compensation.

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In September 2003, FASB decided to delay the issuance of new rules until the first quarter of 2004, with final rules due in the third quarter. IASB also recently said that it would delay the issuance of proposed rules until the summer of 2004.

In June 2003, the European Commission Enterprise Directorate released a report on the legal and administrative environment for employee stock options in the European Union (EU). The report recommends delaying a mandatory accounting expense for employee stock options, until a "widely-shared international consensus" on how to account for them is developed. If this recommendation is accepted by the European Commission, it may slow the IASB's progress.

On June 30, 2003, the SEC approved proposed rule changes by the New York Stock Exchange and Nasdaq Stock Market, Inc. that, subject to limited exemptions, would require shareholder approval of the adoption or material revision of all equity compensation plans, including stock option plans. Both sets of rules are effective for plans adopted or materially revised after June 30, 2003.

**OPINION 25**

The Accounting Principles Board (APB) issued Opinion 25 in October 1972. APB 25 requires that stock-based employee compensation be recorded at the award's intrinsic value (i.e., fair value of the underlying stock less the option exercise price) at the grant date, for awards that meet certain criteria.

Under APB 25, a fixed option granted to an employee, with an exercise price equal to at least 100% of the fair market value (FMV) of the shares at the time of grant, will generally produce no compensation expense at any time. If the exercise price is less than FMV, the company must record compensation expense equal to the discount, generally amortized over the vesting period of the option. The "measurement date" for determining the amount of compensation expense is April 1, 2003.

The full texts of FAS 123 and the proposed IFRS are set out in Appendices to the Invitation to Comment. Primary similarities and differences are discussed within the main body of the Invitation to Comment, and secondary similarities and differences are discussed in Appendix A. Appendix B contains Comparative Illustrations. Appendix C is a Comparative Glossary. Appendix J has a side-by-side comparison of the proposed IFRS and FAS 123.


IASB Basis for Conclusions on Exposure Draft, ¶ 8-C, which also states that "European standard-setting bodies have been working on this issue and some have recently published proposals. For example, the German Accounting Standards Committee published a draft accounting standard, "Accounting for Share Option Plans and Similar Compensation Arrangements", in June 2001. The Danish Institute of State Authorized Public Accountants issued a Discussion Paper, "The Accounting Treatment of Share-Based Payments", in April 2000. The UK Accounting Standards Board led the development of the Discussion Paper, "Accounting for Share-Based Payments", published in July 2000 by IASC, the ASB and other G4+1 member bodies."

Herz Testimony, n. 6 above, at 6.


the compensation expense is the first date on which both the number and the option price of the shares is known. Most option plans are fixed plans, where the measurement date is the date of the award. If the measurement date is after the award date, variable accounting will apply, requiring estimates of the compensation cost to be periodically recorded, and updated through the measurement date.

The variable accounting expense is unpredictable and potentially large. These are two things that company accountants and CFOs hate; they want to avoid these kinds of expenses at all cost. This explains why 99 percent of stock options have a fixed price and a fixed grant date, and an exercise price equal to market price of the stock as of the grant date. Under APB 25, this yields zero expense. Also, under APB 25, awards under all employee stock purchase plans (ESPPs) that qualify for favorable tax treatment under section 423 of the Internal Revenue Code, including those with lookback features, are treated as non-compensatory, as are awards under non-qualified plans that have comparable terms.

Since 1972, a considerable body of guidance has been developed to apply the rules of APB 25 in different circumstances. Nevertheless, as noted by Statement 123, "Opinion 25 has been criticized for producing anomalous results and for providing little general guidance to use in deciding how to account for new forms of stock-based employee compensation plans." This led to requests for FASB to reconsider the accounting treatment specified in Opinion 25, which ultimately led to the issuance of Statement 123.

In addition, in recent years it has become widely accepted that the intrinsic value of an option at the grant date does not reflect its full value. As the IASB pointed out:

Beginning January 1, 2005, all listed companies in the European Union (EU) will be required to adopt IASB standards.

Options sell in the market for more than their intrinsic value. This is because the holder of an option need not exercise it immediately and benefits from any increase in the value of the underlying shares. In other words, although the ultimate benefit realised by the option holder is the option's intrinsic value at the date of exercise, the option holder is able to realise that future intrinsic value because of having held the option. Thus, the option holder benefits from the right to participate in future gains from increases in the share price. In addition, the option holder benefits from the right to defer payment of the exercise price until the end of the option term. These benefits are commonly referred to as the option's 'time value'.

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11 See www.sec.gov/rules/sr/34-48108.htm#339_13256. The rules could apply to an agreement with a single individual. The rules do not cover plans that pay out in cash, employment inducement awards, plans intended to qualify under Code section 401 or 423 or certain excess plans. Generally, these exempted plans must be approved by the company's independent compensation committee or by a majority of its independent directors. A company must also notify the NYSE (but not, at present, Nasdaq) if it relies on any exemption.


12 Example 1: Assume a traditional stock option on 500 shares. The market value is $20 at the date of grant and $40 at the date of exercise. The exercise price is $20 and the only requirement for exercise is continued employment. Under APB 25, the measurement date is the date of grant and the compensation expense is 0, despite the $10,000 gain to the employee.

13 Compensatory plans under which the measurement date is the date of grant are referred to as fixed award plans, while all others are categorized as variable award plans. By contrast, the grant of a stock appreciation right (SAR) results in a compensation charge to earnings to the extent that the market value of the stock exceeds the SAR exercise price. The charge is periodically adjusted (but not below zero) for changes in the market value of the stock while the SAR is outstanding (variable accounting). The measurement date is the date on which the grantee exercises the SAR, and the aggregate compensation is equal to the fair market value of the shares and/or cash received at that time. Example 2: the plan is a SAR payable in shares. The employee is awarded 500 SAR shares. The stock's market value is $20 at the date of grant and $40 at the date of exercise. The measurement date is the date of exercise. The gain to the employee is $10,000, as in Example 1 in note 12, but the compensation expense is $10,000 rather than 0. When a SAR is granted in tandem with an option, there is a general presumption that the grantee will elect to exercise the SAR [FASB Interpretation No. 28]. For restricted stock, the company records a compensation expense equal to the excess of the restricted stock's value at the date of grant over any amount paid for it. The expense is generally recorded pro rata over the restriction period. If the stock is forfeited, the expense is reversed [APB 25].

14 Delves, n. 3 above, at 77.

15 For a complete list of the Interpretations of Opinion 25 and related Emerging Issues Task Force issues, see Appendix C of the Invitation to Comment.

16 See Statement 123, ¶4 and 5.

17 IASB, Proposed IFRS, Basis for Conclusions, ¶ BC72.
For a fixed option where the exercise price is at least equal to the value of the stock at the grant date, the intrinsic value at the grant date is zero, and the option's value consists entirely of its time value. Thus, the current accounting treatment under APB 25 understates the value of the option by 100%.\textsuperscript{18}

Under APB 25, a fixed option granted to an employee with an exercise price equal to at least 100% of the fair market value (FMV) of the shares at the time of grant will generally produce no compensation expense at any time. By contrast, an otherwise identical option that is only exercisable if certain performance conditions are satisfied will result in an expense that is recorded by using unfavorable variable accounting treatment.\textsuperscript{19} APB 25 discourages performance-related option plans, may cause economic distortions, and thus fails to satisfy the goal that accounting standards be neutral, and not encourage or discourage entities from entering into one type of option arrangement rather than another.\textsuperscript{20}

Donald Delves reports that, in the 1980s, Towers Perrin —

tracked 30 to 40 different pieces of data related to compensation and ran sophisticated analyses to determine which data correlated most closely with pay.... what we saw, year in and year out, was that the factor that played the biggest role in determining pay level was the size of the company’s revenue. The other factors were far less significant. Performance was always very low on the list of determining factors.

Up to now, stock options have been granted in a way that has provided a lucrative reward for only mediocre performance. Since stock options have been granted at the money (with an exercise price equal to the stock price), the stock price only has to rise slightly for the option to be worth something. Even if a company’s stock is a relatively low performer — going up only 3 to 5 percent per year, far below the average shareholder total return over time of 10 to 14 percent — individuals holding in-the-money options can still become very wealthy....

Most performance features that would be added to options under the new rules would lower their value — and consequently lower the required expense per option to the company.\textsuperscript{21}

**STATEMENT 123**

In June 1993, FASB issued an Exposure Draft on accounting for stock-based compensation. The Exposure Draft would have required all entities to use a fair value\textsuperscript{22} based method of accounting that would have —

(a) resulted in accounting for stock-based employee compensation that was both internally consistent and also consistent with accounting for all other forms of compensation [that is, it would have been expensed], (b) leveled the playing field between fixed and variable awards, and (c) made the accounting for equity instruments issued to employees more consistent with the accounting for all other free-standing equity instruments and the related consideration received.\textsuperscript{23}

\textsuperscript{18} Id. at ¶ BC73.

\textsuperscript{19} If a performance goal must be met in order for the stock to vest, SAR accounting treatment will apply unless the stock will ultimately vest in any event. Example 3: The facts are as in Example 1 in n. 12 above, but the exercise is also contingent on the company’s achieving an earnings per share (EPS) goal over 5 successive years following the grant. If the goal is met, the measurement date is the end of the performance period. The gain to the employee is $10,000, as in Example 1, but the compensation expense is $10,000 instead of 0.

\textsuperscript{20} IASB, Proposed IFRS, Basis for Conclusions, at ¶ BC267, which notes that performance-related employee plans are common in Europe (performance conditions are often required by law) and in other parts of the world outside the US, and that investors are calling for greater use of performance conditions.

\textsuperscript{21} Delves, n. 3 above, at 133, 145, 146.

\textsuperscript{22} FAS 123 uses the term “fair value” with the same meaning as in FAS 121, “Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of”. The fair value of an asset is “... the amount at which the asset could be bought or sold in a current transaction between willing parties, that is, other than in a forced or liquidation sale. Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis for the measurement, if available. If quoted market prices are not available, the estimate of fair value shall be based on the best information available in the circumstances. The estimate of fair value shall consider prices for similar assets and the results of valuation techniques to the extent available in the circumstances. Examples of valuation techniques include the present value of estimated expected future cash flows using a discount rate commensurate with the risks involved, option-pricing models, matrix pricing, option-adjusted spread models, and fundamental analysis.” [FAS 121, ¶ 7; see also FAS 123, ¶ 9]

\textsuperscript{23} Statement 123, ¶ 57; footnote reference omitted.
The Exposure Draft was vehemently opposed; Congress threatened to take away FASB’s standard-setting powers, and the then-chairman of the SEC, Arthur Levitt, urged it to back off.24

In October 1995, FASB issued Statement 123. Statement 123 states that it is preferable to recognize compensation cost for all stock-based employee compensation at fair value. However, the Statement gives entities the choice of accounting for stock-based employee compensation by using either (1) a fair value based method or (2) an intrinsic value based method under Opinion 25.25

The Board chose a disclosure-based solution for stock-based employee compensation to bring closure to the divisive debate on this issue — not because it believes that solution is the best way to improve financial accounting and reporting.26

Statement 123 does require all entities to disclose in the notes to the financial statements the pro forma effect on net income and earnings per share of reporting stock-based employee compensation using the fair value method.

Unlike APB2.5, FAS 123 requires a grant date measurement of compensation expense even for awards for which the number of shares or exercise price is not known. The amount of the expense for a performance award is based on the stock price on the date of grant, and is not adjusted for subsequent changes in stock price, so this eliminates much of the income statement volatility associated with performance awards under APB2.5.

FAS 123 required companies that voluntarily adopted the fair value based method to apply it prospectively for new option awards. This gave the appearance of a precipitate rise in option-related expenses in the first few years, and created inconsistencies in reported results. In December 2002, FASB issued FAS 148, which provides additional transition options and requires more prominent and more timely disclosures.27

Few entities had adopted the fair value-based method prior to 2002. However, in response to the recent corporate scandals, and demands that compensation expense be recognized in the income statement, more than 280 companies28 have elected, or have announced plans, to account for stock-based employee compensation under the fair value method specified in Statement 123. The major accounting firms have reversed their positions of a decade ago, and now support expensing options.29

Microsoft’s decision to grant restricted stock rather than options, and to expense that compensation, has bolstered the FASB’s position. Intel and Cisco Systems are firmly opposed to expensing and are leaders of the International Employee Stock Options Coalition (IESOC).30 Intel continues to lobby against expensing proposals. In 2001, Intel estimated that expensing options would have reduced its earnings from $1.3 billion to $254 million. A July, 2002, Bear Stearns study found that the average company in the S&P 500 would have seen its earnings shrink by 8% in 2000 and by 20% in 2001 if options were expensed.31 According to Fortune, the effect would be a 50% reduction in earnings for Dell Computer, 79% for Intel and 171% for Cisco Systems.32

APB 25 requires that stock-based employee compensation be recorded at the award’s intrinsic value at the grant date, for awards that meet certain criteria.

24 James Leisenring, a member of the IASB who was a member of FASB in 1993-1994: “We had no support from Congress. The Senate was 92 to 8 against us. The SEC said to us, you’re on your own.” Delves, note 3 above, at 85.

25 APB 25 applies only to grants to employees. Generally, an employment relationship exists for this purpose if the employer has the right to exercise significant control over the employee, but it also includes outside directors. For leased employees, it depends on the structure of the leasing arrangement (see FASB Interpretation No. 44, Accounting for Certain Transactions Involving Stock Compensation: An Interpretation of APB Opinion No. 25, March 31, 2000). If APB 25 does not apply, the company must follow FAS 123, as clarified by EITF 96-18. Under FIN 44, APB 25 can be applied only to stock awards to an “employee”, as defined therein, or to certain non-employee directors. Stock awards to others must be accounted for under FAS 123. Special rules apply if there is a change in employment status.

26 Statement 123, ¶ 62.


28 Herz Tessimonly, n. 6 above. Attachment 6 to his testimony lists 281 companies that, as of May 23, 2003, expense or intend to expense employee stock options using the grant date fair value method.


32 Justin Fox, The Only Option (For Stock Options That Is), Fortune, August 12, 2002.
The Broad-Based Stock Option Plan Transparency Act of 2003 would try to stop FASB. A House bill (HR 1372) and a similar Senate bill (S 979) would impose a three-year moratorium to fully study the impact of any FASB proposals.33

Whether or not FASB... will hold firm in the face of opposition from congressmen such as Michael Oxley, chairman of the House Committee on Financial Services, will depend on how its top people react to pressure.34

THE INTERNATIONAL ACCOUNTING STANDARDS BOARD

The IASB was formed in 2001 and is the standard-setting arm of the International Accounting Standards Committee Foundation (IASCF), which also was formed in 2001. Those two entities were established as a result of the reorganization of the Interna-

tional Accounting Standards Committee (IASC), which was founded in 1973. The IASB is based in London.35

FASB and the IASB, as part of their respective missions, have the goal of promoting international convergence of high-quality accounting standards. This mutual goal is intended to result in a single set of high-quality accounting standards recognized as authoritative by all national standard setters and national regulators and enforceable in all countries.

The IASB Exposure Draft. In July 2000, the G4+1 group of standard-setters36 issued a position paper, “Accounting for Share-Based Payment”. Comments on the position paper strongly supported the idea that share-based payment transactions represent an expense that should be recognized in the income statement when the goods or services received are consumed. National standard setters recommended that accounting for share-based payments should be addressed at an international level, to avoid perceived competitive disadvantages if one national standard setter proposed changes in isolation from other national standard setters. In addition, the International Organization of Securities Commissioners stated that the IASC should address accounting for share-based payments.

For these reasons, in July 2001, the IASB added a project on share-based payment to its agenda, noting that the current environment provided it with an opportunity to provide international leadership. Beginning in July 2001, the IASB discussed various aspects of share-based payments, resulting in the exposure draft of a Proposed IFRS, “Share-based Payment”, issued in November 2002.37
MAJOR AREAS OF AGREEMENT BETWEEN FASB AND THE IASB

According to FASB, the most important similarities between the standards are as follows.

Value. Do stock options granted to employees result in compensation expense for the issuing entity? FASB and the IASB have both concluded that employee stock options have value, and that their issuance results in compensation expense. Both standards conclude that equity instruments, including stock options granted to employees, are valuable.

Measurement of Value. Can the fair value of employee stock options be reliably measured? FASB and the IASB both concluded that the fair value of stock options can be reliably measured through the use of option-pricing models.

Should stock options issued to employees be measured at something other than fair value? FASB and the IASB both determined that stock options issued to employees should be measured at fair value rather than intrinsic value. Arguments against this position are flawed, because a stock option's value consists of both intrinsic and time value.38

Both standards establish fair value as the measurement objective for the goods or services received.

There is a subtle difference in the measurement philosophies of the standards. Under FAS 123, the measurement focus is on the fair value of the equity instruments;39 the value of the consideration received (or the goods or services received) is deemed to be equal to the value of the equity instruments issued:

Equity instruments issued to employees and the cost of the services received as consideration shall be measured and recognized based on the fair value of the equity instruments issued.40

By contrast, the Proposed IFRS considers the fair value of equity instruments granted to be a surrogate measure of the fair value of goods or services received.41 The measurement objective is to determine the value of the goods or services to be received; because the value of those goods or services is not known or reliably measurable (or readily determinable), the value of the consideration given is being measured:

For equity-settled share-based payment transactions, the entity shall measure the goods or services received, and the corresponding increase in equity, either directly, at the fair value of the goods or services received, or indirectly, by reference to the fair value of the equity instruments granted, whichever fair value is more readily determinable.42

Hence, the measurement focus of the Proposed IFRS is on the fair value of the goods or services received. This difference results in other substantive differences between the standards, including the treatment of forfeitures and methods of attributing compensation.

Under both standards, the fair value of stock options granted to employees must be measured using an option-pricing model43 that takes into account the following six factors at the grant date: the exercise price, the expected life of the option, the current price of the underlying stock, the expected volatility of the underlying stock, expected dividends on the underlying stock, and the risk-free interest rate.

38 See n. 17 above. See also IASB Exposure Draft, Basis for Conclusions, ¶ BC293: “the question is, which accounting method is more likely to produce the smallest amount of error and the most relevant, comparable information — a fair value estimate, which might result in some understatement or overstatement of the associated expense, or another measurement basis, such as intrinsic value, that will definitely result in substantial understatement of the associated expense?”

39 “The value of employee services rendered is almost always impossible to measure directly. For that reason, accounting for the cost of employee services is based on the value of compensation paid, which is presumed to be an adequate measure of the value of the services received. Compensation cost resulting from employee stock options is measured based on the value of stock options granted rather than on the value of the services rendered by the employee, which is consistent with the accounting for other forms of employee compensation.” [FAS 123, ¶ 107]

40 See Statement 123, ¶ 16.

41 Some commentators challenged this premise: “We do not subscribe to the IASB’s logic that the objective should be to measure the value of the services received. While we would expect that prudent and responsible compensation policies would provide an appropriate linkage between the number of options granted and the value of the services provided, it is not demonstrable that the former equals the latter.” [The Financial Executives International and Institute of Management Accountants comments to FASB, January 21, 2003, available at www.fei.org]

42 See Proposed IFRS, ¶ 7.

43 Invitation to Comment, ¶¶ 20, 21; see also FAS 123, ¶ 117.
lying stock, and the risk-free interest rate. The proposed IFRS expresses the basic principle as follows:

The fair value of options granted shall be measured at the market price of traded options with similar terms and conditions. However, in many cases such traded options do not exist, because the options granted are subject to terms and conditions that do not apply to traded options. For example, employee share options are typically non-transferable and subject to vesting conditions. If traded options with similar terms and conditions do not exist, the fair value of the options granted shall be estimated by applying an option pricing model, such as the Black-Scholes model or a binomial model. The model applied shall take into account [the factors listed above].

Both FASB and the IASB determined that option-pricing models produce measurements that are sufficiently reliable for inclusion in the financial statements. The bases for conclusions of the standards discuss why the Boards came to that conclusion. Both Boards rejected arguments that option-pricing models, developed to estimate the value of short-term, transferable instruments, do not produce reliable value measurements for long-term, non-transferable employee options that are subject to service or performance conditions.

I can assure that high-tech executives in Silicon Valley use Black-Scholes to communicate total compensation to employees. Those same executives know that having to show the results of that calculation to shareholders would reduce or even eliminate the earnings of their companies.

According to one writer:

The reluctance to accept Black-Scholes tells us that options are undervalued by corporate executives and employees; they do not recognize what options are truly worth. The market value of options is significantly more, as Black-Scholes indicates, than most executives and employees are willing to admit. This is understandable, since stock options are highly risky derivative securities that few individual investors would have in their portfolios in any significant numbers.... The perceived lack of worth of options by executives and employees shows that valuable shareholder resources have been misused in the granting of these options. These resources could have been spent more effectively on other incentive vehicles, to the benefit of the company, its shareholders, and its employees.

Their arguments have not convinced everybody:

To test these models, we conducted extensive studies in 1992, and again in 2002. We studied nearly 200 of the S&P 500 companies over 2.5-year periods. We used the most popular models that FASB will allow, including Black-Scholes, to predict the gains to recipients at the time the options were granted. We then compared these predictions to the actual stock gains at the end of five- and ten-year periods in the 1992 study, and seven-year periods in the more recent study. We ran these calculations for time periods since 1967. The results for all time periods and all option valuation models showed that these models do not come close to predicting the actual value of long-term employee stock options. Our research proves what is intuitively obvious. If these option models were accurate, their purveyors would amass the wealth of Midas buying undervalued stocks.

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44 Proposed IFRS, ¶ 24, emphasis added. See also Statement 123, ¶ 17. Proposed IFRS, ¶ 22. ¶ 166-173 of FAS 123 explain the reasons for the specified adjustments to the results of standard option-pricing models to reflect differences between the terms of employee stock options and the traded options for which option-pricing models were initially developed.

45 See ¶ 21 of the Invitation to Comment. Rev. Proc. 2003-68 provides guidance on the valuation of stock options, but this guidance is solely for purposes of the golden parachute rules of Code sections 280G and 4999. The guidance includes a safe harbor method based on Black-Scholes.

46 See Statement 123, ¶ 107-117 and 161-173 and Proposed IFRS, ¶¶ BCI29-BC190 and BCS28-BC294. “An option is a significant liability to the company. The problem, however, is that its true value is highly variable and hard to estimate. The potential economic cost could be very large or very small. In some cases, that cost may be “zero”, which is why start-ups and companies with poor-performing stocks object to a fair-value expense determined at the grant date. On the other hand, the true economic cost could greatly exceed the grant date expense. Using an example of an option with a $10 exercise price, the Black-Scholes option pricing model would generate a value and expense of the grant date of $3 to $5 per share. If the stock price goes to $20 a share, then the potential economic cost to the company is $10. If the stock goes to $50, the economic cost is $40. However, if the stock price fell to $5 a share, the economic cost would be zero.” [Delves, note 3 above, at 90].


49 Delves, n. 3 above, at 79-80.
rather than selling their software for $50. These models were invented for short-term traded options. Therefore, it is not surprising that they are inaccurate for long-term employee options. The most commonly used one is the Merton variant of the Black-Scholes model. This assumes constant volatility, dividends and a risk-free debt rate over the seven-or-so term of employee options. This is not a real-world set of assumptions. For an option granted at $100 per share, the various valuation models tested in our research predicted a range of gains for individual companies of $10 to $97. FASB, though it does not let a company pick, say, the asset depreciation schedule it wishes, would allow it to use any option valuation model that takes into account the option term, strike price, volatility, lack of marketability, a risk-free rate and dividends. A mad scramble has ensued to find the model producing the lowest earnings charge. Moreover, companies can change these other assumptions — such as employee turnover rates — from year to year, which will distort comparisons with prior years. The true economic cost of options is the dilution to shareholders when options are exercised, offset by the tax deduction for the gains to employees.

Neither FAS 123 nor the IASB Exposure Draft mandates the use of a particular option-pricing model, nor do they express any preference. In fact, both standards note that one model may produce more reliable results in some circumstances than another model and that better models may be developed in the future. A majority of FASB’s Option Valuation Group supports a non-specific flexible approach, using “models and assumptions that a market place participant would use.”

Unlike APB 29, FAS 123 requires a grant date measurement of compensation expense even for awards for which the number of shares or exercise price is not known.

Most commentators supported flexibility in the choice of option-pricing models, and in determining the appropriate adjustments to reflect the differences between employee options and traded options. The problem with allowing companies flex-


51 "The Board decided that it is not necessary or appropriate to prescribe the precise formula or model to be used for option valuation. There is no particular option pricing model that is regarded as theoretically superior to the others, and there is the risk that any model specified might be superseded by improved methodologies in the future. In any event, there should be little difference between the results of the various models. Although the Black-Scholes model is the most well-known model, there does not seem to be any reason to specify that this model should be used rather than another. Entities should select whichever model is most appropriate in the circumstances, provided that the model selected takes into account the features of the options concerned, as discussed further below." [IASB Basis for Conclusions, ¶ BC131].


53 Freer, for instance, Mercer Human Resource Consulting, note 53 above: “With regard to lack of transferability, we believe the standard should provide more flexibility in determining an appropriate adjustment. We do not believe that the use of expected life should be mandated to reflect the lack of transferability of the option, but should be permitted as one alternative. In addition to this approach, we support permitting the use of a standard “haircut” to reflect the option’s illiquidity. There are numerous studies that compute the discount applied to a security or asset to account for the fact that it cannot be sold. The studies we have seen suggest a discount of approximately 10% per year is appropriate. The discount would be applied to the value of the option computed under an option pricing model that reflects the features of the option, as if it were publicly traded. We also support permitting the use of a modification to reflect “blackout periods” during which the option cannot be exercised. This would include periods prior to the time at which the option becomes exercisable, as well as quarterly blackout periods that precede companies’ earnings announcements. This adjustment may not be feasible with the standard Black-Scholes model, which assumes exercise at the end of the term. But other models can incorporate this adjustment to produce a more accurate value.”
ibility is that it allows them to game the system in the same way as under the pension and retiree health benefits rules of FAS 87 and FAS 106.55

At its meeting on September 10, 2003, FASB tentatively decided that it would not prohibit the use of the Black-Scholes model in favor of a less simple binomial model.56 However, FASB is apparently moving toward language encouraging use of a binomial “lattice” model for option valuation, with multiple inputs to try to match projected changes in terms and conditions of stock compensation award programs.57 IASB has asked its staff to provide more guidance on circumstances under which certain types of option pricing models are more appropriate than others.58

There are now several dozen models under development that purport to remedy the problems with Black-Scholes, which has come under attack because of its tendency to overstate the value of options. Black-Scholes assumes that the risk-free interest rate and stock price volatility are constant during the option’s life, which is not true for options with long terms. A new study for the Financial Executives Research Foundation Inc.59 concluded that “the choice of valuation model requires a trade-off between accuracy, on the one hand, and simplicity and comparability, on the other.” 60

At its July, 2003 Board meeting, the IASB tentatively agreed that the IFRS should not specify which option pricing model should be applied. At a later meeting, the Board confirmed that decision, and tentatively agreed to provide guidance on the circumstances in which particular types of option pricing models are more appropriate than others. This will include guidance similar to the guidance on valuation techniques included in IAS 39.

When FAS 123 was developed, FASB concluded that, ideally, the value of a reload feature should be included in the valuation of the original option at grant date. However, FASB believed that it was not possible to do so. Accordingly, FAS 123 does not require the reload feature to be included in the grant date valuation of the original option. Instead, reload options granted upon exercise of the original options are accounted for as a new option grant.

According to the IASB, recent academic research indicates that it is possible to value the reload feature at grant date.61 However, if significant uncertainties exist, such as the number and timing of expected grants of reload options, it might not be practicable to include the reload feature in the grant date valuation. The proposed IFRS provides that, for options with a reload feature, the reload feature must be taken into account, where practicable, when an entity measures the fair value of the options granted. However, if the reload feature is not taken into account, then the reload option must be accounted for as a new option.62

At its meeting on September 10, 2003, FASB tentatively decided that options with reload features should be treated as new grants. At a joint meeting on October 22, 2003, the IASB and FASB members voted unanimously to follow the FASB approach to accounting for reloads as new option grants.63

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55 A recent survey conducted by the Society of Actuaries found that in calculating pension expense under FAS 87, discount rates ranged from 5.48% to 8%, return on assets ranged from 6% to 9.5% and the salary scale ranged from 0 to 7%. In calculating the expense for other post-employment benefits under FAS 106, discount rates ranged from 4.5% to 7.5% and the health care trend rate averaged 9.31% for 2003, 8.83% for 2004 and 7.94% for 2005. [Society of Actuaries – FAS Assumptions Survey, 30 September, 2003, www.soia.org].


61 One commentator stated: “We strongly agree that option-pricing models can address reload features, and that Statement 123’s requirements regarding reloads should be changed. Companies should be permitted to include in their initial fair valuation of a stock option a premium for any reload feature the option contains. Subsequent reload grants, Therefore, should not be treated as new awards that trigger additional measurement of compensation expense.” [Mercer letter, n. 53 above]

62 Proposed IFRS, ¶ 25. See also IASB’s Basis for Conclusions, ¶¶ BC17 through BC180.

Measurement Date for Transactions with Employees.
The APB (in the early 1970s), FASB (in the early 1990s), and the IASB all concluded that the value of equity instruments awarded to employees should be measured at grant date (except in the case of variable awards under Opinion 25). By contrast, the G4+1 group's Discussion Paper supported vesting date measurement, because it concluded that the option is not issued until vesting date.

It noted that the employees must perform their side of the arrangement by providing the necessary services and meeting any other performance criteria before the entity is obliged to perform its side of the arrangement. The provision of services by the employees is not merely a condition of the arrangement, it is the consideration they use to 'pay' for the option. Therefore, the Discussion Paper concluded, in economic terms, the option is not issued until vesting date. Because the entity performs its side of the arrangement on vesting date, that is the appropriate measurement date.

The FASB and IASB standards both require that the fair value of equity instruments granted to employees be measured at the grant date. According to the IASB:

If the fair value of the equity instruments granted is used as a surrogate measure of the fair value of the services received, both vesting date and exercise date measurement are inappropriate because the fair value of the services received during a particular accounting period is not affected by subsequent changes in the fair value of the equity instrument. For example, suppose that services are received during years 1-3 as the consideration for options that are exercised at the end of year 5. For services received in year 1, subsequent changes in the value of the option in years 2-5 are unrelated to, and have no effect on, the fair value of those services when received. The Board concluded that, at grant date, it is reasonable to presume that the fair value of both sides of the contract are substantially the same — i.e. the fair value of the services expected to be received is substantially the same as the fair value of the equity instruments granted. This conclusion, together with the Board's conclusion that there is unlikely to be a high correlation between the fair value of the services received and the fair value of the equity instruments granted at later measurement dates, led the Board to conclude that grant date is the most appropriate measurement date for the purposes of providing a surrogate measure of the fair value of the services received.

The IASB also rejected exercise date measurement on conceptual grounds:

The [G4+1] Discussion Paper rejected exercise date measurement because it requires share options to be treated as liabilities, which is inconsistent with the definition of liabilities in the conceptual frameworks of the G4+1 member bodies. Exercise date measurement requires share options to be treated as liabilities because it requires the remeasurement of share options after initial recognition, which is inappropriate if the share options are equity instruments. The Discussion Paper concluded that a share option does not meet the definition of a liability, because it does not contain an obligation to transfer cash or other assets.

Grant-date measurement represents the cheapest way for companies to charge stock options against their earnings:

Three broad choices exist for when to make a charge for the fair value of share-based payments: first, when the company grants options to its employ-

Both FASB and the IASB determined that option-pricing models produce measurements that are sufficiently reliable for inclusion in the financial statements, but neither mandates the use of a particular option-pricing model, nor do they express any preference.

ce; second, on the vesting date, when the employee becomes entitled to exercise them; and third, when the employee actually exercises them. In its draft standard, the IASB has chosen the grant date, which throws up the lowest charge if the company's shares are rising. That was a decision led by pragmatism rather than accounting principle, some say. According to an example in a discussion paper published in 2000 by the IASB's predecessor, the grant-date method produces a cost roughly a third lower than

64 Because Emerging Issues Task Force (EITF) Issue No. 96-18, "Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services," provides different measurement-date criteria for non-employee awards than the Proposed IFRS, respondents were encouraged to comment with respect to that difference.

65 IASB Basis for Conclusions, ¶ BC98. The Discussion Paper also proposed recognising an accrual in equity during the vesting period to ensure that the services are recognised when they are received. This accrual would be "trued up" on vesting date to equal the fair value of the option at that date. [IASB Basis for Conclusions, ¶ BC99]

66 IASB Basis of Conclusions, ¶ ¶ BC87, BC90.

67 IASB Basis of Conclusions, ¶ ¶ BC92.
the vesting-date method, which the paper concluded was the best one.\textsuperscript{68}

\textbf{Attribution.} The FASB and IASB standards both require that the compensation expense relating to equity instruments granted to employees be recognized in the income statement over the period in which the employees provide services to earn the related benefits (generally, the vesting period).

\textbf{Disclosure.} \textsuperscript{69} Generally, the Proposed IFRS incorporates the financial reporting disclosures required under Statement 123 and requires additional disclosures.\textsuperscript{70} Several of the additional requirements are designed to provide further information on how estimates are established for the valuation of equity instruments, and to provide information on how actual amounts differed from the original estimates. Generally, an IFRS-reporting entity will provide more information with respect to valuation than an entity reporting under Statement 123.

At a recent meeting, the IASB tentatively agreed to retain the proposed disclosure principles. The Board also tentatively agreed to some deletions and modifications of the proposed detailed requirements, in the light of respondents' comments and earlier Board decisions, for example, to replace the units of service method with the modified grant date applied in FAS 123.

\textbf{CONCLUSION}
Part II of this article, to appear in the next issue, will elaborate on the differences between the FASB and IASB approaches. \textsuperscript{71}

\textsuperscript{68} An optional expense?, November 7, 2002, from The Economist Global Agenda, \url{www.economist.com/agenda/displayStory.cfm?story_id=1429243}.

\textsuperscript{69} Invitation to Comment, \textsuperscript{70} \textsuperscript{71} See \textsuperscript{45} through \textsuperscript{48} and \textsuperscript{243} through \textsuperscript{261} of Statement 123, \textsuperscript{45} through \textsuperscript{53} of the Proposed IFRS, and \textsuperscript{31} through \textsuperscript{37} of the Invitation to Comment.