



AMERICAN ACADEMY of ACTUARIES

September 28, 2004

Mr. Michael Tovey
Financial Accounting Standards Board
401 Merritt 7
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Norwalk, CT 06856-5116

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Letter of Comment No: 6534
File Reference: 1102-100

Re: Comments on the proposed Fair Value Index-Adjusted Method

Dear Mr. Tovey:

On behalf of the American Academy of Actuaries'¹ Stock Options Task Force, I appreciate the opportunity to present the following comments regarding the use of the Fair Value Index-Adjusted Method as a means of valuing employee stock options (ESOs).

Summary

In moving toward the best possible standard for valuing employee stock options, the Financial Accounting Standards Board (FASB) has pursued the qualitative goals of relevance, reliability, verifiability, comparability, consistency, and cost effectiveness. Members of the task force embrace these goals – as do all who have an interest in seeing a better reporting of costs associated with ESOs.

ESOs have unique characteristics such as vesting periods, post-vesting restrictions, termination provisions, and other contingencies. The FASB's exposure draft, *Share-Based Payment*, explicitly acknowledges that these unique characteristics affect the fair value and should be reflected in the valuation methodology.

Two valuation methodologies, in particular, are widely viewed as good candidates for use in valuing ESOs: the lattice model (a family of models) and the Black-Scholes model. Both methodologies have solid foundations in financial economic theory, and their use has been tested in academic research and in actual practice.

We do not believe the lattice and Black-Scholes models are the only methodologies capable of valuing ESOs. However, any model used to value ESOs should:

- be grounded in sound financial economics theory;

¹ The American Academy of Actuaries is the public policy organization for actuaries of all specialties within the United States. In addition to setting qualification standards and standards of actuarial practice, a major purpose of the Academy is to act as the public information organization for the profession. The Academy is nonpartisan and assists the public policy process through the presentation of clear actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal and state elected officials, regulators and congressional staff, comments on proposed federal and state regulations and legislation, and works closely with state officials on issues related to insurance. The Academy also develops and upholds actuarial standards of conduct, qualifications and practice, and the Code of Professional Conduct for all actuaries practicing in the United States.

- seek to achieve the goals of relevance, reliability, verifiability, comparability, consistency, and cost effectiveness;
- be capable of addressing the unique characteristics of the ESOs; and
- be appropriately documented in both the assumptions used and the processes employed.

The Fair Value Index-Adjusted Method, a valuation methodology recently proposed to the FASB by an employer group, applies various adjustment factors to a basic value developed using the Black-Scholes model. The application of these adjustment factors is an attempt to capture the unique characteristics of ESOs. In our view, however, this method will not produce reliable ESO fair values. In particular, the adjustments inherent in the method either lack rigorous justification or cannot be applied consistently.

The following is a more detailed discussion of four specific areas of concern with the Fair Value Index-Adjusted Method.

Issue 1: Adjustment for Blackouts

A downward adjustment for blackouts misrepresents the effect of blackout periods on option value.

The proposed methodology suggests that a blackout should always reduce the fair value of an ESO. Members of the task force disagree. We believe that the impact on the option value is a result of employee behavior in response to the blackout period. If blackout periods lead to later exercises, effectively increasing the expected life of the option, the value of the option is actually greater.

In the event a blackout period shortens the life of an option, we don't believe a pro rata adjustment is an appropriate measure of the impact of the value reduction. Consider the case of a European option as an example. Under a European option, exercise is only allowed on the last day of the option. One might consider all days of this option's life to be a blackout period, except for the day of expiration. An adjustment for blackouts would reduce the fair value of this option to almost zero, suggesting that European options have no value. As European options do have value, it is clear that the pro rata blackout adjustment is not appropriate.

Issue 2: Adjustment for Non-Transferability/Termination Risk

Without considering plan design, vesting, and employee behavior, a uniform adjustment for non-transferability and termination risk does not represent the unique features of an ESO.

The ESO characteristics of term, plan design, vesting, and employee behavior patterns can vary significantly from award to award, and their impact on value will also vary greatly. A single adjustment factor applied in all circumstances would inadequately reflect these variations.

Consider an award with a term of three years and vesting of three years – it is not reasonable to reduce the Black-Scholes value of this award by 50 percent, because it is essentially a European option. Prior to vesting, termination risk wouldn't be a factor because non-vested terminations are ultimately not expensed; non-transferability would also not be a factor because the employee would not be able to realize any value before expiration due to the vesting constraint.

The proposed adjustment for non-transferability and termination risk can be accommodated by a reduction in expected life, one of the key factors driving the option value. However, this reduction in expected life may vary significantly from situation to situation. The proposed methodology would apply a uniform 50 percent reduction to the Black-Scholes value, instead of a plan-specific adjustment to expected life. We believe this uniform reduction approach introduces a significant embedded error in the value of the option.

Issue 3: Volatility Assumption

Considering only volatility related to the market ignores a significant portion of total stock price volatility.

The proposed methodology considers only volatility related to the general market, represented by the company's historical data, applied to the volatility of a stock index. This ignores specific company stock price volatility not attributable to market volatility. In general, the total volatility of a specific company's stock will be considerably greater than the volatility inherent in this methodology. We believe that a best-estimate stock option value should be based on an assumption of the total volatility of the underlying stock.

Issue 4: Adjustment for Non-Hedgeability

The adjustment for non-hedgeability potentially replicates adjustments made through other factors in the proposed formula.

The proposed adjustment for non-hedgeability includes "discounting" the option cash flows using the company's equity risk premium. This adjustment implies that all risky investments in the company's stock options should be discounted at the same rate – the risk premium on the company's stock. This ignores the substantial difference in risk between stock and stock options.

The assertion that ESOs cannot be hedged may rely on the unique features of ESOs, such as the inability to sell them and plan features such as vesting or performance conditions. However, the proposed methodology already discounts for these features in the adjustment for non-transferability/termination risk and would thus be double-counting through an additional adjustment for non-hedgeability.

We appreciate the opportunity to provide these comments, and we would be delighted to discuss them with you further at your convenience. Please contact Heather Jerbi, the Academy's pension policy analyst (202.785.7869; Jerbi@actuary.org), or myself (312.454.8140; tterry@chicagoconsultingactuaries.com) if you have any questions.

Sincerely,

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