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ESOARS to Offer Market Pricing of Employee Stock Options?

On January 25, 2007, the SEC sent out a letter generally approving the design of a new derivative security developed by Zions Bancorp called ESOARS (Employee Stock Option Appreciation Rights Securities) that could effectively create a market pricing mechanism for employee stock options ("ESOs"). While we must be careful not to misinterpret this news (the SEC did not actually approve this valuation method for immediate practical use in SFAS 123R compliance), there are some interesting implications that merit consideration.

Here is some background: companies have been required to expense the fair value of ESOs granted since the latter half of 2005, and this requirement has significantly impacted reported earnings for companies that use ESO grant compensation heavily. According to a recent article in *Forbes*, if the results from the ESOARS test auction are reasonably accurate, Electronic Arts, Adobe, and eBay could potentially increase pretax profits by 43%, 11%, and 10%, respectively, through the mitigation of ESO expense. Based on most recent quarterly pretax profits, this increase would represent an additional $70 million in pretax earnings for these three companies alone. While the requirement to report option expense is conceptually sound (companies granting ESOs do incur a real cost), some analysts believe that the current option valuation methods prescribed by the SEC (Black Scholes or binomial option-pricing models adjusted for expected life) overstate ESO cost because these models were developed for the pricing of publicly traded stock options. Results of a test ESOARS auction held by Zions in June 2006 suggest that the fair value of ESOs may be substantially lower than that implied by conventional stock option valuation models, which is music to the ears of managers of business struggling with ESO expense – if it ultimately provides a reasonable basis for recording lower option compensation expense.

SFAS 123R

Companies were required to recognize the cost associated with ESOs when SFAS 123R became effective during 2005. Essentially, 123R states that the fair value of ESOs should be measured based on observable market prices for similar securities, or if such information is not available (and it hasn't been), then the fair value should be based on an option-pricing model adjusted for differences between ESOs and regular publicly traded equity options.

In the absence of relevant market information, companies have generally relied on either the Black Scholes model or a binomial model. The problem is that these models were not developed to price ESOs, which differ from traditional publicly traded options in that they are non-transferable and often include vesting requirements. The most common adjustment to account for the unique features of ESOs is to reduce the remaining term assumption from the contractual term of the option to the expected exercise date, since non-transferability often results in early exercise by employees. It has been a matter of debate as to whether this adjustment is sufficient to fully capture the decrement to value associated with non-transferability. Intuitively, the transfer restrictions and forfeitability render ESOs (relative to an otherwise comparable publicly traded option) less valuable to the holder and thus less costly to issuer.

In consideration of the difficulties associated with the conventional model-based pricing techniques, the SEC began publicly encouraging the development of market-based techniques to measure the fair value of ESOs. Development of the ESOARS security was based on guidance from the Office of Economic Analysis dated August 31, 2005, which stated that 1) market instruments should be designed to track the flow of the net obligation of the company or the net receipts of the employees and 2) the suitability of any market-based approach depends on not only the actual instrument design, but an appropriate market pricing mechanism and related information plan, as well.

THE INSTRUMENT

The ESOARS instrument is an asset-backed security that tracks the value of a reference pool of ESOs by making payments to holders as reference options are exercised. The holder of an ESOARS instrument receives a pro rata share of the net realized value from the exercise of options in the associated pool of ESOs. In other words, ESOARS are not options themselves; the holder cannot exercise any units in exchange for subject stock. Rather, ESOARS are derivatives for which value is driven by expectations regarding future company stock prices and employee exercise behavior. Consistent with SEC guidance, these securities track the flow of net receipts to the holders of the associated ESOs.

While the size of an ESOARS offering is an important consideration (the offering should be large enough to attract attention, yet not so large that it floods the infant market), the terms of the

D I D Y O U K N O W ?

The Quantitative Marketability Discount Model (QMDM) was mentioned in court again on May 4, 2006 in the case *Juan Armstrong v. LaSalle Bank National Association*, No. 05-3417 (7th Cir. May 4, 2006),

To see what the Court said, see page 6 of this newsletter.

If you are interested in a summary of the history of the QMDM and its acceptance in the business appraisal profession, download the complimentary ***QMDM FACT SHEET*** *from our website at www.mercercapital.com.*

offering can be adjusted so that the benefits of an ESO and that of an ESOARS unit correspond one-to-one. For example, if a company issued 500,000 options and 100,000 ESOARS units, the aggregate pool of ESOARS would pay out 20% of the net realized value of the ESO reference pool (100,000 ESOARS / 500,000 ESOs = 20%).

To illustrate the mechanics of the ESOARS instrument, assume Company A issues 10,000 ESOs at a $9 strike price as well as 1,000 ESOARS units that collectively pay 10% of net realized value of the ESOs. Consider the event that 1,000 options are exercised by employees when the price per share of Company A is $12. Since the net realized value to employees at this time was $3,000 ($12 stock price - $9 strike price = $3 x 1000 options exercised = $3,000), the ESOARS would pay out an aggregate sum of $300 associated with the exercised ESOs. Accordingly, the holder of 1 ESOARS unit would receive $0.30, which is the pro-rata share of 10% of the net realized value of the exercised ESOs.

Zions anticipates that ESOARS would be sold through an online auction on the ESO grant date. The idea is that the market price at which ESOARS transact would provide an indication of the fair value of the ESOs at the time of the grant.

	ESOs	ESOARS
Units Issued	10,000	1,000
Strike Price	$9.00	
Stock Price	$12.00	
Options Exercised	1,000	
Net Realized Value	$3,000	$300
Benefit / Unit		**$0.30**

TABLE ONE

THE TEST RUN

In late June 2006, Zions ran a test auction of ESOARS associated with Zions Bancorp ESOs that were granted May 1, 2006. Prior to the auction, Zions publicly announced and advertised the auction and provided information related to historical ESO exercise patterns for option grants since 1994. The test auction was conducted over a timeframe of 30 hours as a modified Dutch auction (similar to the auction in which US Treasuries are sold) designed to sell the ESOARS at the lowest bid price that would allow all units to be sold. It is important to note that this is a rather simplistic overview of the test auction; Zions put substantial emphasis on details with the intent of creating and maintaining the integrity of the market pricing mechanism of the auction, as evidenced by discussion in the Zions ESOARS submission to the SEC.

Table Two briefly summarizes the results of the auction. The auction experienced technical issues in the final 22 minutes, which resulted in

ESOARS Test Auction Results Summary	
Registered Bidders	82
Actual Bidders	57
Bids	1,041
Winning Bidders	21
Unit Price	$7.50

TABLE TWO

bidders experiencing outages and poor connectivity. In consideration of the heavy bid volume in the final hour of the auction and discussions with large bidders, Zions believes the market-clearing price would have exceeded $8.00 in the absence of technical difficulty.

Valuation Method	Value Indication	Discount - 7 Year	Discount - 4 Year
Black Scholes - 7 Year Life	$17.70	na	na
Black Scholes - 4 Year Life	$12.89	27%	na
ESOARS - $8.00[1]	$9.14	48%	29%
ESOARS - $7.50[1]	$8.57	52%	34%

(1) To adjust for investor expectation of pre-vesting ESO forfeiture, we have assumed an expected forfeiture rate of 12.5% (i.e. $8.00 / .875 = $9.14).

TABLE THREE

The ESOs related to the auctioned ESOARS had a strike price of $81.15 (Zions stock price as of the auction date was $78.22), a seven year life, and a three year vesting schedule. Table Three compares the market-clearing price (actual and $8.00) adjusted for pre-vesting forfeiture (assuming a weighted average expected forfeiture rate of 12.5%).

The Black Scholes valuation, based on a four year life to account for early exercises due to the lack of transferability of the ESOs (which is close to how the ESOs would currently be valued under SFAS 123R), indicates a value of $12.89 per option, which implies a discount of 27% for lack of transferability from the seven year value.[1] Assuming the market-clearing price finished at $8.00, the fair value indicated by the ESOARS test auction implies a total discount of 48% from the 7-Year option-pricing model indication of value, or an additional discount of 29% from the adjusted 4-Year indication of value (which is similar to the methods currently used for 123R compliance).

IMPLICATIONS

Although this test auction represents only a single observation of a novel security sold in an untested market, the magnitude of the implied discount from regularly employed ESO pricing techniques is noteworthy. If option compensation expense is being overstated by current financial reporting requirements, there are repercussions for management, investors, and regulators alike. Depending on the actual magnitude of this potential overstatement of ESO expense, reported earnings under SFAS 123R may be no more accurate than under APB 25 (which did not require the expensing of option compensation).

This test auction also provides the opportunity to refine ESO valuation models. The availability of empirical market information for ESOs may allow theoretical ESO pricing models to be tested for reliability and lead to more robust valuation models acceptable to auditors and the SEC. In fact, the response from the SEC suggests that observations from market-based ESO pricing could lead to innovations in models used to price ESOs. Several years ago, Mercer Capital introduced a risk-averse binomial employee stock option pricing model, which is an example of a potential innovation in model-based ESO pricing that would benefit from empirical data.

Although encouraging, the SEC's response was less enthusiastic than many media reports seem to imply. The immediate result of the Zions effort to develop an ESO market-pricing method was an open-ended letter from the SEC that, while generally approving of the design of the ESOARS instrument, recommended that future actions should be "analyzed to determine whether it results in an appropriate market pricing mechanism." Loosely translated, we interpret this to mean: We like the design of the instrument itself,

1 The application of the Black Scholes option pricing model also assumes volatility of 18.0%, a dividend yield of 2.0%, and a risk-free rate of 4.949%.

but your internet auction does not currently satisfy the requirements under SFAS 123R to measure the fair value of ESOs; call us back with anything new.

The ongoing development of market-based ESO pricing mechanisms is one example of the state of constant change in which fair value accounting currently resides. When dealing with fair value issues for financial reporting, you need someone who understands the issues and has stayed current with fair value changes. If you have any questions related to valuation and fair value accounting, please contact a professional at Mercer Capital.

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THE QUANTITATIVE MARKETABILITY DISCOUNT MODEL IN COURT AGAIN

THE QMDM FACT SHEET

THE QMDM FACT SHEET

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In *Juan Armstrong v. LaSalle Bank National Association*, No. 05-3417 (7th Cir. May 4, 2006), the U.S. Court of Appeals for the Seventh Circuit determined that the appropriate standard of review to apply when considering whether an employee stock ownership plan trustee adopts a valuation of the subject stock is the abuse of discretion standard. It noted that one method for testing a trustee's abuse of discretion is whether a marketability discount should have been applied.

In making this recommendation, the court stated:

> "There are techniques for calculating a marketability, or illiquidity, discount, see Z. Christopher Mercer, "A Primer on the Quantitative Marketability Discount Model," *CPA Journal*, July 2003, www.nysscpa.org/cpajournal/2003/0703/dept/d076603.htm, visited Apr. 6, 2006...."

Brief summary above provided by John J. Stockdale, Jr. and appeared in the Summer 2006 issue of the Business Valuation Review

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Z. Christopher Mercer, ASA, CFA
Business Valuation Association of Chicago
February 22, 2007
"Buy-Sell Agreements: Ticking Time Bombs or Reasonable Resolutions?"

Timothy R. Lee, ASA
New York Society of CPAs Business Valuation Conference
May 21, 2007
"Application of Industry & Economic Data in Business Valuation"

Travis W. Harms, CFA, CPA/ABV
Advanced Business Valuation Seminar sponsored by the American Society of Appraisers
July 18, 2007
"Developing Reliable Valuation Models"

Brent A. McDade, CBA, BVAL
ABA Family Law Section Memphis Fall Conference
October 10 - 13, 2007
"Creative Uses of Business Appraisers in Divorce"

The Integrated Theory of Business Valuation - SECOND EDITION
by Z. Christopher Mercer, ASA, CFA and Travis W. Harms, CFA, CPA/ABV
Offered by Wiley & Sons
To be published in the Summer of 2007

Title	Description	Investment	Release Date
Quantifying Marketability Discounts ***Valuing Shareholder Cash Flows***	*Quantifying Marketability Discounts* has been updated and is now offered as an e-book. This edition provides a brand new chapter which discusses each of the assumptions of the QMDM in-depth. As a bonus, when you purchase the e-book, you will also receive the QMDM Companion, the latest edition of the QMDM in spreadsheet format.	**$95.00**	*Currently available*
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