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Ms. Kimberley Crook
Project Manager
International Accounting Standards Board
40 Cannon Street
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Ms. Crook,

I am writing, in part, to commend the International Accounting Standards Board for taking on such a significant project at this early stage of the Board's life. I cannot think of an improvement to financial reporting that is as obviously necessary as this one - and that is, simply, to account for all of a firm's compensation costs. At the same time, I cannot think of a project more likely to generate widespread outrage on the part of those who would prefer to keep such compensation "off-income statement." Congratulations to the Board for not sidestepping controversy and working on meaningful projects instead of trifles.

I am also writing to offer at least a few brief comments on the November Exposure Draft, as follows.

* * * * *

Question 1: Scope

I support the scope as presented in the draft. I cannot find any conceptual reason for excluding one kind of transaction or another from the provisions of the proposal. If an exchange of some sort is completed with a share-based currency rather than a government-sponsored currency, there is still an exchange of values that needs to be reflected - no exceptions.

Question 2: Transaction recognition

I believe the requirements for transaction recognition are sufficient for understanding by the preparer community.

Question 3: Measurement

The requirement to measure the value of a transaction at its fair value (directly) or by the value of the instruments given (indirectly), whichever is more readily determinable, is workable. While allowing for judgment to be exercised as to which value may be "more readily determinable," I believe that it is the right way to take the first cut at the issue of measurement.

Questions 4 & 5: Measurement date

If a fair value for goods or services is available at the time they are exchanged for equity instruments, then that fair value should be imputed to the instruments as the proposal suggests. Likewise, if the fair value is most readily determined by reference to the value of the equity instruments, their value at grant date should be imputed to the transaction.

Question 6 & 7: Rebuttable presumptions

The process of valuing equity instruments is more of an art than a science, despite the artificial precision that accompanies it. I believe that the rebuttable presumption that the fair value of the goods or services being exchanged is more readily determinable than the fair value of the instruments is a the right presumption to use. In the case of employees, it makes more sense to impute the fair value of the instruments to the value being received for their services; there simply is no visible fair value that can be imputed to the instruments.

Question 8: Service period

I believe that employees earn the value of the options over the vesting period. After all, that the entire pretext for granting them: the actions taken by the employees over the option vesting period are supposed to increase the value of the underlying shares so they'll have a reward when they are able to exercise them. The value of their efforts doesn't logically happen at either end point of the vesting period; their efforts take place - and the benefits from their efforts, supposedly - as time goes by.

Question 9: Attribution method

I support the attribution method outlined in the draft. I believe it will appropriately match the value of the instruments with the services provided.

Question 10: Non-adjustment of forfeitures

I believe the approach in the draft makes sense. If an employee provides services while being teased by the promise of an option payday, and the employee keels over (or otherwise forfeits the option), the firm granting the option has still enjoyed the benefits of the employees labors. The fact that the employee won't be around to enjoy the benefits of his or her labors doesn't change that fact, which has already been recorded.

Questions 11, 12, 15 & 16: Option pricing model

I agree that an accounting standard should mandate the use of an option pricing model for measurement purposes. At the same time, I disagree with the model as described in the draft. I believe that the standard should mandate the use of the minimum value model, with no estimate of the expected life of an option. In short, the standard should require a model that accounts for what has been given to the employee: the right to buy a share of stock at a fixed price for a period as long as ten years, in most cases.

The minimum value model is most often dismissed as inelegant and ineffective because it doesn't take into account the option volatility that provides most of the calculated value under the Black-Scholes option pricing model. It is true that the it doesn't capture value attributable to option volatility, but it does account for the time value of what has been given to an employee: the right to buy stock at particular time for an extended period. That is inarguable, and that is what the employee receives: time to buy at specific price for a specific time frame. The volatility value is always arguable.

Estimating the value of the option using the minimum value method with the statutory life produces significant values. I endorse the use of the statutory life as an input, not to achieve a particular effect, but because it is actually what has been granted. Employees may exercise early, or they may never exercise options - but they still have the right to wait until the end of the period. A holder of a newly-issued twenty year term corporate bond might expect it to be called away in five

years - but as long as the twenty-year term is built into the market price, the holder will still carry it at its value using a twenty-year term.

The shorter “expected life” assumption permitted for valuation purposes to compensate for the fact that these options were non-portable. That doesn’t hold up well under examination: the options are still non-portable even with a shortened life. The shortened life certainly lowers the calculated value of an option, but it doesn’t necessarily capture any diminution of value due to an option’s non-transferability.

Attached in Appendix A is a list of option values for 236 companies in the S&P 500 where I calculated the minimum value using the footnote disclosures and a full-term life. Notice that for 23 of them, the value *exceeded* the amount calculated using the Black-Scholes option pricing model. Many others approximated the Black-Scholes estimated fair value.

The arguments in favor of a minimum value model:

- *Simplicity and understandability.* The concept of discounted cash flow is at the heart of the minimum value model. That should be conceptually clear to financial statement users and difficult for anyone to argue with.

- *Objectivity and verifiability.* The inputs to the minimum value model are quite straightforward. There’s no need to wrestle with the methodology employed in computing the volatility factor as in the Black-Scholes option pricing model. If the statutory term was a mandated input, it would also be objectively verifiable.

- *Its (perceived) shortcoming is a strength.* One of the more common complaints about the minimum value model is that it unfairly produces low option values for firms paying relatively high dividends, and high option values for companies with no or low dividends. I question the “unfairness” of that criticism. If high yields are associated with firms in slow growth industries, with stocks that carry an implicit promise of slow growth, shouldn’t the option value be minimal compared to companies paying no dividend or low dividends? In those kinds of companies, the cash is reinvested in the company because the growth prospects are appealing, and the stock will likely be priced that way. That kind of company should have a higher option value than a slow growth firm, all else equal.

Instead of unfairly penalizing some firms, it seems to me that the minimum value method (modified as described above) would actually represent estimated option values quite fairly.

- *Representational faithfulness.* Many argue that the minimum value method does not faithfully represent what it purports to measure because it ignores an option’s volatility. I disagree. Think of it this way: an option is a right to buy a share of stock at a fixed price for a specific period of time. That right is valued over the specific period of time in the minimum value model when the contractual life is used. Discounting that price of that right back to the present using the risk-free rate yields the sum certain that an individual would need today to be able to exercise the option, if it was invested at the risk-free rate. To me, that is more representationally faithful than requiring an adjustment of the life in the models discussed the proposed IFRS. That’s less representationally faithful, in my view.

- *Gaming is minimized.* It’s true that the higher the dividend assumption, the lower the option value under the minimum value method. That convinces some observers that this method would be used to obtain a value of zero (or even less). That presumes that nobody would be watching, however. If a firm that has typically had a low dividend yield in the past suddenly started to sport a rich assumption in the calculation of its option values, it would be quite obvious - especially so because the dividend yield input is the only one in the minimum value model that is subjective.

The dividend yield assumption could also be gamed in the much-debated Black-Scholes option pricing model, and it would be even harder to detect because of the interplay between it and the volatility input. To achieve a desired option value, manipulative types could “shade” the dividend assumption a little bit, and the volatility assumption by a little bit. Neither one might attract attention because the differences from a more reasonable amount might be small, but taken together, they could achieve a desired result. Besides, the “right” volatility input - whatever one wants it to be - can be somehow justified under almost any circumstances. (See the excerpt from The Analyst’s Accounting Observer, Volume 11, No. 12, “Accounting Essentials: Compensation Paid In Stock Options,” in Appendix B attached.)

In short, I believe that a modified minimum value method should be used to value options because it is simple, understandable, and produces consistent results that observers can verify easily. It does this while employing basic fair value concepts and provides relative ease of computation for preparers.

Question 17 & 18: Repriced options

I agree with the principles in the exposure draft: if an option is repriced, the incremental value given to the employee should be recognized over the remaining vesting period of the option. Likewise, in the event of cancellation, the option value being expensed over the vesting period should continue to be recognized. Otherwise, companies could game the standard by cancelling options routinely to avoid the compensation expense.

Question 19: Cash-settled share-based payments

I believe the proposed requirements for these types of transactions are practicable and will provide financial statement users with relevant information.

Question 21: Disclosures

I believe the disclosures would be adequate for the needs of most users of financial statements.

Question 22: Disclosures

The transition methods outlined in the Exposure Draft are practicable. No further recommendation is made here.

Question 23: Income taxes

I disagree with the tax accounting described in the Exposure Draft. I do not believe that all of the tax benefits derived from such arrangements should be recognized in the income statement. Only the effects related to the grant of these instruments as compensation should be recognized in the income statement. When options are exercised, there is a different transaction taking place: a new equity transaction is being created, and the accounting for that kind of transaction should be treated accordingly. I believe the accounting described in FASB Statement No. 123 is more appropriate.

Question 24: SFAS No. 123 comparison

Under separate cover, I am sending you my comment letter to the FASB regarding their Invitation to Comment on the differences between the Exposure Draft and SFAS No. 123.

Those are all the comments that I have at this time. If you have any questions, don't hesitate to call.

Sincerely,

Jack Ciesielski

Appendix A. Comparison: Recorded Fair Value Estimates Calculated Using B-S Model and Estimates Calculated Using Minimum Value Model

Statement No. 123 footnote data for 236 companies of the S&P 500 contained enough detail to calculate estimates of fair value using a minimum value methodology for options granted in 2001. A Black-Scholes option pricing model calculator built into a spreadsheet was used to calculate the estimates; the formulas incorporated into the spreadsheet were found in the January, 1996 Journal of Accountancy article "FASB 123: Putting The Pieces Together", by James R. Mountain. There were only two modifications to the assumptions listed in the footnotes. One, a ten year life was assumed for all options granted; two, the volatility assumption for all options was input as .000001 which effectively made it zero. The result was a shortcut minimum value for the option grants.

First, consider the outliers. Some of the minimum values worked out to zero. They are presented in Table 1 below. These were firms where the dividend yield was unusually high. It should be noted however, that the dividend yield inputs in most of the cases were higher than the three year trailing average yield. (One would hope that there would be reasonable explanations for why such a difference would be justified if a minimum value methodology was permitted.)

Table 1. Zero Minimum Values.

	Recorded Fair Value	Calculated Call Value	Difference	Expected Yield	Difference from 3 Yr. Avg.
Worthington Industries	\$2.27	\$0.00	\$2.27	6.38%	1.35%
UST Inc.	5.13	0.00	\$5.13	6.50%	-0.37%
NICOR	5.01	0.00	\$5.01	5.40%	0.97%
Equity Office Properties	2.76	0.00	\$2.76	6.70%	-0.63%
Consolidated Edison	5.23	0.00	\$5.23	5.83%	0.10%
Deluxe Corporation	2.82	0.00	\$2.82	6.90%	1.70%

Table 2 provides a look at 23 companies that actually had a higher minimum value than Black-Scholes estimated value - not what most observers would expect.

Table 2. Minimum Value > Black-Scholes Estimate.

	Recorded Fair Value	Calculated Minimum Value	Difference
Allergan	\$23.55	\$34.92	(\$11.37)
CIGNA	22.34	31.49	(9.15)
Devon Energy	13.17	21.78	(8.61)
Knight-Ridder	10.53	15.85	(5.32)
Suntrust Banks	7.96	12.01	(4.05)
American Int'l Group	24.3	27.57	(3.27)
Vulcan Materials	7.26	10.07	(2.81)
IMS Health	7.2	9.10	(1.90)
Cardinal Health	23.42	25.26	(1.84)
Golden West Financial	14.14	15.60	(1.46)
Emerson Electric	12.03	13.46	(1.43)
Equifax	8.8	10.07	(1.27)
Target	13.09	14.05	(0.96)
Dillard's	3.91	4.85	(0.94)
Genuine Parts	2.04	2.97	(0.93)
Union Pacific	13.09	13.70	(0.61)
Coors, Adolf	20.65	21.10	(0.45)
Countrywide Credit Industries	13.01	13.40	(0.39)
Wendy's Int'l	8.15	8.52	(0.37)
Biomet	7.09	7.40	(0.31)
SBC Communications	8.37	8.45	(0.08)
Sherwin-Williams	5.36	5.44	(0.08)
Pepsico	13.53	13.57	(0.04)

Appendix A. Comparison: Recorded Fair Value Estimates Calculated Using B-S Model and Estimates Calculated Using Minimum Value Model(continued)

The following pages show Table 3, which contains the companies whose B-S model estimated value exceeded the minimum value estimate, presented in descending order of difference.

Table 3. Minimum Value < Black-Scholes Estimate.

	B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.
Walgreen	\$14.28	\$14.27	\$0.01	Abbott Labs	\$13.31	\$10.90	\$2.41	Nordstrom	\$10.00	\$5.38	\$4.62
Exxon Mobil	6.89	6.85	0.04	Liz Claiborne	9.49	7.04	2.45	Caterpillar	14.56	9.90	4.66
KB Home	9.09	9.01	0.08	Becton, Dickinson	12.08	9.63	2.45	Snap-on	9.37	4.68	4.69
Torchmark	13	12.89	0.11	Int'l Flav. & Fragrances	8.09	5.63	2.46	Bausch & Lomb	12.97	8.28	4.69
AMBAC	17.37	17.23	0.14	Amerada Hess	16.2	13.65	2.55	Pinnacle West	8.84	4.12	4.72
Albertson's	6.61	6.45	0.16	Circuit City	7	4.44	2.56	Whirlpool	15.59	10.86	4.73
American Express	14.69	14.51	0.18	Avon Products	12.05	9.41	2.64	Carnival	12.67	7.82	4.85
Walt Disney	10.25	10.03	0.22	National City Corp.	6.07	3.42	2.65	Conoco	8.64	3.68	4.96
First Data	25	24.76	0.24	Schering-Plough	13.35	10.68	2.67	PerkinElmer	14.4	9.39	5.01
Aetna	11.68	11.40	0.28	Providian	19.58	16.89	2.69	Centex	13.14	8.1	5.04
Ecolab	11.26	10.95	0.31	Baker Hughes	15.04	12.33	2.71	Du Pont	10.77	5.72	5.05
Crane	7.64	7.25	0.39	Coca-Cola	15.09	12.38	2.71	Heinz	8.46	3.35	5.11
Archer Daniels Mid.	3.79	3.39	0.40	Pfizer	15.12	12.41	2.71	Electronic Data Sys.	23.09	17.98	5.11
McDonald's	10.66	10.05	0.61	Conagra Foods	5.75	3.03	2.72	Newmont Mining	12.98	7.63	5.35
Johnson Controls	14	13.35	0.65	Black & Decker	11.96	9.22	2.74	Weyerhaeuser	13.09	7.57	5.52
Pepsi Bottling	8.55	7.89	0.66	Block, H&R	4.67	1.93	2.74	Hershey Foods	18.58	12.99	5.59
Symbol Tech.	11.21	10.53	0.68	Household Int'l	18.25	15.50	2.75	FleetBoston Financial	8.71	3.09	5.62
AT&T	7.9	7.17	0.73	VF Corp.	10.78	7.98	2.80	Duke Energy	10	4.36	5.64
Coca-Cola Ent.	8.08	7.28	0.80	CSX	10.72	7.89	2.83	Merck & Co.	25.42	19.7	5.72
Ball	7.8	6.99	0.81	Deere	12.06	9.07	2.99	Cincinnati Financial	13.31	7.57	5.74
Cooper Tire	3.52	2.69	0.83	Sempra Energy	4.29	1.28	3.01	Home Depot	20.51	14.75	5.76
Bellsouth	10.99	10.09	0.90	TJX Companies	8.46	5.42	3.04	Verizon	15.24	9.46	5.78
Tiffany & Company	12.33	11.41	0.92	Rockwell Automation	8.79	5.75	3.04	Cintas	21.4	15.28	6.12
Great Lakes Chem.	10.81	9.87	0.94	Wyeth	17.76	14.64	3.12	Medtronic	25.34	19.18	6.16
SuperValu	4.85	3.88	0.97	Intel	12.62	9.47	3.15	Eastman Chemical	10.95	4.75	6.2
Family Dollar	6.37	5.28	1.09	Gannett	22.58	19.42	3.16	PNC Fin'l Services	15.87	9.66	6.21
Dollar General	6.77	5.64	1.13	Masco	7.94	4.75	3.19	Temple Inland	16.05	9.8	6.25
Sara Lee	4.65	3.50	1.15	PPG Industries	11.93	8.71	3.22	Fifth Third Bancorp	18.79	12.5	6.29
Lockheed Martin	13.32	12.16	1.16	MeadWestVaco	7.05	3.79	3.26	Lincoln National	13.44	7.09	6.35
Maytag	7.6	6.35	1.25	Autodesk	8.93	5.66	3.27	Ford	8.88	2.34	6.54
Paychex	15.55	14.23	1.32	Northern Trust	24.3	21.02	3.28	Eastman Kodak	8.37	1.78	6.59
Chubb	18.22	16.87	1.35	Apache	21.92	18.61	3.31	El Paso Energy	15.75	8.83	6.92
Motorola	7	5.64	1.36	Peoples Energy	3.56	0.25	3.31	Computer Associates	17.1	10.14	6.96
Centurytel	11.16	9.76	1.40	Newell Rubbermaid	7	3.67	3.33	Merrill Lynch & Co.	31.8	24.82	6.98
Wrigley, William Jr	13.98	12.57	1.41	Penney, J.C.	4.36	1.02	3.34	Dana	7.49	0.41	7.08
Grainger	10.89	9.45	1.44	BB&T	10	6.66	3.34	Public Service Ent.	7.22	0.11	7.11
Delphi	4.13	2.67	1.46	Gillette	9.44	6.08	3.36	Marsh & McLennan	27.97	20.81	7.16
Charles Schwab	7.26	5.79	1.47	United Technologies	24.83	21.42	3.41	Bristol-Myers Squibb	22.59	15.28	7.31
Meredith	10.98	9.50	1.48	Pitney Bowes	9	5.58	3.42	Darden Restaurants	11.69	4.34	7.35
MBNA	11.26	9.72	1.54	Stryker	21.76	18.28	3.48	Avery Dennison	18.31	10.95	7.36
General Electric	12.15	10.59	1.56	Campbell Soup	7.96	4.45	3.51	Bemis	12.92	5.39	7.53
Allstate	12.48	10.81	1.67	Johnson & Johnson	13.72	10.19	3.53	DTE Energy	8.81	1.28	7.53
McGraw-Hill	16.76	14.98	1.78	TRW	9.69	6.16	3.53	Stanley Works	14.31	6.77	7.54
Anadarko Petr.	22.71	20.93	1.78	Textron	11	7.47	3.53	Franklin Resources	19.58	11.91	7.67
T. Rowe Price	9.15	7.35	1.80	Amsouth Bancorp.	3.79	0.24	3.55	PPL	10.42	2.52	7.9
Dow Jones	\$15.66	\$13.81	\$1.85	U.S. Bancorp	\$6.76	\$3.12	\$3.64	Dominion Resources	\$11.70	\$3.74	\$7.96
Hasbro	5.56	3.68	1.88	McKesson HBOC	13.17	9.49	3.68	Georgia Pacific	15.46	7.34	8.12
MGIC Investments	24.43	22.53	1.90	Baxter Int'l	18.21	14.43	3.78	Lilly, Eli & Co.	26.59	18.31	8.28
HCA	15.93	14.00	1.93	Entergy	8.14	4.35	3.79	Procter & Gamble	22.45	13.94	8.51
Bard, C.R.	13.24	11.28	1.96	Donnelley, R.R.	7.05	3.06	3.99	Applera Corp.	19.94	11.28	8.66

	B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.
Kimberly Clark	\$19.87	\$17.89	\$1.98	Goodyear Tire	\$6.95	\$2.94	\$4.01	Hartford Finl.	\$24.86	\$15.99	\$8.87
Interpublic	12.55	10.55	2.00	Radioshack	15.64	11.62	4.02	Allegheny Energy	8.94	0.06	8.88
Norfolk Southern	5.48	3.47	2.01	Sunoco	10.38	6.36	4.02	Philip Morris	10.71	1.53	9.18
Sigma-Aldrich	15.47	13.46	2.01	Honeywell	13.71	9.64	4.07	Fluor	20	10.77	9.23
Ashland	7.38	5.34	2.04	Kellogg	7.5	3.37	4.13	Pulte Homes Inc	23.26	13.57	9.69
Regions Fin'l Corp.	4.83	2.77	2.06	Ingersoll-rand	14.6	10.46	4.14	Goodrich	13.78	3.97	9.81
United Health Grp.	23	20.94	2.06	Phelps Dodge	8.84	4.70	4.14	Paccar	12.12	1.74	10.4
Anheuser-Busch	12.76	10.69	2.07	Fortune Brands	8.91	4.70	4.21	Capital One Financial	29.73	19.28	10.5
Sysco	7.98	5.89	2.09	Alltel	16.98	12.74	4.24	Exelon	19.59	8.77	10.8
Safeco	7	4.88	2.12	Huntington Bancshares	4.55	0.24	4.31	Dow Chemical	13.65	2.79	10.9
Southtrust	5.37	3.24	2.13	Lowe's Companies	17.39	13.06	4.33	Morgan Stanley	26.43	15.31	11.1
Synovus Financial	8.56	6.40	2.16	Hewlett-Packard	12.3	7.96	4.34	Halliburton	19.11	7.11	12
Praxair	16.15	13.95	2.20	Allegheny Techn.	4.89	0.54	4.35	St Paul Companies	19	6.94	12.1
Williams Cos.	10.93	8.70	2.23	Rohm & Haas	10.74	6.33	4.41	Molex	18.23	5.03	13.2
Brunswick	5.46	3.23	2.23	Pall	6.75	2.29	4.46	Linear Technology	31.64	17.95	13.7
Ryder	5.69	3.46	2.23	Bank of New York	12.4	7.88	4.52	Kerr-McGee	22.54	8.14	14.4
Limited Brands	5.84	3.54	2.30	Keyspan	5.29	0.74	4.55	Phillips Petroleum	23.19	7.16	16
ITT Industries	11.04	8.66	2.38	FirstEnergy	4.97	0.38	4.59	Tyco	19.72	0.68	19
Kinder Morgan	21.31	18.92	2.39	Sears	14.47	9.85	4.62	Unocal	35	7.28	27.7

Appendix B. Example of “Input Shading.”

2001 option grant (millions)	2.072
Diluted shares (millions)	53.7
Diluted EPS (Continuing operations)	\$0.78
Estimated fair value per option	\$12.97

Black-Scholes OPM Inputs:

Stock price	\$41.24
Exercise price	\$41.24
Term	3.0
Volatility	48.2%
Expected dividend yield	2.29%

The power of changes in the assumptions can be shown with a real-life example using data about the 2001 option grants made at **Bausch & Lomb**. At left are some relevant facts for the firm extracted from the 2001 10-K. Bausch & Lomb was selected as an example because their data worked perfectly with the Black-Scholes option pricing model calculator available to this analyst, and because volatility was a fairly significant input into their calculation relative to others.¹

Let's make a couple of reasonable assumptions: the vesting period for the options is also three years, and the tax rate is the 35% statutory federal rate. Given those parameters, the

value of all the 2001 options granted was \$26.9 million; using a three year vesting period means that one-third of that value would have affected earnings in 2001 had the company been recognizing compensation expense paid in options in accordance with Statement No. 123's provisions. At a 35% tax rate and on 53.7 million shares, earnings would have been nicked by \$.11 per share just for the 2001 options granted. That's a decrease of 14% from the reported earnings of \$.78, and remember, that's based on the option valuation assumptions specified by Bausch & Lomb. What if they had erred by 20% in either direction on the more “rubbery” assumptions - what would the effect have been on earnings per share? The tables below show the effects.

Revising The Volatility Input

% Change	Resulting Volatility	Revised Option Value	Revised Total Grant Value	Diluted EPS Effects	
-20%	38.56%	\$10.63	\$22.027	\$0.09	-12%
-10%	43.38%	11.81	24.470	0.10	-13%
0%	48.20%	12.97	26.877	0.11	-14%
10%	53.02%	14.11	29.242	0.12	-15%
20%	57.84%	15.23	31.563	0.13	-17%

The shaded area shows the impact of the “standard” assumptions used in calculating the option values. (Also true in the following tables.) Note that for every 10% decrease in the volatility input, there's a penny saved in EPS from the base case; for every 10% increase in the volatility input, there's a penny lost in EPS.

The Black-Scholes option pricing model, for Bausch & Lomb, is not as sensitive for the expected life input as the volatility assumption, but is still sensitive. A 10% decrease in expected life saves a penny of earnings, but an additional 10% shortening of the life doesn't change anything. In the other direction, adding 10% to expected life doesn't affect EPS, but adding 10% more removes a penny.

Revising The Expected Life Input

% Change	Resulting Life	Revised Option Value	Revised Total Grant Value	Diluted EPS Effects	
-20%	2.4	\$11.80	\$24.445	\$0.10	-13%
-10%	2.7	12.41	25.714	0.10	-13%
0%	3.0	12.97	26.877	0.11	-14%
10%	3.3	13.49	27.948	0.11	-14%
20%	3.6	13.97	28.938	0.12	-15%

Revising The Expected Dividend Input

% Change	Resulting Dividend Rate	Revised Option Value	Revised Total Grant Value	Diluted EPS Effects	
-20%	2.89%	\$13.33	\$27.625	\$0.11	-14%
-10%	3.25%	13.15	27.249	0.11	-14%
0%	3.61%	12.97	26.877	0.11	-14%
10%	3.97%	12.79	26.509	0.11	-14%
20%	4.33%	12.62	26.145	0.11	-14%

Notice that the Black-Scholes option pricing model, for Bausch & Lomb, is not sensitive at all over this particular range for the dividend assumption. Within the 20% band of change for the input, there's no effect on EPS at all.

Abusing Assumptions To Manage Earnings

		Volatility				
Term		-20%	-10%	0%	10%	20%
		38.56%	43.38%	48.20%	53.02%	57.84%
-20%	2.4	\$0.08	\$0.09	\$0.10	\$0.11	\$0.12
-10%	2.7	0.08	0.09	0.10	0.11	0.12
0%	3.0	0.09	0.10	0.11	0.12	0.13
10%	3.3	0.09	0.10	0.11	0.12	0.13
20%	3.6	0.10	0.11	0.12	0.13	0.14

What if a company erred - intentionally or not - on more than one variable? For instance, cutting back by 10% on both the term and volatility variables makes for a two cent savings in EPS - as much as a 20% decrease in the volatility input alone.

Trimming a lesser amount from two variables makes it more difficult for observers to notice an out-of-the-ordinary input, while achieving a desired EPS result.

The point: very small changes to the inputs can result in significant earnings per share impacts - which in turn will affect the price of a company's stock. While it's within the ability of an analyst to figure out what a 20% change on an input might mean to earnings per share, it is quite another matter to decide what the "right" input might be. The only thing one can do from the outside is compare the more rubbery inputs (volatility, life, and dividends) from one firm to another or to an industry average - a reasonableness check, which is not exactly the most satisfying kind of analysis.

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January 31, 2003

Ms. Susan Bielstein
Director, Major Projects & Technical Activities
Financial Accounting Standards Board
401 Merritt 7
P.O. Box 5116
Norwalk, CT 06856-5116

Ms. Bielstein,

I am writing to accept the invitation to comment on "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*. Due to the length of the document and the brevity of the comment period, I am limiting my comments to only the "primary similarities and differences" questions.

* * * * *

Issue 1: Statement 123 provides a scope exclusion for ESOPs and certain ESPPs, and the Proposed IFRS does not. Which view do you support and why?

I support the IFRS view. ESOPs and ESPPs are employee compensation mechanisms that involve the same concepts developed in Statement No. 123. There is no valid scope exclusion for ESOPs that I can recall. Perhaps it was excluded in the development of No. 123 because the accounting in SOP 93-6 had been so recently issued - an insufficient reason, if that was the case. As for ESPPs, they should have been included in the scope of No. 123. I believe the grounds on which the Board excluded them from No. 123 do not take into account the fact that these plans are a form of employee compensation that is similar to the transactions that 123 was designed to account for.

Aside from the fact that financial statements prepared under this approach would actually portray the events that actually occurred (i.e., it would show that employees received compensation worth a specified amount), there are side benefits to the adoption of the IFRS view: there would be simplification of the accounting literature because SOP 93-6 could be eliminated.

Convergence of accounting standards would also be furthered.

Issue 2: In measuring the fair value of stock options granted to employees, both Statement 123 and the Proposed IFRS require use of an option-pricing model that takes into account six specific assumptions. The standards provide supplemental guidance for use in selecting those assumptions. Issue 2(a): Do you believe that an accounting standard should mandate the use of an option-pricing model for measurement purposes? If not, what other approaches do you believe would provide more consistent and reliable estimates of the fair value of employee stock options granted and why?

I believe that it is proper for an accounting standard to mandate the use of an option pricing model for measurement purposes. Accounting standards require the use of fair value in many instances and even provide a hierarchy of where the best indications of fair value can be found. Accounting standards still require

the use of fair value when fair values don't exist in freely traded markets, thus estimates of fair value become necessary. The premise behind accounting standards is to account for similar events in a similar fashion, so mandating the use of an option-pricing model is within the purview of an accounting standard.

Issue 2(b): If you agree that an accounting standard should mandate the use of an option-pricing model, do you believe that a particular model should be mandated? If so, which model should be required to be used and why?

I believe that the accounting standard should mandate the use of the minimum value model, with no estimate of the expected life. In other words, use a model that accounts for what has been given to the employee: the right to buy a share of stock at a fixed price for a period as long as ten years, in most cases.

The minimum value model is most often dismissed as inelegant and ineffective because it doesn't take into account the option volatility that provides most of the calculated value under the Black-Scholes option pricing model. It is true that it doesn't capture value attributable to option volatility, but it does account for the time value of what has been given to an employee: the right to buy stock at particular time for an extended period. That is inarguable, and that is what the employee receives: time to buy at specific price for a specific time frame. The volatility value is always arguable.

Estimating the value of the option using the minimum value method with the statutory life produces significant values. I endorse the use of the statutory life as an input, not to achieve a particular effect, but because it is actually what has been granted. Employees may exercise early, or they may never exercise options - but they still have the right to wait until the end of the period. A holder of a newly-issued twenty year term corporate bond might expect it to be called away in five years - but as long as the twenty-year term is built into the market price, the holder will still carry it at its value using a twenty-year term.

In the development of Statement No. 123, a shorter "expected life" assumption was permitted for valuation purposes to compensate for the fact that these options were non-portable. That doesn't hold up well under examination: the options are still non-portable even with a shortened life. The shortened life certainly lowers the calculated value of an option, but it doesn't necessarily capture any diminution of value due to an option's non-transferability. It is a conceptual "gimme" that only serves to lower the estimated option value. Despite that "gimme", the model was not accepted by the FASB's corporate constituents. (As is well-known.)

Attached in Appendix A is a list of option values for 236 companies in the S&P 500 where I calculated the minimum value using the footnote disclosures and a full-term life. Notice that for 23 of them, the value *exceeded* the amount calculated using the Black-Scholes option pricing model. Many others approximated the Black-Scholes estimated fair value.

The arguments in favor of a minimum value model:

- *Simplicity and understandability.* The concept of discounted cash flow is at the heart of the minimum value model. That should be conceptually clear to financial statement users and difficult for anyone to argue with.

- *Objectivity and verifiability.* The inputs to the minimum value model are quite straightforward. There's no need to wrestle with the methodology employed in computing the volatility factor as in the Black-Scholes option pricing model. If the statutory term was a mandated input, it would also be objectively verifiable.

- *Its (perceived) shortcoming is a strength.* One of the more common complaints about the minimum value model is that it unfairly produces low option values for firms paying relatively high dividends, and high option values for companies with no or low dividends. I question the "unfairness" of that criticism. If high yields are associated with firms in slow growth industries, with stocks that carry an implicit promise of slow growth, shouldn't the option value be minimal compared to companies paying no dividend or low dividends? In those kinds of companies, the cash is reinvested in the company because the growth prospects are

appealing, and the stock will likely be priced that way. That kind of company should have a higher option value than a slow growth firm, all else equal.

Instead of unfairly penalizing some firms, it seems to me that the minimum value method (modified as described above) would actually represent estimated option values quite fairly.

- *Representational faithfulness.* Many argue that the minimum value method does not faithfully represent what it purports to measure because it ignores an option's volatility. I disagree. Think of it this way: an option is a right to buy a share of stock at a fixed price for a specific period of time. That right is valued over the specific period of time in the minimum value model when the contractual life is used. Discounting that price of that right back to the present using the risk-free rate yields the sum certain that an individual would need today to be able to exercise the option, if it was invested at the risk-free rate. To me, that is more representationally faithful than requiring an adjustment of the life in the models discussed in Statement No. 123 and the proposed IFRS. That's less representationally faithful, in my view.

- *Gaming is minimized.* It's true that the higher the dividend assumption, the lower the option value under the minimum value method. That convinces some observers that this method would be used to obtain a value of zero (or even less). That presumes that nobody would be watching, however. If a firm that has typically had a low dividend yield in the past suddenly started to sport a rich assumption in the calculation of its option values, it would be quite obvious - especially so because the dividend yield input is the only one in the minimum value model that is subjective.

The dividend yield assumption could also be gamed in the much-debated Black-Scholes option pricing model, and it would be even harder to detect because of the interplay between it and the volatility input. To achieve a desired option value, manipulative types could "shade" the dividend assumption a little bit, and the volatility assumption by a little bit. Neither one might attract attention because the differences from a more reasonable amount might be small, but taken together, they could achieve a desired result. Besides, the "right" volatility input - whatever one wants it to be - can be somehow justified under almost any circumstances. (See the excerpt from The Analyst's Accounting Observer, Volume 11, No. 12, "Accounting Essentials: Compensation Paid In Stock Options," in Appendix B attached.)

In short, I believe that a modified minimum value method should be used to value options because it is simple, understandable, and produces consistent results that observers can verify easily. It does this while employing basic fair value concepts and provides relative ease of computation for preparers.

Issue 2(c): If you agree that an accounting standard should not mandate the use of a particular option-pricing model, do you believe that additional disclosures should be made to improve the user's ability to compare the reported financial results of different enterprises? If so, what types of additional information should be required to be disclosed?

I agree that an accounting standard should mandate the use of an option-pricing model, and would not prefer any attempt to try to compensate for inconsistency by adding disclosures.

Issue 2(d): Statement 123 and the Proposed IFRS require that certain modifications be made to the outcome of an option-pricing model to address certain features of employee stock options. If you believe that other modifications should be made to improve the consistency and reliability of those outcomes, please describe those modifications and why they should be required.

See above comments on the minimum value option pricing model.

Issue 2(e): Do you believe that additional guidance for selecting the factors used in option-pricing models is necessary to provide added consistency and comparability of reported results? If so, what types of guidance should be provided and in which areas?

See above comments on the minimum value option pricing model.

Issue 3: Do you believe that employee and nonemployee transactions are distinct and, therefore, warrant different measurement dates for determining the fair value of equity instruments granted? If so, why? If not, why not?

I do not believe that employee and nonemployee transactions are distinct, and do not warrant different measurement dates for determining fair value of equity instruments granted. In either case, they are an exchange of equity instruments at a particular time for something else of value. If a fair value for goods or services is available at the time they are exchanged for equity instruments, then that fair value should be imputed to the instruments as the proposed IFRS suggests. That should often be the case with nonemployee transactions. If the fair value of the services or goods is not readily available, it should be imputed from the instruments. The fact that the goods or services may be delivered later should not have an effect on the value of the transaction contemplated at the outset.

Issue 4: Do you believe that the fair value of equity awards granted to nonemployees that include performance conditions can be measured with sufficient reliability to justify a grant-date measurement method? If so, why? If not, why not?

I believe that if performance conditions are embedded in a contract to be paid with equity awards, the value of the instruments should be pegged to their worth at the outset of the transaction and it should remain the same throughout the arrangement. That's what the goods or services were considered to be worth when they were purchased. Penalties for non-performance can be assessed by adjusting the number of options granted at the completion of a contract.

Issue 5: Do you believe the notion of issuance is conceptually of importance in the design of a standard on stock-based compensation? If so, why? If not, why not?

I believe that the concept of issuance is not as important in the design of such a standard as it was in Statement No. 123. I believe it was a concept that was over-refined and led to cumbersome accounting for forfeitures. I agree with the IFRS concept of "issuance", in that it should not impact the consideration of stock-based compensation. Changes in net assets result from the receipt of goods and services, not from the exchange of one kind of equity interest for another.

Issue 6: Do you believe an equity instrument subject to vesting or other performance conditions is issued, as defined by Statement 123, at the grant date? If so, why? If not, why not?

In the common vernacular, "issued" and "granted" mean two specific things. That is carried over into Statement 123 with a distinction that options are not issued at the grant date - they are issued later. The IFRS approach seems to not distinguish between the two states at all. In the bigger picture of how stock-based compensation should be accounted for, I would say that the distinction shouldn't matter: splitting a grant into a sub-phase called issuance grant leads to some of the more impractical mechanics of Statement No. 123, particularly with regard to forfeitures.

Issue 7: Do you believe that the effect of forfeiture should be incorporated into the estimate of fair value per equity instrument (IASB approach)? If so, why? If not, why not?

I believe that the IASB approach to handling forfeitures is more computationally sanitary than the Statement No. 123 and presents results that make good conceptual sense.

Issue 8: Should failure of an award holder to satisfy the conditions that entitle the holder to retain or receive the promised benefits affect the amount of compensation expense that should be recognized related to that award? If so, why? If not, why not?

I believe that the IASB approach is more conceptually sound than the Statement No. 123 approach. When an employee forfeits his or her options by leaving the employer or failing to exercise, the company has received the benefits of the employee's labor - and paid for it through the recognition of expense. If the employee doesn't receive the options because of non-performance, then that is not an action that requires reversal of the expense as under Statement No. 123. The employee does not get back the time spent to the employer's advantage, as a reversal implies. That reversal occurs in Statement No. 123 due to its concept of an issued instrument, and results in a counter-intuitive result.

The idea of recognizing expense for services received, whether or not the options are forfeited, appeals to me. The firm actually has received something of value, and recognized its value when given. When the forfeiture occurs, the expense is no longer recognized. It is a more logical approach than reversing a previously recognized expense.

Issue 9: Do you agree that the result of the IASB's approach to calculate the fair value of equity instruments of nonpublic entities would be closer to fair value than minimum value? If so, why? If not, why not?

No. See the above comments on the minimum value method.

Issue 10: Which of the two attribution methods described by the standards do you believe is more representationally faithful of the economics of stock-based compensation arrangements and why?

I believe that IFRS attribution model is more faithful to the economics of stock-based compensation arrangements. It recognizes expense as the units of service are provided by employees, and sidesteps the awkward mechanics of the modified grant-date approach of Statement No. 123 with no apparent loss of information to the readers of financial statements. Statement No. 123's modified grant-date approach adds a great deal of complexity underneath the financial statements for preparers, but it does not clearly provide better information for users in the end.

Issue 11: Statement 123 does not ascribe value to services received in exchange for equity instruments that are later forfeited (that is, recognized compensation expense is reversed upon forfeiture), whereas the Proposed IFRS ascribes value to such services through its units-of-service attribution method (that is, recognized compensation expense is not reversed upon forfeiture). If you support the Proposed IFRS's view, do you believe the units-of-service method ascribes an appropriate value to services received prior to forfeiture? If so, why? If not, why not?

I agree with the IFRS approach, for the reasons described in Issue 10 above.

Issue 12: Do you believe that the actual outcome of performance awards should affect the total compensation expense incurred by an enterprise? If so, why? If not, why not?

I believe that the actual outcome of a performance award should not affect the total compensation expense incurred by a firm. The IFRS approach, a grant-date model, handles this in a way that is more conceptually clear: the estimate of the value of the services, determined at the outset of the transaction, is the price paid for the services to be received. That's what gets recognized - and should be. Reversals of expense, as Statement No. 123 requires, create confusion for many users of financial statements when they are visible.

Issue 13: Do you believe that this issue is important in considering an attribution model's validity? If so, why? If not, why not?

I believe it is an important issue, but not one that should prevent a standard from being issued. Put it this way: Statement No. 123 used a modified grant-date approach, but it still yielded reasonable results. The IFRS approach presents a more practical alternative, and one that should yield more meaningful results - but it doesn't mean that the Statement No. 123 results were without merit.

Issue 14: Do you believe that the measurement-date criteria in Issue 96-18 accurately reflect the economics of transactions with nonemployees? If not, why not?

I don't believe that the criteria in Issue 96-18 provide a better description of the economics of nonemployee transactions than the IFRS approach. I have difficulty distinguishing the transactions with nonemployees from those with employees. If the IFRS (grant-date) approach is workable with employee transactions - and I believe it can be, as discussed above - then I don't understand why it should be unworkable with non-employee payees.

Issue 15: Do you believe that all of the tax benefits derived from stock-based compensation arrangements should be recognized in the income statement? If so, why? If not, why not?

I do not believe that all of the tax benefits derived from such arrangements should be recognized in the income statement. Only the effects related to the grant of these instruments as compensation should be recognized in the income statement. When options are exercised, there is a different transaction taking place: a new equity transaction is being created, and the accounting for that kind of transaction should be treated accordingly - as Statement No. 123 requires.

Issue 16: As discussed in paragraph 83 of this Invitation to Comment, the Proposed IFRS expands on the disclosure requirements in Statement 123. Do you believe that those expanded disclosures would be more informative to users of financial statements? If so, why? If not, why not? (Which of the disclosure requirements should be eliminated or modified in that case?)

I believe the expanded disclosures outlined in paragraph 83 would be very useful to users of financial statements. Anything that provides more substantiation of how the estimated fair value of stock-based compensation was derived would only serve to increase the credibility of financial reporting.

Issue 17: Please describe any additional disclosures that you believe should be required in order to inform a user of financial statements about the economics of stock-based compensation arrangements.

While I believe that all of the additional suggested disclosures discussed in paragraphs 84 through 86 would increase the usefulness of the financial statements to users, I believe that the most effective ones are contained in paragraph 85.

* * * * *

Those are all the comments that I have at this time. If you have any questions, don't hesitate to call.

Sincerely,

Jack Ciesielski

Appendix A.

Comparison: Recorded Fair Value Estimates Calculated Using B-S Model and Estimates Calculated Using Minimum Value Model

Statement No. 123 footnote data for 236 companies of the S&P 500 contained enough detail to calculate estimates of fair value using a minimum value methodology for options granted in 2001. A Black-Scholes option pricing model calculator built into a spreadsheet was used to calculate the estimates; the formulas incorporated into the spreadsheet were found in the January, 1996 Journal of Accountancy article "FASB 123: Putting The Pieces Together", by James R. Mountain. There were only two modifications to the assumptions listed in the footnotes. One, a ten year life was assumed for all options granted; two, the volatility assumption for all options was input as .000001 which effectively made it zero. The result was a shortcut minimum value for the option grants.

First, consider the outliers. Some of the minimum values worked out to zero. They are presented in Table 1 below. These were firms where the dividend yield was unusually high. It should be noted however, that the dividend yield inputs in most of the cases were higher than the three year trailing average yield. (One would hope that there would be reasonable explanations for why such a difference would be justified if a minimum value methodology was permitted.)

Table 1. Zero Minimum Values.

	Recorded Fair Value	Calculated Call Value	Difference	Expected Yield	Difference from 3 Yr. Avg.
Worthington Industries	2.27	0.00	\$2.27	6.38%	1.35%
UST Inc.	5.13	0.00	\$5.13	6.50%	-0.37%
NICOR	5.01	0.00	\$5.01	5.40%	0.97%
Equity Office Properties	2.76	0.00	\$2.76	6.70%	-0.63%
Consolidated Edison	5.23	0.00	\$5.23	5.83%	0.10%
Deluxe Corporation	2.82	0.00	\$2.82	6.90%	1.70%

Table 2 provides a look at 23 companies that actually had a higher minimum value than Black-Scholes estimated value - not what most observers would expect.

Table 2. Minimum Value > Black-Scholes Estimate.

	Recorded Fair Value	Calculated Minimum Value	Difference
Allergan	\$23.55	\$34.92	(\$11.37)
CIGNA	22.34	31.49	(9.15)
Devon Energy	13.17	21.78	(8.61)
Knight-Ridder	10.53	15.85	(5.32)
Suntrust Banks	7.96	12.01	(4.05)
American Int'l Group	24.3	27.57	(3.27)
Vulcan Materials	7.26	10.07	(2.81)
IMS Health	7.2	9.10	(1.90)
Cardinal Health	23.42	25.26	(1.84)
Golden West Financial	14.14	15.60	(1.46)
Emerson Electric	12.03	13.46	(1.43)
Equifax	8.8	10.07	(1.27)
Target	13.09	14.05	(0.96)
Dillard's	3.91	4.85	(0.94)
Genuine Parts	2.04	2.97	(0.93)
Union Pacific	13.09	13.70	(0.61)
Coors, Adolf	20.65	21.10	(0.45)
Countrywide Credit Industries	13.01	13.40	(0.39)
Wendy's Int'l	8.15	8.52	(0.37)
Biomet	7.09	7.40	(0.31)
SBC Communications	8.37	8.45	(0.08)
Sherwin-Williams	5.36	5.44	(0.08)
Pepsico	13.53	13.57	(0.04)

Appendix A. (continued)

Comparison: Recorded Fair Value Estimates Calculated Using B-S Model and Estimates Calculated Using Minimum Value Model

The following pages show Table 3, which contains the companies whose B-S model estimated value exceeded the minimum value estimate, presented in descending order of difference.

Table 3. Minimum Value < Black-Scholes Estimate.

	B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.
Walgreen	\$14.28	\$14.27	\$0.01	Abbott Labs	\$13.31	\$10.90	\$2.41	Nordstrom	\$10.00	\$5.38	\$4.62
Exxon Mobil	6.89	6.85	0.04	Liz Claiborne	9.49	7.04	2.45	Caterpillar	14.56	9.90	4.66
KB Home	9.09	9.01	0.08	Becton, Dickinson	12.08	9.63	2.45	Snap-on	9.37	4.68	4.69
Torchmark	13	12.89	0.11	Int'l Flav. & Fragrances	8.09	5.63	2.46	Bausch & Lomb	12.97	8.28	4.69
AMBAC	17.37	17.23	0.14	Amerada Hess	16.2	13.65	2.55	Pinnacle West	8.84	4.12	4.72
Albertson's	6.61	6.45	0.16	Circuit City	7	4.44	2.56	Whirlpool	15.59	10.86	4.73
American Express	14.69	14.51	0.18	Avon Products	12.05	9.41	2.64	Carnival	12.67	7.82	4.85
Walt Disney	10.25	10.03	0.22	National City Corp.	6.07	3.42	2.65	Conoco	8.64	3.68	4.96
First Data	25	24.76	0.24	Schering-Plough	13.35	10.68	2.67	PerkinElmer	14.4	9.39	5.01
Aetna	11.68	11.40	0.28	Providian	19.58	16.89	2.69	Centex	13.14	8.1	5.04
Ecolab	11.26	10.95	0.31	Baker Hughes	15.04	12.33	2.71	Du Pont	10.77	5.72	5.05
Crane	7.64	7.25	0.39	Coca-Cola	15.09	12.38	2.71	Heinz	8.46	3.35	5.11
Archer Daniels Mid.	3.79	3.39	0.40	Pfizer	15.12	12.41	2.71	Electronic Data Sys.	23.09	17.98	5.11
McDonald's	10.66	10.05	0.61	Conagra Foods	5.75	3.03	2.72	Newmont Mining	12.98	7.63	5.35
Johnson Controls	14	13.35	0.65	Black & Decker	11.96	9.22	2.74	Weyerhaeuser	13.09	7.57	5.52
Pepsi Bottling	8.55	7.89	0.66	Block, H&R	4.67	1.93	2.74	Hershey Foods	18.58	12.99	5.59
Symbol Tech.	11.21	10.53	0.68	Household Int'l	18.25	15.50	2.75	FleetBoston Financial	8.71	3.09	5.62
AT&T	7.9	7.17	0.73	VF Corp.	10.78	7.98	2.80	Duke Energy	10	4.36	5.64
Coca-Cola Ent.	8.08	7.28	0.80	CSX	10.72	7.89	2.83	Merck & Co.	25.42	19.7	5.72
Ball	7.8	6.99	0.81	Deere	12.06	9.07	2.99	Cincinnati Financial	13.31	7.57	5.74
Cooper Tire	3.52	2.69	0.83	Sempra Energy	4.29	1.28	3.01	Home Depot	20.51	14.75	5.76
Bellsouth	10.99	10.09	0.90	TJX Companies	8.46	5.42	3.04	Verizon	15.24	9.46	5.78
Tiffany & Company	12.33	11.41	0.92	Rockwell Automation	8.79	5.75	3.04	Cintas	21.4	15.28	6.12
Great Lakes Chem.	10.81	9.87	0.94	Wyeth	17.76	14.64	3.12	Medtronic	25.34	19.18	6.16
SuperValu	4.85	3.88	0.97	Intel	12.62	9.47	3.15	Eastman Chemical	10.95	4.75	6.2
Family Dollar	6.37	5.28	1.09	Gannett	22.58	19.42	3.16	PNC Fin'l Services	15.87	9.66	6.21
Dollar General	6.77	5.64	1.13	Masco	7.94	4.75	3.19	Temple Inland	16.05	9.8	6.25
Sara Lee	4.65	3.50	1.15	PPG Industries	11.93	8.71	3.22	Fifth Third Bancorp	18.79	12.5	6.29
Lockheed Martin	13.32	12.16	1.16	MeadWestVaco	7.05	3.79	3.26	Lincoln National	13.44	7.09	6.35
Maytag	7.6	6.35	1.25	Autodesk	8.93	5.66	3.27	Ford	8.88	2.34	6.54
Paychex	15.55	14.23	1.32	Northern Trust	24.3	21.02	3.28	Eastman Kodak	8.37	1.78	6.59
Chubb	18.22	16.87	1.35	Apache	21.92	18.61	3.31	El Paso Energy	15.75	8.83	6.92
Motorola	7	5.64	1.36	Peoples Energy	3.56	0.25	3.31	Computer Associates	17.1	10.14	6.96
Centurytel	11.16	9.76	1.40	Newell Rubbermaid	7	3.67	3.33	Merrill Lynch & Co.	31.8	24.82	6.98
Wrigley, William Jr	13.98	12.57	1.41	Penney, J.C.	4.36	1.02	3.34	Dana	7.49	0.41	7.08
Grainger	10.89	9.45	1.44	BB&T	10	6.66	3.34	Public Service Ent.	7.22	0.11	7.11
Delphi	4.13	2.67	1.46	Gillette	9.44	6.08	3.36	Marsh & McLennan	27.97	20.81	7.16
Charles Schwab	7.26	5.79	1.47	United Technologies	24.83	21.42	3.41	Bristol-Myers Squibb	22.59	15.28	7.31
Meredith	10.98	9.50	1.48	Pitney Bowes	9	5.58	3.42	Darden Restaurants	11.69	4.34	7.35
MBNA	11.26	9.72	1.54	Stryker	21.76	18.28	3.48	Avery Dennison	18.31	10.95	7.36
General Electric	12.15	10.59	1.56	Campbell Soup	7.96	4.45	3.51	Bemis	12.92	5.39	7.53
Allstate	12.48	10.81	1.67	Johnson & Johnson	13.72	10.19	3.53	DTE Energy	8.81	1.28	7.53
McGraw-Hill	16.76	14.98	1.78	TRW	9.69	6.16	3.53	Stanley Works	14.31	6.77	7.54
Anadarko Petr.	22.71	20.93	1.78	Textron	11	7.47	3.53	Franklin Resources	19.58	11.91	7.67
T. Rowe Price	9.15	7.35	1.80	Amsouth Bancorp.	3.79	0.24	3.55	PPL	10.42	2.52	7.9

	B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.		B-S FV	Min. Value	Diff.
Dow Jones	\$15.66	\$13.81	\$1.85	U.S. Bancorp	\$6.76	\$3.12	\$3.64	Dominion Resources	\$11.70	\$3.74	\$7.96
Hasbro	5.56	3.68	1.88	McKesson HBOC	13.17	9.49	3.68	Georgia Pacific	15.46	7.34	8.12
MGIC Investments	24.43	22.53	1.90	Baxter Int'l	18.21	14.43	3.78	Lilly, Eli & Co.	26.59	18.31	8.28
HCA	15.93	14.00	1.93	Entergy	8.14	4.35	3.79	Procter & Gamble	22.45	13.94	8.51
Bard, C.R.	13.24	11.28	1.96	Donnelley, R.R.	7.05	3.06	3.99	Applera Corp.	19.94	11.28	8.66
Kimberly Clark	19.87	17.89	1.98	Goodyear Tire	6.95	2.94	4.01	Hartford Finl.	24.86	15.99	8.87
Interpublic	12.55	10.55	2.00	Radioshack	15.64	11.62	4.02	Allegheny Energy	8.94	0.06	8.88
Norfolk Southern	5.48	3.47	2.01	Sunoco	10.38	6.36	4.02	Philip Morris	10.71	1.53	9.18
Sigma-Aldrich	15.47	13.46	2.01	Honeywell	13.71	9.64	4.07	Fluor	20	10.77	9.23
Ashland	7.38	5.34	2.04	Kellogg	7.5	3.37	4.13	Pulte Homes Inc	23.26	13.57	9.69
Regions Fin'l Corp.	4.83	2.77	2.06	Ingersoll-rand	14.6	10.46	4.14	Goodrich	13.78	3.97	9.81
United Health Grp.	23	20.94	2.06	Phelps Dodge	8.84	4.70	4.14	Paccar	12.12	1.74	10.4
Anheuser-Busch	12.76	10.69	2.07	Fortune Brands	8.91	4.70	4.21	Capital One Financial	29.73	19.28	10.5
Sysco	7.98	5.89	2.09	Alltel	16.98	12.74	4.24	Exelon	19.59	8.77	10.8
Safeco	7	4.88	2.12	Huntington Bancshares	4.55	0.24	4.31	Dow Chemical	13.65	2.79	10.9
Southtrust	5.37	3.24	2.13	Lowe's Companies	17.39	13.06	4.33	Morgan Stanley	26.43	15.31	11.1
Synovus Financial	8.56	6.40	2.16	Hewlett-Packard	12.3	7.96	4.34	Halliburton	19.11	7.11	12
Praxair	16.15	13.95	2.20	Allegheny Techn.	4.89	0.54	4.35	St Paul Companies	19	6.94	12.1
Williams Cos.	10.93	8.70	2.23	Rohm & Haas	10.74	6.33	4.41	Molex	18.23	5.03	13.2
Brunswick	5.46	3.23	2.23	Pall	6.75	2.29	4.46	Linear Technology	31.64	17.95	13.7
Ryder	5.69	3.46	2.23	Bank of New York	12.4	7.88	4.52	Kerr-McGee	22.54	8.14	14.4
Limited Brands	5.84	3.54	2.30	Keyspan	5.29	0.74	4.55	Phillips Petroleum	23.19	7.16	16
ITT Industries	11.04	8.66	2.38	FirstEnergy	4.97	0.38	4.59	Tyco	19.72	0.68	19
Kinder Morgan	21.31	18.92	2.39	Sears	14.47	9.85	4.62	Unocal	35	7.28	27.7

Appendix B.

Example of “Input Shading.”

2001 option grant (millions)	2.072
Diluted shares (millions)	53.7
Diluted EPS (Continuing operations)	\$0.78
Estimated fair value per option	\$12.97
Black-Scholes OPM Inputs:	
Stock price	\$41.24
Exercise price	\$41.24
Term	3.0
Volatility	48.2%
Expected dividend yield	2.29%

The power of changes in the assumptions can be shown with a real-life example using data about the 2001 option grants made at **Bausch & Lomb**. At left are some relevant facts for the firm extracted from the 2001 10-K. Bausch & Lomb was selected as an example because their data worked perfectly with the Black-Scholes option pricing model calculator available to this analyst, and because volatility was a fairly significant input into their calculation relative to others.¹

Let’s make a couple of reasonable assumptions: the vesting period for the options is also three years, and the tax rate is the 35% statutory federal rate. Given those parameters, the value of all the 2001 options granted was \$26.9 million; using a three year vesting period

means that one-third of that value would have affected earnings in 2001 had the company been recognizing compensation expense paid in options in accordance with Statement No. 123’s provisions. At a 35% tax rate and on 53.7 million shares, earnings would have been nicked by \$.11 per share just for the 2001 options granted. That’s a decrease of 14% from the reported earnings of \$.78, and remember, that’s based on the option valuation assumptions specified by Bausch & Lomb. What if they had erred by 20% in either direction on the more “rubbery” assumptions - what would the effect have been on earnings per share? The tables below show the effects.

Revising The Volatility Input

% Change	Resulting Volatility	Revised Option Value	Revised Total Grant Value	Diluted EPS Effects	
-20%	38.56%	\$10.63	\$22.027	\$0.09	-12%
-10%	43.38%	11.81	24.470	0.10	-13%
0%	48.20%	12.97	26.877	0.11	-14%
10%	53.02%	14.11	29.242	0.12	-15%
20%	57.84%	15.23	31.563	0.13	-17%

The shaded area shows the impact of the “standard” assumptions used in calculating the option values. (Also true in the following tables.) Note that for every 10% decrease in the volatility input, there’s a penny saved in EPS from the base case; for every 10% increase in the volatility input, there’s a penny lost in EPS.

Revising The Expected Life Input

The Black-Scholes option pricing model, for Bausch & Lomb, is not as sensitive for the expected life input as the volatility assumption, but is still sensitive. A 10% decrease in expected life saves a penny of earnings, but an additional 10% shortening of the life doesn’t change anything. In the other direction, adding 10% to expected life doesn’t affect EPS, but adding 10% more removes a penny.

% Change	Resulting Life	Revised Option Value	Revised Total Grant Value	Diluted EPS Effects	
-20%	2.4	\$11.80	\$24.445	\$0.10	-13%
-10%	2.7	12.41	25.714	0.10	-13%
0%	3.0	12.97	26.877	0.11	-14%
10%	3.3	13.49	27.948	0.11	-14%
20%	3.6	13.97	28.938	0.12	-15%

¹Calculations were made using Quattro Pro, incorporating the formulas from the January, 1996 Journal of Accountancy article “FASB 123: Putting The Pieces Together” by James R. Mountain.

Revising The Expected Dividend Input

% Change	Resulting Dividend Rate	Revised Option Value	Revised Total Grant Value	Diluted EPS Effects	
-20%	2.89%	\$13.33	\$27.625	\$0.11	-14%
-10%	3.25%	13.15	27.249	0.11	-14%
0%	3.61%	12.97	26.877	0.11	-14%
10%	3.97%	12.79	26.509	0.11	-14%
20%	4.33%	12.62	26.145	0.11	-14%

Notice that the Black-Scholes option pricing model, for Bausch & Lomb, is not sensitive at all over this particular range for the dividend assumption. Within the 20% band of change for the input, there's no effect on EPS at all.

Abusing Assumptions To Manage Earnings

Volatility						
Term		-20%	-10%	0%	10%	20%
		38.56%	43.38%	48.20%	53.02%	57.84%
-20%	2.4	\$0.08	\$0.09	\$0.10	\$0.11	\$0.12
-10%	2.7	0.08	0.09	0.10	0.11	0.12
0%	3.0	0.09	0.10	0.11	0.12	0.13
10%	3.3	0.09	0.10	0.11	0.12	0.13
20%	3.6	0.10	0.11	0.12	0.13	0.14

What if a company erred - intentionally or not - on more than one variable? For instance, cutting back by 10% on both the term and volatility variables makes for a two cent savings in EPS - as much as a 20% decrease in the volatility input alone.

Trimming a lesser amount from two variables makes it more difficult for observers to notice an out-of-the-ordinary input, while achieving a desired EPS result.

The point: very small changes to the inputs can result in significant earnings per share impacts - which in turn will affect the price of a company's stock. While it's within the ability of an analyst to figure out what a 20% change on an input might mean to earnings per share, it is quite another matter to decide what the "right" input might be. The only thing one can do from the outside is compare the more rubbery inputs (volatility, life, and dividends) from one firm to another or to an industry average - a reasonableness check, which is not exactly the most satisfying kind of analysis.