



August 12, 2002

To persons interested in Maxim,

Over the past several weeks and months, there has been a lot of discussion about proper accounting for employee stock options. We at Maxim have studied the issues and come to some conclusions.

In summary those are as follows:

1. Employee options obviously are compensatory and must be reflected properly in a company's financial performance.
2. As a matter of fact, all profitable publicly traded corporations in the United States today already account for the cost associated with employee stock option grants. We do that by using the "treasury stock" method of calculating dilution. That calculation appears prominently on the income statement in the "diluted earnings per share" line.
3. The alternative proposed by the Financial Accounting Standards Board of expensing options depends on putting a value on them. Because of the inherent nature of employee options, there is no known methodology that has the prospect of measuring the value of employee options with reasonable accuracy.
4. The particular valuation methods proposed by the FASB, either the Black-Scholes option pricing model or a binomial model, are fatally flawed for these purposes and certainly cannot achieve reasonable accuracy.
5. Therefore, applying the FASB methodology will result either in significantly distorting financial results by assigning incorrect values. Or, if the FASB attempts to correct its methodology to get closer to an accurate value by permitting rational discounts for lack of liquidity etc., financial statements of different companies will not be comparable.
6. The treasury stock method is in fact the only generally accepted, reliable, reasonably accurate and easily calculable method of reporting the cost to the corporation and its stockholders of its option grants. It may also be the only methodology that will produce consistent and comparable results across a broad range of companies.

Attached hereto is a paper we have developed expanding on these points.

If you are persuaded by our logic, we invite you to speak out on this subject. Proper accounting for options is very important. The FASB's stated goals of "credible, transparent and comparable financial information" are worthy goals. Expensing options will not achieve those goals, but rather will undermine the reliability of financial statements.

Very truly yours,

John F. Gifford, Chairman, President and CEO  
Maxim Integrated Products, Inc

## **MAXIM'S VIEWS ON ACCOUNTING FOR EMPLOYEE STOCK OPTIONS – AUGUST 2002**

Maxim Integrated Products, Inc. has had an employee stock option program since its founding over 19 years ago. Maxim believes that its option program has been a major contributor to its extraordinary success over the years because of the plan's contribution to recruiting and retaining employees and to aligning the interests of the employees with those of our stockholders by motivating them to work long and hard to increase the value of Maxim.

Maxim believes that currently proposed changes in accounting for employee stock options have the potential of creating seriously distorted, unreliable and non-comparable financial statements. Our views on the current proposals are set forth below.

### **Accounting for the Compensation Cost of Maxim Employee Stock Options**

Maxim agrees with those that assert that employee options are a form of compensation and that the cost of such options must be properly reflected in the financial performance of the Company.

The Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards No. 123 (SFAS 123) *Accounting for Stock Based Compensation* in 1995. In that document, the FASB took the position that it preferred recognition of the fair value of employee stock options as an expense item starting in the year of grant along with wages, salaries, bonuses and other similar cash items. Nevertheless, SFAS 123 merely recommended that treatment. For companies that decide not to expense options, SFAS 123 mandated disclosure in notes to the financial statements of the pro forma effect on net income and earnings per share as if the expense recognition method had been applied.

The FASB's goal is to calculate stock option expense based on determining the value of employee stock options on the date of grant, namely what a willing buyer would pay for that option in an arm's length transaction. To achieve that goal, the FASB recommended that the calculation be based on either the Black-Scholes option pricing or a binomial model.

Since that time, according to the FASB, only a handful of companies elected to follow the expense recognition method. Everyone else, including Maxim, elected to continue to follow APB 25's intrinsic value based method of accounting for stock-based employee compensation. Under that intrinsic value method, expense is generally recorded only when options are granted with a strike price less than fair market value on the date of grant. Those companies, including Maxim, have supplemented the basic APB 25 valuation methodology by disclosing in the notes to their audited financial statements the pro forma effects of employee stock options using the Black-Scholes option pricing model. (There may be some companies that elected a binomial model, but those appear to be outliers, and discussion of binomial models is not useful in this brief paper.)

The reason that Maxim does not record option cost using the Black-Scholes option pricing model is that, in management's opinion, Black-Scholes does not provide a rational basis for assigning values to employee stock options if one's goal is the same as the FASB's, namely, to provide "credible, transparent and comparable financial information" [emphasis added].

On the other hand, currently all U.S. corporations with outstanding employee stock options use a method of accounting for employee stock options that does in fact do what the FASB urges – accounts for the cost of such employee options on the income statement and in a way that achieves the FASB goals of credibility, transparency and comparability. That method, already in standard use, easily calculated, and easy to understand is the "treasury stock" method of calculating the dilution in net income per share resulting from stock options, in other words the cost of those options to the stockholders of the corporation. (We are aware, of course, that by accounting convention the treasury stock method is not applied for periods in which a company reports a loss because it would be "anti-dilutive." However, we believe that the methodology could be adapted for use even for those circumstances.)

Below we discuss the problems with the Black-Scholes model and other approaches to valuation and the treasury stock alternative that we believe solves the problems with which the FASB is concerned.

### ***The Black-Scholes Option Pricing Model***

Since adoption of SFAS 123, the notes to every Maxim audited financial statement have presented a Black-Scholes calculation of the cost of the corporation's option grants, together with the hypothetical reduction in earnings and earnings per share. Maxim has presented that information, not because we believe it is useful, but because it is mandated. The problems with that mandate are discussed below.

The Black-Scholes option pricing model was developed in 1973 for the purpose of pricing short term publicly traded (liquid) options and warrants. It was not designed to value employee stock options. Black-Scholes depends on a number of subjective assumptions relating to volatility, risk free interest rate, dividends, and option duration. This means that even small errors in these independent variables can produce a significant error in the final result. As a consequence, the reliability of Black-Scholes, even for the purpose for which it was created, is not empirically supported in the case of options of longer duration where the variables may change over time.

Moreover, it is essential to recognize that employee options are fundamentally different from traded options in many respects. The following factors, among others, would diminish the value of employee options relative to traded options:

- Employee options are typically not exercisable for months or years after grant because of vesting terms.
- To the extent not vested, employee options must be forfeited upon termination of employment.

- Employee options are non-transferable under the terms of the grant.
- After exercise of employee options, for all officers and many other employees the resulting shares are not saleable for roughly 50% of the trading days of the year because of Maxim's insider trading "black-out" period during which management employees cannot sell any shares.
  - Vested employee options must be exercised, potentially prematurely, within a brief period following termination of employment, with this brief period made even more constrained if the employee is subject to the black-out restriction mentioned above.
  - Unlike traded options, which, if held for more than a year, are accorded capital gains treatment (20% maximum federal rate), employee options typically result in ordinary income taxed at more than two times the capital gains rate (federal tax at a maximum rate of 38.6% plus payroll taxes of more than 1.5%).

Assuming for purposes of argument that the Black-Scholes model could be relied upon to produce an accurate value for a freely-tradable option, it should be obvious that the result obtained by the standard calculation would have to be discounted drastically -- possibly well in excess of 75% -- if the goal were to calculate what a willing buyer would pay for an employee option in an arm's length transaction.

But the FASB does not permit discounts that could take into account the foregoing fundamental differences between traded options and illiquid, severely conditional and restricted employee options. Their reason: such discounts would not be objectively determinable. Nevertheless, the FASB mandates Black-Scholes calculations of volatility, etc. that also involve subjective assumptions. Given that no arm's length buyer would conceive of paying the same amount for an employee option that he would pay for a tradable option, we submit that forbidding application of the discounts that any rational buyer would require renders the resulting valuation essentially arbitrary. We note that unlike the FASB, the SEC permits such discounts in its rules relating to proxy statement disclosure of option values based on Black-Scholes or similar calculations.

The FASB is correct, however, that the existence of subjective factors in the Black-Scholes calculation together with the imposition of multiple discounts would mean that different companies selecting different assumptions and discount factors will almost certainly end with significantly non-comparable financials. Of course, comparability of financial statements is critically important to the investor. For those reasons, Maxim believes that the Black-Scholes model is not a reliable measure of the value of employee options and cannot be used to achieve the FASB's goals of credibility and comparability of financial statements. Maxim believes this view is widely shared by investors and responsible accountants and economists.

Here is a concrete example of how distorting Black-Scholes can be. At Maxim today we have employees holding options that will vest in fiscal 2003 with exercise prices, for example, of about \$7.50 and \$87 (compared to a closing price of approximately \$32 on August 9, 2002). Suppose one employee has an option under which 1,000 shares becomes exercisable in fiscal 2003 at the \$7.50 price (well in-the-money) and another has an option with the same number of shares becoming exercisable in fiscal 2003 at the high end of \$87. If Black-Scholes

had been applied as proposed, there would be a charge to Maxim earnings in fiscal 2003 of approximately \$5,000 for one of these options and \$53,000 for the other. If your intuition said the higher charge was associated with the option that in fact has some intrinsic value today, your intuition would be wrong. The \$5,000 charge is for the now in-the-money \$7.50 option, and the \$53,000 charge is for the currently far, far out-of-the-money \$87 option. In our opinion this would be a gross distortion of reality.

Even those few U. S. corporations that have decided to expense options cannot agree on how to value option grants. A variety of valuation schemes have been proposed. Coca Cola, for example, has announced that it will deduct a value for stock option grants as part of compensation expense. However, Coca Cola does not agree with the Black-Scholes approach to valuation recommended by FASB and has described a completely different approach to valuation. The reason for this, presumably, is that Coca Cola agrees that the Black-Scholes approach is deeply flawed.

Unfortunately for those interested in comparability of financial statements, a proliferation of valuation approaches has the potential to cause considerable confusion.

### ***The Treasury Stock Method***

All profitable publicly-traded corporations in the United States today already account for the cost associated with employee stock option grants by using the “treasury stock” method of calculating dilution. The treasury stock method of accounting for options displays the cost of options to the corporation, on its income statement in its earning per share line entitled “diluted earnings per share.” It is astonishing to us that this fact is almost universally ignored in the current discussions of accounting for stock-based compensation.

The treasury stock calculation is done on the assumption that the corporation will use both the hypothetical proceeds from exercise of all outstanding in-the-money options (vested and unvested) and the tax benefit derived from such exercises to repurchase shares in the open market at the average market value for the period reported in the financial statements. The difference between the total outstanding in-the-money options and the deemed repurchased shares is then added to the outstanding share count to show the “diluted” shares outstanding.

In accordance with FASB rules, every set of financial statements of U. S. public corporations prepared in accordance with Generally Accepted Accounting Principles (GAAP) shows “basic” earnings per share. Additionally, all profitable companies with options outstanding further disclose a lower number called “diluted” earnings per share. The difference between basic EPS and diluted EPS represents the cost of the option program for that period.

In Maxim’s fiscal year ended June 29, 2002, the difference between basic EPS (\$0.80) and diluted EPS (\$0.73) was \$0.07. The calculation of the compensation cost of employee options, therefore, is as follows: the dilution in net income per share of \$0.07 per share is multiplied times the number of diluted shares outstanding (355,821,000), which results in \$24.9 million at the net income line. Since this compensation cost is a pre-tax cost, the correct measure then is the \$24.9 million adjusted by Maxim’s tax rate of 33% (i.e., divide the \$24.9

million by 1 minus 0.33, or 0.67) resulting in \$37.2 million of imputed compensation cost in fiscal 2002 from employee option grants. This represented approximately 3.6% of revenue for the year.

Some economists and accountants have criticized the treasury stock method because from an analytical point of view, unvested options should not be counted in the calculation, or to put it another way, should only be counted as they vest. We agree with this criticism. To the extent that the treasury stock method includes unvested options, it overstates the dilutive effect of outstanding options and concomitantly understates earnings per share. (In Maxim's case over 50% of the options used in its diluted earnings per share calculation are unvested.)

What is particularly useful about the treasury stock method for determining the cost of employee stock options is that its formula assigns cost to options only when they are in-the-money and therefore adding to dilution. The more the options are in-the-money the greater the cost of the option program and vice versa. This, of course, addresses the fundamental problem with other valuation schemes, such as Black-Scholes, that assign a value to an unvested fair-market-value option grant on the very date of grant even though there is no immediate cost to the corporation or its stockholders. In fact, unless the stock price increases and the option vests, there will never be any real cost to the corporation. The concrete example given above shows how misleading this can be.

We recognize that an economist might argue that analytically there is some value, however small, in an unvested not-in-the-money option on the date of grant. We can't disagree with that point. Somewhere there would be a willing buyer who would pay something for that option. However, it seems to us that the problem we are dealing with is not an academic economics one, but a practical accounting issue.

Given the contingencies affecting valuation -- the necessity that the stock increase in value after the grant date and the option be earned by the employee over a period of years and the other factors discussed above -- it is clear to us that there is no "readily ascertainable fair market value" (to use a phrase from the Internal Revenue Code) for an employee stock option. Even the Internal Revenue Service, hungry as it is for revenue, foregoes taxation of employees when they receive option grants. Their regulations specify that an employee option grant does not have a readily ascertainable fair market value "unless the option is actively traded on an established market" or "unless its fair market value can otherwise be measured with reasonable accuracy." It is basic tax law that employee options like ours do not meet these requirements. It is certainly no more acceptable from an accounting point of view to assign values to employee options in the absence of the ability to measure value "with reasonable accuracy." In our opinion, to do so would be inconsistent with basic accounting principles.

Despite the fact that it may overstate the dilutive effect and cost of options by including unvested options (this is a deficiency that can be easily corrected), nevertheless Maxim believes that the treasury stock method is in fact the only generally accepted, reliable, reasonably accurate and easily calculable method of reporting the cost to the corporation and its stockholders of its option grants. It may also be the only methodology that will produce consistent and comparable results across a broad range of companies.