A Commentary on the Accounting for Employee Stock Options[*]

Joshua Ronen

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In a recent article in this journal (Guay, Kothari, and Sloan, 2003), the authors construct an example to show that, in their view, the proper accounting treatment for employee stock options (ESO) grants is "an entry to increase contributed equity capital and an entry to deduct the value of ESO's from reported earnings."(p. 406). In this reply I contend that expensing options as the authors recommend would provide a misleading picture to shareholders and other stakeholders. The proper treatment would be not to expense the granted options since their cost to shareholders is reflected in the dilution per share. I use below the same example they constructed to illustrate my argument.

Consider **Case A** (the Table below summarizes the data). Suppose a corporation starts operations at the beginning of the year with an asset worth $100 funded by 10 shareholders each issued one share at $10 each. Now it hires 10 executives' (or employees') services by issuing another 10 shares at $10 each (with each employee receiving one share) without spending any cash (As the above authors suggest, one can use shares for the illustration instead of options: the qualitative inferences are unchanged). At the end of the year the employees' services have enhanced the value of the asset and it is now sold at $220. The $220 cash received is now distributed as liquidating dividend to the shareholders. If the company does not expense the shares granted (does not deduct them from income), we will have a profit of $120 ($220 less $100). Consider the original 10 shareholders. What is the return to each of these shareholders' investment of $10? The answer is simple. The original investment is $10.

The total cash received as dividend is $11 (one twentieth of $220). Hence, the return is 10%. How is this reflected in the accounting report? Each of the original ten shareholders had initially a claim of one tenth of the original asset worth $100, which is $10. However, with the issuance of additional 10 shares to the employees, each original shareholder suffered a dilution of 50%. That is, each original shareholder now has a claim of only 5% (one twentieth) to the original asset of $100, hence suffering a value decrement of $5 dollars as a result of the dilution. His claim in the profit is also diluted from 10% (one tenth) to 5% (one twentieth). Since the profit is $120, his diluted share is now $6. Therefore, the total final cash proceeds the shareholder receives is reflected in accounting as the sum of his initial (diluted) claim to the original asset of $5 plus his (diluted) claim to the value increment to the original asset (earnings per share) of $6. Note that the profit in this case properly reflects the value added to the original asset such that the final dividend of $11 is the sum of the diluted claim of $5 plus the diluted share in the value added, $6. As to each of the employees, he will have invested $10 worth of services and also earned 10% return. His receipts of $11 consist of his 5% share in the original asset of $5 (which he earns as result of the dilution of the original shareholders) plus his 5% share in the profit of $120. In his case **a**s well the total return of $11 is the claim on the original asset plus the value added to it.

Of course, had the employees contributed their services for free, the original shareholders would not have suffered any dilution and the total return to each of them would have been the proceeds of $22 (a return of 120%). So the fact that employees got the shares is reflected in the accounting by reducing the original book value (value of the original

asset) per share from $10 (if services were provided free) to $5, and reducing the share in profit (earnings per share) from $12 (if services were provided free) to $6; both reductions result from the dilution and are properly reflected in the accounting reports *without* expensing the shares given to the employees. By giving the employees the shares, the accounting reflects a final book value per share of $11 instead of $22, consisting of the original book value per share of $5 plus the value added (profit or earnings per share) of $6, instead of $10 plus $12 respectively were the services not to be paid for by issuing shares.

Now consider what happens if, as the Financial Accounting Standards Board (FASB) seems about to decree, the shares (or options) are expensed in addition to giving reflection to the dilution. Call this **Case B**. In our simple example we would have a profit of only $20 in total. This consists of the revenue of $220 from the sale of the enhanced asset, less the cost of the original asset of $100, less the compensation expense reflecting the issuance of the ten shares to the employees. Of course the return to each shareholder (both original shareholder and employee) is still 10 %which is the dividend of $11 relative to the investment of $10. However, this final dividend no longer equals the claim on the original asset plus the value added (income per share). Under this expensing alternative, the (diluted) claim on the original asset is $5 (the same as when the shares issued to the employees are not expensed). However, the (diluted) income per share is now only $1 (instead of $6 without expensing). Hence, the original book value per share, $5 plus the earnings per share of $1 sum up to only $6, *short of the final liquidating dividend of $11*. Were the liquidating dividend not to be paid at the end of this year, and

the shareholder wished to evaluate the company's contribution to him in the absence of the certain knowledge of the cash dividend he did not receive, he would reckon that he earned one dollar on his share but lost $5 as a result of the dilution in his claim on the original $100 asset, ending up with a net loss of $4, reflecting a return of -40%! In other words, there would be a double counting of the real cost. What the authors did not properly consider in their analysis when they asserted that the EPS of $1 properly reflected the rate of return of 10% is that they forgot to subtract from the earnings per share the dilution in the claim on the asset. I would argue, therefore, that expensing the options (or shares) constitutes double counting that seriously distorts the economic reality of the company's performance. Those who objected to the expensing on these grounds were right after all.

The damage that would be caused by expensing stock or options is not abstract. It can be real; That is, unless investors or analysts are sophisticated enough to undo the double counting. Consider for example **Case B** where stock is expensed in addition to the dilution and assume a steady state wherein the operations of this company would be repeated ad infinitum. Further assume a 100% payout ratio, that is, total earnings are paid each year as dividend (and no liquidating dividend is paid – the company is a going concern). Investors would probably attempt to project future dividends so as to properly value the company. If they naively project a constant stream of $20 (the profit after expensing) into the future, they would be undervaluing the company. This is so because each year an additional asset worth $100 would be retained by the firm and would earn 10% return that is not reflected in the earnings or the dividend paid. A proper valuation

of the company's worth would only ensue if investors adjust the projected earnings stream to include the growth given rise to by the assets retained as a result of paying the employees in stock rather than in cash. The expensing would cause no harm only if undone by the investors!

It would be instructive to consider a yet another case; **Case C**. Suppose the company originally issued 20 shares of $10 each to finance the acquisition of a $200 asset (say a productive asset worth $100 plus $100 cash). Then, the company hired 10 employees and paid them $100 cash. Under this circumstance and the present generally accepted accounting principles (GAAP) the $100 cash paid would be expensed. But in this case this would be proper accounting. Let us see why. When the remaining productive $100 asset is enhanced in value as a result of the employees' services and is now sold at $220, the reported earnings would be $20 and the earnings per share would be $1 ($20/20). But the claim on the original asset is not diluted in this case. Thus, the undiluted claim on the original asset of $200 is 5% of that equaling $10; Add to that the earnings per share (or value added) of $1, and we get the final liquidating dividend of $11-Per share. In other words, *the initial book value per share and the earnings per share add up to the liquidating dividend.* The accounting is appropriate in this case. The key to understanding the difference between this and the prior case is that there is no dilution in this case and hence expensing the employee services when cash is paid does not give rise to double counting.

Some proffer the argument that issuing stock or options to employees in exchange for their services is economically equivalent to selling stock or options for cash and then instantaneously turning that cash over to the employees for their services (see e.g. Bodie, Kaplan, and Merton, 2003). Call this **Case D**. Since the latter, it is argued, would be expensed under current accounting principles, so should the former, so as to secure identical accounting treatments for identical economical circumstances.

I would offer two counter arguments to the above. First, the current accounting model does not give recognition to opportunity costs or gain in the financial reports, or for that matter, to hypothetical transactions that did not take place (such as **Case D**). This insistence on recording only the outcomes of factual, rather than hypothetical events is not a reflection of accountants' ignorance of sound economic concepts. Rather, it is intended to strip -- as much as possible – the accounting measures from highly subjective components that necessarily inhere in hypothetical, conjectured transactions and their associated quantifications. This is especially important in light of the hazard of misrepresentation that inflicts financial reporting stemming from the information asymmetry between managers and investors. Objectivity and reliability of the measures are essential for endowing the accounting signals with credibility, hence the avoidance of hypothetical quantifications. But more importantly, it is especially hazardous to use a hypothetical transaction that represents an off-equilibrium behavior. We do not observe companies ever engaging in such transactions – selling stock or options for cash and then turning over the cash to employees for services. The probable reason: doing that *may* compel the company to expense the compensation and thus portray a misleading picture

to investors as the above example demonstrated. Essentially, the expensing would double count the effect of the dilution.

Second, even under current accounting principles, we have the overriding principle of "substance over form". That is, the economic substance of the transaction and not its legal or mechanical form governs when deciding on how to account for it. In the case at hand, the substance of this hypothetical transaction is not "paying cash for the services"; rather it is "issuing stock or options for the services". The two are economically equivalent in that they represent diluting pre-existing shareholders' wealth and accreting the employee-recipients' wealth, while not resulting in a *net* sacrifice of assets by the corporation: the cash received and instantaneously turned over does not change the company's net assets as a result of the *single* compound transaction (selling stock or options and then paying the proceeds to employees).Because the economic consequence of the hypothetical transaction is diluting book value and earnings per share, the expensing would constitute double counting and should be avoided.

Understandably, a skeptic might counter that it would be difficult to distinguish between issuing stock to finance expansion through investments and increase in working capital that is used among other things to pay compensation, which is essentially my interpretation of **Case C** and the compound transaction I discussed above (**Case D**). No one would dispute the validity of increasing equity capital and increasing assets and/or expenses in the former case, just as in **Case C**. However, akin to most accounting interpretations of transactions that require judgment, we have no exception here. In the

former case (as in **Case C**) the issuance of shares, accompanied by a registration statement, is likely to be of a relatively large size (significantly larger than the typical options or stock grant) and it is typically intended to finance major acquisitions and working capital, not merely to pay a single vendor or a group of employees. These major financing transactions change the ownership structure to an extent that it is deemed appropriate to treat the new shareholders as a fresh layer of existing shareholders, just as a merger or acquisition is treated as a change in ownership that justifies writing up the book values of the acquiree's assets to their fair value. In this case no dilution is seen to occur as in **Case C** above. In the latter case, paying employees with stock (**Case A**) or issuing stock solely for paying the compensation (such as in **Case D** above) there is in-substance dilution, and expensing would constitute double counting.

Another argument that has been repeatedly made for expensing is worth mentioning. This is the plea for having the added expense exert pressure on compensation committees not to award extravagant and unjustified compensation to executives. But using accounting reports to accomplish such a task at the expense of distorting economic reality by double counting is the wrong remedy for this corporate governance failure. In fact, to the extent that expensing successfully curbs the granting of options, the result may be a sub-optimal level of incentives. A more appropriate cure lies in governance reforms that create incentives for rewarding employees for their marginal product, effort, and innovation through proper structuring of boards of directors and compensation committees and the gate keepers. This is not the place to dwell on these alternative measures.

There is one caveat to my preceding arguments. Namely, the computation of earnings per share as presently prescribed in GAAP does not fully reflect the dilution in ownership resulting from option granting. This should be corrected. Also, it would be advisable to mandate a proper and prominent reflection of the dilution in the book value per share (in addition to earnings per share) in the financial statements even though analysts routinely make these computations and discuss the dilutive effects of material transactions. In fact, it may be advisable to introduce a new statement of Earnings and Book Value per Share showing in detail the different events that cause dilution in either of these measures. In essence, this latter statement would be akin to the current income statement and complementary to it. That is, we would end up having two statements of revenues and expenses affecting earnings per share, one, the current income statement that reports the components of the numerator – earnings, and the other, the statement of earnings and book value per share, that reports the components of the denominator – the average weighted equivalent shares to be divided into earnings and book value to obtain the per share amounts. The component of compensation that requires the sacrifice of the company's assets would be reflected in the first, whereas the component of compensation that did not require the sacrifice of the companies' assets – the component financed by issuing stock or options -- would be highlighted in the second.

Consider the benefits of having these two distinct statements. The current income statement would reflect strictly sacrifices of assets and incurrence of liabilities in the process of generating earnings – uncontaminated or confounded by events that do not affect the net assets of the corporation; it is what determines the numerator in the EPS

number and it would be relevant to assessing the effects of operations on the net assets. More importantly, it, alone, would be the relevant number to be used by other stakeholders of the corporation, most notably the creditors, to assess their potential returns and risk associated with their investments in the company. After all, they are not affected by the dilution; only the common stockholders are. The second statement (Earnings and Book Value per Share) would be strictly for the benefit of equity stakeholders who are affected by the dilution. The two distinct statements would also yield insight into management's policy with regard to how it chooses to finance its human resource acquisitions.

Suppose an existing shareholder wishes to identify the total cost, regardless of who incurs it, corporation or existing shareholders, that was required to generate the reported revenue. The answer would be the sum of the respective components in the two distinct statements. In **Case A** the total compensation cost would be $0 from the Income Statement, plus $50 from the earnings and value per share statement ($5 dilution per share times 100 original shares) to be matched against revenue of $60 (existing shareholders' one half claim to the gain on sale of $120, $6 per share) This yields an income to existing shareholders of $10, $1 per share (10% on the their original investment of $100). Of course, a separate statement summing the corresponding items from the above statements could be presented. One can imagine its title: "Statement of Costs and Benefits to Existing Shareholders".

Employee Stock Options: Expensing vs. Non-expensing

		Case A		Case B			Case C
		Only Dilution		Dilution and Expense			Only Expense
Data in the Beginning of Period	Explanation		Explanation			Explanation	
Asset Value		100		100			$200 (***)
# of Shares issued to outsiders - for cash		10		10			20
Price per share		10		10			10
Original claim on asset of outside investors	$100/10	10	$100/10	10		$200/20	10
# of Shares issued to employees - for free		10		10			
Total # of shares		20		20			20
Immediate payment to employees in cash		0		0			100
Data in the End of Period							
Asset Value		220		220			220
Dividend Distributed (Cash received from asset sale)		220		220			220
Dividend per share relative to the investment	20 shares	11	20 shares	11		20 shares	11
Compensation Expense		0		100			100
Gain form asset sale	$220-$100	120	$220-$100	120			120
Net Income		$120 (*)		$20 (**)			$20 (**)
Earning per share	$120/20	6	$20/20	1			1
Claim on the original asset of outside investors after the dilution	$100/20	5	$100/20	5	no dilution	$200/20	10
Claim on net income (value added) of outside investors after the dilution	$120/20	6	$20/20	1	no dilution	$20/20	1
Total claim of outside investors (on original asset plus income)	$5+$6	11	$5+$1	$6 (****)		$10+$1	11
Accounting return to outsiders investors	($11-$10)/$10	0.1	($6-$10)/$10	-0.4		($11-$10)/$10	0.1

(*) gain from asset sale.

(**) gain from asset sale minus the compensation expense ($120-$100)

(***) Asset worth $100 + $100 cash

(****) At the end of the period the original claim on assets plus earnings do not add up to the final liquidating dividend of $11

REFERENCES

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