

## CHAPTER EIGHT

### The Analysis of the Statement of Shareholders' Equity

#### *Concept Questions*

**C8.1.** Because the accounting is not representatively faithful in measuring additions to “surplus”. “Surplus” is an old-fashioned word meaning shareholder’s equity – the surplus of assets over liabilities. An effect on equity from operations – that creates additional “surplus” -- bypasses the income statement (which is supposed to give the results of operations), and thus is “dirty.” Clean-surplus accounting books all income in the income statement.

**C8.2.** If a valuation is made on the basis of income that is missing some element (of the value added in operations), the valuation is wrong. For example, if sales or depreciation expense were put in the equity statement rather than the income statement, we would see the income statement as missing something that is value-relevant.

**C8.3.** Currency translation gains and losses are real. If a U.S. firm holds net assets in another country and the dollar equivalent of those asset falls, the shareholder has lost value.

Dell Computer has shareholders’ equity in 2002, but many of the net assets behind the equity were in countries other than the U.S. If the value of the dollar were to fall against those currencies, the firm would have more dollar value to repatriate to ultimately pay dividends to shareholders. Indeed, the 2002 financial statements (in Exhibit 2.1 in Chapter 2) report a currency translation gain of \$39 million.

**C8.4.** Because deferred compensation is charged to equity (rather than treated as an asset like prepaid wages), amortizations increase shareholders' equity, like capital contributions. The amortizations reduce net income, and so reduce equity, so the net effect is zero. But it appears that, after recording the income for the period, the firm is increasing equity with an additional amount of the amortization.

**C8.5.** Shares in the equity statement are issued shares. Shares outstanding are issued shares (92,556) less shares in treasury (36,716). Always use shares outstanding in per-share calculations, for it is the value of the common share outstanding that the analyst wants to assess. (See Reebok's balance sheet in Exhibit 9.4 in Chapter 9 for share numbers.)

**C8.6.** Existing shareholders lose when shares are issued to new shareholders at less than the market price. They give up a share worth the market price, but receive in return a cancellation of a liability valued at its book value. The new shareholders buying into the firm through the conversion gain: they receive shares worth more than they paid for the bonds. The accounting treatment (the "market value method") that records the issue of the shares in the conversion at market value, along with a loss on conversion, reflects the effect on existing shareholders' wealth.

**C8.7.** The firm is substituting stock compensation for cash compensation but, while recording the reduced cash compensation, it is not recording the cost of the stock compensation. One would have to calculate the equivalent cash compensation cost of the stock option compensation to see if the compensation was attractive to shareholders. One would also have to consider the incentive effects of stock options (the benefits as well as the costs).

**C8.8.** The executives received the difference between the value of shares and the exercise price, or \$33 per share issued. For 30 million shares, the compensation was \$990 million.

Robert Eaton, the Chrysler CEO, received \$100 million from the merger. When asked about his motives he replied, " My personal situation never came to my mind. We are trying to create the leading auto company in the world for the future of all our shareholders" (as reported in *The Times* of London).

- C8.9.** (a) Yes. Issuing shares at less than the market price dilutes the per-share value of the existing shares. See Chapter 3, text and exercises.
- (b) No. Repurchasing shares at market value has no effect on the per-share value of existing shares. See Chapter 3, text and exercises. The number of shares is reduced and eps increases, and this might look like reverse dilution. But the value per share does not change.
- (c) If Microsoft felt its shares were overvalued in the market it would feel they are too expensive. In this case, repurchasing would dilute the value of each share, as the price is not indicative of value (and of the long run price once the market corrects itself).

**C8.10.** No. The net benefit (to the shareholder) is the tax benefit less the value given up to employees in stock compensation. This net amount must always be negative, as the tax is the tax rate applied to the difference between the market and issue value of the shares, the value given up by the shareholders.

If there is any benefit to shareholders, it must be from the incentive effects of the stock options.

**C8.11.** The scheme effectively recognizes the difference between the market price and the exercise price of options exercised as an expense, and so recognizes the compensation expense at exercise date. The net cash paid by the firm is equivalent to paying the compensation as cash wages to employees. But why use cash? The expense could be recognized in the books with accrual accounting without paying out cash.

The only fault with the recognition of the expense is that it is recognized at exercise date rather than matched to revenue over a service period during which the employees worked for the compensation.

**C8.12.** Microsoft might think its own shares are overvalued in the market. So it uses them as “currency” to get a “cheap buy.”

## ***Exercises***

## E8.1 Calculating ROCE from the Statement of Shareholders' Equity

$$\begin{aligned}
 \text{Comprehensive Earnings} &= \text{CSE (end)} - \text{CSE (beginning)} + \text{net} \\
 \text{dividend} &= 226.2 - 174.8 - 26.1 \\
 &= 25.3 \\
 \text{(The net dividend is negative.)} & \\
 \text{ROCE} &= \text{Comprehensive earnings} / \text{beginning} \\
 \text{CSE} &= 25.3 / 174.8 \\
 &= 14.47\%
 \end{aligned}$$

[Beginning CSE is used in the denominator because the share issue was at the end of the year.]

## E8.2 Reformulation of a Statement of Owners' Equity: VF Corporation, 1993

### Reformulated Statement of Common Equity

Balance, January 2, 1993		1,153,971
Transactions with shareholders		
Stock issues	246,799	
Stock repurchases	0	
Common dividends	<u>(78,540)</u>	168,259
Comprehensive income		
Net income	246,415	
Loss on redemption of preferred stock	(264)	
Tax benefit of preferred dividends	1,180	
Foreign currency translation loss, net of taxes	(17,109)	
Preferred dividends	<u>(4,291)</u>	225,931
Net addition of deferred compensation		<u>(761)</u>
Balance, January 1, 1994		<u>1,547,400</u>

Note that, because the balance of the accumulated deferred compensation is not available, the net addition has been left in the statement.

### E8.3 Deferred Compensation: Dell Computer

Deferred compensation is booked in the stockholders' equity statement when options are granted to employees in the money: the difference between the market price and exercise price of the stock at grant date is deemed to be compensation, but for a future period. Deferred compensation is also booked when shares are sold to employees at less than market price under an employee stock purchase plan, or when there are outright grants of stocks to employees. The deferred compensation is amortized to the income statement over the future period during which the employee is deemed to earn it. It is really an asset (like prepaid wages) but is entered in the equity section of the balance sheet.

It's often difficult to unravel the deferred compensation because balances of deferred compensation are usually not reported. Dell, however, first recorded deferred compensation in fiscal 1995 and its first amortization in 1996, so both the compensation and amortization can be differentiated in the statement even though there is no running balance.

The January, 1996 balance is:

Deferred compensation, 1995	(4)
Deferred compensation, 1996	<u>(17)</u>
	(21)
Amortization, 1996	<u>2</u>
Balance, 1996	<u>(19)</u>

### E8.4 Statement of Shareholders' Equity: Boise Cascade

(a) Comprehensive income:

Net income as reported	\$351,860
Preferred dividends	(44,872)
"Other" in retained earnings <sup>1</sup>	17,603
Loss on preferred conversion <sup>2</sup>	<u>(93,159)</u>

Total<sup>3</sup> \$231,432

1. This is presumably dirty-surplus income such as translation gains and losses.

2. The loss is calculated as follows:

Market value of common on conversion date,	
8,625 thousand shares x \$33	\$284,625 thousand
Book value of preferred converted	<u>191,466</u>
	\$ <u>93,159</u> thousand

3. The calculation ignores loss from exercise of stock options. If the tax benefit from the options had been reported, one could calculate this expense. The tax benefit has been aggregated with the amount received from share issues.

(b) The balance of the deferred ESOP benefit in the shareholders' equity statement equals the amount of a liability for ESOP debt in the balance sheet.

The 1995 debt footnote from Boise includes the following:

The Company has guaranteed debt used to fund an employee stock ownership plan that is part of the Savings and Supplemental Retirement Plan for the Company's U.S. salaried employees (see Note 5). The Company has recorded the debt on its Balance Sheets, along with an offset in the shareholders' equity section that is titled "Deferred ESOP benefit." The Company has guaranteed certain tax indemnities on the ESOP debt, and the interest rate on the guaranteed debt is subject to adjustment for events described in the loan agreement.

You see that Boise is recognizing a contingent liability for the debt guarantee and contras equity for the same amount. There is no effect on income. The \$17,022 thousand "other" within the shareholders' equity statement for 1995 is the current reduction of the amount that is guaranteed (because the ESOP has paid off part of the debt). Is this (dirty surplus) income? No because no loss has been suffered. Any loss that might be suffered is contingent on the financial well being of the ESOP and, if all goes well, the shareholders won't be out of pocket. So a reduction of the amount



guaranteed (because the ESOP has paid off part of the loan) is not current income or a capital contribution.

These ESOP loan guarantees have zero net effect on shareholders' wealth, unless things go sour. So reformulate the statements to omit the liability and the contra in equity. But a good analyst will always inquire into the financial well being of the ESOP. If he or she anticipates a loss, then forecasts of future earnings should be modified accordingly.

(c) thousand	Reported Balance	\$1,694,438
	Preferred Equity	(562,747)
	Deferred ESOP benefit	<u>213,934</u>
	Common shareholders' equity	<u>\$1,345,625</u>

#### E8.5 Missing Shareholders' Equity Statement: J.C. Penny Company

(a)

J.C. Penney Company, Inc.

##### Consolidated Statement of Stockholders' Equity

In millions

	Balance, January 31, 1994	\$5,615
	Issue of common stock	113
	Repurchase of common stock	(332)
	Conversion of preferred stock	(27)
	Net income	838
	Common dividends	(434)
	Preferred dividends, after tax	(40)
	Change in LESOP obligation guarantee	79
	Unrealized change in debt and equity securities and currency translation adjustments	72
	Balance, January 31, 1995	\$5,884

Note: 1. The statement could be set out under headings like the Boise Cascade statement in the previous exercise, with balances for each category.



2. The repurchase of common stock for \$332 million sums the paid-in value of the shares of \$31 in the Common Stock footnote and the charge to reinvested earnings of \$301 million.

4. The decline in the LESOP guarantee in the shareholders' equity section of the balance sheet corresponds to the change in the obligation in the Long-Term Debt footnote.

5. The conversion of Series B preferred stock is by the LESOP. See the Preferred Stock footnote.

(b) J.C. Penney Company, Inc.

Reformulated (Clean Surplus) Statement of  
Common Stockholders' Equity

In millions

Balance, January 31, 1994  
\$5,292

Comprehensive income to common:

Net income reported	838
Unrealized security changes and translation adjustments	72
Preferred dividends, after tax	<u>(40)</u>

870

Net transaction with shareholders:

Issue of common stock	113
Repurchase of common stock	(332)
Common dividends	<u>(434)</u>

(653)

Balance, January 31, 1995  
\$5,509

Notes:

1. The beginning balance is reported balance - preferred stock + LESOP guarantee:

$$(5,292 = 5,615 - 630 + 307).$$

2. The ending balance reconciles to the reported balance by the same adjustments:

$$(5,509 = 5,884 - 603 + 228).$$

3. The LESOP loan guarantee has been included in long-term debt in the reports (see the Long-Term Debt footnote 12), with a contra to stockholders' equity. This signals that there is a guarantee (and thus a contingent obligation) but the guarantee is not a current reduction of shareholder's wealth. So remove it from CSE and remove it from the liabilities.

4. No loss for the conversion of the preferred stock has been included in comprehensive income (in absence of a market price for the common issued).

(c) Preferred dividends are usually not deductible. But they are when paid to an employee stock ownership plan.

## E8.6 Analysis of the Statement of Shareholders' Equity: Sears, Roebuck and Company

A particular feature of this statement is the distribution of the Allstate shares described in the first footnote.

This spin-off of Sear's investment in Allstate is a dividend to shareholders: they got shares in Allstate instead of cash. You can interpret it as a cash dividend with the cash spent to purchase Allstate shares from Sears. Like any dividend, this is charge against retained earnings. But previously not all the components on Allstate's comprehensive income was reported in retained earnings in the consolidation. Some was in unrealized gains and losses, some in currency translation adjustments. Thus the dividend is entered in the statement under three categories:

Retained earnings	\$7,747 million
Unrealized gains	1,208
Translation adjustments	<u>20</u>
	<u>\$8,975 million</u>

This amount is the total reported in the notes for the distribution. This dividend is not part of Sear's comprehensive income, of course.

The comprehensive income to common is calculated as follows:

Net income as reported	\$1,801 million
Translation loss	(7)
Unrealized net capital gains	1,176
Minimum pension liability adjustment	(285)
Preferred dividends	<u>(53)</u>
	<u>\$2,632 million</u>

Sears exchanged the preferred "PERCS" to common at their book value (\$1,236 million). This is explained in the second footnote in the exercise. The loss or gain on the exchange was not recorded and is not included in the comprehensive income calculation here. You'd have to know the market price of the common at conversion date to calculate this loss.

The company prefunded its contribution to the ESOP some years prior in the form of a loan, and this prepayment or loan has been recorded as a “deferred ESOP expense” in the owners’ equity. But this really is an asset. The reduction of the advanced contribution of \$305 million is the current period’s required contribution (which is charged against the reported income) plus any amount the ESOP paid to pay off the loan. An ESOP often pays off the loan with dividends from the company’s stock it holds.

### **E8.7 Analysis of Shareholders’ Equity for a U.K. Company: Cadbury Schweppes**

	Comprehensive profit (in millions)
	Profit from profit and loss account (after preferred dividends)
£355	
(15)	Currency translation losses
	Revaluation gains on fixed assets
(3)	
	Comprehensive profit
<u>£337</u>	

- Notes:
- Up to 1998, goodwill was written off against equity in the UK. But now it is written off to the profit and losses account.
  - The UK allows revaluations of fixed assets (unlike the U.S.).

### **E8.8 Exercise of Stock Options: Dell Computer**

- (a) The difficulty (with the information given) is to discover the market price of the shares when they were exercised.

Suppose that the shares were exercised at the midpoint of the share prices for the year, \$63.50 per share:

Market value of shares issued in exercise:	
110 million x 63.50	\$6,985 million
Exercise price: 110 x 1.29	<u>142 million</u>
Value loss before tax	\$6,843 million
Tax benefit (35%)	<u>2,395</u>
Value loss after tax	<u>\$4,448 million</u>

The calculations can be done for the market low of \$26 and for the high of \$101. At the low, the loss is \$1,767 million and at the high the loss is \$7,222 million.

(b) The best guess at the potential loss uses the market price at the end of the fiscal year:

Market value of shares under outstanding	
option plans: 363 million x \$101	\$36.663 billion
Exercise price of outstanding options: 363 million x \$5.40	<u>0.824</u>
Potential value loss, before tax	\$35.839 billion
Tax benefit (35%)	<u>12.544</u>
Potential value loss, after tax	<u>\$23.295 billion</u>

This loss would be recorded appropriately as a liability: an obligation to give up value in the future. Further consideration would bring option pricing formulas to the valuation of this contingent liability. These formulas give the current value of these in-the money options, based on the amount the option is in now the money (as above) but also, through the incorporation of stock price volatility, on the likelihood of their being further in-the-money at exercise date.

The calculation of the value loss from options in the money here assumes that all of the options will be exercised. Note that only 103 million are currently exercisable. Others may depend on vesting requirements.

You see that stock option accounting is fairly complicated. And it needs more information than given here.

## **E8.9 Exercise of Stock Options and the Statement of Shareholders' Equity: Genetech**

(a) The tax benefit is from the deduction of the value given in calculating taxable income. (The value given up is the difference between market and exercise prices.) So, using the tax rate, the value given up can be imputed:

Tax benefit	\$17,332 thousand
Tax rate	0.37
Value given up	\$46,843 thousand

In other words, the value given up was \$46,843 thousand for which Genentech got a tax deduction, saving it \$17,332 thousand in taxes.

(b) The tax benefit is part of operations, not financing. It's a benefit from incurring costs to pay employees, just as a firm gets a tax deduction (and reduces taxes) from paying cash wages. So it should be part of comprehensive income.

However the imputed wage expense is not recorded as part of comprehensive income under GAAP. So firms treat the tax benefit as proceeds from a share issue!

### E8.10. Ratio Analysis for the Equity Statement: Nike and Reebok

Follow the ratio analysis in the chapter. Work from the reformulated equity statement (of course). The following summary starts with the profitability ratios (ROCE).

*Profitability:*

$$\text{Nike ROCE} = \frac{535}{2198} = 24.3\%$$

(Average CSE is used in the denominator.)

$$\text{Reebok ROCE} = \frac{173}{729} = 23.7\%$$

(Because the large stock repurchase took place in August, the CSE in the denominator is calculated by assigning a  $\frac{2}{3}$  weight to beginning CSE and a  $\frac{1}{3}$  weight to ending CSE.)

*Payout:*

Nike	Dividend payout	=	$\frac{82}{535}$	=	15.3%
	Total payout	=	$\frac{101}{535}$	=	18.9%
	Dividends-to-book value	=	$\frac{82}{2,431+82}$	=	3.3%
	Retention ratio	=	$\frac{535-82}{535}$	=	84.7%
	Total payout-to-book value	=	$\frac{101}{2,431+101}$	=	3.99%
Reebok	Dividend payout	=	$\frac{21}{173}$	=	12.1%
	Total payout	=	$\frac{687+21}{173}$	=	409.2%
	Dividends-to-book value	=	$\frac{21}{382+21}$	=	5.2%
	Total payout-to-book value	=	$\frac{687+21}{382+708}$	=	64.5%
	Retention ratio	=	$\frac{173-21}{173}$	=	87.9%

*Growth:*

Nike	Net investment rate	=	$\frac{(68)}{1,964}$	=	-3.5%
	Growth rate in CSE	=	$\frac{466}{1,964}$	=	23.7%



$$\text{Reebok net investment rate} = \frac{(693)}{902} = -76.8\%$$

$$\text{Growth rate in CSE} = \frac{(520)}{902} = -57.6\%$$

Both firms added book value from business activities by over 20% of beginning book value. Both disinvested, Reebok by a large amount. Nike's disinvestment was largely in cash dividends, Reebok's in share repurchases.

### ***Minicases***

#### **M8.1. Analysis of the Equity Statement, Hidden Losses, and Off-Balance-Sheet Liabilities: Microsoft Corporation**

This case requires the student to reformulate and analyze Microsoft's equity statement and then deal with the question of omitted expenses. The accounting for these expenses (or lack of it) leads to further distortions – to reported tax rates and to

cash from operations. The student discovers that many of Microsoft's costs of acquiring expertise are not reported under GAAP. The student also understands that there are omitted liabilities for these costs and is introduced to the notion of an option overhang.

### *The Reformulated Statement of Shareholders' Equity*

#### **MICROSOFT CORPORATION** **Reformulated Equity Statement** **Nine months ended, March 31, 2000**

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Balance, beginning of period		\$27,458
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#### *Transactions with Shareholders*

Share issues	\$2,843	
Share repurchases	<u>4,872</u>	(2,029)
 Tax benefit of shares issues for options		 4,002

#### *Comprehensive Income*

Net income	\$7,012	
Unrealized investment gains	2,724	
Translations gains	166	
Preferred dividends	<u>(13)</u>	<u>9,889</u>

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Balance, end of period		\$39,320
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Notes: Tax benefits are in a limbo line. But see later for the treatment of these tax benefits.

Put warrants have been taken out of the statement because they are a liability. See the answer to Question C below. Accordingly, the closing balance of shareholders' equity has been restated.

### *Answering the Questions*

- A. Net cash paid to shareholders = \$2,029 million
- B. Comprehensive income = \$9,889million
- C. Put warrants and other agreements to put shares to the corporations (put options and forward share purchase agreements) are options sold to banks and

private investors that gives them a right to have shares repurchased by the firm at a specified exercise price in the future. If the option is exercised, the firm can either pay cash for the repurchase or have a net settlement in shares for the same value. The option holder pays for the options (the option premium).

If settlement is in cash, GAAP records the premium paid as a liability. If settlement is in shares (as here), the amount of the premium is entered as equity. But cash or kind, the value is the same. All put options result in a contingent liability to the current shareholders so cannot be part of their equity. Accordingly, the reformulated statement above takes the \$472 million in option premium out of equity (and implicitly classifies it as a liability).

When the options lapse, GAAP reclassifies the premium received as a share issue (even though no shares are issued), and extinguishes the liability if one was recorded under a cash settlement. However, the amount of the premium is a gain to shareholders and should be recorded as such as part of comprehensive income.

Why would Microsoft issue put warrants? If must feel that its stock price is undervalued, so it can pocket the premium as the stock price rises. The warrants

may be part of a stock repurchase program, with the firm pegging the repurchase

price in advance of the repurchase as a hedge against stock price increases.

Firms can use these put options for more doubtful purposes, effectively borrowing against future settlement in stock but with the loan off balance sheet. See case M8.2 on Household International.

D. When options are exercised, GAAP records the consequent share repurchase for the amount of cash paid, with no loss recognized. However, the amount paid for the shares is greater than their current market price (otherwise the warrant holder would not have exercised), so the firm repurchases at a loss (which is not recorded under GAAP). See the Dell example in the chapter. The appropriate clean-surplus accounting records the share repurchase at market value and the difference between cash paid and market value as a loss on exercise of warrants (and part of comprehensive income). See Box 8.4. In 2003, the FASB was proposing to address the issue of put options.

E. No, repurchases do not reverse dilution. They give the appearance of reversing dilution if the number of shares repurchased equals the number issued in the exercise of options, leaving shares outstanding unchanged. But issuing shares at less than market price results in dilution of the current shareholder's value. Repurchasing them at market price has no effect of shareholder value in an efficient market, so cannot recover the value lost.

In Microsoft's case, the firm was repurchasing stock in 2000 at bubble prices. So they were actually furthering the dilution, for buying back shares at greater than fair value losses values for the current shareholders. They were well advised to stop the repurchases.

- F. The loss is the difference between market price and exercise price, net of the tax benefit from deducting this difference on the tax return. As the tax rate is known and the tax benefit is reported, Method 1 in the chapter can be applied:

Stock option expense	\$4,002/0.375	\$10,672
Tax benefit		<u>4,002</u>
After-tax stock option expense		<u>\$6,670</u>

This expense could have been entered in the reformulated equity statement, as follows:

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Balance, beginning of period		\$27,458
<i>Transactions with Shareholders</i>		
Share issues (2,843 +10,672)	\$13,515	
Share repurchases	<u>4,872</u>	8,643
<i>Comprehensive Income</i>		
Net income	\$7,012	
Unrealized investment gains	2,724	
Translations gains	166	
Preferred dividends	(13)	
Loss on exercise of stock options	<u>(6,670)</u>	<u>3,219</u>
Balance, end of period		<u>\$39,320</u>

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The share issue is recorded here at market value (issue price plus the difference between issue price and market price), and the loss is recorded as part of comprehensive income. The appropriate journal entry is:

Cash	Dr.	2,843
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Loss on exercise of stock options	Dr.	10,672	
Common stock and paid in capital	Cr.		13,515

Microsoft is paying its engineers and managers with options and the appropriate accounting recognizes the (large) cost. There is quite a change to comprehensive income here.

Note that, if the IASB's proposal (and the emerging FASB proposal as of mid-2003) comes to pass, an option expense will be recorded at grant date as (unamortized) compensation. If this is done, the difference between grant value and exercise price should be recorded as the loss at exercise (in an effective mark to market of the option). If the option is not exercised, the original expense is reversed as a gain on lapse.

G. As options are issued to pay employees in operations, the expense – and the tax benefit from the expense – are operating items. Correspondingly, the cash flows should be classified as cash from operations. Of course, both the cash associated with the expense and the tax benefit should be included, with the cash for the expense being the “as if” cash paid by not receiving the full cash from the share issue: The firm essentially issued the shares at market value, then paid part of the proceeds to employees to help them purchase the shares.

After the EIFT rule, the tax benefit was classified as part of operations. So Microsoft's 2001 cash flow for operations was reported as follows:

MICROSOFT CORPORATION

Cash Flows Statements  
(In millions) (Unaudited)

	Nine Months Ended Mar. 31	
	2000	2001
Operations		
Net income	\$ 7,012	\$ 7,281
Cumulative effect of accounting change, net of tax	-	375
Depreciation, amortization, and other noncash items	945	972
Net recognized gains on investments	(1,078)	(943)
Stock option income tax benefits	4,002	1,271
Deferred income taxes	449	1,357
Unearned revenue	4,278	5,141
Recognition of unearned revenue from prior periods	(4,058)	(4,652)
Accounts receivable	(558)	(281)
Other current assets	(328)	(557)
Other long-term assets	(654)	(228)
Other current liabilities	(1,272)	107
Net cash from operations	8,738	9,843

Notice that, for the nine months in 2000 (on which the case is based), the \$4,002 million in tax benefits (reclassified in 2001) was 45.8% of cash from operations.

H. The total tax paid was \$3,612 million on income in the income statement minus

\$4,002 million in tax benefits from stock options. That is, taxes were negative.

The amount of \$3,612 in the income statement results from allocating the taxes between the income statement and the equity statement. If Microsoft had recognized the compensation expense in the income statement, along with the tax benefit, the income statement would have looked as follows:

Income reported, before tax	\$10,624 million
Loss on exercise of stock options	<u>10,672</u>
Loss before tax	(48)
Taxes (\$3,612 – 4,002)	<u>(390)</u>
Net income	<u>\$ 342</u>



The negative income before tax draws a negative tax, as is usual (with the loss carried forward or back against income).

About quality of income: if a firm is paying low taxes on a high income, it must be either (1) the firm is getting certain tax credits (for R&D, for example), or (2), it is recognizing expenses for taxes that it is not recognizing on its books (or recognizing revenue in its books that is not recognized for taxes). If the difference is for reason (2), there is a concern about the quality of its accounting earnings: Is the firm recognizing the correct revenues and expenses?

I. Here are the concerns arising from the Stockholders' Equity footnote:

- Share repurchases: Is the firm purchasing its own shares at the appropriate price?
- Put warrants: there is a potential liability here because the put options might go into the money, requiring the firm to repurchase shares at more than the market price. As the strike prices ranged from \$69 to \$78 per share and the stock was trading at \$90 at the time, the options were out of the money. However, some of the expiration dates were up to December 2002 by which time the stock had dropped to \$56, so some options were subsequently exercised. When exercised, GAAP did not require Microsoft to record a loss. Nor did it require the firm to book a contingent liability as these options went into the money. See Box 8.4 for the correct accounting.
- The convertible preferred stock results in a loss to shareholders, if converted, but the contingent liability for this loss is not recorded, nor is the actual loss recorded on conversion. So, when the preferreds were

converted in 1999, the equity statement showed a substitution of common stock for preferred stock at the book value of the preferred stock (by the book value method), but no loss (that would have been recognized under the market value method).

In 1999, Microsoft's shares traded at an average price of \$88. With 14.901 million common shares issued ( $12.5 \times 1.1273$ ), common stock worth \$1,240 million was issued. As the carrying value of the preferred stock was \$990 million, the loss in conversion was \$260 million (unrecorded).

- J. The footnote tells you that Microsoft has an option overhang: As exercise prices are less than the current stock price of \$90, many options are in the money. The (contingent) liability to issue shares at less than market value for the outstanding options is simply their option value, calculated using a (modified) Black-Scholes valuation or similar method.

Chapter 13 illustrates how to do this and how to reduce an equity valuation for the amount of the option overhang. Students with some familiarity with option pricing models might make a stab at it using the parameters given in the option footnote. A floor valuation for the liability can be calculated as the difference between the current market price and the exercise prices:

Shares (millions)	Wtd-ave Exercise Price	Market Price	Per share Difference	Total Difference
133	4.57	90.00	85.43	11,362
104	10.89	90.00	79.11	8,227
135	14.99	90.00	75.01	10,126

96	32.08	90.00	57.92	5,560
198	63.19	90.00	26.81	5,308
<u>166</u>	89.91	90.00	0.09	<u>15</u>
<u>832</u>				<u>40,598</u>

The total amount of \$40.599 billion does not include option value (the

calculation

here is sometimes referred to as the “intrinsic value method”). However,

although

it is a minimum, it is large! Indeed, more than the total book value of

shareholders’ equity.



## **M8.2. Losses from Put Options: Household International**

This case illustrates the trouble that a firm can get into with put contracts on its own shares, and how GAAP fails to signal the trouble.

### ***How share repurchase agreements work***

Share repurchase agreements – and similar instruments like put options and put warrants --- are agreements to purchase stock at a prespecified price, with settlement in cash or a net share transaction for equivalent value. The agreements are written with private investors or banks who pay a premium for the option right. Firms write put contracts – in this case forward share purchase agreements – presumably because they think their shares are undervalued; they do not expect the option to be exercised. Or, if a share repurchase program is in place, they may be hedging against increases in the repurchase price. But there may be more sinister motives, as we will see.

### ***GAAP accounting***

When a firm is issuing stock for an average of \$21.72 per share and using the cash to repurchase stock at \$53.88, one can easily see that it is losing value and endangering its liquidity and credit status. But GAAP treats the transactions as if they were plain vanilla share issues and repurchases at market price, with no recognition of the losses. Further, in the case where settlement can be in shares, as here, no liability is recorded when these contracts are entered into; rather the proceeds from the option premium paid by the counterparties are treated as part of equity. So the firm treats a liability for current shareholders to potentially give up value (and equity) as part of their equity. (A liability is recorded at the amount of the premium if settlement is required in cash, that is, if the firm is required to repurchase shares for cash rather than settling up in shares.)

If the option is not exercised (because the market price of the shares is above the strike price), the firm pockets the premium paid for option and thus makes a gain for shareholders. GAAP does not report a gain, however; rather the amount of the premium remains as part of issued capital, or is transferred to equity if it had been carried as a liability. With Household International's agreements, the counterparty is required to deliver value, in the form of shares, for the difference between exercise price and market price, augmenting the gain. If the option is exercised against the firm (because the market price is less than the strike price), the share repurchase is recorded but no loss is recognized. But there is indeed a loss because the firm repurchases shares at more than the market price.

### ***Exercise of Options***

During the current quarter, Household International repurchased 2.1 million shares at \$55.68 under the agreements. The share issue (yielding \$400 million from 18.7 million shares) was at \$21.39 per share. Taking this \$21.39 as the market price at the time of the repurchase, the loss per share (gross of the premium received for the contracts) was \$34.29 per share ( $55.68 - 21.39$ ), for a total of \$72.009 million. See Box 8.4. In journal entry form, the appropriate accounting is (in millions of dollars):

Loss on stock repurchase	Dr. 72.009
Common Stock	Cr. 72.009

The \$72.009 million credit to equity is the value of the stock net issued to settle. If settlement were in cash, shares would be repurchased at market value ( $2.1 \times \$21.39 = \$44.919$  million), with the difference between the share value and cash paid ( $2.1 \times \$55.68 = 116.928$ ) recorded as the loss.

### ***Option Overhang***

In addition, a liability exists at September 2002 for outstanding agreements. One could apply option pricing methods to measure this liability, although this would

be complex here because of the varying triggers and the limits on shares to be delivered under the contracts. One can get a feel for the magnitude, however, by comparing the weighted-average strike price for the 4.9 million options outstanding to the closing market price at September 30, 2003:

Market price	4.9 x \$28.31	\$138,719
Exercise price	4.9 x \$52.99	<u>259,651</u>
Liability		<u>\$120,932</u>

(Losses are not tax deductible, so there is no tax benefit to net out here.) This valuation of the liability excludes the further option value and does not build in the effects of restrictions in the agreements. The footnote does give some further information on the value of the liability because it indicates that 4.2 million shares will have to be issued to settle outstanding contracts at the current market price of the shares. At \$28.31 per share, this is \$118.902 million. But there are scenarios under the agreements, depending on the price of the shares, where more shares would have to issued, up to a maximum of 29.8 million shares.

Share repurchase agreements and put options have a sharp barb for shareholders. When the share price goes down, they of course lose. But if, in addition, the firm has these agreements, the shareholder gets hit twice; the loss is levered. Yet GAAP does not account for the loss.

The counterparties here were banks. So you could see the premium received as a loan from the bank to be paid back in stock, with the expected interest being any difference between market and strike price. However, this “loan” was not recorded as such, but rather as equity, so enhancing capital ratios and improving book leverage. Effectively, the transactions took loans off balance sheet. Put it down as another structured finance deal to move debt off the balance sheet.

Here is how Floyd Norris described it in an article in *The New York Times*,

November 8, 2002, page C1:

Here's how it worked. Household, following the strategy recommended by Wall Street, decided in 1999 that it would embark on a big share-buyback program. It figured the stock was cheap. There was, however, a limitation on how many shares Household could buy. It had promised investors that it would maintain certain capital ratios, which required that it limit leverage. If it spent all that money, capital ratios would fall too low.

It could have just waited to buy back the stock until it could afford to do so, but Household had a better idea. It signed contracts with banks in which it promised to buy the shares within a year, for the market price when it signed the contract plus a little interest to cover the cost of the bank's buying the stock immediately. In reality, that amounted to a loan from the bank. But that is not the way that Household accounted for it. It structured the contracts so that it had a right to pay off the loan by issuing new stock, even though that was not what it intended to do. By doing that, it was able to pretend that the shares it had agreed to buy were still outstanding, and to keep its capital ratios up. All that was in accord with some easily abused accounting rules.

*Postscript:* In early 2003 the FASB began deliberations on dealing with the accounting issues posed by put options.



