CHAPTER 2

ASSET AND LIABILITY VALUATION AND INCOME MEASUREMENT

Solutions to Questions, Exercises, and Problems, and Teaching Notes to Cases

2.1 Asset Valuation and Income Recognition. The important part of the question is that it focuses on *net* income (as opposed to *comprehensive* income). Changes in the valuation of assets generally result in an increase in shareholders' equity (to maintain the balance of the accounting equation), which is accomplished through associated effects captured as part of net income. For example, sales generate cash or receivables, which increase both assets and net income. Similarly, recognition of depreciation expense decreases both assets and net income. However, certain changes in asset valuations result in corresponding amounts being temporarily held as part of "accumulated other comprehensive income" on the balance sheet (in shareholders' equity). Such changes would be part of Approach 2 as shown in Exhibit 2.4 and discussed in the text. In these situations, asset valuations do not have to relate to the recognition of net income (although such asset valuations relate to *comprehensive* income).

2.2 Reliability versus Relevance. Reliability is an attribute of accounting information that relates to the degree of verifiability or representational faithfulness of the reported amounts; reliable asset valuations are supported by source documents, liquid market prices, or other credible evidence. There is limited room for subjectivity in these valuations. For example, reporting assets at acquisition cost provides management with fewer opportunities to bias the valuation compared to using current replacement costs or fair value inputs. Relevance describes accounting information that is timely and has the capacity to affect a user's decisions based on the information; relevant asset valuations incorporate all available information, including the acquisition cost and subsequent developments. Relevant asset valuations may or may not be subjective; the existence of subjectivity in an asset valuation does not necessarily mean the valuation will not be reliable.

Examples:
Historical cost/reliable and relevant: accounts receivable, fixed assets, and other assets with values that remain relatively stable

Historical cost/reliable but less relevant: LIFO inventory layers, acquired research and development and other intangible assets, and real estate that has appreciated

Fair value/relevant and reliable: Marketable equity securities, commodities, and financial assets traded in liquid markets

Fair value/relevant but less reliable: Real estate valuations based on comparable analysis, internally generated intangible asset valuations, and pension plan assets invested in illiquid investments

2.3 Income Flows versus Cash Flows. The analysis below demonstrates that the change in cash for the five years as a whole is $117,000. Subtracting the $100,000 cash contribution by the owners equals $17,000, which equals the amount of net income for the five years and the balance in retained earnings at the end of five years. Note that the cash outflow to purchase the machine occurs at the beginning of the first year, whereas depreciation on the machine occurs throughout the five years, and the remaining book value of the machine of $20,000 affects computation of the gain on sale at the end of five years. Thus, the statement about the equivalence of cash flows and earnings holds for this example and in general.

Transaction or Event		Cash		Equipment		Common Stock		Net Income
Cash Contributed by Owners	+	$ 100,000			+	$ 100,000		
Purchase of Machine for Cash	–	100,000	+	$ 100,000				
Recognition of Rent Revenue	+	125,000					+	$125,000
Recognition of Operating Expenses	–	30,000					–	30,000
Recognition of Depreciation			–	80,000			–	80,000
Sale of Machine	+	22,000	–	20,000			+	2,000
Totals		$ 117,000		$ 0		$ 100,000		$ 17,000

2.4 Measurement of Acquisition Cost. Acquisition cost is $240,500 ($250,000 invoice price – $15,000 cash discount + $4,000 for the title + $1,500 to paint company's name on the truck). The license fee of $800 and the insurance of $2,500 are not costs to prepare the truck for its intended use, but costs to operate the truck during its first year. Therefore, these latter two costs are prepayments that become expenses of the first year.

2.5 Measurement of a Monetary Asset.

Balance, January 1, 2009: $10 million x 9.81815 (Part a.)	$ 98,181,500
Interest for 2009: .08 x $98,181,500	7,854,520
Less Cash Received	(10,000,000)
Balance, December 31, 2009 (Part b.)	$ 96,036,020
Interest for 2010: .08 x $96,036,020	7,682,882
Less Cash Received	(10,000,000)
Balance, December 31, 2010 (Part c.)	$ 93,718,902

2.6 Fair Value Measurements.

a. The stocks are Level 1 assets, assuming they are for public companies for which the prices of each share are available via closing quotes from one of the major exchanges.

b. Bonds are also likely Level 1 assets if they are publicly traded; however, if they are privately placed issues, they would be Level 2 assets because their values would be determined by reliable inputs such as market interest rates and yield curves.

c. Real estate is more likely comprised of Level 2 assets, given ready availability of real estate valuation data.

d. Timber investments are either Level 2 or Level 3 assets depending on the availability of directly applicable current and future timber prices.

e. Private equity funds are typically invested in young privately held start-up companies, and due to the illiquidity of such investments and difficulty in obtaining directly comparable asset prices, these would likely be Level 3 assets.

f. Illiquid asset-backed securities are, by definition, illiquid, and although various models exist for valuing manufactured securities (such as mortgage-backed securities), the inputs are generally well-placed guesses, making such assets Level 3.

2.7 Computation of Income Tax Expense.

a.

Taxes Currently Payable	$ 50,000
Plus Decrease in Deferred Tax Assets: $42,900 – $38,700	4,200
Plus Increase in Deferred Tax Liabilities: $34,200 – $28,600	5,600
Income Tax Expense	$ 59,800

b.

Taxes Currently Payable	$ 50,000
Plus Decrease in Deferred Tax Assets: $42,900 – $38,700	4,200
Less Decrease in Deferred Tax Liability: $58,600 – $47,100	(11,500)
Income Tax Expense	$ 42,700

c. In both Part a. and Part b., the value of the deferred tax asset decreased, which means that the company utilized deferred tax assets to decrease taxes owed relative to the amount expensed. However, the difference lies in the change in the deferred tax liability. In Part a., the deferred tax liability increased, which occurs when the firm has larger deductions (lower income) on its tax return relative to amounts expensed (amounts recognized in income). The advantageous treatment of these amounts leads to lower current cash outflows for taxes than amounts recognized as income tax expense. For Part b., the situation is reversed. In Part b., the decrease in the deferred tax liability means

that previous timing differences likely reversed, leading to higher cash payments required for current income tax payments relative to amounts recognized as income tax expense.

2.8 Computation of Income Tax Expense.

a.	Taxes Currently Payable		$ 35,000
	Less Increase in Deferred Tax Assets:		
	Beginning of Year: $24,600 – $6,400 =	$ 18,200	
	End of Year: $27,200 – $7,200 =	20,000	(1,800)
	Less Decrease in Deferred Tax Liabilities: $18,900 – $16,300		(2,600)
	Income Tax Expense		$ 30,600

b.	Taxes Currently Payable		$ 35,000
	Less Increase in Deferred Tax Assets:		
	Beginning of Year: $24,600 – $6,400 =	$ 18,200	
	End of Year: $27,200 – $4,800 =	22,400	(4,200)
	Less Decrease in Deferred Tax Liabilities: $18,900 – $16,300		(2,600)
	Income Tax Expense		$ 28,200

2.9 Effect of Valuation Method for Nonmonetary Asset on Balance Sheet and Income Statement.

a. Valuation of the land at acquisition until sale of land:

2009

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash –100,000						
Land +100,000						

Land	100,000	
Cash		100,000

2010

No Entry

2011

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash +180,000						Gain on Sale of Land +80,000
Land –100,000						

Cash	180,000	
Land		100,000
Gain on Sale of Land		80,000

b. Valuation of the land at current market value but including unrealized gains and losses in accumulated other comprehensive income until sale of land:

2009

Assets	= Liabilities	+ Shareholders' Equity		
		CC	AOCI	RE
Cash –100,000				
Land +100,000				

Land	100,000	
Cash		100,000

Assets	= Liabilities	+ Shareholders' Equity		
		CC	AOCI	RE
			Unrealized Holding Gain or Loss—OCI	
Land +50,000			+50,000	

Land	50,000	
Unrealized Holding Gain or Loss—OCI		50,000

2010

Assets	= Liabilities	+ Shareholders' Equity		
		CC	AOCI	RE
			Unrealized Holding Gain or Loss—OCI	
Land –30,000			–30,000	

Unrealized Holding Gain or Loss—OCI	30,000	
Land		30,000

2011

Assets	= Liabilities	+ Shareholders' Equity			
		CC	AOCI	RE	
			Unrealized Holding Gain or Loss—OCI		
Cash +180,000				Gain on Sale of Land	+80,000
Land –120,000			–20,000		

Cash	180,000	
Unrealized Holding Gain or Loss—OCI	20,000	
Land		120,000
Gain on Sale of Land		80,000

c. Valuation of the land at current market value and including market value changes each year in net income:

2009

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash –100,000						
Land +100,000						

Land 100,000
Cash 100,000

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
						Gain on Fair Market Value of Land +50,000
Land +50,000						

Land 50,000
Gain on Fair Market Value of Land 50,000

2010

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
						Loss on Fair Market Value of Land –30,000
Land –30,000						

Loss on Fair Market Value of Land 30,000
Land 30,000

2011

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash +180,000						Gain on Sale of Land +60,000
Land –120,000						

Cash 180,000
Land 120,000
Gain on Sale of Land 60,000

d. Net income over sufficiently long time periods equals cash inflows minus cash outflows, other than cash transactions with owners. Walmart acquired the land in 2009 for $100,000 and sold it for $180,000 in 2011. Thus, the total effect on net income through the realization of the increase in the value of the land bought and sold is $80,000. The three different methods of asset valuation and income measurement recognize this $80,000 in different patterns over time, but the total is the same.

2.10 Effect of Valuation Method for Monetary Asset on Balance Sheet and Income Statement.

a. Valuation of the note at the present value of future cash flows using the historical market interest rate of 8 percent (Approach 1)

2011

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Note Receivable	+180,000				Gain on Sale
Land	–100,000				of Land +80,000

Note Receivable	180,000	
Land		100,000
Gain on Sale of Land		80,000

2012

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+100,939				
Note Receivable	–86,539				Interest Revenue 14,400[a]

Cash	100,939	
Interest Revenue		14,400[a]
Note Receivable		86,539

[a]$14,400 = .08 x $180,000

2013

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+100,939				
Note Receivable	–93,461				Interest Revenue 7,478[b]

Cash	100,939	
Interest Revenue		7,478[b]
Note Receivable		93,461

[b]$7,478 = .08 x ($180,000 – $86,539) plus an additional $1 due to rounding

b. Valuation of the note at the present value of future cash flows, adjusting the note to fair value upon changes in market interest rates and including unrealized gains and losses in net income (Approach 3)

2011

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Note Receivable	+180,000				Gain on Sale of Land +80,000
Land	–100,000				

Note Receivable	180,000	
Land		100,000
Gain on Sale of Land		80,000

2012

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+100,939				Interest Revenue +14,400[a]
Note Receivable	–86,539				Loss on Note Receivable –1,699[c]
Note Receivable	–1,699				

Cash	100,939	
Interest Revenue		14,400[a]
Note Receivable		86,539

[a]$14,400 = .08 x $180,000

Loss on Note Receivable	1,699[c]	
Note Receivable		1,699

[c]$1,699 = $91,762 – ($180,000 – $86,539)

2013

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+100,939				Interest Revenue 9,177[d]
Note Receivable	–91,762				

Cash	100,939	
Interest Revenue		9,177[d]
Note Receivable		91,762

[d]$9,177 = .10 x $91,762 plus an additional $1 due to rounding

c. Over sufficiently long time periods, net income equals cash inflows minus cash outflows, other than cash transactions with owners. WMT receives $101,878 net in cash from purchasing the land for $100,000 and selling it for $201,878 ($100,939 x 2). Problem 2.9 indicates that net income across 2009 to 2011 includes the $80,000 change in market value of the land as of the time of sale on December 31, 2011. The $21,878 difference between the cash received of $201,878 and the market value of the land on December 31, 2011, of $180,000 is

income for 2012 and 2013. The valuation method in Part a. uses the 8 percent interest rate applicable to this note on December 31, 2011, both to value the note and to recognize interest revenue for both years (acquisition cost valuation of the asset, Approach 1 for income recognition). The valuation method in Part b. uses the market interest rate for this note each year (8 percent for 2012 and 10 percent for 2013) to value the note and to recognize interest revenue and holding gains and losses (fair value for the asset, Approach 3 for income recognition). These two methods report the same total income but in a different pattern over time.

2.11 Effect of Valuation Method for Nonmonetary Asset on Balance Sheet and Income Statement.

a. Assume for this part that PCU accounts for the equipment using acquisition cost adjusted for depreciation and impairment losses.

(1)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Equipment +100,000						
Cash –100,000						

Equipment	100,000	
Cash		100,000

(2)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation –25,000						Depreciation Expense –25,000

Depreciation Expense	25,000	
Accumulated Depreciation		25,000

(3)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Equipment –15,000						Impairment Loss –15,000

Impairment Loss	15,000	
Equipment		15,000

(4)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation –20,000						Depreciation Expense –20,000

Depreciation Expense	20,000	
Accumulated Depreciation		20,000

(5)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation	–20,000					Depreciation Expense –20,000

Depreciation Expense	20,000	
Accumulated Depreciation		20,000

(6)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	+26,000					Gain on Sale of Equipment +6,000
Equipment	–85,000					
Accumulated Depreciation	+65,000					

Cash	26,000	
Accumulated Depreciation	65,000	
Equipment		85,000
Gain on Sale of Equipment		6,000

b. Assume that PCU accounts for the equipment using current market values adjusted for depreciation and impairment losses.

(1)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Equipment	+100,000					
Cash	–100,000					

Equipment	100,000	
Cash		100,000

(2)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation	–25,000					Depreciation Expense –25,000

Depreciation Expense	25,000	
Accumulated Depreciation		25,000

(3)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Equipment	–15,000					Impairment Loss –15,000

Impairment Loss	15,000	
Equipment		15,000

(4)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation	–20,000					Depreciation Expense –20,000

Depreciation Expense	20,000	
Accumulated Depreciation		20,000

(5)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Equipment	+8,000					Gain on Change in Equipment Fair Value +8,000

Equipment	8,000	
Gain on Change in Equipment Fair Value		8,000

(6)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation	–24,000					Depreciation Expense –24,000

Depreciation Expense	24,000	
Accumulated Depreciation		24,000

(7)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Equipment	+2,000					Gain on Change in Equipment Fair Value +2,000

Equipment	2,000	
Gain on Change in Equipment Fair Value		2,000

(8)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	+26,000					
Accumulated Depreciation	+69,000					
Equipment	–95,000					

Cash	26,000	
Accumulated Depreciation	69,000	
Equipment		95,000

c. Total expenses over sufficiently long time periods equal cash outflows, other than cash transactions with owners. The negative $74,000 total net cash outflow for the equipment reflects the cash outflow to acquire the equipment of $100,000 offset by the cash inflow to sell the equipment for $26,000. When the depreciation expense, gain, and loss accounts under the retained earnings column are summed, the total also is negative $74,000, which is the amount that reduced income related to the purchase, use, and disposition of the equipment.

2.12 Effect of Valuation Method for Monetary Asset on Balance Sheet and Income Statement.

a. Assume that Alfa Romeo accounts for this note throughout the three years using its initial present value.

(1)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Automobile Inventory	+30,000					
Cash	–30,000					

Automobile Inventory	30,000	
Cash		30,000

(2)

Assets	=	Liabilities	+	Shareholders' Equity			
				CC	AOCI	RE	
Cash	+5,000					Sales	+45,000
Note Receivable	+40,000					Cost of Goods Sold	–30,000
Automobile Inventory	–30,000						

Cash	5,000	
Note Receivable	40,000	
Sales		45,000
Cost of Goods Sold	30,000	
Automobile Inventory		30,000

(3)

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+14,414				
Note Receivable	–12,814[b]				Interest Revenue +1,600[a]

Cash	14,414	
Note Receivable		12,814[b]
Interest Revenue		1,600[a]

[a]$1,600 = 0.04 x $40,000
[b]$12,814 = $14,414 – $1,600

(4)

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+14,414				
Note Receivable	–13,327[d]				Interest Revenue +1,087[c]

Cash	14,414	
Note Receivable		13,327[d]
Interest Revenue		1,087[c]

[c]$1,087 = .04 x ($40,000 – $12,814)
[d]$13,327 = $14,414 – $1,087

(5)

Assets		= Liabilities	+ Shareholders' Equity		
			CC	AOCI	RE
Cash	+14,414				
Note Receivable	–13,859[f]				Interest Revenue +555[e]

Cash	14,414	
Note Receivable		13,859[f]
Interest Revenue		555[e]

[e]$555 = .04 x $13,859 plus an additional $1 due to rounding
[f]$13,859 = $14,414 – $555

b. Assume that Alfa Romeo values this note receivable at fair value each year.

(1)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Automobile Inventory	+30,000					
Cash	–30,000					

Automobile Inventory	30,000	
Cash		30,000

(2)

Assets	=	Liabilities	+	Shareholders' Equity			
				CC	AOCI	RE	
Cash	+5,000					Sales	+45,000
Note Receivable	+40,000					Cost of Goods Sold	–30,000
Automobile Inventory	–30,000						

Cash	5,000	
Note Receivable	40,000	
Sales		45,000
Cost of Goods Sold	30,000	
Automobile Inventory		30,000

(3)

Assets	=	Liabilities	+	Shareholders' Equity			
				CC	AOCI	RE	
Cash	+14,414						
Note Receivable	–12,814[b]					Interest Revenue	+1,600[a]

Cash	14,414	
Note Receivable		12,814[b]
Interest Revenue		1,600[a]

[a] $1,600 = .04 x $40,000
[b] $12,814 = $14,414 – $1,600

(4)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
						Loss on Decline in Fair Value of Note Receivable –384[c]
Note Receivable –384						

Loss on Decline in Fair Value of Note Receivable..... 384[c]
Note Receivable 384

[c]$384 = $26,802 – ($40,000 – $12,814)

(5)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash +14,414						
Note Receivable –13,074[e]						Interest Revenue +1,340[d]

Cash..... 14,414
Note Receivable ..... 13,074[e]
Interest Revenue ..... 1,340[d]

[d]$1,340 = .05 x $26,802
[e]$13,074 = $14,414 – $1,340

(6)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
						Loss on Decline in Fair Value of Note Receivable –382[f]
Note Receivable –382						

Loss on Decline in Fair Value of Note Receivable..... 382[f]
Note Receivable 382

[f]$382 = $13,346 – ($26,802 – $13,074)

(7)

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	+14,414					
Note Receivable	–13,346[h]					Interest Revenue +1,068[g]

Cash	14,414	
Note Receivable		13,346[h]
Interest Revenue		1,068[g]

[g]$1,068 = .08 x $13,346
[h]$13,346 = $14,414 – $1,068

c. Total expenses over sufficiently long time periods equal cash inflows minus cash outflows, other than cash transactions with owners. The $18,242 balance in retained earnings equals the cash inflows of $48,242 ($5,000 + $14,414 + $14,414 + $14,414) minus cash outflows of $30,000 for the cost of the automobile.

d. In Part a., the balance sheet suffers at the end of 2010 and 2011 because the note receivable is overvalued. The overvaluation is due to the market interest rate that Alfa Romeo *ought* to be realizing on the note being higher than what the company is actually realizing. Thus, the note is worth less than its adjusted acquisition cost (that is, the initial present value minus payments). In Part b., however, the fair valuation of the note receivable on the balance sheet results in volatility of the "loss" and "interest revenue" line items, reflecting the fair value adjustments.

2.13 Deferred Tax Assets.

a. Biosante Pharmaceuticals discloses that the amount of the net operating loss carryforwards at the end of 2008 is $62,542,000. This amount reflects the accumulated total of taxable losses (as opposed to taxable income) that Biosante has reported on its tax returns (possibly offset by taxable income, but this seems unlikely). In future years, Biosante could offset up to $62,542,000 of taxable income with the tax loss carryforwards, for which the company did not receive any tax benefit at the time they were reported. The amount of the deferred tax asset for these net operating loss carryforwards is $23,609,594. This is the income tax "shield" available due to the $62,542,000 tax loss carryfowards. The link between these two amounts is that the deferred tax asset represents the tax effect of the tax loss carryforwards. Generally, this text uses 35–40 percent as the tax effect of income and deductions. You can back into the rate that was assumed by Biosante. $23,609,594/$62,542,000 = 37.75%. Intuitively, for each dollar of taxable income the company might report in the future (up to $62,542,000), it would be able to save $0.3775 in tax because it would offset that dollar of taxable income with a dollar of its tax loss carryforwards.

b. The company has recorded a valuation allowance for the deferred tax asset equal to the entire amount of the deferred tax asset. What this means is that the company believes that it is "more likely than not" to use its deferred tax assets before they expire. This implies that management is not optimistic about the company's ability to generate future taxable income.

c. The increase in the valuation allowance was achieved by the following entry:

Income Tax Expense (28,946,363 – 21,818,084)	7,128,279	
Valuation Allowance		7,128,279

The income tax expense entry decreased net income; the valuation allowance entry decreased the deferred tax asset. However, note that the change in the valuation allowance exactly equals the increase in the deferred tax assets. This increase in deferred tax assets would have been achieved via a cumulative adjustment to the financial statements for the individual deferred tax assets, symbolically represented as follows:

Deferred Tax Asset (28,946,363 – 21,818,084)	7,128,279	
Income Tax Expense		7,128,279

As a result of the build-up of the deferred tax assets but the full reserve for this build-up, there was no impact on net income for fiscal 2008. Indeed, the company's tax provision disclosed in the footnotes is as follows:

Taxes at U.S. Federal Statutory Rate	$(6,030,952)
State Taxes, Net of Federal Benefit	(568,133)
Research and Development Credits	(526,196)
Other, Net	(2,998)
Change in Valuation Allowance	7,128,279
Income Tax Expense	$ 0

2.14 Interpreting Income Tax Disclosures.

a. ABC's income before income taxes for financial reporting exceeded taxable income because the net deferred tax liability increased between the end of 2007 and the end of 2008. Also note that total income tax expense exceeds income taxes currently payable, so ABC deferred some tax payments to later years.

b. Income before income taxes for financial reporting exceeded taxable income because the net deferred tax liability increased between the end of 2007 and the end of 2008. In addition, total income tax expense exceeded income taxes currently payable.

c. The deferral of tax payments in 2007 and 2008 results in an addition to net income of $208 million and $94 million, respectively, when cash flow from operations is computed. ABC did not pay as much income taxes as the subtraction for income tax expense in the income statement would suggest.

d. ABC recognizes insurance expense earlier for financial reporting than for tax reporting, giving rise to a deferred tax asset for the future savings in income taxes when actual losses materialize. The decline in the deferred tax asset for self-insured benefits between the end of 2006 and the end of 2007 indicates that ABC paid out more in actual claims during 2007 than it recognized as an expense. The increase in the deferred tax asset for self-insured benefits between the end of 2007 and the end of 2008 indicates that ABC recognized more expense than it paid in actual claims during 2008.

e. ABC recognizes these costs as expenses earlier for financial reporting than for tax reporting, giving rise to a deferred tax asset for the future income taxes savings when it sells the inventory items. The decline in the deferred tax assets for inventory between the end of 2006 and the end of 2007 suggests that inventories declined during 2007, resulting in a larger expense for tax reporting than for financial reporting. The increase in the deferred tax assets for inventory between the end of 2007 and the end of 2008 suggests that inventories increased during 2008.

f. The deferred tax asset related to the health care obligation indicates that ABC has recognized more expenses cumulatively for financial reporting than for payments made to the health care plan. The slight increase in the deferred tax assets for postretirement health care between the end of 2006 and the end of 2007 indicates that ABC grew the number of employees, improved health care benefits, or experienced increased health care costs during 2007. The decrease in the deferred tax assets for postretirement health care between the end of 2007 and the end of 2008 suggests a decline in the number of employees, lower health care benefits, or lower health care costs. The deferred tax liability related to pension indicates that ABC has contributed larger amounts cumulatively to its pension fund than it has recognized as expenses for financial reporting. The growing amounts over time suggest that ABC has consistently grown the number of its employees or their retirement benefits each year.

g. The deferred tax asset related to uncollectible accounts indicates that ABC recognizes losses for uncollectibles earlier for financial reporting than for tax reporting. The deferred tax asset indicates the future savings in income taxes the firm will realize when it writes off actual uncollectible accounts. The increasing amount for this deferred tax asset is consistent with growth in sales.

h. The deferred tax liability indicates that ABC recognizes depreciation earlier for tax reporting than for financial reporting. The increasing amounts for this deferred tax liability suggest that ABC increased its capital expenditures each year and therefore had more depreciable assets in the early years of their lives, when accelerated depreciation exceeds straight-line depreciation, than it has depreciable assets in the later years of their lives, when straight-line depreciation exceeds accelerated depreciation.

2.15 Interpreting Income Tax Disclosures.

a. In 2008, the deferred income tax provision is positive, whereas in 2007, it is negative. This shows that income before taxes exceeded taxable income in 2008, but the reverse was true for 2007.

b. During 2008, the deferred tax liability increased from $110 million to $495 million. Because this increase was associated with a deferred income tax provision of $385 million but no associated tax payment for this amount was made, this increase will appear on the statement of cash flows as a positive adjustment to net income. In 2007, the opposite is true, although the 2006 balance sheet amount of deferred tax liabilities in the footnote disclosure is not available. However, it is not needed because the components of the provision are such that the deferred provision was negative, indicating that the company reported higher taxable income in 2007 than income before taxes.

c. The premiums collected from customers go immediately into taxable income, but they do not get reported as financial income until ratably over the period in which customers have purchased legal insurance. Thus, PPD has paid taxes on these amounts although they have not been reported as financial reporting income. In the future, when PPD recognizes the revenue currently deferred, financial reporting income will increase for these amounts; however, there will be no associated taxable income for these amounts. As a consequence, the taxes already paid on the amounts deferred represent an asset of PPD, and they are categorized appropriately as deferred tax assets on the balance sheet.

d. The explanation for why the deferred tax effect of deferred costs shows up as a liability is complementary to the explanation for deferred revenues in Part c. above. When PPD pays costs for acquiring customers, they are able to deduct these amounts. However, when these amounts are subsequently reported as expenses for financial reporting purposes, income before taxes are reduced, yet there is no associated deduction for tax reporting purposes; thus, taxable income will be higher than income before taxes. Accordingly, these amounts represent a future tax liability and are categorized as deferred tax liabilities.

e. Accelerated depreciation deductions, all else equal, reduce current taxable income and taxes payable. However, because total tax depreciation and financial reporting depreciation will equal over the life of an asset, in future years when straight-line depreciation exceeds accelerated depreciation, PPD will show higher taxable income relative to financial reporting income. Accordingly, the excess depreciation deductions already reported are associated with a deferred tax liability.

f. Although the limited income tax footnote disclosures can provide only limited insight into the overall reported growth and profitability (because there are many other aspects of reported profitability than are revealed in the footnote), certain items are suggestive. For example, a buildup in deferred tax liabilities for property and equipment suggests that a company is continuing to make investments in property and equipment, which generally occurs when managers are bullish on future prospects. Similarly, a buildup in the deferred tax asset for deferred revenues would indicate that the company is generating growth in sales. For PPD, the deferred tax liability for property and equipment grew, but the deferred tax asset for deferred revenue fell in 2008. Thus, these signals are mixed. The greatest difficulty posed by deducing growth and profitability from the income tax footnote for PPD is that a large component of the deferred tax effects on its balance sheet reflects the mix of cash versus accrual mix of the business. If PPD realizes an increase in the frequency of customers paying in advance with cash relative to paying ratably, this could accompany an increase, a decrease, or a flat pattern in sales. However, what the income tax footnote *is* frequently useful for is quickly identifying accrual accounting differences from cash flows. A quick glance at PPD's tax footnote reveals that it (i) defers costs of acquiring new customers and (ii) defers revenues. Given judgment often required in such deferrals, analysts can use the tax footnote as a quick way to identify possible accounting quality issues.

2.16 Interpreting Income Tax Disclosures.

a. Nike's income before income taxes (also referred to as book income) exceeded taxable income for 2007 because total income tax expense exceeded income taxes currently payable (that is, $708.4 million income tax expense versus $674.1 currently payable).

b. Opposite 2007, the taxable income for 2008 was higher than income before taxes, made clear by the fact that income tax expense is approximately $300 million less than income taxes currently payable ($619.5 million versus $920.1 million). In addition, during 2008, Nike switched from a net deferred tax liability position to a net deferred tax asset position, consistent with the company paying a substantial sum for taxes relative to amounts currently expensed.

c. The adjustment to net income to compute cash flow from operations will be a subtraction because the cash payment is larger than income tax expense.

d. Nike recognizes an estimated expense or revenue reduction earlier for financial reporting than for tax reporting. The delayed reduction in taxable income gives rise to the payment of taxes in early years and a reduction in taxes in later years, resulting in a deferred tax asset in between. The increasing deferred tax assets for both sales returns and allowance for doubtful accounts indicate that Nike's sales grew each year (assuming a level mix of returns and allowances and doubtful accounts estimates).

e. Nike recognizes deferred compensation expense earlier for financial reporting than for tax reporting, giving rise to a future tax benefit that the firm will realize when it actually pays out cash to employees in later years. The increase in the deferred tax asset for deferred compensation suggests that Nike increase the number of employees or the deferred compensation benefits.

f. The amount of the deferred tax asset for foreign loss carryforwards increased significantly each year, suggesting that some foreign units continued to operate at a net loss. Normally, an increase in such deferred tax assets would be expected to trigger an increase in the valuation allowance as well. However, the valuation allowance decreased slightly from 2007 to 2008. This indicates Nike's greater confidence that there is a reduced probability of not being able to realize the benefits of these tax loss carryforwards, perhaps due to better prospects of future profits that can be offset by tax loss carryforwards for tax reporting purposes.

g. Apparently, when Nike acquired Umbro, it was able to deduct a large number of these amounts currently, although for financial reporting, the company is required to recognize intangible assets. The result is that Nike faces a deferred tax liability for the amounts currently residing on the balance sheet as "expenses waiting to happen.

h. Nike recognizes foreign-source income earlier for financial reporting than for tax reporting, thereby delaying the payment of taxes and creating a deferred tax liability in the meantime.

i. Some of Nike's foreign units operate at a net loss, giving rise to a deferred tax asset, while other units operate at a net profit, giving rise to a deferred tax liability.

2.17 Analyzing Transactions.

a.

Assets		= Liabilities		+ Shareholders' Equity		
				CC	AOCI	RE
Cash	+50,000			Common Stock and Paid-in-Capital	+50,000	

Cash	50,000		
Common Stock and Paid-in-Capital			50,000

b.

Assets		= Liabilities		+ Shareholders' Equity		
				CC	AOCI	RE
Building	+35,000					
Cash	–5,000	Note Payable	+30,000			

Building	35,000		
Cash			5,000
Note Payable			30,000

c.

Assets		= Liabilities		+ Shareholders' Equity		
				CC	AOCI	RE
Inventory	+40,000	Accounts Payable	+40,000			

Inventory	40,000		
Accounts Payable			40,000

d.

Assets		= Liabilities		+ Shareholders' Equity		
				CC	AOCI	RE
Accounts Receivable	+65,000					Sales +65,000
Inventory	–30,000					Cost of Goods Sold –30,000

Accounts Receivable	65,000		
Sales			65,000
Cost of Goods Sold	30,000		
Inventory			30,000

e.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	–15,000					Compensation Expense –15,000

Compensation Expense 15,000
Cash 15,000

f.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	+45,000					
Accounts Receivable	–45,000					

Cash 45,000
Accounts Receivable 45,000

g.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	–28,000	Accounts Payable –28,000				

Accounts Payable 28,000
Cash 28,000

h.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accumulated Depreciation	–7,000					Depreciation Expense –7,000

Depreciation Expense 7,000
Accumulated Depreciation 7,000

i.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
		Wages Payable +4,000				Compensation Expense –4,000

Compensation Expense 4,000
Wages Payable 4,000

j.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	–2,400					Interest Expense –2,400

Interest Expense	2,400	
Cash		2,400

k.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	–1,440[b]	Deferred Tax Liability	+1,200[c]			Income Tax Expense –2,640[a]

Income Tax Expense	2,640[a]	
Cash		1,440[b]
Deferred Tax Liability		1,200[c]

[a]Sales	$ 65,000
Cost of Goods Sold	30,000
Compensation *Expense*	15,000
	4,000
Depreciation *Expense*	7,000
Interest *Expense*	2,400
Income before Taxes	$ 6,600
	x 40%
Income Tax Expense	$ 2,640

[b]Sales	$ 65,000
Cost of Goods Sold	30,000
Compensation *Deduction*	15,000
	4,000
Depreciation *Deduction*	10,000
Interest *Deduction*	2,400
Taxable Income	$ 3,600
	x 40%
Current Taxes Payable	$ 1,440

[c]$1,200 = $2,640 – $1,440

2.18 Analyzing Transactions.

(1)

a.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Marketable Equity Securities	+100,000					
Cash	–100,000					

Marketable Equity Securities	100,000	
Cash		100,000

b.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Marketable Equity Securities	–10,000				Unrealized Holding Gain or Loss–OCI –10,000	

Unrealized Holding Gain or Loss—OCI	10,000	
Marketable Equity Securities		10,000

c.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Deferred Tax Asset	+4,000				Unrealized Holding Gain or Loss–OCI +4,000	

Deferred Tax Asset	4,000	
Unrealized Holding Gain or Loss—OCI		4,000

d.

Assets	=	Liabilities	+	Shareholders' Equity			
				CC	AOCI	RE	
Cash	+94,000				Unrealized Holding Gain or Loss—AOCI +10,000	Loss on Marketable Equity Securities	–6,000
Marketable Equity Securities	–90,000						

Cash	94,000	
Loss on Marketable Equity Securities	6,000	
Unrealized Holding Gain or Loss—AOCI		10,000
Marketable Equity Securities		90,000

e.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash	+2,400				Unrealized Holding Gain or Loss–AOCI +4,000	Income Tax Expense +2,400
Deferred Tax Asset	–4,000					

Unrealized Holding Gain or Loss—AOCI	4,000	
Cash	2,400	
Deferred Tax Asset		4,000
Tax Expense		2,400

(2)

a.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accounts Receivable	+500,000					Sales +500,000

Accounts Receivable	500,000	
Sales		500,000

b.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Inventory	–400,000					Cost of Goods Sold –400,000

Cost of Goods Sold	400,000	
Inventory		400,000

c.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Allowance for Uncollectible Accounts	–10,000					Bad Debt Expense –10,000

Bad Debt Expense	10,000	
Allowance for Uncollectible Accounts		10,000

d.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
		Warranty Reserve +20,000				Warranty Expense –20,000

Warranty Expense	20,000	
Warranty Reserve		20,000

e.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Accounts Receivable –3,000						
Allowance for Uncollectible Accounts +3,000						

Allowance for Uncollectible Accounts	3,000	
Accounts Receivable		3,000

f.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash –8,000		Warranty Reserve –8,000				

Warranty Reserve	8,000	
Cash		8,000

g.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash –35,600[a]						Income Tax Expense –28,000
Deferred Tax Asset +7,600[b]						

Income Tax Expense	28,000	
Deferred Tax Asset	7,600[b]	
Cash		35,600[a]

[a]$35,600 = .40 x ($500,000 – $400,000 – $3,000 – $8,000)
[b]$7,600 = .40 x ($10,000 + $20,000 – $3,000 – $8,000)

(3)

a.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Bonds Investment +68,058						
Cash –68,058						

Bond Investment	68,058	
Cash		68,058

b.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Bond Investment +5,445						Interest Revenue +5,445[a]

Bond Investment	5,445	
Interest Revenue		5,445[a]

[a]$5,445 = .08 x $68,058

c.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash –2,178						Income Tax Expense –2,178

Income Tax Expense	2,178	
Cash		2,178

d.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Bond Investment +5,880						Interest Revenue +5,880[b]

Bond Investment	5,880	
Interest Revenue		5,880[b]

[b]$5,880 = .08 x $73,503

e.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash +2,352						Income Tax Expense –2,352

Income Tax Expense	2,352	
Cash		2,352

f.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash +83,683						Gain on Sale of Bonds +4,300
Bond Investment –79,383[c]						

Cash	83,683	
Bond Investment		79,383[c]
Gain on Sale of Bonds		4,300

[c]$79,383 = $68,058 + $5,445 + $5,880

g.

Assets	=	Liabilities	+	Shareholders' Equity		
				CC	AOCI	RE
Cash –1,720						Income Tax Expense –1,720

Income Tax Expense	1,720	
Cash		1,720

Integrative Case 2.1: Starbucks

a. Taxable income exceeded book income before income taxes for 2007 because income taxes currently payable ($326.7 + $65.3 + $31.2 = $423.2) exceeded total income tax expense ($383.7).

b. The answer to Part b. is in the same spirit as for Part a. above. Also, the net deferred tax asset increased between the end of 2007 and the end of 2008, indicating that Starbucks prepaid taxes relative to book income.

c. Starbucks will report a subtraction from net income when computing cash flow from operations for the income taxes paid in excess of the amount reported as income tax expense in the income statement. Another way to understand this adjustment is to note that the current portion of income tax expense (which reflects the cash owed for current year taxes) exceeds total income tax expense.

d. Given Starbucks' success, it is a desirable tenant and might receive rent abatements as inducements to sign long-term leases. Rent abatements might take the form of no lease payments for the first six months of a 60–month lease, for example. For financial reporting, Starbucks records rent expense ratably over the entire 60–month period, but will pay only during the last 54 months, giving rise to a deferred tax asset (because the subsequent rent payments will be deductible).

e. Starbucks recognizes deferred compensation expense for financial reporting earlier than it claims an income tax deduction. When Starbucks contributes cash to a retirement fund in later years, it can claim an income tax deduction. The decreasing amount for the deferred tax asset related to deferred compensation suggests that the firm is contracting in terms of number of employees and/or is decreasing the deferred compensation benefits, perhaps as a cost-cutting measure.

f. When Starbucks collects cash from customers purchasing stored value cards, the company must report these amounts as taxable income immediately. However, because these amounts are not recognized in financial reporting income until they are tendered at stores (or deemed to have been lost), the company pays taxes on these amounts up front, which results in a deferred tax asset. The substantial increase in this deferred tax asset indicates that the amount of deferred revenue must have increased between 2007 and 2008, reflecting greater sales of stored value cards.

g. Assuming that the deferred tax asset for net operating losses of consolidated foreign subsidiaries is included in "Other," note that this amount increased substantially from 2007 to 2008, as did the valuation allowance—the deferred tax asset. Presumably, there are restrictions on the use of such net operating losses to offset future taxes, so Starbucks' management has determined that a portion of such deferred tax assets is "more likely than not" going to be utilized.

h. Depreciation recognized each year and cumulatively for tax reporting exceeded depreciation recognized for financial reporting. Starbucks likely has more depreciable assets in the early years of their depreciable lives when accelerated depreciation exceeds straight-line depreciation than it has depreciable assets in the later years of their lives when straight-line depreciation exceeds accelerated depreciation. For example, the 10-K mentions, "Depreciation and amortization expenses increased primarily due to the opening of 681 new Company-operated retail stores in the last 12 months." However, the decreasing amount of deferred tax liabilities related to depreciation-related temporary differences suggests that Starbucks has decreased its capital expenditures during 2008 as compared to 2007 and 2006. For example, the 10-K explains the decrease in revenue growth for 2008 as follows: "Revenue growth was slower than in previous years due to a combination of declining comparable store sales and a decrease in the number of net new stores opened during fiscal 2008."

Chapter 2
Asset and Liability Valuation
and Income Measurement

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