

Module 12 – Financial Accounting for MBAs, 4th edition by Easton, Halsey, Wild & McAnally

Practice Quiz

1. **3M Company** reports net operating profit after tax (NOPAT) of \$3,305 million in 2005. Its net operating assets at the beginning of 2005 are \$12,972 million. Assuming a 6.66% weighted average cost of capital (WACC), what is 3M's residual operating income for 2005?
 - a. \$864 million
 - b. \$2,441 million
 - c. \$1,699 million
 - d. \$3,305 million

2. **3M Company** reports net operating profit after tax (NOPAT) of \$3,305 million in 2005. Its net operating assets at the beginning of 2005 are \$12,972 million and are \$12,209 million at the end of 2005. What are 3M's free cash flows to the firm (FCFF) for 2005?
 - a. \$3,305 million
 - b. \$2,441 million
 - c. \$4,068 million
 - d. \$5,176 million

3. In its 2005 fiscal year annual report, **PepsiCo** reports 2005 net operating income after tax (NOPAT) of \$4,140 million. As of the beginning of fiscal year 2005 it reports net operating assets of \$18,908 million. At what level of WACC would PepsiCo not report positive residual operating income for 2005?
 - a. 5.8%
 - b. 12.3%
 - c. 19.1%
 - d. 21.9%

4. Following are forecasts of **Target Corporation's** sales, net operating profit after tax (NOPAT), and net operating assets (NOA) as of January 31, 2006.

(In millions)	Reported 2006	Horizon Period				Terminal Period
		2007	2008	2009	2010	
Sales	\$51,271	\$57,526	\$64,544	\$72,418	\$81,253	\$82,878
NOPAT	2,694	2,876	3,227	3,621	4,063	4,144
NOA	24,077	27,008	30,302	33,999	38,147	38,910

Assuming a terminal period growth rate of 2%, discount rate (WACC) of 7%, shares outstanding of 874.1 million, and net nonoperating obligations (NNO) of \$9,872 million, estimate the value of a share of Target common stock using the discounted cash flow (DCF) model as of January 31, 2006.

- a. \$41.50
 - b. \$43.21
 - c. \$47.45
 - d. \$53.22
5. Following are forecasts of **Abercrombie & Fitch's** sales, net operating profit after tax (NOPAT), and net operating assets (NOA) as of January 31, 2006.

(In millions)	Reported 2006	Horizon Period				Terminal Period
		2007	2008	2009	2010	
Sales	\$2,785	\$3,636	\$5,289	\$7,268	\$10,043	\$10,244
NOPAT	325	448	617	850	1,172	1,195
NOA	616	849	1,170	1,612	2,221	2,266

Assuming a discount rate (WACC) of 13%, common shares outstanding of 103.3 million, and net nonoperating obligations (NNO) of \$(379) million (negative NNO reflects net investments rather than net obligations), estimate the value of a share of Abercrombie & Fitch common stock using the residual operating income (ROPI) model as of January 31, 2006.

- a. \$75.93
- b. \$78.27
- c. \$74.32
- d. \$69.78

6. Following are forecasts of sales, net operating profit after tax (NOPAT), and net operating assets (NOA) as of December 31, 2005 for **CVS Pharmacy**.

(In millions)	Reported 2005	Horizon Period				Terminal Period
		2006	2007	2008	2009	
Sales	\$37,006	\$44,777	\$54,180	\$65,558	\$79,325	\$80,912
NOPAT	1,292	1,563	1,891	2,268	2,768	2,824
NOA	10,520	12,721	15,392	18,624	22,536	22,966

Assuming a discount rate (WACC) of 8%, common shares outstanding of 814.3 million, and net nonoperating obligations (NNO) of \$2,189 million, estimate the value of a share of CVS' common stock using the discounted cash flow (DCF) model as of December 31, 2005.

- \$23.59
- \$32.95
- \$25.23
- \$29.53

7. Following is the balance sheet for **3M Company**.

Balance Sheet At December 31 (\$ millions, except per share amount)	2005	2004
Assets		
Cash and cash equivalents	\$ 1,072	\$ 2,757
Accounts receivable—net of allowances of \$73 and \$83	2,838	2,792
Inventories		
Finished goods	1,050	947
Work in process	706	614
Raw materials and supplies	406	336
Total inventories	2,162	1,897
Other current assets	1,043	1,274
Total current assets	7,115	8,720
Investments	272	227
Property, plant and equipment	16,127	16,290
Less: Accumulated depreciation	(10,534)	(10,579)
Property, plant and equipment—net	5,593	5,711
Goodwill	3,473	2,655
Intangible assets—net	486	277
Prepaid pension and postretirement benefits	2,905	2,591
Other assets	669	527
Total assets	<u>\$20,513</u>	<u>\$20,708</u>
Liabilities and Stockholders' Equity		
Short-term borrowings and current portion of long-term debt	\$ 1,072	\$ 2,094
Accounts payable	1,256	1,168
Accrued payroll	469	487
Accrued income taxes	969	867
Other current liabilities	1,452	1,455
Total current liabilities	5,238	6,071
Long-term debt	1,309	727
Other liabilities	3,866	3,532
Total liabilities	10,413	10,330
Stockholders' equity		
Common stock, par value \$.01 per share:		
Shares outstanding—2005: 754,538,387;		
Shares outstanding—2004: 773,518,281	9	9
Capital in excess of par value	287	287
Retained earnings	17,358	15,649
Treasury stock	(6,965)	(5,503)
Unearned compensation	(176)	(196)
Accumulated other comprehensive income (loss)	(411)	132
Stockholders' equity—net	10,100	10,378
Total liabilities and stockholders' equity	<u>\$20,513</u>	<u>\$20,708</u>

Compute net operating assets (NOA) for 2005.

- a. \$12,481 million
- b. \$13,465 million
- c. \$12,209 million
- d. \$16,075 million

8. Following is the income statement for **3M Company**.

Income Statement Year Ended December 31 (millions)	2005	2004	2003
Net sales	\$21,167	\$20,011	\$18,232
Operating expenses			
Cost of sales	10,381	9,958	9,285
Selling, general and administrative expenses	4,535	4,281	3,994
Research, development and related expenses	1,242	1,194	1,147
Other expense	—	—	93
Total	<u>16,158</u>	<u>15,433</u>	<u>14,519</u>
Operating income	5,009	4,578	3,713
Interest expense and income			
Interest expense	82	69	84
Interest income	(56)	(46)	(28)
Total	<u>26</u>	<u>23</u>	<u>56</u>
Income before income taxes, minority interest and cumulative effect of accounting change	4,983	4,555	3,657
Provision for income taxes	1,694	1,503	1,202
Minority interest	55	62	52
Income before cumulative effect of accounting change	<u>3,234</u>	<u>2,990</u>	<u>2,403</u>
Cumulative effect of accounting change	(35)	—	—
Net income	<u><u>\$ 3,199</u></u>	<u><u>\$ 2,990</u></u>	<u><u>\$ 2,403</u></u>

Compute net operating profit after tax (NOPAT) for 2005, assuming a federal and state statutory tax rate of 36.3%. (*Hint:* Other expense is an operating item for 3M.)

- a. \$3,315 million
- b. \$3,306 million
- c. \$5,009 million
- d. \$3,289 million

9. Following are forecasts of **3M Company's** sales, net operating profit after tax (NOPAT), and net operating assets (NOA) as of December 31, 2005.

(In millions)	Reported 2005	Horizon Period				Terminal Period
		2006	2007	2008	2009	
Sales	\$21,167	\$22,395	\$23,694	\$25,068	\$26,522	\$26,787
NOPAT	3,306	3,498	3,701	3,916	4,143	4,184
NOA	12,209	12,945	13,696	14,490	15,331	15,484

Assuming a discount rate (WACC) of 7%, common shares outstanding of 754.5 million, and net nonoperating obligations (NNO) of \$2,109 million, estimate the value of a share of 3M's common stock using the residual operating income (ROPI) model as of December 31, 2005.

- \$71.32
- \$75.41
- \$78.69
- \$83.14

10. Following are the income statement and balance sheet for **Intel Corporation**.

Income Statement			
Year Ended December 31 (In millions)	2005	2004	2003
Net revenue	\$38,826	\$34,209	\$30,141
Cost of sales	15,777	14,463	13,047
Gross margin	23,049	19,746	17,094
Research and development	5,145	4,778	4,360
Marketing, general and administrative	5,688	4,659	4,278
Impairment of goodwill	—	—	617
Amortization and impairment of acquisition- related intangibles and costs	126	179	301
Purchased in-process research and development	—	—	5
Operating expenses	10,959	9,616	9,561
Operating income	12,090	10,130	7,533
Losses on equity securities, net	(45)	(2)	(283)
Interest and other, net	565	289	192
Income before taxes	12,610	10,417	7,442
Provision for taxes	3,946	2,901	1,801
Net income	<u>\$ 8,664</u>	<u>\$ 7,516</u>	<u>\$ 5,641</u>

Balance Sheet		
December 31 (In millions, except par value)	2005	2004
Assets		
Cash and cash equivalents	\$ 7,324	\$ 8,407
Short-term investments	3,990	5,654
Trading assets	1,458	3,111
Accounts receivable, net of allowance for doubtful accounts of \$64 (\$43 in 2004)	3,914	2,999
Inventories	3,126	2,621
Deferred tax assets	1,149	979
Other current assets	233	287
Total current assets	21,194	24,058

continued

10. Continued

Balance Sheet		
December 31 (in millions, except par value)	2005	2004
Property, plant and equipment, net	17,111	15,768
Marketable strategic equity securities	537	656
Other long-term investments	4,135	2,563
Goodwill	3,873	3,719
Deferred taxes and other assets	1,464	1,379
Total assets	\$48,314	\$48,143
Liabilities and stockholders' equity		
Short-term debt	\$ 313	\$ 201
Accounts payable	2,249	1,943
Accrued compensation and benefits	2,110	1,858
Accrued advertising	1,160	894
Deferred income on shipments to distributors	632	592
Other accrued liabilities	810	1,355
Income taxes payable	1,960	1,163
Total current liabilities	9,234	8,006
Long-term debt	2,106	703
Deferred tax liabilities	703	855
Other long-term liabilities	89	—
Stockholders' equity		
Preferred stock, \$0.001 per value, 50 shares authorized; none issued	—	—
Common stock, \$0.001 per value, 10,000 shares authorized; 5,919 issued and outstanding (5,253 in 2004) and capital in excess of par value	6,245	6,143
Acquisition-related unearned stock compensation	—	(4)
Accumulated other comprehensive income	127	152
Retained earnings	29,810	32,288
Total stockholders' equity	36,182	38,579
Total liabilities and stockholders' equity	\$48,314	\$48,143

Compute Intel's net operating assets (NOA) for year end 2005.

- \$33,008 million
- \$30,978 million
- \$29,107 million
- \$29,018 million