

**Module 12 – Financial & Managerial Accounting for MBAs, 4<sup>th</sup> Edition  
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**Solutions to Practice Quiz**

LO: 3

1. Answer: b

$$\$3,306 \text{ million} - (6.66\% \times \$10,215 \text{ million}) = \$2,626 \text{ million.}$$

LO: 2

2. Answer: c

$$\begin{aligned} \text{FCFF} &= \text{NOPAT} - \text{increase in NOA} \\ &= \$3,306 \text{ million} - (\$11,137 \text{ million} - \$10,215 \text{ million}) \\ &= \$2,384 \text{ million} \end{aligned}$$

LO: 3

3. Answer: d

BrandCo will earn a positive ROPI up to a WACC of 30.6%. At this level of WACC,  $\text{ROPI} = (\$13,529 \text{ million}) \times 30.6\% = \$4,140$ , the level of NOPAT.

LO: 1, 2

4. Answer: d

Value-Mart (\$ millions)	Current	Forecast Horizon				Terminal Year
	2013	2014	2015	2016	2017	
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 .....	22,429	25,121	28,185	31,624	35,482	36,191
DCF Model						
Increase in NOA .....		\$ 2,692	\$ 3,064	\$ 3,439	\$ 3,858	\$ 709
FCFF (NOPAT - Increase in NOA) .....		(184)	(163)	(182)	(205)	3,435
Discount factor $[1 / (1 + r_w)^t]$ .....		0.93458	0.87344	0.81630	0.76290	
Present value of horizon FCFF .....		(172)	(142)	(149)	(156)	
Cum present value of horizon FCFF	\$ (619)					
Present value of terminal FCFF .....	52,411					
Total firm value .....	53,030					
Less NNO .....	8,224					
Firm equity value .....	\$44,806					
Shares outstanding (millions) .....	874.1					
Stock price per share.....	\$ 51.26					

LO: 3

5. Answer: a

Baker Company (\$ millions)	Current 2013	Forecast Horizon			Terminal Year	
		2014	2015	2016		2017
Sales.....	\$2,785	\$3,838	\$5,289	\$7,288	\$10,043	\$10,244
NOPAT .....	330	455	627	864	1,190	1,214
NOA .....	533	735	1,012	1,395	1,922	1,961
ROPI Model						
ROPI (NOPAT – [NOA <sub>Beg</sub> × r <sub>w</sub> ]) .....		\$ 386	\$ 531	\$ 732	\$ 1,009	\$ 964
Discount factor [1 / (1 + r <sub>w</sub> ) <sup>t</sup> ] .....		0.88496	0.78315	0.69305	0.61332	
Present value of horizon ROPI .....		342	416	507	619	
Cum present value of horizon ROPI	\$1,884					
Present value of terminal ROPI .....	5,375					
NOA .....	533					
Total firm value .....	\$7,792					
Less NNO (Plus negative NNO) .....	(462)					
Firm equity value .....	8,254					
Shares outstanding (millions) .....	103.3					
Stock value per share .....	\$ 79.90					

LO: 1, 2

6. Answer: d

Stellar Store, Inc. (\$ millions)	Current	Forecast Horizon				Terminal Year
	2013	2014	2015	2016	2017	
Sales.....	\$37,006	\$44,777	\$54,180	\$65,558	\$79,325	\$80,912
NOPAT .....	1,292	1,563	1,891	2,288	2,768	2,824
NOA .....	10,007	12,102	14,643	17,718	21,439	21,868
DCF Model						
Increase in NOA .....		\$ 2,095	\$ 2,541	\$ 3,075	\$ 3,721	\$ 429
FCFF (NOPAT – Increase in NOA)		(532)	(650)	(787)	(953)	2,395
Discount factor $[1 / (1 + r_w)^t]$ .....		0.92593	0.85734	0.79383	0.73503	
Present value of horizon FCFF .....		(493)	(557)	(625)	(700)	
Cum present value of horizon FCFF	\$(2,375)					
Present value of terminal FCFF .....	29,340					
Total firm value .....	26,965					
Less NNO .....	1,676					
Firm equity value .....	\$25,289					
Shares outstanding (millions) .....	814.3					
Stock price per share .....	\$ 31.06					

LO: 1, 2

7. Answer: c

$$\begin{aligned}
 (\text{\$millions}) \\
 \text{NOA} &= \$20,513 - 1,072 - \$272 - \$1,256 - \$469 - \$989 - \$1,452 - \$3,866 \\
 &= \$11,137
 \end{aligned}$$

LO: 1, 2

8. Answer: b

$$\begin{aligned}
 (\text{\$millions}) \\
 \text{NOPAT} &= \$5,009 - (\$1,694 + [\$26 \times 36.3\%]) \\
 &= \$3,306
 \end{aligned}$$

LO: 3

9. Answer: c

3M (\$millions)	Current	Forecast Horizon				Terminal Year
	2005	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 .....	11,137	11,787	12,471	13,194	13,959	14,098
ROPI Model						
ROPI (NOPAT – [NOA <sub>Beg</sub> × r <sub>w</sub> ]) .....		\$ 2,718	\$ 2,876	\$ 3,043	\$ 3,219	\$ 3,207
Discount factor [1 / (1 + r <sub>w</sub> ) <sup>t</sup> ] .....		0.93458	0.87344	0.81630	0.76290	
Present value of horizon ROPI .....		2,540	2,512	2,484	2,456	
Cum present value of horizon ROPI	\$ 9,992					
Present value of terminal ROPI .....	40,777					
NOA .....	11,137					
Total firm value .....	61,906					
Less NNO .....	1,037					
Firm equity value .....	\$60,869					
Shares outstanding (millions) .....	754.5					
Stock value per share .....	\$ 80.67					

LO: 1,2

10. Answer: d

2005 NOA = \$48,314 – 7,324 – \$3,990 – \$1,458 – \$4,135 – \$2,249 – 2,110 – \$1,160 – \$632 – \$810 – \$1,960 – \$703 – \$89 = \$21,694 million.