

Valuation: Measuring and Managing the Value of Companies

Estimating Continuing Value

Chapter 10 Problems

1. Exhibit 10.13 presents free cash flow and economic profit forecasts for ApparelCo, a \$250 million company that produces men's clothing. ApparelCo is expected to grow revenues, operating profits, and free cash flow at 6 percent per year indefinitely. The company earns a return on new capital of 15 percent. The company's cost of capital is 10 percent. Using the key value driver formula, what is the continuing value as of Year 5? Using discounted cash flow, what is the value of operations for ApparelCo? What percentage of ApparelCo's total value is attributable to the continuing value?
2. Since growth is stable for ApparelCo, you decide to start the continuing value with Year 3 cash flows (i.e. cash flows in Year 3 and beyond are part of the continuing value). Using the key value driver formula (and data provided in Question 1), what is the continuing value as of Year 2? Using discounted cash flow, what is the value of operations for ApparelCo? What percentage of ApparelCo's total value is attributable to the continuing value? How does this compare to Question 1?
3. Using the economic profit formula, what is the continuing value for ApparelCo as of Year 5? Using discounted economic profit, what is the value of operations for ApparelCo? What percentage of ApparelCo's total value is attributable to current invested capital, to interim economic profits, and to economic profits in the continuing value period?
4. Since growth is stable for ApparelCo, you decide to start the continuing value with Year 3 economic profits (i.e. economic profits in Year 3 and beyond are part of the continuing value). Using the economic profit formula (and data provided in Question 1), what is the continuing value as of Year 2? Using discounted economic profit, what is the value of operations for ApparelCo? What percentage of ApparelCo's total value is attributable to the continuing value? How does this compare to Question 2?
5. A colleague suggests that a 6 percent growth rate is too low for revenue, profit, and cash flow growth beyond Year 5. He suggests raising growth to 12 percent in the continuing value. If

NOPLAT equals \$26.6 million, return on new capital equals 15 percent, and the cost of capital equals 10 percent, what is the continuing value as of Year 5? Is there an alternative model that would perform better?

6. SuperiorCo earns a return on invested capital of 20 percent on its existing stores. Given intense competition for new stores sites, you believe new stores will only earn their cost of capital. Consequently, you set return on new capital (8 percent) equal to the cost of capital (8 percent) in the continuing value formula. A colleague argues this is too conservative, as SuperiorCo will create value well beyond the forecast period. What is the flaw in your colleague's argument?

Exhibit 10.13 ApparelCo: Free Cash Flow and Economic Profit Forecasts

\$ million

	Today	Year 1	Year 2	Year 3	Year 4	Year 5	Continuing Value
Revenues	250.0	265.0	280.9	297.8	315.6	334.6	354.6
Operating costs	(225.0)	(238.5)	(252.8)	(268.0)	(284.1)	(301.1)	(319.2)
Operating margin	25.0	26.5	28.1	29.8	31.6	33.5	35.5
Operating taxes	(6.3)	(6.6)	(7.0)	(7.4)	(7.9)	(8.4)	(8.9)
NOPLAT	18.8	19.9	21.1	22.3	23.7	25.1	26.6
Net investment		(8.0)	(8.4)	(8.9)	(9.5)	(10.0)	
Free cash flow		11.9	12.6	13.4	14.2	15.1	

Economic profit

	Today	Year 1	Year 2	Year 3	Year 4	Year 5	Continuing Value
NOPLAT		19.9	21.1	22.3	23.7	25.1	26.6
Invested capital _{t-1}		132.5	140.5	148.9	157.8	167.3	177.3
x Cost of capital		10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Capital charge		13.3	14.0	14.9	15.8	16.7	17.7
Economic profit		6.6	7.0	7.4	7.9	8.4	8.9