

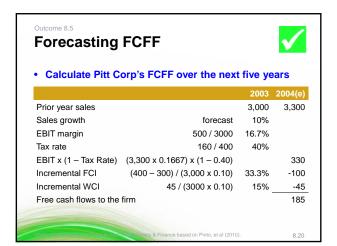


### Forecasting FCFF



- An analyst valuing Pitts Corporation at the end of 2003 estimates sales (currently \$3,300m) to grow by 10% p.a. from 2004 onwards
- In 2004 the EBIT margin will be maintained at the 2003 level of 16.67%, but decline to 14.5% over the next 4 years
- The incremental fixed capital and working capital ratios are expected to be maintained at 2003 levels
- · Calculate Pitts Corp's FCFF over the next five years

Pinto, et al (2010).



## Forecasting FCFF



· Calculate Pitt Corp's FCFF over the next five years

Prior year sales	0.000					
	3,000	3,300	3,630	3,992	4,392	4,831
Sales growth	10%	10%	10%	10%	10%	10%
EBIT margin	16.7%	16.0%	15.5%	15.0%	14.5%	14.0%
Tax rate	40%	40%	40%	40%	40%	40%
EBIT x (1 – Tax Rate)		330	348	371	395	420
Incremental FCI	33.3%	-100	-110	-121	-133	-146
Incremental WCI	15%	-45	-50	-54	-60	-66
Free cash flow to the firm		185	188	196	202	208

# Outcome 8.5 Forecasting FCFE



# An analyst valuing Pitts Corporation at the end of

- 2003 estimates sales (currently \$3,300m) to grow by 10% p.a. from 2004 onwards
- In 2004 the net income margin will be maintained at the 2003 level of 8%
- The incremental fixed capital and working capital ratios are expected to be maintained at 2003 levels
- Calculate Pitts Corporation's FCFE for 2004

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#### **Forecasting FCFF**



#### Calculate Pitt Corp's FCFE for 2004

		2003	2004(e)
Prior year sales		3,000	3,300
Sales growth	forecast	10%	
NI margin	240 / 3000	8%	
Net income			264
Incremental FCI	(400 - 300) / (3,000 x 0.10)	33.3%	-100
Incremental WCI	45 / (3000 x 0.10)	15%	-45
Gearing of new funds	Target	50%	
Net borrowing	(100 + 45) x 0.50		72
Free cash flows to equity			191

#### Outcome 8.10

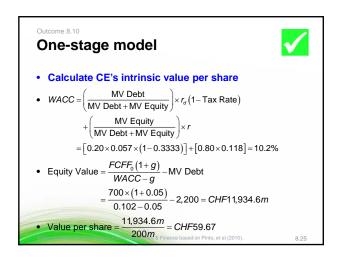
#### One-stage model



- Cagiati Enterprises (CE) has FCFF of CHF700m, FCFE of CHF620m and expects to grow FCFF forever at 5% n.a.
- CE's before-tax cost of debt is 5.7% and its required return on equity is 11.8%
- CE expects a target capital structure of 20% debt and 80% equity
- CE has debt outstanding with a market value of CHF2.2b and 200m outstanding common shares
- The tax rate is 33.33%
- Calculate CE's intrinsic value per share

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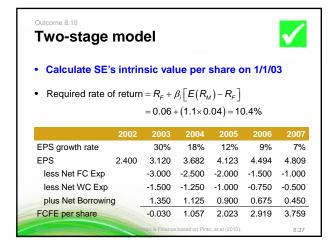


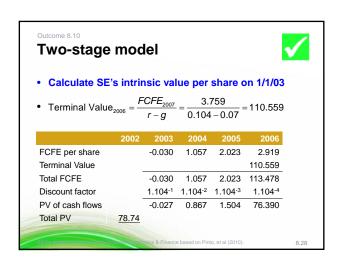


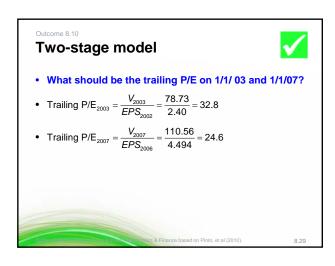
## Two-stage model



- On 1/1/03, Vishal Noronha is valuing Sindhuh Enterprises (SE), which had an EPS of \$2.40 in 2002
- For the next five years EPS is estimated to grow by 30%, 18%, 12% and 9%, respectively, and 7% thereafter
- Net investment in fixed capital per share is estimated for each of the next five years at 3.0, 2.5, 2.0, 1.5 and 1.0, respectively, and to grow by 7% thereafter
- Investment in working capital equals 50% of investment in fixed capital
- Investment in capital is funded 30% by new debt
- $R_F$  is 6%, the equity risk premium is 4% and beta is 1.1
- Calculate SE's intrinsic value per share on 1/1/03
- What should be the trailing P/E on 1/1/03 and 1/1/07?







# Outcome 8.10 Three-stage model



- Marathon Oil Company (MRO) reported FCFF of \$745m
- Forecast growth rate of FCFF is 8.8% p.a. for the next four years, 7.4%, 6.0% and 4.6% in years 5, 6 and 7, respectively, and 3.2% p.a. thereafter
- Capital structure is 20% debt, 80% equity
- Cost of debt is 7.1%
- Long-term debt is currently \$1.518b
- Tax rate is 34%
- Beta for MRO is 0.90, the risk-free rate is 5.04% and the equity premium is 5.5%
- There are 309.39 million shares outstanding
- Estimate MRO's WACC, firm value, equity value and value per share

   S Finance based on Pinto, et al (2010).

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