

CHAPTER 23

VALUING YOUNG OR START-UP FIRMS

Problem 1

Year	Current	1	2	3	4	5
Revenues	500	1000	1800	2520	3528	4939.2
Operating Margin	-80.00%	-62%	-44%	-26%	-8%	10%
EBIT	-400	-620	-792	-655.2	-282.24	493.92

Problem 2

	10-K	1Q 2001	1Q 2000	Trailing 12 month
Revenues	\$1,100	\$600	\$120	\$1,580
Operating loss	-\$330	-\$180	-\$30	-\$480

Problem 3

Total Market in 10 years = $25000 * 1.05^{10} = \$ 40, 722$ million

Revenues in year 10 = total Market * market share = $40722 * .10 = \$ 4072$ million

Revenues today = \$ 25 million

Revenue growth = $(4072/25)^{1/10} - 1 = 66.41\%$

Problem 4

Year	Current	1	2	3	4	5
Revenues	\$1,000.00	\$1,200.00	\$1,440.00	\$1,728.00	\$2,073.60	\$2,488.32
Operating Margin	-\$0.09	-\$0.06	-\$0.03	\$0.00	\$0.06	\$0.10
EBIT	-\$90.00	-\$72.00	-\$43.20	\$0.00	\$124.42	\$248.83
EBIT *t	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.22
EBIT (1-t)	-\$90.00	-\$72.00	-\$43.20	\$0.00	\$124.42	\$217.61
NOL	\$180.00	\$252.00	\$295.20	\$295.20	\$170.78	\$0.00

Problem 5

Year	Current	1	2	3	4	5
Beta	2	1.84	1.68	1.52	1.36	1.2
Cost of equity	13.60%	12.96%	12.32%	11.68%	11.04%	10.40%
Cost of debt	9%	9%	9%	9%	9%	9%
After-tax cost of debt		9.00%	9.00%	9.00%	9.00%	7.87%
Debt ratio	70%	66.00%	62.00%	58.00%	54.00%	50.00%
Cost of capital		10.35%	10.26%	10.13%	9.94%	9.14%

Problem 6

Value of Vitale = DCF Value (1 – Probability of distress) + Distress sale value

(Probability of distress) = $700 (1-.4) + 1.5 * 100 * 4 = \$ 510$ million

Value per share = $510/30 = \$ 17$ per share