

FIN 521: MIL Exercise

Due on Friday, March 30, 2018

Wanbae Park

Part 1

I chose PEPSICO INC. which is famous multinational food, snack, and beverage corporation. Most of data used in evaluating share price is come from CapitalIQ, and if data which is necessary to evaluate stock price is unobserved, it is estimated by myself.

- a) I collected analyst's forecast of sales revenue of PepsiCo over next seven years. Table 1 shows the estimated revenue. Estimated revenue grows moderately.
- b) Analyst's forecast data of company's EBITDA from FY2018 to FY2022 is collected from CapitalIQ, and since the average EBITDA growth is about 6% per year, I assumed that EBITDA will grow at 6% over the last 2 years. Table 1 shows the estimated EBITDA. Using this data, EBITDA/Sales margin was calculated. Table 2 shows estimated EBITDA/Sales margin.
- c) In order to estimate free cash flow, estimation for EBIT is needed first. As mentioned above, EBITDA was estimated by using analyst's forecast and by estimation of growth. Depreciation and amortization is estimated by estimating depreciation margin which is (Depreciation / Sales Revenue). Depreciation margin is estimated by averaging past 3 years' margin, and is assumed constant over 7 years. The margin was calculated as 3.44%. Changes in net working capital is estimated by estimating days in receivables, inventory, payables and others. They were estimated by averaging past 3 years' data and were assumed to be constant over 7 years. Table 3 shows estimated days of each account. Capital expenditure is estimated by estimating CapEx margin, which was calculated by averaging past 3 year's data. From the procedure, free cash flow was calculated as Table 1.

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Revenues	65,373	67,472	69,619	71,229	73,403	77,621	80,373
Gross Profit	35,782	36,931	38,105	38,987	40,176	42,485	43,992
EBITDA	13,627	14,402	15,129	16,286	17,188	18,219	19,312
Depreciation/Amortization	2,248	2,321	2,394	2,450	2,525	2,670	2,764
Operating Income	11,378	12,081	12,735	13,836	14,663	15,550	16,548
Taxes	2,389	2,537	2,674	2,906	3,079	3,265	3,475
Tax Affected EBIT	8,989	9,544	10,060	10,931	11,584	12,284	13,073
Depreciation/Amortization	2,248	2,321	2,394	2,450	2,525	2,670	2,764
Changes in Working Capital	382	(6)	(6)	(5)	(6)	(12)	(8)
Capital Expenditures	(3,026)	(3,124)	(3,223)	(3,298)	(3,398)	(3,593)	(3,721)
Unlevered Free Cash Flow	8,593	8,735	9,226	10,078	10,704	11,348	12,109

Table 1: Estimated Income Statement and Expected Cash Flow

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Sales Growth	2.91%	3.21%	3.18%	2.31%	3.05%	5.75%	3.55%
Gross Margin	54.73%	54.73%	54.73%	54.73%	54.73%	54.73%	54.73%
EBITDA Margin	20.84%	21.34%	21.73%	22.86%	23.42%	23.47%	24.03%
Depreciation Margin	3.44%	3.44%	3.44%	3.44%	3.44%	3.44%	3.44%
CapEx Margin	4.63%	4.63%	4.63%	4.63%	4.63%	4.63%	4.63%

Table 2: Estimated Margins

	FY2015	FY2016	FY2017	Average
Days in AR	37	39	40	39
Days in Inventory	35	35	37	36
Prepaid Days	14	11	19	19
Days in AP	70	80	85	85
Days in Accruals	52	55	53	53

Table 3: Estimated days

d)

e)

f)

g)

h)

Part 2

a)

b)

Part 3

Part 4