

- 1) The price of The Walt Disney Company (DIS) is currently around \$80 per share. Their earnings per share (EPS) is \$3.64. Their 5-year average P/E is 18. If Disney's earnings per share are expected to grow at 12% next year, what would you expect their price to be next year?

$$\begin{aligned} \text{expected stock price next year} &= \text{historical P/E Ratio} * \text{Projected Earnings Next Year} \\ &= 18 * (\text{current earnings per share} * (1 + \text{projected EPS growth rate})) \\ &= 18 * (\$3.64 * (1 + 12\%)) \\ &= 18 * \$3.64 * 1.12 = \$73.3824 \approx \$73.38 \end{aligned}$$

- 2) Disney's cash flow per share (CFPS) is currently \$5.35 per share. Their 5-year average Price-to-Cash Flow per Share ratio is 13. If we expect their cash flow per share to grow by 10% next year, what would you expect their price to be next year?

$$\begin{aligned} \text{expected stock price next year} &= \text{historical P/CF ratio} * \text{Projected cash flow per share next year} \\ &= 13 * (\text{current cash flow per share} * (1 + \text{projected CFPS growth rate})) \\ &= 13 * (\$5.35 * (1 + 10\%)) \\ &= 13 * \$5.35 * 1.10 = 76.505 \approx \$76.51 \end{aligned}$$

- 3) Finally, Disney's sales per share (SPS) is currently \$22.32 per share. Their 5-year average Price-to-Sales per Share ratio is 3.1. If we expect their sales per share to grow by 8% next year, what would you expect their price to be next year?

$$\begin{aligned} \text{expected stock price next year} &= \text{historical P/S ratio} * \text{Projected sales per share next year} \\ &= 3.1 * (\text{current sales per share} * (1 + \text{projected SPS growth rate})) \\ &= 3.1 * (\$22.32 * (1 + 8\%)) \\ &= 3.1 * \$22.32 * 1.08 = 74.72736 \approx \$74.73 \end{aligned}$$

- 4) Centerpoint Energy (CNP) is currently selling for around \$24.50 per share. It has been consistently paying \$0.95 in dividends. If our expected rate of return is 5%, how much would we be willing to pay for the stock? Would we consider the stock a good investment at \$24.50 per share?

zero growth model

$$\text{present value of stock} = \frac{\text{Annual Dividends}}{\text{Required rate of return}} = \frac{\$0.95}{0.05} = \$19.00$$

Not a good investment  
We believe it is only worth \$19 but market price is \$24.50

KEY

5) Waste Management, Inc. (WM) is currently selling for around \$41 per share and paying \$1.46 per year in dividends. The company has been growing the dividend at a constant rate at 6%. Our expected rate of return is 10%. At what price would we consider Waste Management, Inc. to be a good investment?

constant perpetual growth model  
present value of stock

$$= \frac{\text{Annual Dividends} * (1 + \text{constant dividend growth rate})}{\text{Required rate of return} - \text{Constant dividend growth rate}}$$

$$= \frac{\$1.46 * (1 + 6\%)^{1.06}}{10\% - 6\%} = \frac{\$1.5476}{0.04} = \$38.69$$

Not a good investment for us. We believe it is worth \$38.69 but market price is \$41.  
(what if we only required 8% or 9%?)

6) Yum! Brands (YUM - they own KFC, Taco Bell, & Pizza Hut) is currently selling for around \$73 per share. The dividends for the next three years are expected to be \$1.48 for 2014, \$1.58 for 2015, and \$1.70 for 2016. We forecast the price per share to be approximately \$96 at the end of 2016. If we desire a rate of return of 11%, using the Dividends-and-Earnings Model, would we consider this a good investment?

YEAR	Future Cash flows	Present Value Multipliers 11%	Discounted Cash Flows
2014	\$1.48	* 0.901	= \$1.33348
2015	\$1.58	* 0.812	= 1.28296
2016	\$1.70 + \$96	* 0.731	= 71.4187
			\$ 74.03514 ≈ 74.04

Yes, we believe it is a good investment for us. we believe it is worth \$74.04 and it is selling for \$73.

7) The price of Biolase Technology (BIOL) is currently around \$3 per share. The company is currently losing money and pays no dividends. But it has patents on teeth cleaning and whitening technologies that should be very popular and profitable in the future. The average of the analysts's estimates for the stock price next year is \$4. We estimate that the price will be approximately \$6 price in five years. If our desired rate of return is 14%, would this be a good buy?

Present value = [value from dividends] + [expected stock price in 5 years \* present value multiplier for 14% for 5 years]

No dividends

$$= \$0 + [\$6.00 * 0.519] = 3.114 \approx \$3.11$$

Yes, it is a good investment for us but it is a VERY RISKY STOCK!

(Benjamin Graham would not approve of this stock - "SPECULATIVE!")