

$$* E = \frac{P}{\frac{P}{E}}$$

← page 254

$$* R = \frac{D_1}{P_0} + \frac{P_1 - P_0}{P_0}$$

* $(g) =$ al gebrä

$$* P_0 = \frac{D_1}{r-g} = \frac{D_0(1+g)}{r-g}$$

~~The same~~ ~~$\frac{P}{E} = \frac{D_0(1+g)}{r-g}$~~

also $P_0 = \frac{D_1 + P_1}{1+r}$, $V_0 = \frac{D_1 + P_1}{1+r}$

$$\frac{P}{E} = \frac{(1-b)(1+g)}{r-g}$$

←, ~~but~~ ³ not

ST-1

The first step is to solve for g , the unknown variable, in the constant ~~growth~~ equation. Since D_1 is unknown but D_0 is known, substitute $D_0(1+g)$ as follows:

$$\hat{P}_0 = P_0 = \frac{D_1}{r_s - g} = \frac{D_0(1+g)}{r_s - g}$$

$$\cancel{\$36} = \frac{\cancel{\$2.40}(1+g)}{0.12 - g}$$

Solving for g , we find the growth rate to be 5%:

$$\cancel{\$4.32} - \cancel{\$36}g = \cancel{\$2.40} + \cancel{\$2.40}g$$

$$\$38.4g = \$1.92$$

$$g = 0.05 = 5\%$$

The next step is to use the growth rate to project the stock price 5 years hence:

$$\hat{P}_5 = \frac{D_0(1+g)^6}{r_s - g}$$

$$= \frac{\$2.40(1.05)^6}{0.12 - 0.05}$$

$$= \$45.95$$

(Alternatively, $\hat{P}_5 = \$36(1.05)^5 = \45.95 .) Therefore, Ewald Company's ^{expected} stock price 5 years from now, P_5 , is \$45.95.

ST-2

- a. (1) Calculate the PV of the dividends paid during the ~~next~~ ^{next} 5 years:

mon stock in 2013). Column 13, labeled "P/E", is the ratio of the closing stock price to the annual dividends per year divided by the closing stock price (e.g., for Aaron's, Inc., $0.07/28.52 = 0.24$ percent). Column 14 is the firm's P/E ratio—the ratio of the company's closing price to earnings per share over the previous year (e.g., Aaron's, Inc.'s P/E ratio is reported to be 14.19; Aaron's price—the numerator of the P/E ratio—is reported as \$28.52; thus, Aaron's earnings per share—the denominator of the P/E ratio—over the period July 2012 through July 2013 must have been \$2.01 per share: $E = P \div P/E = \$28.52/14.19$). The P/E ratio is used by traders as an indicator of the relative value of the stock. Looking at the inverse of the P/E ratio (E/P), traders can estimate the number of years (based on the firm's current earnings) that it will take to recoup their investment in the stock (the payback period). High P/E ratio stocks reflect the market's expectation of growth in earnings.

TABLE 8-1 Stock Market Quote, July 25, 2013

(1) Name	(2) Symbol	(3) Open	(4) High	(5) Low	(6) Close	(7) Net Chg	(8) %Chg	(9) Volume	(10) 52 Week High	(11) 52 Week Low	(12) Div	(13) Yield	(14) P/E	(15) YTD %Chg
AAR Corp.	AIB	25.34	25.47	23.52	25.43	-0.15	-0.57	328,954	26.06	13.03	0.30	1.18	14.96	36.13
Aaron's Inc.	AAN	28.79	29.08	28.17	28.52	-0.47	-1.62	675,845	32.53	24.61	0.07	0.24	14.19	0.85
Abbott Laboratories	ABT	36.42	36.60	36.24	36.58	0.13	0.36	7,198,692	38.77	29.96	0.56	1.53	14.48	16.72
Abercrombie & Fitch	ANF	49.18	49.74	49.06	49.33	0.09	0.18	1,241,186	55.23	28.64	0.80	1.62	17.78	2.84
ACCO Brands	ACCO	7.12	7.41	7.11	7.38	0.22	3.07	434,099	9.16	5.80	...	...	5.86	0.54
E.I. DuPont de Nemours	DD	57.03	57.69	57.01	57.59	0.21	0.37	4,021,905	60.40	41.67	1.80	3.13	20.91	28.04
Eli Lilly	LLY	52.41	52.64	51.88	52.59	0.04	0.08	4,065,385	58.41	42.10	1.96	3.73	11.80	6.66
El Paso Electric	EE	38.00	39.10	38.00	38.73	0.57	1.49	188,289	39.12	30.15	1.06	2.74	16.34	21.37
McDonald's	MCD	96.67	97.59	96.56	97.49	0.83	0.86	4,188,845	103.70	83.31	3.08	3.16	17.87	10.52
McGraw Hill Financial	MHI	55.72	61.32	55.72	60.10	0.62	1.04	2,674,770	61.32	42.07	1.12	1.86	38.56	9.46
McKesson	MCK	118.25	118.69	117.27	118.58	0.12	0.10	914,794	119.56	84.65	0.80	0.67	20.87	22.88
Waste Management	WM	42.13	42.41	42.01	42.35	0.04	0.09	1,070,139	43.00	30.82	1.46	3.45	24.20	24.52
Webster Financial	WBS	27.74	28.06	27.44	27.64	-0.19	-0.68	724,869	28.17	19.43	0.60	2.17	13.75	34.56
Weight Watchers International	WTW	45.40	45.64	44.81	45.51	0.12	0.26	155,883	60.30	40.00	0.70	1.54	10.14	-13.28
Wells Fargo	WFC	44.22	44.22	43.42	43.65	-0.66	-1.49	29,278,540	44.78	31.25	1.20	2.75	11.67	27.71

Source: The Wall Street Journal Online, July 26, 2013. www.wsj.com

7

$$P_0 = \$35$$

$$D_1 = \$2.75$$

$$\begin{aligned} a - \hat{r} &= \frac{(P_1 + D_1) - P_0}{P_0} = \frac{(30 + 2.75) - 35}{35} = \frac{-2.25}{35} \\ &= -0.06 \\ &\approx -6\% \end{aligned}$$

$$\begin{aligned} b - \hat{r} &= \frac{(P_1 + D_1) - P_0}{P_0} = \frac{(40 + 2.75) - 35}{35} = \frac{7.75}{35} \\ &= 0.22 \\ &\approx 22\% \end{aligned}$$

9)

$$E = \frac{\text{close } P}{P/E} = \frac{60.60}{13.00} = 4.66$$

10)

$$E = \frac{\text{close } P}{P/E} = \frac{37.80}{55.29} = 0.68$$

⑧

$$\hat{r} = \frac{(P_1 + D_1) - P_0}{P_0} = \frac{(40 + 4.50) - 50}{50} = \frac{-5.5}{50} = -0.11 \approx -11\%$$

$$\hat{r} = \frac{(48 + 4.50) - 50}{50} = \frac{2.5}{50} = 0.05 \approx 5\%$$

$$\hat{r} = \frac{(50 + 4.50) - 50}{50} = \frac{4.5}{50} = 0.09 \approx 9\%$$

$$\hat{r} = \frac{(55 + 4.50) - 50}{50} = \frac{9.5}{50} = 0.19 \approx 19\%$$

20. What is an ADR? How is an ADR created? (LG 8-9)

- b. What is the market value of the stock after the rights offering?
 - c. What is your total investment in the firm after the rights offering? How is your investment split between original shares and new shares?
 - d. If you decide not to exercise your preemptive rights, what is your investment in the firm after the rights offering? How is this split between old shares and rights?
5. Refer to the stock market quote in Table 8-1. (LG 8-5)
 - a. What was the closing stock price for Abbott Laboratories on July 25, 2013?
 - b. What were the high and low prices at which McGraw-Hill traded between July 26, 2012, and July 25, 2013?
 - c. What was the dividend yield on Waste Management stock as of July 25, 2013?
 6. Refer to the stock market quote in Table 8-1. (LG 8-5)
 - a. What was the closing stock price for Abercrombie & Fitch on July 24, 2013?
 - b. What was the dividend yield on El Paso Electric stock as of July 25, 2013?
 - c. What were the earnings per share on Wells Fargo stock for the period July 2012 through July 2013?
 7. At the beginning of the year, you purchased a share of stock for \$35. Over the year the dividends paid on the stock were \$2.75 per share. (LG 8-5)
 - a. Calculate the return if the price of the stock at the end of the year is \$30.
 - b. Calculate the return if the price of the stock at the end of the year is \$40.
 8. **eXcel** Using a Spreadsheet to Calculate Stock Returns: At the beginning of the year, you purchased a share of stock for \$50. Over the year the dividends paid on the stock were \$4.50 per share. Calculate the return if the price of the stock at the end of the year is \$40, \$48, \$50, and \$55. (LG 8-5)

Price at Beginning of Year	Dividends	Price at End of Year	⇒ The Return Is
\$50	\$4.50	\$40	-11.00%
50	4.50	48	5.00
50	4.50	50	9.00
50	4.50	55	19.00

9. Use the information in the following stock quote to calculate McKesson's earnings per share over the last year. (LG 8-5)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Name	Symbol	Open	High	Low	Close	Net Chg	%Chg	Volume	52 Week High	52 Week Low	Div	Yield	PE
McKesson	MCK	61.00	61.14	60.28	60.60	-1.01	-1.64	2,719,785	71.49	53.57	0.72	1.19	13.00

10. Use the information in the following stock quote to calculate Abercrombie & Fitch's earnings per share over the last year. (LG 8-5)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Name	Symbol	Open	High	Low	Close	Net Chg	%Chg	Volume	52 Week High	52 Week Low	Div	Yield	PE
Abercrombie & Fitch	ANF	37.89	38.41	37.20	37.60	-1.21	-3.12	2,323,747	51.12	28.76	0.70	1.86	55.29

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the Federal Reserve Board's website and find the most recent data on the market value of common stock outstanding, by type of issue and by holder.
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 your computer that will contain the data on the market value of common stock outstanding, Table L213.

the market value of common stock currently outstanding? Calculate the
 the percentage of