

SCHEDULE 9
CALCULATION OF CAPITAL ASSET PRICING MODEL (CAPM) COST OF EQUITY
USING DCF ESTIMATE OF THE EXPECTED RATE OF RETURN
ON THE MARKET PORTFOLIO

Line			
1	Risk-free Rate	4.64%	Forecast 20-year Treasury Bond Yield
2	Beta	0.77	Average Beta Natural Gas Utilities
3	DCF S&P 500	12.35%	DCF Cost of Equity S&P 500 (see following)
4	Risk Premium	7.7%	
5	Beta x Risk Premium	6.9%	
6	Flotation	0.20%	
7	Model Result	10.8%	

Value Line beta for comparable companies from Value Line Investment Analyzer. Treasury bond yield forecast from Value Line and EIA data to obtain a forecasted yield to maturity on 20-year Treasury bonds. Value Line forecasts a yield on 10-year Treasury notes equal to 4.3 percent. The current spread between the average April 2014 yield on 10-year Treasury notes (2.71 percent) and 20-year Treasury bonds (3.12 percent) is 41 basis points. Adding 41 basis points to Value Line's 4.3 percent forecasted yield on 10-year Treasury notes produces a forecasted yield of 4.71 percent for 20-year Treasury bonds (see Value Line Investment Survey, Selection & Opinion, Feb. 21, 2014). EIA forecasts a yield of 4.16 percent on 10-year Treasury notes. Adding the 41 basis point spread between 10-year Treasury notes and 20-year Treasury bonds to the EIA forecast of 4.16 percent for 10-year Treasury notes produces an EIA forecast for 20-year Treasury bonds equal to 4.57 percent. The average of the forecasts is 4.64 percent (4.71 percent using Value Line data and 4.57 percent using EIA data).

SCHEDULE 9 (CONTINUED)
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR S&P 500 COMPANIES

LINE	COMPANY	STOCK PRICE (P ₀)	DIVIDEND (D ₀)	FORECAST OF FUTURE EARNINGS GROWTH	DCF MODEL RESULT	MARKET CAP \$ (MILS)
1	3M	132.65	3.42	11.18%	14.1%	91,998
2	ABBOTT LABORATORIES	38.42	0.88	11.51%	14.1%	59,933
3	ABBVIE	50.59	1.68	8.40%	12.0%	81,973
4	ADT	30.34	0.80	9.03%	11.9%	5,356
5	AETNA	71.60	0.90	9.66%	11.0%	25,836
6	AGILENT TECHS.	56.35	0.53	9.48%	10.5%	18,448
7	AIR PRDS.& CHEMS.	117.31	3.08	9.33%	12.2%	25,335
8	AIRGAS	105.88	2.20	11.09%	13.4%	7,853
9	ALLERGAN	129.60	0.20	12.95%	13.1%	50,549
10	ALLSTATE	54.40	1.12	9.53%	11.8%	25,488
11	ALTRIA GROUP	36.82	1.92	7.40%	13.1%	79,240
12	AMERICAN EXPRESS	88.94	0.92	10.96%	12.1%	92,480
13	AMERICAN INTL.GP.	49.92	0.50	11.07%	12.2%	76,394
14	ANALOG DEVICES	51.39	1.48	11.67%	14.9%	15,995
15	AON CLASS A	83.04	1.00	11.59%	12.9%	25,262
16	AT&T	33.87	1.84	5.92%	11.8%	185,594
17	AUTOMATIC DATA PROC.	76.18	1.92	10.25%	13.1%	37,541
18	AVERY DENNISON	49.61	1.40	8.23%	11.3%	4,650
19	BECTON DICKINSON	113.65	2.18	8.82%	10.9%	21,906
20	BOEING	125.92	2.92	10.38%	13.0%	96,228
21	BROWN-FORMAN 'B'	85.08	1.16	10.90%	12.4%	11,749
22	C R BARD	140.56	0.84	12.24%	12.9%	10,700
23	CARDINAL HEALTH	69.73	1.21	9.10%	11.0%	21,938
24	CF INDUSTRIES HDG.	248.07	4.00	9.10%	10.9%	13,280
25	CH ROBINSON WWD.	54.14	1.40	10.38%	13.3%	8,575
26	CIGNA	80.17	0.04	10.60%	10.7%	22,508
27	CINTAS	59.20	0.77	10.64%	12.1%	7,099
28	CISCO SYSTEMS	22.37	0.76	8.18%	11.9%	118,248
29	CITIGROUP	47.99	0.04	12.17%	12.3%	143,323
30	COACH	47.78	1.35	8.85%	12.0%	12,044
31	COCA COLA ENTS.	46.04	1.00	10.70%	13.1%	11,664
32	COLGATE-PALM.	63.77	1.44	8.63%	11.1%	61,239
33	CONAGRA FOODS	30.19	1.00	7.25%	10.8%	12,782
34	CONOCOPHILLIPS	68.54	2.76	6.37%	10.7%	94,387
35	COSTCO WHOLESALE	113.69	1.42	10.82%	12.2%	50,362
36	COVIDIEN	70.34	1.28	9.52%	11.5%	32,292
37	CSX	27.84	0.64	9.50%	12.0%	28,102
38	CUMMINS	141.93	2.50	13.20%	15.2%	27,636
39	DANAHER	74.73	0.40	13.13%	13.7%	51,066
40	DEERE	88.83	2.04	8.00%	10.5%	34,268

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LINE	COMPANY	STOCK PRICE (P ₀)	DIVIDEND (D ₀)	FORECAST OF FUTURE EARNINGS GROWTH	DCF MODEL RESULT	MARKET CAP \$ (MILS)
41	DIAMOND OFFS.DRL.	48.00	0.50	10.48%	11.6%	7,076
42	DR PEPPER SNAPPLE GROUP	51.97	1.64	7.20%	10.6%	10,970
43	E I DU PONT DE NEMOURS	65.79	1.80	8.18%	11.2%	61,887
44	EATON	73.14	1.96	11.60%	14.6%	34,664
45	EMC	26.19	0.46	11.45%	13.4%	52,779
46	EMERSON ELECTRIC	65.50	1.72	9.67%	12.6%	47,536
47	ESTEE LAUDER COS.'A'	68.37	0.80	12.16%	13.5%	17,335
48	FIDELITY NAT.INFO.SVS.	53.11	0.96	12.40%	14.4%	15,675
49	FLOWERVE	76.44	0.64	14.20%	15.2%	10,270
50	FMC	76.46	0.60	12.20%	13.1%	10,131
51	GENERAL ELECTRIC	25.66	0.88	8.48%	12.2%	266,464
52	GENERAL MILLS	50.47	1.64	7.16%	10.7%	32,574
53	HONEYWELL INTL.	92.43	1.80	10.38%	12.5%	72,525
54	HUMANA	108.97	1.12	9.43%	10.6%	17,038
55	ILLINOIS TOOL WORKS	81.57	1.68	9.42%	11.7%	35,297
56	INTERNATIONAL BUS.MCHS.	187.06	4.40	8.68%	11.3%	193,590
57	INTL.FLAVORS & FRAG.	92.87	1.56	10.23%	12.1%	7,949
58	INTUIT	76.90	0.76	12.46%	13.6%	21,410
59	KEYCORP	13.44	0.22	9.22%	11.0%	12,075
60	KRAFT FOODS GROUP	55.13	2.10	8.13%	12.3%	33,492
61	KROGER	42.15	0.66	10.47%	12.2%	23,725
62	L BRANDS	56.02	1.36	10.37%	13.1%	15,892
63	LINCOLN NAT.	49.46	0.64	10.03%	11.5%	13,045
64	LINEAR TECH.	46.94	1.08	11.12%	13.7%	10,503
65	LOCKHEED MARTIN	159.44	5.32	8.88%	12.6%	52,718
66	LYONDELLBASELL INDS.CL.A	87.31	2.80	9.90%	13.5%	49,386
67	MACY'S	57.18	1.00	11.20%	13.2%	20,912
68	MARATHON PETROLEUM	87.79	1.68	10.65%	12.8%	27,785
69	MARSH & MCLENNAN	47.91	1.00	12.41%	14.8%	26,714
70	MCDONALDS	96.77	3.24	7.42%	11.1%	100,023
71	MEAD JOHNSON NUTRITION	81.89	1.50	9.58%	11.6%	17,718
72	MICROSOFT	38.95	1.12	8.53%	11.7%	325,708
73	MONDELEZ INTERNATIONAL CL.A	34.27	0.56	12.92%	14.8%	60,495
74	MOODY'S	79.45	1.12	13.15%	14.8%	17,040
75	NATIONAL OILWELL VARCO	77.25	1.04	11.18%	12.7%	34,257
76	NETAPP	38.92	0.60	13.13%	14.9%	11,873
77	NEWELL RUBBERMAID	30.51	0.60	9.40%	11.6%	7,991
78	NIKE 'B'	74.63	0.96	12.28%	13.7%	51,346
79	NOBLE ENERGY	68.92	0.72	13.33%	14.5%	25,645
80	NORDSTROM	60.75	1.32	11.90%	14.4%	11,672
81	NORFOLK SOUTHERN	93.90	2.16	10.11%	12.7%	28,995
82	NVIDIA	18.04	0.34	8.80%	10.9%	10,383
83	ORACLE	39.10	0.48	10.51%	11.9%	183,751
84	PALL	85.50	1.10	12.27%	13.7%	9,196

JHV SCHEDULE 9-3

LINE	COMPANY	STOCK PRICE (P ₀)	DIVIDEND (D ₀)	FORECAST OF FUTURE EARNINGS GROWTH	DCF MODEL RESULT	MARKET CAP \$ (MILS)
85	PATTERSON COMPANIES	41.12	0.80	11.33%	13.5%	4,215
86	PAYCHEX	41.58	1.40	10.00%	13.8%	15,092
87	PERRIGO	154.91	0.42	13.22%	13.5%	19,500
88	PETSMART	66.94	0.78	13.06%	14.4%	6,596
89	PG&E	43.39	1.82	6.44%	11.0%	20,849
90	PHILIP MORRIS INTL.	80.86	3.76	7.03%	12.1%	134,229
91	PNC FINL.SVS.GP.	82.91	1.80	8.44%	10.8%	44,947
92	PPG INDUSTRIES	191.34	2.68	10.88%	12.4%	27,084
93	PRAXAIR	129.31	2.60	11.40%	13.7%	38,272
94	PREC.CASTPARTS	252.97	0.12	14.63%	14.7%	37,793
95	PRINCIPAL FINL.GP.	45.02	1.28	11.70%	14.9%	13,623
96	PROCTER & GAMBLE	79.28	2.57	8.38%	11.9%	221,076
97	PRUDENTIAL FINL.	83.98	2.12	9.83%	12.6%	37,966
98	PULTEGROUP	19.82	0.20	11.31%	12.4%	7,009
99	PVH	121.74	0.15	12.18%	12.3%	10,535
100	QUEST DIAGNOSTICS	55.54	1.32	9.66%	12.3%	8,019
101	RALPH LAUREN CL.A	157.50	1.80	11.60%	12.9%	9,306
102	RAYTHEON 'B'	97.33	2.42	11.95%	14.8%	30,263
103	REPUBLIC SVS.'A'	33.87	1.04	8.28%	11.6%	12,458
104	REYNOLDS AMERICAN	52.43	2.68	7.40%	13.0%	29,985
105	ROCKWELL AUTOMATION	120.24	2.32	11.18%	13.3%	16,632
106	ROPER INDS.NEW	134.57	0.80	13.07%	13.7%	13,767
107	ROSS STORES	71.09	0.80	11.70%	13.0%	14,459
108	SAFEWAY	32.89	0.80	10.08%	12.8%	7,876
109	SCRIPPS NETWORKS INTACT. 'A'	76.54	0.80	12.78%	14.0%	8,328
110	SEAGATE TECH.	52.78	1.72	7.68%	11.2%	16,494
111	ST.JUDE MEDICAL	64.50	1.08	10.59%	12.5%	18,269
112	STANLEY BLACK & DECKER	80.36	2.00	10.20%	13.0%	13,379
113	STRYKER	80.29	1.22	9.08%	10.7%	29,884
114	SUNTRUST BANKS	38.52	0.80	8.67%	10.9%	20,461
115	SYMANTEC	20.40	0.60	8.28%	11.5%	13,900
116	SYSCO	35.74	1.16	8.37%	11.9%	21,755
117	TEXAS INSTS.	45.27	1.20	10.53%	13.5%	49,348
118	THE HERSHEY COMPANY	102.70	1.94	10.44%	12.5%	15,840
119	TIFFANY & CO	87.82	1.36	12.28%	14.0%	11,313
120	TJX COS.	59.95	0.70	11.00%	12.3%	40,774
121	UNITED PARCEL SER.'B'	96.71	2.68	11.04%	14.1%	69,499
122	UNITED TECHNOLOGIES	114.97	2.36	11.60%	13.9%	107,093
123	V F	59.60	1.05	11.52%	13.5%	27,003
124	VERIZON COMMUNICATIONS	47.05	2.12	6.60%	11.5%	196,249
125	VIACOM 'B'	84.80	1.20	13.17%	14.8%	31,914
126	WAL MART STORES	75.98	1.92	8.08%	10.8%	253,758
127	WESTERN UNION	16.07	0.50	10.67%	14.2%	8,768
128	WW GRAINGER	248.63	4.32	13.22%	15.2%	17,224

LINE	COMPANY	STOCK PRICE (P ₀)	DIVIDEND (D ₀)	FORECAST OF FUTURE EARNINGS GROWTH	DCF MODEL RESULT	MARKET CAP \$ (MILS)
129	WYNN RESORTS	220.33	5.00	12.41%	15.0%	21,937
130	XILINX	50.91	1.16	11.96%	14.5%	12,355
131	XYLEM	36.57	0.51	12.33%	13.9%	6,758
132	ZOETIS	29.84	0.29	12.68%	13.8%	15,287
133	Market-weighted Average				12.35%	

Notes: In applying the DCF model to the S&P 500, I include in the DCF analysis only those companies in the S&P 500 group which pay a dividend, have a positive growth rate, and have at least three analysts' long-term growth estimates. I also eliminate those twenty-five percent of companies with the highest and lowest DCF results, a decision which had no impact on my CAPM estimate of the cost of equity.

D₀ = Current dividend per Thomson Reuters.
P₀ = Average of the monthly high and low stock prices during the three months ending April 2014 per Thomson Reuters.
g = I/B/E/S forecast of future earnings growth April 2014.
k = Cost of equity using the quarterly version of the DCF model shown below:

$$k = \left[\frac{d_0(1+g)^{\frac{1}{4}}}{P_0} + (1+g)^{\frac{1}{4}} \right]^4 - 1$$