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FILE

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Columbia Gas of Ohio, Inc., for Authority to Amend its Filed Tariffs to Increase the Rates and Charges for Gas Services and Related Matters.	:	Case No. 08-72-GA-AIR
In the Matter of the Application of Columbia Gas of Ohio, Inc., for Approval of an Alternative Form of Regulation and for a Change in its Rates and Charges.	:	Case No. 08-73-GA-ALT
In the Matter of the Application of Columbia Gas of Ohio, Inc., for Approval to Change Accounting Methods.	:	Case No. 08-74-GA-AAM
In the Matter of the Application of Columbia Gas of Ohio, Inc., for Authority to Revise its Depreciation Accrual Rates.	:	Case No. 08-75-GA-AAM

PREFILED TESTIMONY OF JEFFREY P. HECKER

UTILITIES DEPARTMENT
CAPITAL RECOVERY & FINANCIAL ANALYSIS DIVISION
PUBLIC UTILITIES COMMISSION OF OHIO

Staff Exhibit _____

October 9, 2008

1. Q. Please state your name and business address.

A. My name is Jeffrey P. Hecker. My business address is 180 East Broad Street, Columbus, Ohio 43215.

2. Q. By whom are you employed?

A. I am employed by the Public Utilities Commission of Ohio ("PUCO").

3. Q. What is your current position with the PUCO?

A. I am employed as a Utilities Specialist in the Capital Recovery and Financial Analysis Division of the Utilities Department.

4. Q. Would you briefly state your educational and occupational background?

A. I achieved a Bachelor of Science Degree in Business with a major in Accounting from Miami University in Oxford, Ohio, in May, 1980. I have been employed by the Public Utilities Commission of Ohio since December, 2004. I am a Certified Rate of Return Analyst through the Society of Utility and Regulatory Financial Analysts.

5. Q. What are your responsibilities in this proceeding?

A. The purpose of my testimony is to address objections to the rate-of-return on rate base ("ROR") analysis included in the Staff Report docketed in this proceeding on August 21, 2008, and to update that analysis.

6. Q. What changes to your ROR analysis have you made?

A. The Staff made changes that result in a different cost of capital. Treasury yields, stock prices, dividends, and analysts' growth rates were updated to reflect more recent values. In the Staff Report, yields, prices, and dividends fall within the period of July 3, 2007 to July 2, 2008. This period now becomes September 20, 2007 to September 19, 2008. Compared to the Staff Report recommendation, these changes increase the equity cost by 18 basis points, and increase the overall rate of return range by 9 to 10 basis points.

7. Q. Have you adjusted your ROR recommendation to take into account the revenue stabilizing effect of straight-fixed-variable rate design or decoupling, and the Pipeline Infrastructure Replacement Program ("PIR")?

A. Yes. I have made a reduction in cost of equity of 25 basis points, after the issuance adjustment. Compared to the Staff Report recommendation, this change by itself would have decreased the overall rate of return by 12 to 13 basis points. This change combined with the other changes described in the answer to Question 6 decrease the equity cost by 7 basis points, and decrease the overall rate of return range by 3 to 4 basis points.

8. Q. What is Staff's updated return on rate base recommendation?

A. The details of my updated ROR recommendation are shown in the schedules at the end of this testimony and are summarized below:

Long Term Debt Capitalization	49.29%
Common Equity Capitalization	50.71%
Cost of Debt	5.78%
Return on Equity Range	9.88% - 10.89%
Return on Rate Base Range	7.86% - 8.37%

9. Q. How is your testimony organized?

A. I will summarize the other parties' objections to the Staff Report ROR by topic, and then discuss Staff's position. Objections to the Staff's ROR were submitted by Columbia Gas of Ohio, Inc. ("Columbia" or the "Applicant"), by The Office of the Ohio Consumers' Counsel ("OCC"), and by the Ohio Partners for Affordable Energy ("OPAE").

10. Q. What objections were submitted relating to the explicit reduction of return on equity to compensate for rate structures or tariff provisions that tend to stabilize revenue?

A. OCC's Objection 6 states:

> The OCC objects to the Staff's failure to make an adjustment to reduce the recommended rate for common equity in recognition of the reduced risks that the Company will face with respect to revenues and cost recovery if the Commission approves any of the risk-reducing mechanisms proposed by the Company. These mechanisms are the IRP, the costs of a natural gas riser/service line replacement program, and a new advanced metering program. In addition, the Staff recommends a dramatic change to the Company's existing rate design that guarantees revenues for its distribution service by significantly increasing the fixed monthly charge and decreasing/eliminating the volumetric rate over the next two years. Although the Staff Report acknowledged that these mechanisms would reduce the risks faced by the Company, the Staff failed to make any corresponding reductions to the rate of return to reflect these reduced risks.

OPAE Objection I states:

> OPAE objects to the Staff Report recommendation that the rate of return be set in the range of 7.89% to 8.41% because it provides an excessive return when compared to the risk faced by VEDO, and other factors. Staff acknowledges the need to adjust rate of return to recognize the reduction in risk of earning the revenue requirement because of decoupling or the Staff's modified straight fixed variable rate, and the proposed Rider IRP. The Standard Service Offer bidding process under discussion also eliminates the risk of refunds under traditional gas cost recovery audits. Unfortunately, the Staff Report fails to quantify the level of reduction of the rate of return as a result of the reduced risk. The comparable companies utilized by Staff do not, in large part, have decoupling or a modified straight fixed variable rate and SRR-B, or Rider IRP. The Staff Report errs in not reducing the rate of return sufficiently to reflect the minimal risk faced by the Company for purposes of a return on its investment.

Applicant's Objection 12 states:

> Columbia objects to the Staff's statement that Commission approval of either a fixed monthly delivery charge or Columbia's proposed IRP would create a reduction in business and regulatory risk that should be considered in determining a fair and reasonable rate of return. Investors have become accustomed to these types of tariff provisions for natural gas distribution companies, so to the extent such measures produce benefits in the form of reduced risk, those benefits are already reflected the DCF results for the Staff's proxy group.

11. Q. What is Staff's position on the explicit reduction of return on equity to compensate for revenue stabilization?

A. Staff has made a 25 basis point reduction to the return on equity as there is relatively low exposure of Staff's comparable group companies to the kind of risk-reducing mechanisms proposed by the Company. Of the approximately twenty states in which the six comparable group companies have operating companies, seven are listed by the American Gas Association as having natural gas revenue decoupling: New Jersey, Maryland, Colorado, New York, Illinois, Arkansas, and California. All of the comparable companies operate in at least one of these states. Four of the companies operate in only one of these states. AGL Resources operates in two (New Jersey and Maryland) while Atmos operates in three (Colorado, New York, and Illinois). Only New Jersey Resources and Sempra

Energy are entirely exposed, as they operate only in New Jersey and California, respectively. All of the other companies are partially exposed.

OCC witness Woolridge concurs with the Staff that adoption of the Straight-Fixed-Variable Rate Design and IRP Rider would reduce the business and regulatory risk of Columbia and recommends, as does the Staff, that a 25 basis point adjustment is appropriate.

12. Q. What objections were submitted relating to the selection of the rate of return on equity or the overall rate of return range?

A. OCC Objection D states:

> OCC objects to the Staff Report's recommendation for a common equity rate in the range of 9.95% to 10.96%, which is unreasonably high.

OCC witness Woolridge estimates an overall cost of capital of 7.37%, with an equity cost rate of 9.00%.

Applicant's Objection 3 states:

> Columbia objects to the Staff's recommended range of 7.89% - 8.41% for the overall rate of return. This recommended range ignores important evidence presented by Columbia, and is insufficient to allow Columbia to attract capital on reasonable terms; provide a return commensurate with those earned by comparable business undertakings; and provide reasonable compensation to the company for the service it renders to the public.

> Columbia objects to the Staff's recommended range of 9.85% - 10.85% for the cost of equity. This range is too low to reflect the returns that investors require from a gas distribution utility, and is insufficient to allow the company to attract capital on reasonable terms and provide a return commensurate with those earned by comparable business undertakings.

13. Q. What is the Staff's position regarding this objection?

A. The Staff's rate of return estimate has been revised from a range of 7.89% - 8.41% to a range of 7.86% - 8.37%, and the cost of equity has been revised from a range of 9.95% - 10.96% to a range of 9.88% - 10.89% for the reasons stated in this testimony.

14. Q. What objections were submitted relating to capital structure and debt cost rate?

A. Office of Consumers' Counsel Objection D.2 concerning "Capital Structure" states:

> The OCC objects to the Staff Report's use of a hypothetical capital structure which is the average book value capital structure of the five companies in the Staff's comparable group. This is not the capitalization used by the Company to attract and raise capital.

Applicant's Objection 4 states:

> Columbia objects to the Staff's failure to synchronize its recommended cost of debt with its recommended capital structure. Staff ignored the fact that the debt ration affects financial risk, which in turn affects the cost of debt. Because Columbia's external financing activities are conducted through its parent corporation, NiSource, Staff should have

> utilized both the NiSource capital structure and cost of debt in calculating its recommended rate of return. Columbia also objects to the Staff's failure to utilize the NiSource cost of debt in its utilization of the hypothetical capital structure (despite the lack of synchronization) because the NiSource cost of debt most closely approximates the debt cost of the comparable group companies used to develop the hypothetical capital structure.

15. Q. What is the Staff's position regarding the use of a hypothetical capital structure based on a comparable group?

A. The Staff's capital structure is reflective of the risk profile required for a natural gas distribution company. It is also consistent with the average capital structure of the comparable group companies used by Staff to estimate the cost of common equity. Given the current industry structure, any particular book consolidated capital structure may not reflect the risk associated with a regulated utility operating company. In addition, given current industry financial practices, stand-alone capital structures for operating companies, in general, may not reflect the risk associated with a regulated utility operating company or the risk associated with the parent company. In this case, a capital structure based on a comparable group of gas distribution companies makes more sense than the Applicant's parent consolidated capital structure.

16. Q. What objections were submitted concerning the selection of the Staff's comparable group?

A. Applicant's Objection No. 7 states:

> Columbia objects to Staff's use of different criteria for selecting comparable group companies than those utilized by the company in its direct testimony, without explaining why the Staff rejected Columbia's criteria. In addition, Staff erred in including Sempra Energy in the comparable group. Sempra Energy is atypical and injects an inappropriate downward bias to the group average DCF.

Office of Consumers' Counsel's Objection D.1 states:

> OCC objects to the Staff Report's use of a group of only six companies in its group of "comparable utilities" that served as a basis of its capital structure and cost of capital analysis. Furthermore, this group of six companies includes Center Point Energy (CNP) and Sempra Energy (SRE), companies which are considered to be an integrated combination electric and natural gas companies and not a natural gas distribution company.

17. Q. What is your response to these comparable group objections?

A. The Staff is not necessarily "rejecting" Columbia's criteria, but simply using companies with a risk level appropriate for distribution operations, including Center Point Energy and Sempra Energy. Non-regulated enterprises permeate the gas utility industry, both as affiliates and as integrated operations. Overall, the comparable group reflects a degree of riskiness appropriate for Columbia.

18. Q. Applicant's Objection No. 6 states:

> Columbia objects to the Staff's failure to consider and utilize methodologies other than DCF and CAPM in determining Columbia's cost of equity, such as those used in Columbia's direct testimony on this issue.

How does Staff respond?

A. The Staff has historically used the CAPM and DCF methods, which have produced reasonable results. The CAPM is a type of Risk Premium method. The Comparable Earnings approach is, in no sense, a forward-looking method, but is rather based entirely on historical earnings. As a cost of equity estimation for ratemaking, comparable earnings poses a circularity problem; i.e., regulated utilities can earn what they are authorized to earn, and, in turn, what they are authorized to earn is based on what they have earned.

19. Q. Columbia's Objection No. 10 states:

> Columbia objects to the Staff's calculation of the cost of equity using CAPM. This calculation understates the cost of equity because it: a) fails to consider the forecasted yields on US Treasury Bonds that are used to establish the risk-free rate of return; and, b)does not consider the relative size of the four companies that comprise the Staff's proxy group.

How does Staff respond?

A. Regarding point a), Staff will not predict economic conditions for the rate period when formulating its CAPM recommendation. Staff believes that growth rates occur in a manner independent of the preceding growth rate. Staff believes the period in question is a reasonable tradeoff between stability and timeliness. However, as explained earlier, Staff did adjust the period in which yields are used to calculate the risk-free rate of return to the period from July 3, 2007 to July 2, 2008 to September 20, 2007 to September 19, 2008 to incorporate more recent numbers.

Regarding point b), Columbia's market capitalization falls within the range of that of the group of comparable companies Staff used in its ROR calculations. The comparable group is based on comparable risk. Staff does not consider relative size a factor and any adjustment for size would be somewhat arbitrary.

20. Q. Office of Consumers' Counsel's Objection 3 states:

> OCC objects to the Staff Report's inappropriate risk free rate and risk premium of 6.5% in the CAPM. The risk premium stated in the Staff Report was based on the spread of the arithmetic mean of historical total returns between large stocks for large companies and long-term government bonds between 1926 and 2007. This approach is subject to a myriad of empirical errors which make these historical returns poor measures of expected returns. The use of historical return to estimate an expected risk premium can be erroneous because (1) ex post returns are not the same as ex ante expectations, (2) market risk premiums can change over time, increasing when investors become more risk- averse, and decreasing when investors become less risk-averse, and (3) market conditions can change such that ex post historical returns are

> poor estimates of ex ante expectations. This approach is outdated, ignores twenty years of academic and professional research on the equity risk premium, and is out of touch with the real world of finance. The research and surveys of investment banks, consulting firms, and CFOs, who use the equity risk premium concept every day in making financing, investment, and valuation decisions, indicates an equity risk premium in the 4% range is appropriate.

Is this objection valid?

A. No. As previously stated, Staff will not predict economic conditions for the rate period when formulating its CAPM recommendation. Staff believes that growth rates occur in a manner independent of the preceding growth rate. Short-term forecasts involve arbitrary selective guesses as to which conditions that have occurred before will be prevalent in the near-term. Staff admits that it cannot predict the future and, thus, incorporates parameters that reflect broad general conditions in its analysis. As stated above, the dates for yields of U.S. Treasury Bonds have been updated to include a more recent period, from September 20, 2007 to September 19, 2008.

21. Q. What objections were submitted concerning the Staff's DCF analysis?

A. Columbia's Objection 8 states:

> Columbia objects to the Staff's use of a non-constant DCF in calculating the cost of equity. The Staff's methodology understates the cost of equity because it improperly uses an

> average stock price consisting of twelve months of data, which is too long, given the prospective nature of utility ratemaking, and includes data which are too far removed from current market fundamentals to reflect the current cost of equity.

Columbia's Objection 9 states:

> Columbia objects to the Staff's calculation of the cost of equity using a non-constant DCF, because the methodology used to calculate the expected growth rate was improperly employed. Among other things, the transition period (fifth to twenty-fifth years) used to project future cash flows is entirely arbitrary, and the four-hundred year time horizon reflected on Sch. D-1.9 is too long to provide a reasonable estimate of current investor expectations. In addition, Staff's use of a natural logarithm is incompatible with the annual periodic form of the DCF model employed by Staff, which requires that a discrete compound growth rate be used when computing the DCF growth rate.

Office of Consumers' Counsel's Objection 4 states:

> The OCC objects to the Staff Report's use of a multi-stage DCF model which includes a growth rate that is a combination (1) the average of projected EPS growth from Wall Street analysts (as collected and compiled by Reuters, Yahoo!, and MSN) and Value Line and (2) a long-term growth rate equal to the projected GNP growth rate. It is well known that the EPS growth rate projections of Wall Street analysts are upwardly biased and produce an overstated DCF equity cost rate. Furthermore, the Staff had provided no theoretical or empirical support to justify using the projected GNP growth rate as the expected long-term DCF growth rate.

22. Q. What is the Staff's response to these DCF objections?

A. Regarding Columbia's Objection 8, in the Staff's estimation, the period of a year is a natural cycle for this phenomenon, and it is also a reasonable tradeoff between stability and timeliness.

Addressing Columbia's Objection 9 and the OCC's Objection 4, Staff will not predict economic conditions for the rate period when formulating its DCF recommendation. Staff believes that growth rates occur in a manner independent of the preceding growth rate. Analysts formulate company-specific growth estimates for the next five years. Staff moderated these growth rates by merging them into the long term GNP growth rate. In the absence of company-specific growth rates beyond five years, the long term GNP rate is a satisfactory proxy, as it would be an average rate that companies on balance could not exceed. Projections of GNP growth are made for limited periods during which specific economic conditions are presumed to apply. Staff's use of the GNP rate is over a broad period with no specific conditions presumed. "Projected GNP" is appropriate only if one guesses about prospective economic conditions. (Any projected growth rates from Reuters were not included in the Staff's analysis due to its merger with MSN.)

23. Q. Columbia's Objection 11 states:

> Columbia objects to the Staff's non-constant DCF and CAPM calculations of the cost of equity. Those calculations are understated because they have not been adjusted for application to a book value, rather than market value, capital structure used to determine the weighted average cost of capital.

Is this objection valid?

A. No. The run-up in market values of equity has outpaced the market value of debt, causing increasingly higher market-related equity ratios. Market values of common equity increasingly reflect aspects of the business which have nothing to do with utility service. It is not possible to separate out the non-utility market value. The result is an inordinately high equity ratio for regulated utility cost of capital. The regulatory process does provide compensation for new investment in the rate base, as new investment is made. The book value of a stock is determined by the market price at each issuance. To adjust these balances to current market value, however, inflates balances beyond what investors have actually made, and inflates the proportion of equity in the capital structure above what would be necessary for the investor-required cost of capital.

24. Q. OCC Objection 39, states:

> The OCC objects to the Staff Reports' incorporation of an excessive flotation cost adjustment to the cost of equity. This adjustment is erroneous. The Staff has not identified any actual flotation costs for the Company. Therefore, the Staff is recommending that the Company receive annual revenues in the form of a higher return on equity for flotation costs that have not been identified by the Staff.

What is the Staff's response to this objection?

A. First of all, OCC misconstrues Staff's issuance adjustment as including flotation costs. Staff's adjustment in no way reflects flotation costs, if such a term is meant to refer to dilution or price pressure. Staff's adjustment reflects only an estimate for issuance costs.

In addition, OCC makes a recommendation for the next rate case, not this one. OCC requests that Columbia itemize its stock issuance costs incurred in the test year and submit them as a test-year expense. It is not relevant to the Staff that the Applicant or its parent or affiliates have plans to issue new equity. The Staff does not reflect issuance costs as an annual operating expense in the revenue requirement calculation.

The Staff traditionally includes an issuance cost in its estimation of the cost of common equity. This is merely an estimated "generic" amount based on issuance costs associated with prior security offerings. Just as the actual imbedded costs of debt and preferred stock include issuance costs, a similar adjustment is required for the cost of common equity.

25. Q. What are common stock issuance costs?

A. Issuance costs include expenditures made directly by the company issuing stock, for the purpose of issuing stock. Some of these expenditures would be for filing with the SEC, accounting, legal representation, printing, and exchange listing. Issuance costs also include the underwriting spread, which is not an expenditure for the issuing company. Basically, the underwriting spread is the difference between the proceeds to the company and the price paid by the primary purchasers of an issue. Issuance costs are the difference between the amount paid by the primary purchasers and the net proceeds, which is the amount available for investment by the company.

26. Q. Why is an adjustment for issuance cost necessary?

A. The cost of issuance is properly spread over the life of the stock issue. As long as stock has been issued, an equity adjustment is necessary. It does not matter what future financing plans have been prepared. The investor requires a full return as long as the investor owns the stock. The company issuing new equity initially receives funds in the amount of the equity issued. The amount of equity issued less the issuance cost is the amount available to the company for investment, yet the investor has, as required, paid a return on the full amount of investment. A greater return, therefore, must be earned on the lesser amount that can be invested. This is made possible by the Staff's adjustment to the baseline cost of equity.

27. Q. Should an adjustment be made to the cost of equity to reflect dilution or price pressure?

A. No. The investors pay the public offering price, which reflects any dilution effect. The investors require a return on the amount they have invested, not the amount that their investment would have entailed had they been able to buy shares at market price prior to any public announcement of stock issuance.

28. Q. Does this conclude your testimony?

A. Yes.

PROOF OF SERVICE

I hereby certify that a true copy of the foregoing Prefiled Testimony of Peter K. Baker, submitted on behalf of the Staff of the Public Utilities Commission of Ohio, was served by regular U.S. mail, postage prepaid, hand-delivered, and/or delivered via electronic mail, upon the following parties of record, this 9th day of October, 2008.

Anne L. Hammerstein
Assistant Attorney General

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Schedule D-1

Rate of Return Summary
Columbia Gas of Ohio

	% of Total	% Cost	Weighted Cost %
Long Term Debt	49.29%	5.78%	2.85%
Preferred Stock	0.00%	0.00%	0.00%
Common Equity	50.71%	9.88% -10.89%	5.01% -5.52%
Total Capital	100.00%		7.86% -8.37%

Schedule D-1.1

Equity Issuance Cost Adjustment
Columbia Gas of Ohio, Inc.
December 31, 2007

(1) Retained Earnings[1]	$474,871,000
(2) Total Common Equity[2]	$660,296,244
(3) Ratio of (1) to (2)	0.7192
(4) Generic Issuance Cost, f	3.50%
(5) External Equity Ratio, w [1.0 - (3)]	0.28082
(6) Net Adjustment Factor, (w/(1 - f)) + (1 - w)	1.01019
(7) Low End Equity Cost [10.03% x (6)]	10.13%
(8) High End Equity Cost [11.03% x (6)]	11.14%
(9) Adjusted Low End Equity Cost [(7) - .25%]	9.88%
(10) Adjusted High End Equity Cost [(8) - .25%]	10.89%

Sources:

1 Applicant's Schedule C-11.1
2 Applicant's Schedule D-1

Schedule D-1.2

CAPM Cost of Equity Estimate

Date:	Closing 10Yr Yld (%)	Closing 30Yr Yld (%)
20-Sep-07	4.67	4.94
21-Sep-07	4.63	4.89
24-Sep-07	4.62	4.88
25-Sep-07	4.61	4.89
26-Sep-07	4.62	4.89
27-Sep-07	4.57	4.84
28-Sep-07	4.58	4.83
1-Oct-07	4.56	4.80
2-Oct-07	4.53	4.78
3-Oct-07	4.54	4.79
4-Oct-07	4.52	4.77
5-Oct-07	4.64	4.87
8-Oct-07	4.64	4.86
9-Oct-07	4.65	4.86
10-Oct-07	4.65	4.86
11-Oct-07	4.66	4.88
12-Oct-07	4.69	4.91
15-Oct-07	4.67	4.91
16-Oct-07	4.66	4.91
17-Oct-07	4.55	4.81
18-Oct-07	4.50	4.78
19-Oct-07	4.40	4.69
22-Oct-07	4.39	4.67
23-Oct-07	4.41	4.69
24-Oct-07	4.33	4.64
25-Oct-07	4.35	4.66
26-Oct-07	4.39	4.68
29-Oct-07	4.38	4.66
30-Oct-07	4.38	4.67
31-Oct-07	4.47	4.75
1-Nov-07	4.36	4.65
2-Nov-07	4.29	4.59
5-Nov-07	4.32	4.62
6-Nov-07	4.36	4.65

7-Nov-07	4.33	4.67
8-Nov-07	4.27	4.66
9-Nov-07	4.22	4.60
12-Nov-07	4.21	4.59
13-Nov-07	4.26	4.61
14-Nov-07	4.27	4.60
15-Nov-07	4.16	4.53
16-Nov-07	4.15	4.52
19-Nov-07	4.08	4.48
20-Nov-07	4.05	4.48
21-Nov-07	4.02	4.47
23-Nov-07	4.01	4.44
26-Nov-07	3.85	4.28
27-Nov-07	3.94	4.36
28-Nov-07	4.03	4.41
29-Nov-07	3.94	4.35
30-Nov-07	3.97	4.40
3-Dec-07	3.89	4.35
4-Dec-07	3.89	4.35
5-Dec-07	3.91	4.39
6-Dec-07	4.00	4.48
7-Dec-07	4.12	4.59
10-Dec-07	4.15	4.61
11-Dec-07	3.99	4.48
12-Dec-07	4.08	4.53
13-Dec-07	4.17	4.61
14-Dec-07	4.23	4.66
17-Dec-07	4.19	4.62
18-Dec-07	4.12	4.54
19-Dec-07	4.07	4.49
20-Dec-07	4.03	4.45
21-Dec-07	4.17	4.57
24-Dec-07	4.21	4.62
26-Dec-07	4.28	4.69
27-Dec-07	4.20	4.61
28-Dec-07	4.10	4.51
31-Dec-07	4.03	4.46
2-Jan-08	3.90	4.35
3-Jan-08	3.90	4.37
4-Jan-08	3.85	4.36
7-Jan-08	3.84	4.34
8-Jan-08	3.84	4.36
9-Jan-08	3.79	4.32

10-Jan-08	3.89	4.44
11-Jan-08	3.81	4.39
14-Jan-08	3.79	4.37
15-Jan-08	3.70	4.29
16-Jan-08	3.71	4.32
17-Jan-08	3.64	4.25
18-Jan-08	3.65	4.30
22-Jan-08	3.48	4.23
23-Jan-08	3.43	4.18
24-Jan-08	3.64	4.35
25-Jan-08	3.58	4.28
28-Jan-08	3.59	4.28
29-Jan-08	3.66	4.34
30-Jan-08	3.73	4.43
31-Jan-08	3.64	4.35
1-Feb-08	3.60	4.32
4-Feb-08	3.64	4.37
5-Feb-08	3.59	4.34
6-Feb-08	3.61	4.37
7-Feb-08	3.74	4.50
8-Feb-08	3.65	4.44
11-Feb-08	3.62	4.41
12-Feb-08	3.68	4.46
13-Feb-08	3.69	4.51
14-Feb-08	3.82	4.65
15-Feb-08	3.78	4.59
19-Feb-08	3.88	4.66
20-Feb-08	3.92	4.64
21-Feb-08	3.78	4.55
22-Feb-08	3.79	4.58
25-Feb-08	3.90	4.66
26-Feb-08	3.86	4.66
27-Feb-08	3.85	4.65
28-Feb-08	3.71	4.55
29-Feb-08	3.53	4.42
3-Mar-08	3.53	4.43
4-Mar-08	3.58	4.48
5-Mar-08	3.69	4.61
6-Mar-08	3.62	4.58
7-Mar-08	3.54	4.54
10-Mar-08	3.44	4.45
11-Mar-08	3.60	4.53
12-Mar-08	3.48	4.41

13-Mar-08	3.53	4.45
14-Mar-08	3.42	4.35
17-Mar-08	3.31	4.28
18-Mar-08	3.45	4.33
19-Mar-08	3.36	4.22
20-Mar-08	3.33	4.16
24-Mar-08	3.52	4.31
25-Mar-08	3.49	4.30
26-Mar-08	3.49	4.33
27-Mar-08	3.53	4.38
28-Mar-08	3.47	4.34
31-Mar-08	3.43	4.31
1-Apr-08	3.55	4.38
2-Apr-08	3.58	4.39
3-Apr-08	3.59	4.39
4-Apr-08	3.48	4.32
7-Apr-08	3.56	4.37
8-Apr-08	3.56	4.38
9-Apr-08	3.47	4.31
10-Apr-08	3.53	4.34
11-Apr-08	3.47	4.30
14-Apr-08	3.50	4.34
15-Apr-08	3.57	4.41
16-Apr-08	3.70	4.53
17-Apr-08	3.73	4.52
18-Apr-08	3.74	4.52
21-Apr-08	3.71	4.48
22-Apr-08	3.72	4.47
23-Apr-08	3.73	4.49
24-Apr-08	3.83	4.54
25-Apr-08	3.87	4.59
28-Apr-08	3.84	4.57
29-Apr-08	3.83	4.56
30-Apr-08	3.76	4.50
1-May-08	3.75	4.48
2-May-08	3.85	4.57
5-May-08	3.85	4.58
6-May-08	3.89	4.64
7-May-08	3.87	4.62
8-May-08	3.81	4.56
9-May-08	3.77	4.52
12-May-08	3.78	4.52
13-May-08	3.91	4.62

14-May-08	3.94	4.64
15-May-08	3.84	4.58
16-May-08	3.85	4.58
19-May-08	3.84	4.57
20-May-08	3.78	4.53
21-May-08	3.82	4.56
22-May-08	3.92	4.63
23-May-08	3.83	4.56
27-May-08	3.92	4.64
28-May-08	4.01	4.70
29-May-08	4.08	4.76
30-May-08	4.05	4.71
2-Jun-08	3.97	4.68
3-Jun-08	3.90	4.62
4-Jun-08	3.94	4.68
5-Jun-08	4.03	4.73
6-Jun-08	3.94	4.65
9-Jun-08	3.99	4.62
10-Jun-08	4.10	4.70
11-Jun-08	4.07	4.70
12-Jun-08	4.20	4.76
13-Jun-08	4.26	4.80
16-Jun-08	4.24	4.78
17-Jun-08	4.22	4.79
18-Jun-08	4.15	4.73
19-Jun-08	4.20	4.75
20-Jun-08	4.14	4.70
23-Jun-08	4.17	4.71
24-Jun-08	4.11	4.66
25-Jun-08	4.11	4.66
26-Jun-08	4.03	4.60
27-Jun-08	3.99	4.54
30-Jun-08	3.98	4.53
1-Jul-08	3.99	4.54
2-Jul-08	3.96	4.50
3-Jul-08	3.97	4.53
7-Jul-08	3.93	4.50
8-Jul-08	3.88	4.46
9-Jul-08	3.83	4.43
10-Jul-08	3.81	4.42
11-Jul-08	3.94	4.52
14-Jul-08	3.88	4.47
15-Jul-08	3.84	4.47

16-Jul-08	3.93	4.58
17-Jul-08	4.04	4.64
18-Jul-08	4.08	4.66
21-Jul-08	4.07	4.65
22-Jul-08	4.10	4.66
23-Jul-08	4.15	4.70
24-Jul-08	4.02	4.61
25-Jul-08	4.11	4.70
28-Jul-08	4.02	4.61
29-Jul-08	4.04	4.62
30-Jul-08	4.05	4.64
31-Jul-08	3.98	4.60
1-Aug-08	3.95	4.57
4-Aug-08	3.97	4.59
5-Aug-08	4.01	4.63
6-Aug-08	4.05	4.69
7-Aug-08	3.93	4.56
8-Aug-08	3.95	4.55
11-Aug-08	4.00	4.61
12-Aug-08	3.92	4.55
13-Aug-08	3.95	4.58
14-Aug-08	3.89	4.52
15-Aug-08	3.85	4.47
18-Aug-08	3.82	4.44
19-Aug-08	3.84	4.47
20-Aug-08	3.80	4.44
21-Aug-08	3.84	4.47
22-Aug-08	3.87	4.46
25-Aug-08	3.79	4.40
26-Aug-08	3.78	4.39
27-Aug-08	3.77	4.38
28-Aug-08	3.80	4.39
29-Aug-08	3.81	4.41
2-Sep-08	3.75	4.36
3-Sep-08	3.70	4.32
4-Sep-08	3.64	4.28
5-Sep-08	3.66	4.28
8-Sep-08	3.66	4.27
9-Sep-08	3.60	4.19
10-Sep-08	3.64	4.22
11-Sep-08	3.62	4.21
12-Sep-08	3.73	4.33
15-Sep-08	3.48	4.15

16-Sep-08	3.49	4.09
17-Sep-08	3.41	4.08
18-Sep-08	3.44	4.11
19-Sep-08	3.77	4.37

Averages:		
Last 63 days	3.8760	4.4768
Last 126 days	3.8463	4.5132
Last 189 days	3.8029	4.4864
Last 253 days	3.9325	4.5283
Average	3.8644	4.5012

Average of 10 and 30 Year Yields	4.1828
CAPM Cost of Equity Estimate	9.7620

Source: Yahoo.com

CAPM = risk free return + β(large company total return - risk free return)

= 4.182790652% + .858333(6.5%)

Value Line Betas:

ATG	0.85	
ATO	0.80	
CNP	0.90	
NJR	0.80	
SRE	0.95	
WGL	0.85	
AVG		0.858333333

Schedule D1.3
DCF Cost of Equity Estimate

Stock Prices[1] ($)

	ATG	ATO	CNP	NJR	SRE	WGL
09/20/07	39.7300	28.2300	16.3200	32.7267	59.1300	33.5800
09/21/07	40.0400	28.3000	16.5700	32.7667	59.8400	33.7400
09/24/07	39.9500	28.3200	16.4500	32.6600	59.2500	33.5300
09/25/07	39.8400	28.2500	16.3600	32.6800	58.7000	33.5600
09/26/07	39.7700	28.5000	16.4600	33.5133	59.0000	34.2200
09/27/07	39.8000	28.4400	16.3200	33.4733	58.9000	34.4000
09/28/07	39.6200	28.3200	16.0300	33.0600	58.1200	33.8900
10/01/07	40.0300	28.9200	16.4000	33.5667	58.9800	34.2900
10/02/07	39.9900	28.8300	16.4700	33.6200	58.2500	34.0600
10/03/07	40.1000	28.9200	16.4700	33.5733	58.3200	34.4000
10/04/07	40.4300	29.0000	16.4700	33.8000	58.6400	34.4200
10/05/07	40.6800	29.2800	16.8700	34.1133	58.6000	34.2900
10/08/07	40.6500	29.1700	17.0000	33.8800	58.1400	34.4800
10/09/07	41.0000	29.4400	17.1700	34.0000	58.9400	34.9200
10/10/07	40.4100	29.3200	16.9400	33.5533	58.3700	34.5400
10/11/07	40.3800	29.4600	16.7900	33.4267	59.3400	34.8300
10/12/07	40.0600	29.3800	16.9200	33.2800	59.2700	34.6700
10/15/07	39.8100	28.8500	16.6500	32.4733	59.7800	34.0600
10/16/07	39.2000	28.6300	16.4400	32.1933	59.8800	33.8700
10/17/07	38.8900	28.2700	16.3800	32.0400	59.6100	33.8500
10/18/07	38.8500	28.2900	16.3600	31.7800	59.5100	33.6400
10/19/07	38.2500	27.7800	15.9700	31.1667	58.1600	32.7800
10/22/07	37.2300	27.9200	16.1600	31.5333	58.5300	32.9400
10/23/07	37.4100	28.0600	16.0500	32.0333	58.7200	32.8200
10/24/07	37.6400	28.1200	16.0400	31.6200	58.5600	32.5700
10/25/07	38.0400	28.0800	16.2600	31.8667	59.5500	32.8800
10/26/07	38.7200	28.1200	16.4300	32.2333	60.0500	33.6000
10/29/07	38.7700	27.9600	16.4400	32.2000	60.6000	33.4800
10/30/07	38.7300	27.7700	16.5700	32.0867	60.3400	33.3000
10/31/07	39.5300	28.0500	16.7600	32.8333	61.5100	33.9200
11/01/07	38.7700	27.7600	16.6700	31.6467	60.2000	32.8400
11/02/07	38.2600	28.0800	17.1100	31.5333	61.2100	32.9100
11/05/07	37.7800	27.8300	17.6400	31.7000	62.0200	32.9400
11/06/07	38.1900	27.8400	18.2100	32.4133	62.3300	33.1400

11/07/07	37.1600	26.9500	18.0600	31.2467	60.1600	32.3600
11/08/07	38.3300	26.9600	18.5100	32.3800	61.5400	33.5800
11/09/07	38.0100	26.8000	18.2200	31.9067	60.0000	32.8000
11/12/07	37.6400	26.7700	17.6700	31.8200	59.2600	32.7200
11/13/07	37.7500	27.1200	17.9200	31.9867	59.5100	33.5000
11/14/07	36.6300	27.0200	17.8300	31.8400	58.9600	33.2200
11/15/07	36.8100	27.2100	17.8400	32.6067	58.9500	33.3900
11/16/07	36.9300	26.9000	17.6600	32.4867	60.1100	33.0000
11/19/07	36.6700	26.9000	17.5700	32.6200	60.9000	32.9100
11/20/07	36.7200	26.9200	17.7800	32.9333	61.1600	33.0400
11/21/07	36.4000	26.4700	17.4600	33.2133	60.5600	32.9400
11/23/07	36.1400	26.5800	17.4900	33.2400	60.5800	33.1800
11/26/07	36.1200	26.2100	17.4400	32.6933	60.9300	32.7400
11/27/07	36.6700	26.1300	17.4000	33.2200	61.4000	33.2400
11/28/07	37.5400	26.2000	17.6300	34.1400	62.4800	33.3900
11/29/07	36.9400	26.1100	17.6000	33.6133	62.2600	33.0300
11/30/07	37.0800	26.1900	17.8500	33.6333	62.6200	33.0400
12/03/07	37.1500	26.1800	17.9400	33.2467	62.3000	32.6800
12/04/07	37.5400	26.4900	18.0700	33.3667	62.8300	33.1300
12/05/07	38.1100	26.8200	18.2700	33.7933	63.8900	33.3200
12/06/07	38.5100	27.3900	18.0800	34.5467	63.8200	33.9100
12/07/07	38.3200	27.0700	18.1600	34.2533	63.5900	33.5300
12/10/07	38.2200	27.1900	18.2500	34.1267	63.8600	33.5700
12/11/07	37.6400	27.0300	18.0200	33.2933	62.1500	32.8800
12/12/07	37.3100	26.9400	18.0000	33.3333	62.1600	32.7400
12/13/07	37.1300	27.2800	18.3700	33.7733	62.6300	33.1400
12/14/07	36.2500	26.8800	18.3300	32.6600	61.1800	32.2100
12/17/07	35.8100	26.7400	18.1600	32.6733	61.0200	32.0500
12/18/07	36.1500	27.1500	18.2000	33.2733	61.7800	32.4300
12/19/07	36.2400	27.4300	18.1000	33.2400	61.3400	32.5500
12/20/07	36.2900	28.0000	17.3400	33.2333	61.4000	33.0100
12/21/07	37.1700	28.6500	17.3800	34.0000	62.7200	34.0200
12/24/07	37.2600	28.7600	17.6500	34.3000	63.0700	34.2200
12/26/07	37.2700	28.3900	17.6000	34.0133	62.3200	33.9400
12/27/07	37.3800	28.2100	17.5200	33.3333	61.7800	33.4100
12/28/07	37.4200	28.1000	17.4700	33.3467	62.2600	33.2300
12/31/07	37.6400	28.0400	17.1300	33.3467	61.8800	32.7600
01/02/08	37.3000	27.9500	16.8700	32.5867	61.4100	32.5500
01/03/08	36.9300	27.7900	16.6800	32.4667	60.8500	32.5000
01/04/08	36.8000	27.6700	16.5200	32.4733	60.2500	32.2200
01/07/08	37.2700	27.9400	16.6200	32.9067	60.6000	32.6300
01/08/08	37.3700	28.0000	16.7300	32.4200	60.9800	31.5900
01/09/08	38.0000	28.1700	16.9800	33.0933	61.9500	32.8200

01/10/08	38.0800	28.0200	16.9700	33.3467	61.7800	34.2800
01/11/08	38.3900	27.8500	16.8200	33.1733	62.5700	33.9700
01/14/08	37.9600	27.8700	16.7500	33.0800	62.4500	34.1400
01/15/08	37.3900	27.5600	16.4300	32.7067	61.6500	33.4200
01/16/08	37.7200	27.6000	16.5500	32.8133	60.4400	33.7900
01/17/08	37.1300	27.3600	16.0100	32.0667	58.5600	33.2800
01/18/08	36.6900	26.9200	15.8800	31.0933	57.3000	32.6200
01/22/08	36.3800	26.9100	15.4600	30.1267	55.0900	32.2200
01/23/08	37.6900	27.8500	15.8300	31.4533	56.1100	33.1400
01/24/08	36.8200	27.5600	15.4100	30.5733	54.9800	32.2600
01/25/08	36.8800	27.4700	15.3300	30.4467	54.0900	31.8100
01/28/08	37.2200	27.8000	15.8000	31.0000	54.7900	32.2100
01/29/08	37.4900	28.3200	15.7500	30.9400	54.9900	32.0500
01/30/08	36.9800	28.2500	15.7700	30.4600	54.8500	31.7900
01/31/08	37.8500	28.7400	15.9900	31.2200	55.9000	32.2400
02/01/08	38.4600	28.9600	16.1500	31.4933	56.9800	32.3300
02/04/08	39.0300	28.9100	16.3400	32.3733	58.1100	32.8000
02/05/08	37.8400	28.3300	15.8900	31.5067	56.1500	32.1200
02/06/08	37.6300	27.6300	15.8500	32.1600	56.1700	32.0800
02/07/08	36.7600	27.4600	15.7600	32.7200	55.8600	32.2400
02/08/08	36.9200	27.5100	15.5800	32.3800	55.6100	32.2100
02/11/08	36.8800	27.9600	15.4700	32.3267	55.1200	31.8000
02/12/08	37.1000	27.6300	15.6800	32.1800	56.5500	31.7800
02/13/08	36.4400	27.5100	15.4900	33.2400	56.3800	31.8900
02/14/08	36.4300	27.2400	15.2800	32.7467	55.7300	32.2300
02/15/08	36.3800	27.0400	15.3000	32.6200	55.5400	32.4300
02/19/08	36.2700	27.2300	15.4500	32.7333	55.3200	32.7100
02/20/08	36.5000	27.6500	15.5300	32.7200	55.2100	33.1000
02/21/08	35.7700	26.8500	15.1800	31.9867	54.4200	32.5100
02/22/08	35.6500	26.7200	15.3400	32.0133	54.4500	32.5100
02/25/08	36.4200	27.0700	15.3900	32.4200	54.8700	33.0400
02/26/08	36.4400	27.1300	15.3300	32.0733	55.7700	33.2600
02/27/08	36.1600	26.7400	15.2400	32.0333	54.9500	32.9300
02/28/08	35.8000	26.6100	15.2700	31.6267	54.8600	32.3400
02/29/08	34.6800	26.0000	14.6800	30.6733	53.1300	31.1900
03/03/08	35.0300	26.0700	14.5100	31.1000	52.7600	31.3300
03/04/08	35.5400	26.3400	14.5800	31.2700	52.5700	31.8300
03/05/08	35.3300	26.2400	14.5000	30.7500	52.7500	31.6600
03/06/08	34.4400	25.8700	14.2600	30.0400	52.1900	30.7600
03/07/08	34.5500	25.7800	14.2000	29.8200	52.1000	30.7800
03/10/08	34.3600	25.6000	14.2800	29.8100	51.6700	31.2500
03/11/08	34.7800	26.0300	14.5600	30.4700	52.8000	32.2000
03/12/08	34.4600	25.6700	14.2000	30.4200	52.6500	31.8200

03/13/08	34.7300	25.8500	14.0000	31.1200	52.7000	32.3500
03/14/08	34.4300	25.9000	13.9100	30.9400	52.7800	32.3000
03/17/08	33.8200	25.6100	13.8400	30.9600	51.0000	32.0100
03/18/08	34.3900	25.6800	14.1700	31.8300	51.2700	33.0800
03/19/08	33.9800	25.2800	13.9600	31.1800	50.1100	32.2000
03/20/08	33.9600	25.2200	14.1600	30.9400	49.5200	32.2400
03/24/08	34.1900	25.1100	13.9100	30.9100	50.2500	31.9000
03/25/08	34.5100	25.1000	14.2400	30.8300	50.7500	31.8500
03/26/08	33.8000	25.2400	14.2200	30.8500	51.0200	31.8600
03/27/08	34.0500	25.3000	14.1900	30.6500	53.0000	31.8000
03/28/08	33.8500	25.0900	14.0500	30.5500	52.9800	31.6500
03/31/08	34.3200	25.5000	14.2700	31.0500	53.2800	32.0600
04/01/08	35.2700	26.2700	14.6600	31.9000	54.3100	32.7600
04/02/08	34.9100	26.7800	15.0400	32.4300	55.2900	33.1600
04/03/08	34.6000	26.7200	14.8200	31.6200	54.6500	32.9500
04/04/08	34.0500	26.4400	14.9400	31.0300	54.3000	32.4800
04/07/08	34.6000	26.8200	15.1400	31.4200	55.1700	32.5600
04/08/08	34.6200	26.4100	15.1500	31.5900	55.1600	32.3200
04/09/08	34.2700	26.2500	15.1500	31.4900	54.4600	32.3000
04/10/08	34.0300	26.0500	15.0300	31.6700	54.6400	32.3100
04/11/08	33.8500	25.8100	15.0900	31.1300	55.0200	31.9100
04/14/08	33.9200	25.8300	15.1400	31.5300	55.0700	32.2500
04/15/08	34.2000	26.3000	15.2600	32.2100	55.4900	32.6700
04/16/08	35.2700	27.0700	15.4500	33.2000	56.8600	33.6900
04/17/08	35.2000	27.1100	15.4700	32.7500	56.7800	33.5400
04/18/08	35.3900	27.3600	15.6900	32.9900	57.2400	33.9000
04/21/08	35.0700	27.0100	15.4900	32.6900	56.7700	33.4800
04/22/08	34.7300	26.8100	15.4100	32.1600	56.5200	33.0600
04/23/08	34.8600	27.3100	15.4700	32.6300	57.5000	33.4600
04/24/08	35.0800	27.6400	15.4400	32.8000	57.2400	33.6200
04/25/08	35.1000	27.8800	15.5700	33.0500	57.0400	33.3600
04/28/08	35.0900	28.0700	15.6900	32.6100	56.9800	33.3900
04/29/08	35.0000	27.9400	15.6200	32.4100	56.6700	32.9800
04/30/08	34.0000	27.6800	15.2200	31.8500	56.6700	32.8000
05/01/08	35.1600	28.1000	15.5500	32.7100	56.8800	34.7900
05/02/08	34.9700	27.9700	15.7200	32.6700	58.8000	34.4800
05/05/08	35.5500	28.4400	15.5400	32.7100	57.7300	34.6800
05/06/08	35.8200	28.4300	15.4400	32.8000	57.8900	34.4500
05/07/08	35.6600	27.9000	15.1600	32.3300	57.2700	34.0100
05/08/08	35.7100	27.6500	15.3900	32.3700	57.1600	33.9300
05/09/08	35.8200	27.8600	15.2300	32.6700	57.1600	34.0000
05/12/08	36.2500	27.9800	15.5000	33.1700	57.8900	34.5100
05/13/08	36.3300	28.1300	15.6300	33.4900	58.3100	34.9700

05/14/08	36.4400	28.5400	15.7800	33.5500	58.9700	35.1000
05/15/08	36.2400	28.3400	15.7100	33.6900	58.7900	34.7600
05/16/08	35.7200	28.2800	15.8500	33.6400	59.1900	34.8500
05/19/08	35.8900	28.2100	15.8700	33.6200	59.3500	34.7900
05/20/08	35.7500	28.0500	16.0300	33.7000	59.2700	34.9500
05/21/08	35.6000	28.0200	15.9800	33.9300	59.3000	34.8400
05/22/08	35.7000	27.5300	16.3100	34.3300	59.1500	35.2500
05/23/08	35.2000	27.3100	16.3300	33.5900	57.5400	34.7300
05/27/08	35.4600	27.5400	16.7200	34.2300	58.5800	35.5000
05/28/08	35.6600	27.5600	16.8800	34.0100	58.2200	35.4800
05/29/08	36.0500	27.4000	17.1600	33.8800	58.0000	35.2700
05/30/08	35.7000	27.3900	16.9400	33.3100	57.8100	34.8900
06/02/08	35.7300	27.1600	16.8700	33.1900	57.2400	34.5800
06/03/08	35.7000	27.0600	16.7000	32.8800	56.7500	34.7600
06/04/08	35.9500	27.2200	16.9700	33.2700	57.3300	35.3600
06/05/08	36.4200	27.4100	17.1000	34.0000	58.0100	36.0100
06/06/08	35.8900	27.0600	16.6400	33.4600	56.2600	35.1100
06/09/08	35.8800	27.1500	16.9100	33.5800	56.4800	35.2300
06/10/08	35.3600	27.0500	16.8300	33.5700	56.4100	35.2000
06/11/08	34.8500	26.8500	16.5300	32.8200	55.9200	34.8300
06/12/08	34.2900	26.5500	16.4500	32.9200	55.9600	34.8100
06/13/08	34.2300	26.4300	16.5600	33.2500	56.4000	34.9800
06/16/08	34.0800	26.6700	16.5600	33.5200	56.8500	35.2500
06/17/08	34.1500	26.8800	16.5200	33.4600	56.5700	35.7100
06/18/08	34.6200	27.3200	16.4900	33.9100	56.2000	35.5600
06/19/08	34.5600	27.4400	16.5200	33.7900	56.2300	35.1900
06/20/08	34.2900	27.2000	16.1500	33.7600	55.3700	34.7900
06/23/08	34.1600	27.6700	16.2100	33.9200	55.6000	35.6100
06/24/08	33.5300	27.2800	16.0300	33.1900	55.4200	35.1600
06/25/08	33.9300	27.4400	16.2100	33.5300	55.9800	35.6500
06/26/08	33.9400	27.0800	15.8900	32.8500	55.1900	35.0400
06/27/08	33.9400	26.8000	15.5400	32.1400	55.2200	34.6000
06/30/08	34.5800	27.5700	16.0500	32.6500	56.4500	34.7400
07/01/08	34.2200	27.7500	16.0300	32.9200	57.7600	35.1100
07/02/08	33.5600	27.7300	16.0100	32.4700	56.8100	34.7700
07/03/08	32.7200	27.2100	15.9000	32.0300	56.2600	34.3200
07/07/08	32.9900	26.6500	15.8100	32.0000	55.7700	34.2400
07/08/08	33.6300	26.5800	15.8300	32.5800	54.9000	34.5300
07/09/08	34.0400	26.7200	16.0000	32.7700	55.5700	34.7300
07/10/08	33.7400	26.7800	16.0800	33.1900	56.1800	34.8600
07/11/08	33.8000	26.6800	15.9400	33.5500	55.9000	34.6800
07/14/08	33.6200	26.2600	15.7100	32.9500	55.8400	34.4300
07/15/08	33.5000	26.0100	15.5600	32.9500	55.9800	34.4100

07/16/08	33.2700	25.8200	15.4200	32.5800	54.9400	33.7700
07/17/08	33.4000	25.4900	15.3700	32.2800	53.8100	33.6800
07/18/08	33.3400	25.5100	15.3400	32.0400	54.6100	33.4400
07/21/08	33.2400	25.5100	15.6300	32.2600	54.7300	33.2900
07/22/08	33.5000	25.7500	15.6500	33.1000	54.8900	33.9600
07/23/08	33.3900	26.0100	15.4300	32.8500	54.4500	33.5200
07/24/08	33.5400	25.9500	15.2600	33.2500	55.0200	33.7900
07/25/08	33.5300	25.7700	15.1900	33.4900	54.4800	33.9400
07/28/08	33.5000	25.8900	15.1500	33.1300	54.2300	33.8900
07/29/08	33.3900	25.6400	15.1600	33.1000	54.6500	34.0000
07/30/08	34.2000	26.3500	15.6000	33.8300	55.4700	34.8000
07/31/08	34.5600	26.4700	15.7700	34.0900	56.1600	34.5300
08/01/08	33.5000	26.4500	15.3200	33.5100	55.1200	34.6700
08/04/08	32.8900	26.2200	15.2100	33.2000	54.8300	34.6600
08/05/08	33.4600	27.0200	15.5100	33.7800	55.7000	33.4100
08/06/08	33.3800	26.9800	16.0300	33.7000	55.9800	32.5500
08/07/08	33.0200	26.5700	15.8300	33.7500	55.8100	31.7500
08/08/08	33.1400	26.7000	16.2500	34.2400	57.1700	32.4100
08/11/08	33.6000	27.0800	16.5900	35.2500	57.7600	33.0300
08/12/08	33.1100	26.7200	16.1500	35.6000	56.6600	32.6700
08/13/08	32.8700	26.8000	15.9700	35.6800	57.0400	32.6300
08/14/08	32.3900	26.7100	15.9400	35.7700	56.5900	32.4000
08/15/08	32.4300	26.6900	15.8400	36.0200	57.1300	32.4600
08/18/08	32.7900	27.1900	15.7200	36.1400	57.3500	32.7200
08/19/08	33.0000	27.4200	15.8900	36.1000	56.7700	32.7500
08/20/08	32.9700	27.5400	15.8600	35.7600	57.1300	32.9200
08/21/08	32.8100	27.0500	16.0000	35.6800	57.0200	32.6100
08/22/08	32.8200	26.8500	16.0800	35.8900	57.4100	32.6900
08/25/08	32.5300	26.6900	15.9900	35.6700	57.3500	32.0800
08/26/08	32.7900	27.0400	16.1500	35.8300	57.3300	32.0500
08/27/08	33.2900	27.4100	15.8400	35.9800	58.0800	32.2300
08/28/08	33.3600	27.6100	16.1400	36.2200	58.5800	32.5700
08/29/08	33.0600	27.5400	15.8800	36.1800	57.9200	32.2000
09/02/08	33.2300	27.5000	15.6900	36.3500	57.7300	32.4800
09/03/08	32.8500	27.2700	15.6800	35.9900	57.0500	32.5700
09/04/08	32.3900	26.7400	15.6900	35.0700	56.2500	32.0000
09/05/08	31.9400	26.4600	15.7500	34.7400	56.0800	31.6400
09/08/08	32.6200	26.5100	16.0300	35.9000	57.3600	32.9000
09/09/08	32.1600	26.1200	15.3000	35.6900	57.2000	32.4800
09/10/08	32.3600	26.3700	15.6300	35.9900	56.9400	33.0100
09/11/08	32.7900	26.8600	15.2900	36.2300	57.7000	33.4200
09/12/08	33.0900	27.4500	15.4500	36.5100	58.1700	33.8300
09/15/08	32.0200	26.4700	14.9700	35.6600	56.4200	33.0300

09/16/08	31.8900	26.5700	14.8700	36.9800	53.0400	33.4900
09/17/08	31.4100	25.8600	14.1300	36.3000	50.5700	32.0700
09/18/08	33.2800	28.2500	13.9800	38.9000	51.7400	34.7500
09/19/08	33.7800	28.1000	14.8300	38.7500	53.4900	35.1400
AVERAGE ($)	35.7664	27.2045	16.0758	32.9936	57.3456	33.3614
QUARTERLY DIV.[2] ($)	0.4100	0.3250	0.1700	0.2670	0.3100	0.3430
	0.4200	0.3250	0.1830	0.2800	0.3100	0.3430
	0.4200	0.3250	0.1830	0.2800	0.3200	0.3550
	0.4200	0.3250	0.1830	0.2800	0.3500	0.3550
ANNUAL DIVIDEND ($)	1.6700	1.3000	0.7190	1.1070	1.2900	1.3960
YIELD	4.67%	4.78%	4.47%	3.36%	2.25%	4.18%
EARNINGS GROWTH ESTIMATES:						
MSN[3]	4.80%	5.40%	9.00%	8.00%	7.00%	7.50%
YAHOO[4]	5.25%	5.00%	18.00%	6.00%	7.76%	4.00%
VALUE LINE[5]:						
'07 EARNINGS ($)	2.75	1.98	1.20	1.10	3.75	2.40
'11 EARNINGS ($)	3.15	2.45	1.50	2.80	5.75	2.55
VALUE LINE CALCULATED	3.40%	7.10%	7.44%	31.14%	10.69%	1.52%
VALUE LINE, "BOXED"	3.00%	4.50%	6.00%	8.50%	6.00%	3.50%
VALUE LINE (AVERAGE)	3.20%	5.80%	6.72%	19.82%	8.34%	2.51%
DCF GROWTH ESTIMATE	4.42%	5.40%	11.24%	11.27%	7.70%	4.67%
DCF COST OF EQUITY ESTIMATE	10.66%	11.20%	13.88%	12.30%	9.41%	10.33%
DCF AVERAGE				11.30%		
CAPM COST OF EQUITY ESTIMATE				9.76%		
COST OF EQUITY ESTIMATE				10.53%		

Sources:

1 MSN Investor
2 MSN Investor & Value Line Investment Guide
3 moneycentral.msn.com
4 finance.yahoo.com
5 Value Line Investment Guide

Schedule D-1.4
ATG Non-Constant DCF Calculation

		non const		const	
g=	4.42%	dcf=	10.66%	dcf=	9.29%
D=	$1.67			g(e)=	6.74%
		P=	$35.77		

YEAR	GROWTH RATE	DIVIDEND
1	4.42%	$1.74
2	4.42%	$1.82
3	4.42%	$1.90
4	4.42%	$1.99
5	4.42%	$2.07
6	4.53%	$2.17
7	4.65%	$2.27
8	4.76%	$2.38
9	4.88%	$2.49
10	5.00%	$2.62
11	5.11%	$2.75
12	5.23%	$2.89
13	5.34%	$3.05
14	5.46%	$3.21
15	5.58%	$3.39
16	5.69%	$3.59
17	5.81%	$3.79
18	5.92%	$4.02
19	6.04%	$4.26
20	6.16%	$4.52
21	6.27%	$4.81
22	6.39%	$5.12
23	6.50%	$5.45
24	6.62%	$5.81
25	6.74%	$6.20
26	6.74%	$6.62
27	6.74%	$7.06
28	6.74%	$7.54
29	6.74%	$8.05
30	6.74%	$8.59

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.3

g(e) is from Schedule D-1.10

Schedule D-1.5

ATO Non-Constant DCF Calculation

g=	5.40%	non const dcf=	11.20%	const dcf=	10.44%
D=	$1.30			g(e)=	6.74%
		P=	$27.20		

YEAR	GROWTH RATE	DIVIDEND
1	5.40%	$1.37
2	5.40%	$1.44
3	5.40%	$1.52
4	5.40%	$1.60
5	5.40%	$1.69
6	5.47%	$1.78
7	5.53%	$1.88
8	5.60%	$1.99
9	5.67%	$2.10
10	5.73%	$2.22
11	5.80%	$2.35
12	5.87%	$2.49
13	5.93%	$2.63
14	6.00%	$2.79
15	6.07%	$2.96
16	6.13%	$3.14
17	6.20%	$3.34
18	6.27%	$3.55
19	6.34%	$3.77
20	6.40%	$4.01
21	6.47%	$4.27
22	6.54%	$4.55
23	6.60%	$4.85
24	6.67%	$5.18
25	6.74%	$5.53
26	6.74%	$5.90
27	6.74%	$6.30
28	6.74%	$6.72
29	6.74%	$7.17
30	6.74%	$7.66

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.3
g(e) is from Schedule D-1.10

Schedule D-1.6

CNP Non-Constant DCF Calculation

g=	11.24%	non const dcf=	13.88%	const dcf=	16.21%
D=	$0.72			g(e)=	6.74%
		P=	$16.08		

YEAR	GROWTH RATE	DIVIDEND
1	4.42%	$1.74
2	4.42%	$1.82
3	4.42%	$1.90
4	4.42%	$1.99
5	4.42%	$2.07
6	4.53%	$2.17
7	4.65%	$2.27
8	4.76%	$2.38
9	4.88%	$2.49
10	5.00%	$2.62
11	5.11%	$2.75
12	5.23%	$2.89
13	5.34%	$3.05
14	5.46%	$3.21
15	5.58%	$3.39
16	5.69%	$3.59
17	5.81%	$3.79
18	5.92%	$4.02
19	6.04%	$4.26
20	6.16%	$4.52
21	6.27%	$4.81
22	6.39%	$5.12
23	6.50%	$5.45
24	6.62%	$5.81
25	6.74%	$6.20
26	6.74%	$6.62
27	6.74%	$7.06
28	6.74%	$7.54
29	6.74%	$8.05
30	6.74%	$8.59

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.3
g(e) is from Schedule D-1.10

Schedule D-1.7
NJR Non-Constant DCF Calculation

		non const			const	
g=	11.27%	dcf=		12.30%	dcf=	15.01%
D=	$1.11				g(e)=	6.74%
			P=	$32.99		

YEAR	GROWTH RATE	DIVIDEND
1	11.27%	$1.23
2	11.27%	$1.37
3	11.27%	$1.53
4	11.27%	$1.70
5	11.27%	$1.89
6	11.05%	$2.10
7	10.82%	$2.32
8	10.59%	$2.57
9	10.37%	$2.84
10	10.14%	$3.12
11	9.91%	$3.43
12	9.69%	$3.77
13	9.46%	$4.12
14	9.23%	$4.50
15	9.00%	$4.91
16	8.78%	$5.34
17	8.55%	$5.80
18	8.32%	$6.28
19	8.10%	$6.79
20	7.87%	$7.32
21	7.64%	$7.88
22	7.42%	$8.47
23	7.19%	$9.07
24	6.96%	$9.71
25	6.74%	$10.36
26	6.74%	$11.06
27	6.74%	$11.80
28	6.74%	$12.60
29	6.74%	$13.45
30	6.74%	$14.35

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation

g, D, P are from Schedule D-1.3
g(e) is from Schedule D-1.10

Schedule D-1.8

SRE Non-Constant DCF Calculation

g=	7.70%	non const dcf=	9.41%	const dcf=	10.12%
D=	$1.29			g(e)=	6.74%
		P=	$57.35		

YEAR	GROWTH RATE	DIVIDEND
1	7.70%	1.39
2	7.70%	1.50
3	7.70%	1.61
4	7.70%	1.74
5	7.70%	1.87
6	7.65%	2.01
7	7.60%	2.17
8	7.56%	2.33
9	7.51%	2.50
10	7.46%	2.69
11	7.41%	2.89
12	7.36%	3.10
13	7.31%	3.33
14	7.27%	3.57
15	7.22%	3.83
16	7.17%	4.10
17	7.12%	4.40
18	7.07%	4.71
19	7.03%	5.04
20	6.98%	5.39
21	6.93%	5.76
22	6.88%	6.16
23	6.83%	6.58
24	6.78%	7.03
25	6.74%	7.50
26	6.74%	8.01
27	6.74%	8.55
28	6.74%	9.12

29	6.74%	9.74
30	6.74%	10.39

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.3
g(e) is from Schedule D-1.10

Schedule D-1.9

WGL Non-Constant DCF Calculation

g=	4.67%	non const dcf=	10.33%	const dcf=	9.05%
D=	$1.40			g(e)=	6.74%
		P=	$33.36		

YEAR	GROWTH RATE	DIVIDEND
1	4.67%	$1.46
2	4.67%	$1.53
3	4.67%	$1.60
4	4.67%	$1.68
5	4.67%	$1.75
6	4.77%	$1.84
7	4.88%	$1.93
8	4.98%	$2.02
9	5.08%	$2.13
10	5.19%	$2.24
11	5.29%	$2.35
12	5.39%	$2.48
13	5.50%	$2.62
14	5.60%	$2.76
15	5.70%	$2.92
16	5.81%	$3.09
17	5.91%	$3.27
18	6.01%	$3.47
19	6.12%	$3.68
20	6.22%	$3.91
21	6.32%	$4.16
22	6.43%	$4.43
23	6.53%	$4.72
24	6.63%	$5.03
25	6.74%	$5.37
26	6.74%	$5.73
27	6.74%	$6.12
28	6.74%	$6.53
29	6.74%	$6.97
30	6.74%	$7.44

This schedule is truncated; the calculation extends to 400 years to ensure the stability of the calculation.

g, D, P are from Schedule D-1.3
g(e) is from Schedule D-1.10

Schedule D-1.10

Growth in U.S. Gross National Product, 1929 to 2007

Year	GNP ($billion)	Change ($billion)	Growth%
1929	104.4		
1930	91.90	-12.70	-12.32%
1931	77.00	-14.60	-16.15%
1932	59.10	-17.80	-23.48%
1933	56.70	-2.40	-4.14%
1934	66.30	9.50	17.09%
1935	73.60	7.10	10.91%
1936	84.00	10.30	14.27%
1937	92.20	7.90	9.58%
1938	86.50	-5.70	-6.31%
1939	92.50	6.60	7.79%
1940	101.70	9.10	9.97%
1941	127.20	25.10	25.00%
1942	162.30	33.50	26.69%
1943	198.90	33.70	21.19%
1944	220.10	18.70	9.70%
1945	223.40	2.00	0.95%
1946	222.90	-1.00	-0.47%
1947	245.30	22.80	10.73%
1948	270.60	26.40	11.22%
1949	268.60	-1.20	-0.46%
1950	295.20	27.90	10.71%
1951	341.20	45.10	15.64%
1952	360.30	18.20	5.46%
1953	381.30	20.00	5.69%
1954	382.50	0.90	0.24%
1955	417.20	33.40	8.97%
1956	440.30	22.30	5.49%
1957	464.10	22.80	5.32%
1958	469.80	5.80	1.29%
1959	509.30	53.50	11.71%
1960	529.50	20.30	3.98%
1961	548.20	18.70	3.52%
1962	589.70	41.40	7.54%
1963	622.20	32.50	5.50%

1964	668.50	46.20	7.41%
1965	724.40	56.10	8.38%
1966	792.90	69.00	9.51%
1967	838.00	45.00	5.66%
1968	916.10	78.10	9.30%
1969	990.70	73.90	8.05%
1970	1,044.90	54.60	5.51%
1971	1,134.70	90.10	8.61%
1972	1,246.80	112.90	9.94%
1973	1,395.30	149.10	11.94%
1974	1,515.50	118.50	8.48%
1975	1,651.30	131.70	8.68%
1976	1,842.10	192.60	11.68%
1977	2,051.20	211.10	11.47%
1978	2,316.30	265.90	12.96%
1979	2,595.30	281.30	12.14%
1980	2,823.70	231.50	8.91%
1981	3,161.40	335.30	11.84%
1982	3,291.50	129.60	4.09%
1983	3,573.80	276.10	8.38%
1984	3,969.50	396.30	11.10%
1985	4,246.80	270.30	6.81%
1986	4,480.60	229.90	5.42%
1987	4,757.40	287.90	6.44%
1988	5,127.40	370.60	7.79%
1989	5,510.60	382.60	7.46%
1990	5,837.90	322.80	5.86%
1991	6,026.30	178.70	3.06%
1992	6,367.40	331.40	5.51%
1993	6,689.30	324.40	5.11%
1994	7,098.40	404.40	6.07%
1995	7,433.40	349.80	4.95%
1996	7,851.90	410.30	5.53%
1997	8,337.30	473.80	6.05%
1998	8,768.30	445.00	5.36%
1999	9,302.20	486.20	5.56%
2000	9,855.90	553.70	5.95%
2001	10,171.60	315.70	3.20%
2002	10,500.20	328.60	3.23%
2003	11,017.60	517.40	4.93%
2004	11,762.10	744.50	6.76%
2005	12,502.40	740.30	6.29%
2006	13,252.70	750.30	6.00%

2007	13,937.10	684.40	5.16%
Average			6.74%

Sources: (1) National Income and Product Accounts (NIPA) from the U. S. Bureau of Economic Analysis and Econostats; BEA Data; NIPA Index; Section 1. Domestic Product and Income Table 1.7.5 Relation of Gross Domestic Product, Gross National Product, Net National Product, National Income, and Personal Income. (2) U. S. Department of Commerce; Survey of Current of the United States Business and Historical Statistics