BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Investigation into Pricing Unbundled Network Elements	)))	Docket 990649B-TP

REBUTTAL TESTIMONY OF

JAMES H. VANDER WEIDE

on behalf of

VERIZON FLORIDA INC.

SUBJECT: COST OF CAPITAL

March 18, 2002

DOCUMENT NUMBER-DATE
03124 MAR 18 02
FPSC-COMMISSION CLERK

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REBUTTAL TESTIMONY OF JAMES H. VANDER WEIDE

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James H. Vander Weide. I am Research Professor of Finance and Economics at the Fuqua School of Business of Duke University. I am also President of Financial Strategy Associates, a firm that provides strategic and financial consulting services to clients in the electric, gas, insurance, telecommunications, and water industries. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

Q. ARE YOU THE SAME JAMES H. VANDER WEIDE THAT PREVIOUSLY FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I have been asked by Verizon Florida Inc. (Verizon Florida) to review the testimonies of Mr. David J. Draper on behalf of Staff, Dr. George S. Ford on behalf of Z-Tel Communications, Inc., and Dr. August H. Ankum on behalf of the ALEC Coalition, and to respond to their cost of capital recommendations in this proceeding.

II. REBUTTAL OF MR. DRAPER

A. ECONOMIC PRINCIPLES

Q. HAS THE FCC ESTABLISHED ANY ECONOMIC PRINCIPLES FOR

SETTING RATES FOR UNBUNDLED NETWORK ELEMENTS?

A. Yes. In its First Report and Order, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996* ("Local Competition Order"), the FCC decided that three fundamental economic principles should be used to set rates for unbundled network elements. First, the FCC decided that rates for unbundled network elements should be based on forward-looking economic costs, not embedded or accounting costs. Second, the FCC decided that rates for unbundled network elements should approximate the rates the incumbent LEC would be able to charge in a competitive market for unbundled network elements. Third, the FCC decided that rates for unbundled network elements should provide correct economic signals for the investment decisions of both competitive and incumbent local exchange carriers.

Q. HOW WOULD A FORWARD-LOOKING ECONOMIC COST OF CAPITAL DIFFER FROM A COST OF CAPITAL BASED ON EMBEDDED OR ACCOUNTING COSTS?

A. As noted in my direct testimony, a forward-looking economic cost of capital would be based on market interest rates, market costs of equity, and a market value capital structure. In contrast, a cost of capital based on embedded or accounting costs would reflect the embedded cost of debt, the rate of return on book equity, and a book value capital structure.

Q. IS MR. DRAPER'S COST OF CAPITAL RECOMMENDATION IN THIS

PROCEEDING CONSISTENT WITH THE FCC'S FORWARD-LOOKING ECONOMIC COST PRINCIPLE?

A. No. Mr. Draper's cost of capital recommendation in this proceeding is based on his proxy telecommunications companies' book value capital structures, which reflect—contrary to the FCC's guidelines—the embedded, historical, and accounting costs of these companies' assets.

Q. CAN YOU EXPLAIN WHY THE BOOK VALUE CAPITAL STRUCTURES OF MR. DRAPER'S TELECOMMUNICATIONS GROUP REFLECT THE HISTORICAL, EMBEDDED, OR ACCOUNTING COSTS, OF THESE COMPANIES' ASSETS?

A. Yes. The book value of a company's equity is defined as the book value of a company's assets minus the book value of the company's debt:

Book Value of Equity = Book Value of Assets - Book Value of Debt.

Since the book value of a company's assets, in turn, is equal to the historical cost of a company's assets minus accumulated depreciation, the book value of a company's equity can also be stated as the historical cost of a company's assets, minus the accumulated book depreciation on these assets, minus the book value of a company's debt:

Book Value of Equity = Historical Cost of Assets – Accumulated Book Depreciation – Book Value of Debt

Thus, the book value of a company's equity reflects the historical cost of the company's assets. Similarly, the book value of a company's debt reflects the historical costs of the company's debt financing.

Q. IN ITS RECENT DECISION IN DOCKET NO. 990649TP, THE COMMISSION ADOPTED A BOOK VALUE CAPITAL STRUCTURE ON THE GROUNDS THAT THE TELECOMMUNICATIONS ACT REQUIRES USE OF FORWARD-LOOKING COSTS, BUT NOT THE USE OF MARKET VALUE CAPITAL STRUCTURES. DO YOU AGREE WITH THE COMMISSION'S ARGUMENT REGARDING THE USE OF A MARKET VALUE CAPITAL STRUCTURE?

A. No. The FCC has interpreted the Telecommunications Act to require the use of forward-looking ***economic*** costs, not historical, embedded, or accounting costs. Economic costs are based on ***market values***, not accounting or book values. I have taught corporate finance and economics for more than 30 years, and I have never seen a reputable finance or economic text recommend the use of book value capital structures to estimate the cost of capital.

Q. WHY DID THE FCC RECOMMEND THE USE OF FORWARD-LOOKING *ECONOMIC* COSTS, RATHER THAN HISTORICAL OR ACCOUNTING COSTS?

A. The FCC recommended the use of forward-looking ***economic*** costs, rather than historical or accounting costs, because it wanted to send correct economic signals to new entrants who were deciding whether to purchase unbundled network elements or to purchase their own facilities. For example, in paragraph 620 of the Local Competition Order, the FCC states:

> In the following sections, we first set forth ... a cost-based

pricing methodology based on forward-looking economic costs, which we conclude is the approach for setting prices that best furthers the goals of the 1996 Act. In dynamic competitive markets, firms take action based not on embedded costs, but on the relationship between market-determined prices and forward-looking economic costs. If market prices exceed forward-looking economic costs, new competitors will enter the market. If their forward-looking economic costs exceed market prices, new competitors will not enter the market and existing competitors may decide to leave. Prices for unbundled elements under section 251 must be based on cost under the law, and that should be read as requiring that prices be based on forward-looking economic costs. New entrants should make their decisions whether to purchase unbundled elements or to build their own facilities based on the relative economic costs of these options. By contrast, because the cost of building an element is based on forward-looking economic costs, new entrants' investment decisions would be distorted if the price of unbundled elements were based on embedded costs. In arbitrations of interconnection arrangements, or in rulemakings the results of which will be applied in arbitrations, states must set prices for interconnection and unbundled network elements based on the forward-looking, long-run, incremental cost methodology we describe below.

Q. YOU NOTED ABOVE THAT THE FCC REQUIRES THAT RATES FOR UNBUNDLED NETWORK ELEMENTS BE BASED ON FORWARD-LOOKING *ECONOMIC* COSTS, NOT HISTORICAL OR ACCOUNTING COSTS. ARE ALL FORWARD-LOOKING ECONOMIC ESTIMATES OF THE COST OF CAPITAL CONSISTENT WITH THE FCC'S ECONOMIC GUIDELINES FOR SETTING UNE RATES?

A. No. As noted above, the FCC also requires that UNE rates: (1) approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs; and (2) send correct economic signals to both potential new entrants and incumbent LECs. Forward-looking economic cost estimates that fail to approximate the cost of capital the incumbent LEC would incur in a competitive market for UNEs, and that fail to provide correct economic signals to both potential new entrants and incumbent LECs in making network investment decisions, are inconsistent with the FCC's economic guidelines for setting UNE rates.

Q. IS MR. DRAPER'S COST OF CAPITAL ESTIMATE IN THIS PROCEEDING CONSISTENT WITH THE FCC'S PRINCIPLE THAT UNE RATES MUST APPROXIMATE THE RATES THE INCUMBENT LEC WOULD BE ABLE TO CHARGE IN A COMPETITIVE MARKET FOR UNES?

A. No. Since competitive companies use market value capital structures to estimate their weighted average costs of capital, their rates are necessarily based on capital costs measured using market value capital structures. In contrast, Mr. Draper uses a book value capital structure to calculate his recommended cost of capital in this proceeding. UNE rates based on Mr. Draper's estimate of the weighted average cost of capital cannot approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs.

Q. IS YOUR COST OF CAPITAL ESTIMATE IN THIS PROCEEDING CONSISTENT WITH THE FCC'S PRINCIPLE THAT UNE RATES MUST APPROXIMATE THE RATES THE INCUMBENT LEC WOULD BE ABLE TO CHARGE IN A COMPETITIVE MARKET FOR UNES?

A. Yes. Since my cost of capital recommendation reflects the forward-looking economic cost of capital of competitive companies of average risk, my recommendation approximates the cost of capital the incumbent LEC would incur in a competitive market for UNEs. However, as I discuss below, my cost of capital estimate does not reflect the forward-looking economic costs of building an entirely new telecommunications network from scratch using the most efficient technology at every moment of time.

Q. DO AT&T AND WORLDCOM AGREE WITH THE FCC'S CONCLUSION THAT THE TELRIC METHODOLOGY SHOULD PRODUCE RATES THAT "APPROXIMATE WHAT THE INCUMBENT LEC WOULD BE ABLE TO CHARGE IF THERE WERE A COMPETITIVE MARKET FOR SUCH OFFERINGS"?

A. Yes. AT&T and WorldCom have repeatedly supported this statement in their testimony regarding UNE rates throughout the country. For example, in her direct testimony on behalf of AT&T and WorldCom in a proceeding before the FCC, AT&T/WorldCom witness Terry L. Murray states at page 5,

> First, as is consistent with the Commission's Total Element Long Run Incremental Cost ("TELRIC") methodology, **the prices for unbundled network elements should mimic the prices that would prevail if Verizon sold the same functionalities in a competitive market**. Competitive market forces would drive prices down to efficient forward-looking economic costs. Thus, to allow all providers of local exchange service to purchase inputs as if they were doing so in a competitive market, the Commission should establish prices for unbundled network elements that do not exceed forward-looking economic costs. (Murray Direct Testimony on behalf of AT&T and WorldCom in CC Docket No. 00-218, CC Docket No. 00-24, CC Docket No. 00-251, at 5 (emphasis added).)

In her rebuttal testimony, Ms. Murray states,

> TELRIC is the right methodology because, as this Commission explained when it adopted the TELRIC methodology in its Local Competition First Report and Order [at ¶ 679], "Adopting a pricing methodology based on forward-looking, economic costs best replicates, to the extent possible, the conditions of a competitive market."

(Murray Rebuttal on behalf of AT&T and WorldCom in CC Docket No. 00-218, CC Docket No. 00-24, CC Docket No. 00-251 at 5-6.)

Q. HAVE AT&T/WORLDCOM WITNESSES CONCEDED THAT THE COST OF CAPITAL MUST ASSUME A FULLY COMPETITIVE MARKET TO BE CONSISTENT WITH OTHER ASSUMPTIONS IN A UNE COST MODEL?

A. Yes. In the Virginia FCC Arbitration proceeding, AT&T/WorldCom economic witness Terry Murray stated: "I think all the model assumptions have to be consistent. So, to the degree that it requires a competitive market to get all of the other assumptions, that would be true for the cost of capital as well." (AT&T and WorldCom v. Verizon Virginia, Case No. 00-218 et al., Tr. at 3202 (October 23, 2001.)

Q. AT&T WITNESS ANKUM RECOMMENDS COST MODEL INPUTS IN THIS PROCEEDING THAT REFLECT HIS ASSUMPTION THAT VERIZON FLORIDA WILL BUILD AN ENTIRELY NEW TELECOMMUNICATIONS NETWORK FROM SCRATCH USING THE MOST EFFICIENT TECHNOLOGY AT EVERY MOMENT OF TIME. DOES MR. DRAPER'S COST OF CAPITAL ESTIMATE REFLECT THE RISKS OF A COMPANY THAT MUST BUILD AN ENTIRELY NEW TELECOMMUNICATIONS NETWORK FROM SCRATCH USING THE MOST EFFICIENT TECHNOLOGY AT EVERY MOMENT OF TIME?

A. No. Mr. Draper's cost of capital estimate, if it were calculated correctly, reflects only the risks of the telecommunications holding companies' existing telecommunications businesses, not the risk of building an entirely new telecommunications network from scratch using the most efficient technology at every moment of time. This extreme competitive market assumption, which serves as the basis of the ALEC coalition's UNE cost recommendations, would require a significantly higher cost of capital than either Mr. Draper or I have recommended in this proceeding.

Q. HAS THE FCC RECOGNIZED THAT THE RISKS OF THE REGULATORY ENVIRONMENT, INCLUDING THE RISK OF THE UNE COST MODEL, SHOULD BE CONSIDERED IN ESTIMATING THE COST OF CAPITAL?

A. Yes. In its reply brief before the Supreme Court, the FCC stated, "Moreover, an appropriate cost of capital determination takes into account not only existing competitive risks...but also risks associated with the regulatory regime to which a firm is subject." (Reply Brief for Petitioners United States and the FCC, *Verizon Communications, Inc. et al. v. FCC et al.* (Nos. 00-551, 00-555, 00-587, 00-590, and 00-602) at 11 - 12.) Thus, the FCC clearly recognizes that the risks of the economic and regulatory environment assumed in the UNE cost model should be considered in estimating the cost of capital.

Q. WOULD MR. DRAPER'S COST OF CAPITAL ESTIMATE PROVIDE CORRECT ECONOMIC SIGNALS TO NEW ENTRANTS WHO ARE MAKING DECISIONS WHETHER TO PURCHASE UNBUNDLED

NETWORK ELEMENTS OR TO BUILD THEIR OWN FACILITIES?

A. No. As noted above, Mr. Draper uses the average book value capital structure of his proxy group of telecommunications companies to estimate the weighted average cost of capital for use in Verizon Florida's UNE cost studies. Book value capital structures reflect the embedded or historical costs of his telecommunications companies' assets. In contrast, new entrants necessarily issue debt and equity securities, and hence attract capital, at ***market*** values, not accounting or book values. Because Mr. Draper incorrectly uses a book value capital structure to estimate the weighted average cost of capital for use in Verizon Florida's UNE cost studies, his estimate would provide incorrect economic signals to new entrants who are deciding whether to purchase UNEs or to build their own facilities.

Q. ARE YOU AWARE THAT THE FLORIDA PUBLIC SERVICE COMMISSION HAS TRADITIONALLY USED BOOK VALUE CAPITAL STRUCTURES TO SET RATES FOR PUBLIC UTILITY SERVICES?

A. Yes. However, the Florida Public Service Commission has also used book values, or historical costs, to measure the company's investment in rate base assets. While a book value capital structure may have been appropriate in a world where assets were measured in terms of book values or historical costs, a book value capital structure is definitely not appropriate in a world where assets are measured in terms of market values, or forward-looking economic costs. If assets are measured in terms of market values or forward-looking economic costs, consistency requires that the debt and equity components of the capital structure also be measured in terms of market values of forward-looking economic costs.

B. MR. DRAPER'S DCF METHOD

1. Mr. Draper's Proxy Companies

Q. WHAT RISK PROXY COMPANIES DID MR. DRAPER USE TO ESTIMATE THE COST OF CAPITAL INPUT IN UNE COST STUDIES?

A. Mr. Draper used a group of seven telecommunications holding companies, including AT&T, BellSouth, CenturyTel, Qwest, Sprint, Telephone & Data, and Verizon as risk proxies for the purpose of estimating the cost of capital input in UNE cost studies.

Q. WHAT SELECTION CRITERIA DID MR. DRAPER USE TO SELECT THE COMPANIES IN HIS RISK PROXY GROUP?

A. Mr. Draper describes his selection criteria on page 6 of his direct testimony, as follows:

> I first analyzed the publicly traded telecommunication carriers listed in Value Line's Investment Survey for Windows, November 2001 edition. ... In developing this index, I eliminated any company that received less than 75% of its annual revenues from telecommunications operations. I also eliminated any company with insufficient financial data to perform a financial analysis. Finally, I eliminated any company that was the subject of an ongoing

merger or acquisition.

Q. DOES MR. DRAPER PROVIDE ANY DATA THAT WOULD ALLOW ONE TO VERIFY THAT HIS GROUP OF SEVEN TELECOMMUNICATIONS HOLDING COMPANIES, IN FACT, MEET THE CRITERIA HE STATES?

A. No. While Mr. Draper's work papers contain some data on the seven telecommunications companies in his proxy group, they do not contain any data on the telecommunications companies that he eliminated in arriving at his proxy group. Furthermore, Mr. Draper does not provide any data on which companies were eliminated because they are "the subject of an ongoing merger or acquisition."

Q. DO ANY OF THE COMPANIES IN MR. DRAPER'S PROXY GROUP FAIL TO MEET HIS CRITERIA THAT THE COMPANY NOT BE INVOLVED IN AN "ONGOING MERGER OR ACQUISITION"?

A. Yes. At least two of Mr. Draper's companies, AT&T and CenturyTel, fail to meet his criteria that they not be "the subject of an ongoing merger or acquisition." AT&T is subject to a merger with Comcast, and CenturyTel is subject to a merger with ALLTEL.

Q. DID MR. DRAPER FAIL TO INCLUDE ANY COMPANIES THAT DID MEET HIS CRITERIA?

A. Yes. SBC Communications is a large telecommunications holding company that receives all its revenues from telecommunications operations, has sufficient data to perform both a DCF and CAPM analysis, and is not involved in a merger or acquisition at this time.

Q. HAVE YOU CALCULATED DCF RESULTS FOR THE TELECOMMUNICATIONS COMPANIES THAT MEET MR. DRAPER'S SELECTION CRITERIA USING MR. DRAPER'S TWO-STAGE DCF METHODOLOGY?

A. Yes. The average DCF result for the Value Line telecommunications holding companies that meet Mr. Draper's selection criteria is 15.86 percent. This result is based on use of Mr. Draper's specific DCF methodology and data applied to each individual company that meets his selection criteria. See Vander Weide Rebuttal Exhibit JVW-1.

Q. WHAT RISK PROXY COMPANIES DID YOU USE TO ESTIMATE THE COST OF CAPITAL INPUT IN STUDIES OF THE FORWARD-LOOKING ECONOMIC COST OF PROVIDING UNBUNDLED NETWORK ELEMENTS IN FLORIDA?

A. I used both the S&P Industrials and a group of telecommunications holding companies as proxies for the risk of investing in the facilities required to provide unbundled network elements in Florida.

Q. WHY DID YOU USE THE S&P INDUSTRIALS AS A PROXY FOR THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNES IN FLORIDA?

A. I used the S&P Industrials as a proxy for the risk of investing in the facilities required to provide unbundled network elements for several reasons. First, there are no publicly-traded companies whose sole business is the provision of unbundled network elements to competitors. Companies that would most closely resemble a "network element leasing company" include companies such as Global Crossing, Level 3 Communications, and Metromedia Fiber Network. These companies provide telecommunications network services in the wholesale market. However, as I have noted, these companies do not have sufficient data for the application of traditional cost of equity techniques.

Second, the S&P Industrials are a broad sample of companies in competitive markets whose aggregate risk is average. Because the sample of companies in the S&P Industrials is broad, the use of the S&P Industrials significantly reduces the estimation error in the cost of capital that can arise when a small sample of companies is chosen from an industry that is undergoing unprecedented restructuring.

Third, the three remaining Regional Bell Holding Companies are simply too small a sample for the purpose of estimating the cost of capital. In addition, the RBHCs receive a very small percentage of their revenues from the leasing of unbundled network elements.

Finally, the risk of the RBHCs is approximately equal to the risk of the S&P Industrials, as evidenced by the fact that the RBHCs and the S&P Industrials have approximately the same average market value capital structure. Companies with similar risk generally use similar capital structures to finance their business activities.

Q. WHY DID YOU ALSO USE A GROUP OF TELECOMMUNICATIONS HOLDING COMPANIES AS A PROXY FOR THE RISK OF INVESTING IN THE FACILITIES REQUIRED TO PROVIDE UNES IN FLORIDA?

A. I also used a group of telecommunications holding companies because some commissions maintain the view that companies must be in a similar line of business in order to be comparable in risk to the business of leasing unbundled network elements. Although this view is not economically correct, I felt it necessary to perform the analysis so that the Commission would have a complete set of information for consideration in making its decision.

Q. WHAT TELECOMMUNICATIONS HOLDING COMPANIES DID YOU USE IN YOUR ANALYSIS?

A. As shown in Vander Weide Exhibit JVW-2, I used ALLTEL, BellSouth, SBC Communications, and Verizon Communications as a risk proxy group of telecommunications holding companies. As shown on that exhibit, my DCF result for the group of telecommunications holding companies is slightly higher than my DCF result for the S&P Industrials.

2. Mr. Draper's Two-Stage DCF Model

Q. HOW DOES MR. DRAPER USE THE DCF MODEL TO ESTIMATE THE COST OF EQUITY FOR HIS PROXY COMPANIES?

A. Mr. Draper uses a two-stage annual DCF model in which investors expect future dividends to grow at one rate for the next four years and at a second rate thereafter.

Q. HOW DOES MR. DRAPER ESTIMATE THE TWO GROWTH RATES IN HIS DCF MODEL?

A. Mr. Draper uses Value Line dividend forecasts for the years 2002 and 2005 to estimate the short-term dividend growth in his DCF model, and Value Line estimates of the long-run rate of return on book equity and retention ratio to estimate the long-run growth rate in his DCF model. Mr. Draper's short-term and long-term growth estimates are shown in Exhibit DJD-4.

Q. DO YOU AGREE WITH MR. DRAPER'S APPLICATION OF HIS TWO-STAGE DCF METHOD TO HIS PROXY GROUP OF TELECOMMUNICATIONS HOLDING COMPANIES?

A. No. I have several problems with Mr. Draper's application of his two-stage DCF method to the telecommunications holding companies. First, as noted above, Mr. Draper applies his two-stage DCF model to a proxy group of companies that did not even meet his own selection criteria for inclusion in the proxy group. If Mr. Draper had applied his own selection criteria correctly he would have obtained a two-stage DCF result equal to 15.86 percent.

Second, Mr. Draper has not provided any evidence that investors use his two-stage DCF method in making stock buy and sell decisions. As noted in my direct testimony, there is considerable evidence that investors use the I/B/E/S growth rates in a single-stage model in making stock buy and sell decisions.

Third, Mr. Draper's two-stage DCF model is based on the assumption that dividends are received only at the end of each year. In contrast, his proxy companies actually pay dividends quarterly. Investors recognize the quarterly payment of dividends when they value the stocks of Mr. Draper's telecommunications holding companies.

Fourth, Mr. Draper's two-stage DCF model produces the unreasonable result that two of his companies, AT&T and Telephone & Data Systems, have DCF costs of equity less than the current yield to maturity on Moody's A-rated utility bonds; and one company, Qwest, has a DCF cost of equity that is only slightly greater than the yield to maturity on Moody's A-rated utility bonds.

C. MR. DRAPER'S CAPITAL ASSET PRICING MODEL ("CAPM")

Q. HOW DOES MR. DRAPER USE THE CAPM TO ESTIMATE THE COST OF EQUITY FOR HIS PROXY COMPANIES?

A. The CAPM requires an estimate of the risk-free rate, the company-specific risk factor or beta, and the expected return on the market portfolio. For his estimate of the risk-free rate, Mr. Draper used the forecasted yield to maturity on long-term Treasury bonds. For his estimate of the company-specific risk, or beta, Mr. Draper used the average Value Line beta for his proxy companies. For his estimate of the expected return on the market portfolio, Mr. Draper performed "a basic DCF analysis" for each company in the Value Line database. (See Draper testimony at p. 9.)

Q. DO YOU AGREE WITH MR. DRAPER'S APPLICATION OF THE CAPM?

A. No. I strongly disagree with Mr. Draper's estimate of the expected rate of return on the market portfolio.

Q. HOW DOES MR. DRAPER ESTIMATE THE EXPECTED RATE OF RETURN ON THE MARKET PORTFOLIO?

A. Mr. Draper estimates the expected rate of return on the market portfolio using a single-stage annual DCF model.

Q. HOW DOES MR. DRAPER ESTIMATE THE GROWTH COMPONENT OF HIS SINGLE-STAGE ANNUAL DCF MODEL?

A. Mr. Draper uses an average of Value Line's projected dividend and earnings growth forecasts as his estimate of the growth component for his DCF model.

Q. DO YOU AGREE WITH MR. DRAPER'S USE OF THE AVERAGE OF VALUE LINE'S FORECASTED DIVIDEND AND EARNINGS GROWTH RATES AS HIS ESTIMATE OF GROWTH IN HIS DCF MODEL?

A. No. Value Line's current average dividend growth forecast for Mr. Draper's companies is based on its assumption that the average Value Line company is in the process of adjusting to a lower target dividend payout ratio. As shown below, dividends must grow at the same rate as earnings once the companies have achieved their new target dividend payout ratio. Thus, Value Line's forecasted earnings growth rate is a better estimate of long-run dividend growth than its current forecasted dividend growth rate.

Q. DO YOU HAVE ANY EVIDENCE THAT VALUE LINE'S AVERAGE DIVIDEND FORECAST FOR THE COMPANIES IN MR. DRAPER'S MARKET RISK INDEX IS BASED ON THE ASSUMPTION OF A DECLINING DIVIDEND PAYOUT RATIO?

A Yes. As shown in Mr. Draper's work papers, the average earnings growth forecast for the companies in Mr. Draper's market risk index is greater than the average dividend growth forecast for these companies. Whenever earnings are expected to grow at a faster rate than dividends, the dividend payout ratio will necessarily decline.

Q. SUPPOSE THAT ANALYSTS EXPECT A COMPANY'S DIVIDENDS TO GROW BY LESS THAN ITS EARNINGS OVER THE NEXT SEVERAL YEARS BECAUSE OF THE COMPANY'S TRANSITION TO A NEW, LOWER TARGET DIVIDEND PAYOUT RATIO. DOES THIS SITUATION IMPLY THAT ANALYSTS' EARNINGS GROWTH PROJECTIONS FOR THIS COMPANY CANNOT BE USED TO ESTIMATE THE "G" TERM IN

THE DCF MODEL?

A. No. To illustrate, suppose that a company's current dividend payout ratio is approximately 75 percent and that the company intends to adjust its dividend payout ratio to 60 percent. Once the company achieves its new dividend payout target, dividends will grow at the same rate as earnings. As long as the transition is relatively short, the earnings growth forecast would still be a good estimate of long-term dividend growth in the DCF Model. (To illustrate why the earnings growth forecast would be a good estimate of long-term dividend growth, consider that, for any one year period of time, a company's earnings growth rate is given by the equation:

$$g_E = \frac{E_t}{E_{t-1}}$$

Assuming that the company has achieved its new dividend payout ratio of 60%, their dividend growth rate is given by the

$$g_D = \frac{D_t}{D_{t-1}} = \frac{.6E_t}{.6E_{t-1}} = \frac{E_t}{E_{t-1}}$$

equation:

Thus, once the company achieves its new dividend payout ratio, dividends must grow at the same rate as earnings.)

Q. **HAVE YOU CALCULATED DCF RESULTS FOR THE COMPANIES IN THE VALUE LINE UNIVERSE USING VALUE LINE'S EARNINGS GROWTH FORECASTS AND DATA AT NOVEMBER 2001 (THE SAME TIME PERIOD USED BY MR. DRAPER)?**

A. Yes. My application of the basic annual DCF model to the companies in the Value Line universe, using Value Line earnings growth forecasts and data at November 2001, the same time period used by Mr. Draper, produces a DCF result of 13.55 percent—nearly 300 basis points higher than the result used by Mr. Draper in his CAPM calculations. (See Vander Weide Rebuttal Exhibit JVW-2. Since Mr. Draper used an annual DCF model, I also used an annual DCF model in this instance. However, because the companies in the S&P 500 and Value Line universe pay dividends quarterly, the quarterly DCF model would provide a more accurate estimate of these companies' costs of equity.)

Q. IN YOUR APPLICATION OF THE ANNUAL DCF MODEL WITH THE VALUE LINE EARNINGS GROWTH FORECASTS, DID YOU INCLUDE ALL COMPANIES IN THE VALUE LINE DATA BASE?

A. No. Like Mr. Draper, I eliminated all companies that paid no dividends, had negative dividend growth, had negative projected earnings growth, and projected earnings growth in excess of 20 percent. I also eliminated companies that had DCF results less than the current approximate 7.5 percent yield on Moody's A-rated utility bonds or results greater than 20 percent. (The latter screen had only a minimal effect on the average DCF results, but did serve to eliminate companies with DCF results that are obviously unreasonable.)

Q. HAVE YOU ALSO APPLIED THE ANNUAL DCF MODEL TO THE S&P 500 USING THE I/B/E/S GROWTH FORECASTS AS YOUR ESTIMATE OF THE GROWTH COMPONENT?

A. Yes. My application of the annual DCF model to the S&P 500 using the I/B/E/S earnings growth forecasts produces an average DCF result of

14.45 percent. (See Vander Weide Rebuttal Exhibit JVW-3.)

Q. IN YOUR APPLICATION OF THE ANNUAL DCF MODEL WITH THE I/B/E/S EARNINGS GROWTH FORECASTS TO THE S&P 500, DID YOU INCLUDE ALL THE S&P 500 COMPANIES?

A. No. I eliminated all companies that paid no dividends and had fewer than 3 estimates of long-term growth from I/B/E/S. I also eliminated companies that had DCF results less than the current approximate 7.5 percent yield on Moody's A-rated utility bonds or results greater than 20 percent.

Q. WHAT CAPM RESULT WOULD MR. DRAPER HAVE OBTAINED IF HE USED EITHER THE 13.55 PERCENT RETURN ON THE VALUE LINE MARKET INDEX OR THE 14.45 PERCENT RETURN ON THE S&P 500?

A. Mr. Draper would have obtained CAPM results in the range 13.86 percent to 14.78 percent. [5.4% + 1.02(13.55% - 5.4%) + .15% = 13.86 percent: and 5.4% + 1.02(14.45% - 5.4%) + .15% = 14.78 percent. All data from Mr. Draper's Exhibit DJD-5.]

D. MR. DRAPER'S CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE DOES MR. DRAPER USE TO ESTIMATE THE COST OF CAPITAL INPUT IN VERIZON FLORIDA'S FORWARD-LOOKING ECONOMIC COST STUDIES?

A. Mr. Draper uses a book value capital structure containing 60 percent equity and 40 percent debt.

Q. HOW DOES MR. DRAPER ARRIVE AT HIS RECOMMENDED CAPITAL STRUCTURE IN THIS PROCEEDING?

A. Mr. Draper notes on page 3 of his testimony that the average equity ratio for his proxy telecommunications companies was 63 percent, as reported by Value Line, and 57.6 percent, as reported by C. A. Turner. Mr. Draper's recommended capital structure containing 60 percent equity is the approximate midpoint of the Value Line and C. A. Turner reported equity ratios for Mr. Draper's proxy companies.

Q. ARE THE VALUE LINE AND C. A. TURNER REPORTED EQUITY RATIOS REFERRING TO BOOK VALUE EQUITY RATIOS OR MARKET VALUE EQUITY RATIOS?

A. The Value Line and C. A. Turner reported equity ratios are book value equity ratios, not market value equity ratios.

Q. HOW DOES A COMPANY'S BOOK VALUE CAPITAL STRUCTURE DIFFER FROM ITS MARKET VALUE CAPITAL STRUCTURE?

A. A company's book value capital structure represents the percentages of debt and equity shown on the company's accounting books. The company's market value capital structure represents the values of the company's debt and equity as determined in the capital markets.

Q. DO YOU AGREE WITH MR. DRAPER'S USE OF A BOOK VALUE

CAPITAL STRUCTURE TO CALCULATE THE APPROPRIATE WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN VERIZON FLORIDA'S UNE COST STUDIES?

A. No. As noted above, the use of a book value capital structure is inconsistent with the FCC's three basic guidelines that UNE rates must: (1) reflect forward-looking *economic* costs, not historical, embedded, or accounting costs; (2) approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs; and (3) send correct economic signals to both new entrants and incumbents.

With regard to the FCC's requirement that UNE rates reflect forward-looking economic costs, the FCC states in the Local Competition Order:

> In this section, we describe this forward-looking, cost-based pricing standard in detail. ... [W]e address potential cost measures that ***must not be included in a TELRIC analysis, such as embedded (or historical) costs*** (Emphasis added.) (Local Competition Order at para. 673.)

Since a company's book value capital structure reflects the "embedded (or historical) costs" of its assets, Mr. Draper's use of a book value capital structure is undoubtedly inconsistent with the FCC's forward-looking economic cost guideline.

With respect to the need to approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs (see Local Competition Order at para. 738), I note that competitive companies use market value capital structures, not book value capital structures, to estimate the weighted average cost of capital. Thus, Mr. Draper's book value capital structure is also inconsistent with the FCC's guideline that UNE rates must approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs.

Finally, with regard to the requirement that UNE rates send correct economic signals to all participants in the UNE market, the FCC recognizes that new entrants make their decisions based on economic costs, not embedded costs (see Local Competition Order at para. 620). Thus, Mr. Draper's book value capital structure is also inconsistent with the guideline that UNE rates must provide correct economic signals to participants in the UNE market.

Q. WHAT CAPITAL STRUCTURE DID YOU USE TO ESTIMATE THE COST OF CAPITAL IN THIS PROCEEDING?

A. I used a market value capital structure that conservatively approximates the average market value capital structures of the S&P Industrials and the telecommunications holding companies over the last five years.

Q. WHY DID YOU USE THE AVERAGE MARKET VALUE CAPITAL STRUCTURES OF THE S&P INDUSTRIALS AND THE TELECOMMUNICATIONS HOLDING COMPANIES RATHER THAN THEIR AVERAGE BOOK VALUE CAPITAL STRUCTURES?

A. I used the average market value capital structures of these proxy companies because they are the only capital structures that are consistent with the FCC's guideline that UNE rates must: (1) be based on forward-looking ***economic*** costs, (2) approximate the rates that the incumbent LEC would be able to charge if there were a competitive market for UNEs; and (3) send correct economic signals to both incumbents and new entrants regarding their investment decisions. Book value capital structures are inconsistent with each of these three economic principles of UNE rate setting.

III. REBUTTAL OF DR. FORD

Q. WHAT IS DR. FORD'S ESTIMATE OF VERIZON FLORIDA'S WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN UNE COST STUDIES?

A. Dr. Ford recommends a weighted average cost of capital equal to 8.50 percent, based on a 6.25 percent estimate of the cost of debt, a 10 percent estimate of the cost of equity, and a capital structure containing 40 percent debt and 60 percent equity.

A. DR. FORD'S COST OF DEBT

Q. DO YOU AGREE WITH DR. FORD'S ESTIMATE OF THE COST OF DEBT FOR USE IN UNE COST STUDIES?

A. No. Dr. Ford's estimate of the cost of debt is based on his assumptions that Verizon Florida could: (1) attract short-term debt over the life of its telecommunications network at an interest rate of 2.01 percent; and (2) attract long-term debt at an interest rate of 7.12 percent. I disagree with both these assumptions.

Q. WHY DO YOU DISAGREE WITH DR. FORD'S ASSUMPTION THAT VERIZON FLORIDA COULD ATTRACT SHORT-TERM DEBT OVER THE LIFE OF ITS NETWORK AT AN INTEREST RATE OF 2.01 PERCENT?

A. I disagree with Dr. Ford's short-term interest rate assumption because the current 2.01 percent interest rate on short-term debt is an historically low interest rate that reflects the Federal Reserve's efforts to stimulate the U. S. economy. The cost of short-term debt will surely rise as the economy moves out of its current recession. If Dr. Ford had wanted to include short-term debt in his cost of capital calculations, he should at least have used an average short-term debt interest rate over a full business cycle. The cost of debt over the last full business cycle significantly exceeded Dr. Ford's 2.01 percent estimate of the cost of short-term debt.

Q. DO YOU AGREE WITH DR. FORD'S ASSUMPTION THAT VERIZON FLORIDA COULD ATTRACT LONG-TERM DEBT FINANCING FOR CONSTRUCTION OF A TELECOMMUNICATIONS NETWORK USED TO PROVIDE UNES TO COMPETITORS AT AN INTEREST RATE OF 7.12 PERCENT?

A. No. If Verizon Florida were to attempt to attract financing to construct a telecommunications network for the purpose of offering UNEs to competitors, it would probably have to offer an average yield at least equal to the yield to maturity on A-rated industrial bonds. According to

Mergent's Bond Record, the average yield to maturity on A-rated industrial bonds in December 2001 was 7.57 percent.

B. Dr. Ford's Cost of Equity

Q. HOW DID DR. FORD ESTIMATE THE COST OF EQUITY COMPONENT OF THE WEIGHTED AVERAGE COST OF CAPITAL HE RECOMMENDS FOR USE IN VERIZON FLORIDA'S UNE COST STUDIES?

A. Dr. Ford used the Capital Asset Pricing Model ("CAPM") to estimate the cost of equity component of his recommended weighted average cost of capital.

Q. DO YOU AGREE WITH DR. FORD'S USE OF THE CAPM TO ESTIMATE THE COST OF EQUITY INPUT IN VERIZON FLORIDA'S UNE COST STUDIES?

A. No. First, Dr. Ford fails to recognize the pervasive evidence that the CAPM underestimates the cost of equity for companies that have betas of less than 1.0. Second, Dr. Ford ignores the extensive evidence that the investor's required rate of return depends on more than the risk-free rate and the expected return on the market.

Q. WHAT EVIDENCE DO YOU HAVE THAT THE TRADITIONAL CAPM TENDS TO UNDERESTIMATE THE COST OF EQUITY FOR COMPANIES WHOSE EQUITY BETAS ARE LESS THAN 1.0 AND TO OVERESTIMATE THE COST OF EQUITY FOR COMPANIES WHOSE EQUITY BETAS ARE GREATER THAN 1.0?

A. The original evidence that the traditional CAPM tends to underestimate the cost of equity in those instances was presented in a paper by Black, Jensen, and Nobel Laureate Scholes, "The Capital Asset Pricing Model: Some Empirical Tests." Numerous subsequent papers have validated the Black, Jensen, and Scholes findings, including those by Litzenberger and Ramaswamy, Banz, Fama and French, and Fama and MacBeth. (Fischer Black, Michael C. Jensen, and Myron Scholes, "The Capital Asset Pricing Model: Some Empirical Tests," in *Studies in the Theory of Capital Markets*, M. Jensen, ed. New York: Praeger, 1972; Eugene Fama and James MacBeth, "Risk, Return, and Equilibrium: Empirical Tests," *Journal of Political Economy* 81 (1973), pp. 607—36; Robert Litzenberger and Krishna Ramaswamy, "The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence." *Journal of Financial Economics* 7 (1979), pp. 163—95; Rolf Banz, "The Relationship between Return and Market Value of Common Stocks," *Journal of Financial Economics* (March 1981), pp. 3—18; and Eugene Fama and Kenneth French, "The Cross-Section of Expected Returns," *Journal of Finance* (June 1992), pp. 427—465.)

Q. WHAT EVIDENCE DO YOU HAVE THAT THE MARKET PRICES OTHER SOURCES OF SYSTEMATIC RISK?

A. There are many studies that demonstrate that stock returns cannot be adequately explained by the risk-free rate and the return on the market portfolio, as assumed by the CAPM. These studies demonstrate that additional variables, such as interest rates, dividend yields, market capitalization, and the market-to-book ratio, are required to explain the variation in stock returns.

Q. WHAT ARE THE IMPLICATIONS OF THE WIDESPREAD EVIDENCE THAT THE MARKET PRICES OTHER SOURCES OF SYSTEMATIC RISK?

A. These studies provide evidence that the analyst must be careful in interpreting the results of an application of the traditional CAPM. Since investors generally recognize additional sources of systematic risk besides that captured in the traditional CAPM, the traditional CAPM may underestimate the investors' required rate of return on equity for companies that are sensitive to these additional factors.

Q. DO YOU HAVE ANY OTHER RESERVATIONS ABOUT THE USE OF THE CAPM AT THIS TIME?

A. Yes. The CAPM relates a company's cost of equity to the interest rates on risk-free Treasury securities. For many years, the spread between the yield on long-term Treasury securities and the yield on A-rated utility bonds has been approximately 100 basis points. Since the summer of 1998, however, the spread between the yields on long-term Treasury bonds and A-rated utility bonds has increased to more than 200 basis points due to: (1) an increased demand for U.S. Treasury securities resulting from international capital market uncertainty; and (2) the Treasury's move to significantly reduce the supply of long-term Treasury bonds. The increased spread between the yield on long-term Treasury bonds and A-rated utility bonds has caused the CAPM cost of equity results to decline at a time when the cost of money for utilities as measured by the yield on A-rated utility bonds has remained relatively constant. Thus, in addition to the tendency, as noted above, of the CAPM to underestimate the cost of equity for companies whose betas are less than 1.0, the unadjusted CAPM further underestimates the cost of equity at this time because of the unusually large spread between the yields on long-term Treasury bonds and utility bonds.

Q. RECOGNIZING YOUR DISAGREEMENT WITH DR. FORD'S USE OF THE CAPM, DO YOU HAVE ANY FURTHER DISAGREEMENT WITH THE PARTICULAR INPUTS DR. FORD USED IN HIS IMPLEMENTATION OF THE CAPM?

A. Yes. I strongly disagree with Dr. Ford's use of BARRA betas to estimate the systematic risk component of the CAPM cost of equity. Dr. Ford's 0.58 average beta is significantly below the 1.02 average Value Line beta Mr. Draper used in his application of the CAPM to the telecommunications holding companies. It is inconceivable that investors would believe that telecommunications companies are only 58 percent as risky as the market as a whole at a time when telecommunications technology is changing rapidly, regulatory uncertainty abounds, and customers are finding alternatives to landline service.

Q. WHAT COST OF EQUITY WOULD DR. FORD HAVE OBTAINED IF HE HAD USED MR. DRAPER'S 1.02 BETA ESTIMATE, BASED ON

VALUE LINE DATA, FOR THE TELECOMMUNICATIONS HOLDING COMPANIES?

A. Dr. Ford would have obtained a CAPM cost of equity estimate of 13.82 percent [5.34 + (1.02 x 8.34) = 13.82.]

C. Dr. Ford's Capital Structure Recommendation

Q. DO YOU AGREE WITH DR. FORD'S RECOMMENDED 40 PERCENT DEBT/60 PERCENT EQUITY CAPITAL STRUCTURE RECOMMENDATION IN THIS PROCEEDING?

A. No. As I discussed in my rebuttal of Mr. Draper, the FCC's forward-looking economic cost standard requires the use of market value capital structures, not book value capital structures, to estimate the weighted average cost of capital input in UNE cost studies. I presented extensive evidence in my direct testimony that the telecommunications companies and the S&P Industrials both have average market value capital structures with no more than 25 percent debt and at least 75 percent equity. Since Dr. Ford's recommended capital structure is based on book values rather than market values, it is necessarily inconsistent with the FCC guideline that UNE rates must be based on forward-looking ***economic*** costs rather than embedded, historical, or accounting costs.

D. Dr. Ford's Comments on My Testimony

Q. DOES DR. FORD OFFER ANY REBUTTAL OF YOUR COST OF CAPITAL TESTIMONY IN THIS PROCEEDING?

A. Yes. Dr. Ford claims that my cost of capital testimony should be dismissed because: (1) I failed to consider the impact of short-term debt on the cost of capital; and (2) I performed a DCF analysis on companies in industries that are totally unrelated to telecommunications.

Q. DO YOU AGREE WITH DR. FORD'S ASSERTION THAT YOU FAILED TO CONSIDER THE IMPACT OF SHORT-TERM DEBT ON YOUR ESTIMATE OF VERIZON FLORIDA'S WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN UNE COST STUDIES?

A. No. In estimating the percentage of debt to include in the capital structure, I definitely included the impact of short-term debt in my calculation. In estimating the cost rate for the debt component of the weighted average cost of capital, however, I considered only the cost of long-term debt, because I do not believe that Verizon Florida would use a significant portion of short-term debt to finance the construction of a telecommunications network built solely for the purpose of providing UNEs to competitors. Financial experts recommend that firms match the maturity of their liabilities with the maturity of their assets. Since telecommunications network assets are relatively long lived, Verizon Florida would very likely rely primarily on long-term debt to finance the construction of its telecommunications network.

Q. DO YOU AGREE WITH DR. FORD'S ASSERTION THAT YOUR COST OF CAPITAL RECOMMENDATION IS BASED ON THE RESULTS OF A DCF ANALYSIS FOR COMPANIES IN INDUSTRIES THAT ARE TOTALLY UNRELATED TO TELECOMMUNICATIONS?

A. No. First, Dr. Ford fails to recognize that I provided a DCF analysis for a group of telecommunications holding companies in my direct testimony. My DCF result for this group of telecommunications companies exceeded my DCF result for the S&P Industrials. Second, Dr. Ford fails to recognize that my S&P Industrials are related to telecommunications companies in the most important dimension, namely, risk. As an economist, Dr. Ford should recognize that companies do not have to be in the same industry to be considered of comparable risk. Indeed, Dr. Ford's CAPM analysis is based on the fundamental assumption that all companies with the same beta have the same cost of equity, regardless of differences in their lines of business. If Dr. Ford believes that risk is related to a company's industry, rather than its beta, he should not use the CAPM to estimate the cost of equity.

IV. REBUTTAL OF DR. ANKUM

Q. DOES DR. ANKUM PROVIDE HIS OWN ANALYSIS OF THE WEIGHTED AVERAGE COST OF CAPITAL FOR USE IN UNE COST STUDIES IN THIS PROCEEDING?

A. No, he does not.

Q. DOES DR. ANKUM PROVIDE REBUTTAL COMMENTS ON YOUR COST OF CAPITAL ANALYSIS IN THIS PROCEEDING?

A. Yes. Dr. Ankum criticizes my: (1) recommended market value capital structure; and (2) use of the S&P Industrials as a proxy group for estimating the cost of equity.

Q. WHY DOES DR. ANKUM CRITICIZE YOUR RECOMMENDED MARKET VALUE CAPITAL STRUCTURE IN THIS PROCEEDING?

A. Dr. Ankum notes on page 102 of his testimony that the Commission has previously stated that "the Telecommunications Act of 1996 requires the use of forward-looking costs, but not the use of a market value capital structure."

Q. DO YOU AGREE WITH THE COMMISSION'S STATEMENT THAT THE TELECOMMUNICATIONS ACT OF 1996 DOES NOT REQUIRE THE USE OF A MARKET VALUE CAPITAL STRUCTURE TO ESTIMATE THE WEIGHTED AVERAGE COST OF CAPITAL INPUT IN UNE COST STUDIES?

A. No. As I noted in my rebuttals of Mr. Draper and Dr. Ford, the FCC has interpreted the Telecommunications Act of 1996 to require that UNE rates must: (1) be based on forward-looking *economic* costs, not embedded, historical, or accounting costs; (2) approximate the rates that the incumbent would be able to charge in a competitive market for UNEs; and (3) provide correct economic signals to new entrants and incumbent LECs in making network investment decisions. Market value capital structures are the only capital structures that are consistent with the FCC's three basic criteria for setting UNE rates. First, since market value capital structures are based on market prices, they necessarily reflect forward-looking *economic* costs, not embedded, historical, or accounting costs. Second, since competitive companies use market value capital structures to estimate their weighted average costs of capital, the use of a market value capital structure would produce rates that approximate the rates the incumbent LEC would be able to charge in a competitive market for UNEs. Third, since new entrants use market value capital structures to estimate their weighted average costs of capital (new entrants can only attract capital at market value), a market value capital structure would allow UNE rates to send correct economic signals to new entrants in making network investment decisions.

In contrast, the use of a book value capital structure in estimating the UNE cost of capital is inconsistent with the FCC's guideline that UNE rates reflect economic costs, not embedded, historical, or accounting costs. Use of a book value capital structure is also inconsistent with the capital structures competitive companies and new entrants use in estimating their costs of capital, and, thus, would provide incorrect economic signals to new entrants and incumbent LECS in making network investment decisions.

Q. DO YOU AGREE WITH DR. ANKUM'S ASSERTION THAT YOUR COST OF CAPITAL RECOMMENDATION SHOULD BE REJECTED BECAUSE IT IS BASED ON YOUR USE OF THE S&P INDUSTRIALS AS A RISK PROXY GROUP?

A. No. As I noted in my rebuttal of Mr. Draper and Dr. Ford, my cost of capital recommendation in this proceeding is based on my use of _both_ a group of telecommunications holding companies and the S&P Industrials as risk proxies for Verizon Florida's UNE leasing business. Indeed, my estimates of the weighted average costs of capital for the telecommunications holding companies and the S&P Industrials are approximately the same.

Q. DOES DR. ANKUM ATTEMPT TO CITE ANY EVIDENCE THAT YOUR COST OF CAPITAL RECOMMENDATION IN THIS PROCEEDING MAY BE TOO HIGH?

A. Yes. Dr. Ankum notes that the New Jersey and New York Commissions have recently adopted cost of capital inputs in UNE cost proceedings that are less than my recommended cost of capital input in this proceeding.

Q. DO YOU HAVE ANY COMMENTS ON DR. ANKUM'S STATEMENT ABOUT RECENT NEW JERSEY AND NEW YORK COMMISSION RULINGS ON THE COST OF CAPITAL INPUT IN UNE COST PROCEEDINGS?

A. Yes. Dr. Ankum fails to mention that the New Jersey Board of Public Utilities offered no explanation whatsoever for its exceedingly low cost of capital decision. It merely adopted the cost of capital recommendation of a witness who re-filed testimony that was originally offered in a Verizon New Jersey alternative regulation rate of return proceeding. Furthermore, the Verizon New Jersey decision was based on a capital structure containing 62.37 percent debt and 37.63 percent equity. There is simply no way to reconcile a book value capital structure containing such a high percentage of debt, 62.37 percent, and low percentage of equity, 37.63 percent, with the FCC's forward-looking economic pricing principles. Finally, Dr. Ankum fails to note that the New York Commission's cost of capital decision is significantly above his recommendation in this proceeding, and that the FCC itself has recently determined to maintain the 11.25 percent rate of return for rate-of-return regulated LECs, who are certainly less risky than companies building a new telecommunications network in a competitive market. (Docket Nos.: CC 00-256, 96-45, 98-77, 98-166, *Second Report and Order and Further Notice of Proposed Rulemaking* (FCC 01-304), October 11, 2001.)

Q. DO YOU HAVE ANY EVIDENCE THAT YOUR COST OF CAPITAL RECOMMENDATION IN THIS PROCEEDING MAY BE CONSERVATIVELY LOW?

A. Yes. My cost of capital recommendation in this proceeding is significantly less than the 15.31 percent after-tax weighted average cost of capital that Dr. Ankum's client, AT&T, has used to make investment decisions in its long distance network. (This proceeding requires a before-tax weighted average cost of capital input. AT&T's equivalent before-tax weighted average cost of capital would be approximately 50 basis points higher than its after –tax weighted average cost of capital.) Since AT&T has a strong incentive to use the correct after-tax weighted average cost of capital to make real world local exchange network investment decisions, the fact that AT&T used a 15.31 percent after-tax weighted average cost of capital in making these decisions is strong evidence that my recommended 12.95 percent before-tax, weighted average cost of capital is conservatively low. (AT&T indicated that it used a cost of capital of 15.31 percent throughout the country when it last used its Total Incremental Cost Model in 1997. This information was provided in response to interrogatories in New York, New Jersey, Virginia, and

Pennsylvania (BA ATT/MCI 1044 in Case No. 98 C 1357 in New York; VNJ-547 in Docket No. TO-00060356 in New Jersey; FCC CC Docket Nos. 00-218, 00-249 and 00-251, Response of AT&T to Staff Record Requests Concerning Cost of Capital; R-00016683, Nos. 73-78).)

Q. WHY IS AT&T'S INTERNAL ESTIMATE OF THE FORWARD-LOOKING COST OF CAPITAL FOR USE IN NETWORK INVESTMENT DECISIONS RELEVANT IN THIS PROCEEDING?

A. AT&T's estimate of the forward-looking cost of capital for use in its Total Incremental Cost Model (TICM) model is relevant because the TICM model is analogous to the incremental cost models that are the focus of this proceeding. The model was designed to measure the incremental cost of investing in telecommunications facilities such as those considered in this proceeding. AT&T's use of a 15.31 percent forward-looking cost of capital is strong evidence that the cost of capital recommendations of Mr. Draper, Dr. Ford, and Dr. Ankum are unjustifiably low.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

Mr. Draper's Discounted Cash Flow Analysis

Company	Average Stock Price	2002 Dividend	2005 Dividend	Short-term g	Long-term g	Market Capitalization	Cost of Equity
BellSouth	39.37	0.80	0.84	1.64%	17.55%	73,820,594	18.85%
Qwest	16.23	0.05	0.05	0.00%	8.31%	26,993,873	7.86%
Sprint	21.60	0.50	0.50	0.00%	8.83%	21,019,731	10.67%
Telephone & Data	93.33	0.58	0.66	4.40%	7.04%	5,483,497	7.37%
Verizon	52.50	1.60	1.72	2.44%	14.36%	142,228,378	16.69%
SBC	42.50	1.04	1.28	7.17%	13.83%	142,881,430	16.09%
Market Weighted Average							15.86%

Sources of data: Mr. Draper's Exhibit DJD-4. The costs of equity for each company are calculated using Mr. Draper's specific data and methodology (however, Mr. Draper did not report individual company results in his exhibit). Data for SBC is from the Value Line Investment Survey and the November 2001 issue of the *S&P Stock Guide* (Mr. Draper's data sources), and the short-term and long-term growth estimates and DCF result for SBC are also calculated using Mr. Draper's specific methodology. Market capitalization is determined by multiplying the stock price times the number of shares outstanding from the November 2001 issue of the S&P Stock Guide.

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
21st Century Ins. Group	16.80	0.32	13.50%	15.73%
Abbott Labs.	53.12	0.84	12.00%	13.83%
ABM Industries Inc.	29.35	0.66	10.50%	13.06%
ACE Limited	36.80	0.60	10.50%	12.36%
AEGON Ins. Group	26.58	0.28	12.00%	13.22%
AFLAC Inc.	24.89	0.20	15.50%	16.46%
AGL Resources	22.10	1.08	9.50%	15.02%
Ahold ADR	27.78	0.15	16.00%	16.65%
Air Products & Chem.	43.01	0.80	11.50%	13.64%
Albemarle Corp.	21.13	0.52	9.00%	11.77%
Alberto Culver 'B'	43.38	0.33	12.00%	12.88%
Albertson's Inc.	32.67	0.76	6.50%	9.05%
Alcan Inc.	34.30	0.60	14.00%	16.06%
Alexander & Baldwin	23.70	0.90	10.00%	14.31%
Allegheny Technologies	15.79	0.80	9.50%	15.22%
ALLETE	23.24	1.07	12.00%	17.32%
Allmerica Financial	38.95	0.25	8.00%	8.71%
ALLTEL Corp.	61.27	1.36	13.50%	16.10%
ALPHARMA Inc.	21.80	0.18	12.00%	12.95%
Ambac Fin'l Group	51.56	0.36	14.50%	15.32%
Amer. Express	32.15	0.32	12.00%	13.15%
Amer. Home Products	57.09	0.92	11.00%	12.84%
Amer. Int'l Group	80.90	0.17	15.50%	15.75%
Amer. States Water	33.95	1.30	6.50%	10.70%
Amer. Water Works	41.35	0.94	9.00%	11.55%
Amer. Woodmark	40.55	0.20	12.50%	13.07%
Amerada Hess	60.68	1.20	8.50%	10.71%
Ameren Corp.	42.15	2.54	4.00%	10.46%
Ameron Int'l	65.90	1.28	6.50%	8.63%
Ametek Inc.	29.30	0.24	9.00%	9.92%
Ampco-Pittsburgh	8.95	0.40	7.50%	12.45%
AmSouth Bancorp.	18.35	0.88	7.50%	12.81%
Anadarko Petroleum	58.88	0.30	9.00%	9.57%
Analogic Corp.	35.38	0.28	11.00%	11.91%
Anheuser-Busch	43.40	0.72	11.50%	13.41%
Aon Corp.	34.84	0.90	10.00%	12.93%
Applebee's Int'l	32.40	0.11	14.50%	14.90%
Applied Ind'l Techn.	16.85	0.48	9.50%	12.72%
AptarGroup	32.45	0.24	11.00%	11.85%
Arch Chemicals	20.25	0.80	3.50%	7.72%
Arrow Int'l	38.05	0.26	8.50%	9.26%
Assoc. Banc-Corp.	35.41	1.24	10.00%	13.97%
Astoria Financial	52.19	1.36	14.50%	17.58%
Atmos Energy	21.02	1.16	12.50%	18.90%
Autodesk Inc.	36.02	0.24	16.50%	17.30%
Automatic Data Proc.	55.43	0.41	16.00%	16.88%
Avery Dennison	52.56	1.32	7.00%	9.77%
Avon Products	47.55	0.76	12.00%	13.85%
Ball Corp.	65.41	0.60	12.00%	13.06%
Banco Bilbao Vis. ADR	12.05	0.08	8.00%	8.74%
BancWest Corp.	34.97	0.76	10.50%	12.98%
Bank of America	63.46	2.40	8.50%	12.73%
Bank of Montreal	36.15	1.12	8.00%	11.45%
Bank of New York	38.59	0.72	12.50%	14.66%
Bank of Nova Scotia	49.06	1.36	12.00%	15.20%
Banknorth Group	22.00	0.52	11.00%	13.70%
Banta Corp.	28.45	0.64	7.50%	9.99%
Bard (C.R.)	62.15	0.84	13.50%	15.08%
Barnes Group	19.71	0.80	4.00%	8.35%
Bassett Furniture	14.30	0.80	2.50%	8.41%
Baxter Int'l Inc.	48.94	0.58	17.00%	18.43%
BB&T Corp.	34.28	1.04	12.50%	16.02%
Bear Stearns	60.35	0.60	7.50%	8.60%
Beckman Coulter	40.46	0.34	14.00%	14.99%
Becton Dickinson	33.70	0.38	11.50%	12.80%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
Belden Inc.	21.56	0.20	9.00%	10.04%
BellSouth Corp.	38.82	0.76	13.50%	15.79%
Bemis Co.	49.20	1.00	9.00%	11.28%
Biomet	29.30	0.11	15.00%	15.45%
Black & Decker	34.49	0.48	7.50%	9.04%
Black Hills	30.19	1.12	8.00%	12.13%
Block (H&R)	38.07	0.64	16.50%	18.52%
Bob Evans Farms	20.60	0.36	9.00%	10.96%
Bowater Inc.	46.15	0.80	16.50%	18.58%
Bowne & Co.	11.25	0.22	16.50%	18.85%
BP PLC ADR	49.58	1.27	10.00%	12.90%
Briggs & Stratton	36.90	1.24	8.00%	11.74%
Bristol-Myers Squibb	54.47	1.10	10.50%	12.80%
British Amer Tobacco ADR	16.53	0.27	10.00%	11.85%
Brown Shoe	11.45	0.40	6.50%	10.34%
Brown-Forman 'B'	61.35	1.32	7.00%	9.37%
Buckeye Partners L.P.	36.31	2.50	7.50%	15.13%
Burlington Northern	28.27	0.48	6.00%	7.86%
Butler Mfg.	24.40	0.72	4.50%	7.68%
Cabot Corp.	34.30	0.52	17.00%	18.83%
Cadbury Schweppes	25.20	0 38	13.00%	14.76%
CAE Inc.	9.68	0.12	16.50%	17.99%
California Water	25.00	1.12	6.00%	10.90%
Cambrex Corp.	40.40	0.12	14.50%	14.85%
Can. Imperial Bank	54.15	1.40	16.50%	19.61%
Can. National Railway	43.61	0.78	12.00%	14.07%
Canon Inc. ADR	29.69	0.07	11.00%	11.27%
Capital One Fin'l	53.88	0.11	17.50%	17.75%
Carlisle Cos.	31.66	0.84	8.50%	11.47%
Carnival Corp.	25.15	0.42	9.50%	11.39%
Cascade Natural Gas	21.88	0.96	8.50%	13.41%
Casey's Gen'l Stores	12.50	0.08	13.00%	13.75%
Caterpillar Inc.	48.96	1.40	9.50%	12.73%
CBRL Group	25.13	0.02	8.00%	8.09%
Cedar Fair L.P.	21.89	1.64	6.50%	14.73%
Centex Corp.	44.56	0.16	12.00%	12.41%
CenturyTel Inc.	34.10	0.20	10.00%	10.67%
Charter One Fin'l	28.94	0.80	12.00%	15.19%
ChemFirst Inc.	20.43	0.40	11.50%	13.75%
Chesapeake Corp.	29.05	0.88	12.50%	16.01%
ChevronTexaco	90.17	2.80	7.00%	10.43%
Chubb Corp.	69.92	1.36	7.50%	9.66%
Church & Dwight	25.67	0.30	13.50%	14.87%
CIGNA Corp.	84.10	1.28	12.50%	14.27%
Cincinnati Financial	38.87	0.84	15.00%	17.56%
Cinergy Corp.	32.06	1.80	6.00%	12.14%
Cintas Corp.	45.71	0.22	16.00%	16.58%
Circuit City Group	14.91	0.07	9.00%	9.53%
Citigroup Inc.	49.95	0.64	16.00%	17.53%
City National Corp.	44.05	0.74	12.50%	14.45%
Claire's Stores	14.14	0.16	6.50%	7.74%
CLARCOR Inc.	26.49	0.48	10.50%	12.56%
Clayton Homes	15.30	0.06	8.50%	8.94%
Cleco Corp.	20.35	0.88	8.00%	12.81%
Clorox Co.	39.14	0.84	7.50%	9.88%
CMS Energy Corp.	22.78	1.46	6.50%	13.54%
CNF Inc.	24.38	0.40	7.00%	8.81%
Coca-Cola	49.65	0.72	9.00%	10.63%
Colgate-Palmolive	57.86	0.72	10.00%	11.41%
Comerica Inc.	50.85	1.76	9.50%	13.41%
Commerce Bancorp NJ	75.00	1.10	14.50%	16.23%
Commerce Bancshs.	37.17	0.64	8.50%	10.43%
Compaq Computer	8.80	0.10	12.00%	13.31%
Computer Associates	28.65	0.08	8.50%	8.81%
ConAgra Foods	23.55	0.94	6.00%	10.36%
Conoco Inc.	26.86	0.76	10.00%	13.21%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
Consol. Edison	40.20	2.20	2.50%	8.28%
Cooper Cos.	42.50	0.10	12.50%	12.77%
Cooper Inds.	38.95	1.40	8.00%	12.00%
Cooper Tire & Rubber	13.40	0.42	10.00%	13.55%
Coors (Adolph) 'B'	53.70	0.82	9.50%	11.22%
Corn Products Int'l	32.38	0.40	16.00%	17.48%
Countrywide Credit	44.79	0.40	10.50%	11.52%
CPI Corp.	16.00	0.56	13.00%	17.08%
Crane Co.	22.10	0.40	6.50%	8.49%
Crawford & Co. 'B'	11.78	0.56	8.00%	13.29%
Crompton Corp.	7.55	0.20	16.00%	19.17%
CTS Corp.	15.85	0.12	17.50%	18.42%
Curtiss-Wright	43.26	0.52	8.50%	9.84%
CVS Corp.	24.05	0.23	14.00%	15.12%
Danaher Corp.	57.21	0.08	12.50%	12.66%
Darden Restaurants	31.40	0.08	14.00%	14.30%
Datascope Corp.	36.02	0.20	11.50%	12.14%
Dean Foods	44.63	0.90	13.50%	15.86%
Deere & Co.	40.65	0.88	14.50%	17.06%
Delphi Automotive	12.92	0.28	9.00%	11.44%
Deluxe Corp.	38.24	1.48	4.50%	8.67%
Dentsply Int'l	44.05	0.28	14.00%	14.75%
Devon Energy	38.60	0.20	18.50%	19.13%
Diebold Inc.	39.32	0.64	10.50%	12.35%
Dime Bancorp Inc.	35.35	0.48	12.00%	13.57%
Disney (Walt)	19.10	0.21	8.50%	9.73%
Dofasco	23.29	1.08	4.00%	8.97%
Dole Food	22.45	0.40	10.50%	12.53%
Dollar General Corp.	14.70	0.13	18.50%	19.58%
Domtar Inc.	9.04	0.14	13.00%	14.80%
Donaldson Co.	34.86	0.30	14.50%	15.52%
Donnelley (R.R) & Sons	27.35	0.96	10.00%	13.98%
Dover Corp.	36.76	0.54	10.50%	12.17%
Dow Jones & Co.	50.14	1.00	11.00%	13.28%
DPL Inc.	24.40	0.94	10.50%	14.89%
Ecolab Inc.	36.75	0.52	12.50%	14.14%
El Paso Corp.	50.76	0.85	14.50%	16.48%
Electronic Data Sys.	68.50	0.60	14.00%	15.03%
Emerson Electric	53.60	1.55	6.50%	9.68%
ENDESA ADR	15.48	0.29	11.00%	13.14%
Energy East Corp.	19.79	0.92	3.50%	8.46%
Engelhard Corp.	27.26	0.40	9.50%	11.16%
Entergy Corp.	38.53	1.32	7.00%	10.78%
EOG Resources	36.08	0.16	13.00%	13.52%
Ericsson ADR	5.12	0.05	14.00%	15.15%
Ethan Allen Interiors	36.50	0.16	11.50%	12.00%
Everest Re Group Ltd.	68.53	0.28	14.50%	14.98%
Exxon Mobil Corp.	40.50	0.92	9.50%	12.06%
Family Dollar Stores	30.99	0.24	16.50%	17.43%
Fannie Mae	84.28	1.20	11.50%	13.14%
Fastenal Co.	59.32	0.09	16.00%	16.18%
Federal Signal	21.46	0.78	10.00%	14.12%
Ferro Corp.	23.56	0.58	11.50%	14.33%
Fifth Third Bancorp	60.87	0.80	15.50%	17.06%
First Data Corp.	73.26	0.08	15.00%	15.13%
First Tenn. National	36.25	1.00	8.50%	11.59%
First Va. Banks	47.53	1.56	7.00%	10.62%
FirstMerit Corp.	23.83	0.92	10.00%	14.38%
FleetBoston Fin'l	37.36	1.40	6.50%	10.61%
Florida Rock	30.90	0.34	11.00%	12.26%
Fluor Corp.	42.51	0.64	10.50%	12.22%
Fortune Brands	37.83	1.00	12.50%	15.57%
FPL Group	56.08	2.24	4.50%	8.80%
Franklin Electric	76.51	0.96	7.00%	8.38%
Franklin Resources	36.90	0.26	9.50%	10.30%
Freddie Mac	70.04	0.80	13.00%	14.33%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
Fred's Inc. 'A'	34.49	0.16	18.00%	18.56%
Fuji Photo ADR	33.05	0.15	9.50%	10.01%
G&K Services 'A'	31.36	0.07	8.50%	8.75%
Gallagher (Arthur J.)	34.32	0.52	15.50%	17.30%
Gannett Co.	67.40	0.92	9.00%	10.53%
GATX Corp.	28.03	1.24	3.50%	8.22%
Gen'l Dynamics	79.25	1.12	9.50%	11.10%
Gen'l Electric	40.56	0.64	13.50%	15.35%
Gen'l Mills	49.46	1.10	7.50%	9.96%
Gen'l Motors	44.99	2.00	8.00%	12.95%
Genuine Parts	33.85	1.14	7.50%	11.23%
GlaxoSmithKline ADR	54.15	0.26	12.50%	13.06%
Golden State Bancorp	25.39	0.40	13.50%	15.34%
Golden West Fin'l	49.43	0.29	17.00%	17.71%
Goldman Sachs	91.05	0.48	11.50%	12.11%
Goodrich Corp.	22.90	1.10	5.50%	10.72%
Graco Inc.	31.60	0.40	13.50%	14.98%
Grainger (W.W.)	45.10	0.70	6.50%	8.20%
Granite Construction	26.19	0.32	17.00%	18.47%
GreenPoint Fin'l	35.55	1.00	16.00%	19.36%
G't Lakes Chemical	22.92	0.32	6.50%	8.03%
Harland (John H.)	20.19	0.30	13.00%	14.73%
Harley-Davidson	46.49	0.12	17.00%	17.31%
Harsco Corp.	32.10	0.96	9.00%	12.36%
Harte-Hanks	24.44	0.12	12.00%	12.57%
Hartford Fin'l Svcs.	57.01	1.04	9.00%	11.05%
Haverty Furniture	14.07	0.21	8.50%	10.17%
HCA Inc.	38.21	0.08	17.00%	17.25%
HCC Insurance Hldgs.	27.06	0.25	12.50%	13.57%
Heinz (H.J.)	40.00	1.62	9.00%	13.55%
Helmerich & Payne	29.55	0.30	14.50%	15.70%
Hershey Foods	66.44	1.21	10.50%	12.57%
Hewlett-Packard	20.23	0.32	6.50%	8.24%
Hibernia Corp. 'A'	16.31	0.56	14.00%	18.04%
Hillenbrand Inds.	50.97	0.84	12.00%	13.90%
Hollinger Int'l 'A'	10.03	0.55	9.00%	15.16%
Home Depot	44.00	0.16	18.00%	18.44%
HON Industries Inc.	25.60	0.48	10.50%	12.64%
Honeywell Int'l	31.70	0.75	7.00%	9.61%
Hooper Holmes	7.20	0.03	12.50%	12.98%
Hormel Foods	24.89	0.37	16.00%	17.78%
Horton D.R.	25.74	0.20	14.50%	15.42%
Household Int'l	60.00	0.88	13.00%	14.71%
Hubbell Inc. 'B'	27.80	1.32	7.50%	12.76%
IDEX Corp.	27.20	0.56	9.50%	11.82%
Illinois Tool Works	63.10	0.88	11.50%	13.10%
Imperial Oil Ltd.	28.41	0.84	11.50%	14.90%
IMS HEALTH	21.19	0.08	17.50%	17.96%
Independence Cmnty	24.54	0.40	17.50%	19.47%
Ingersoll-Rand	41.23	0.68	8.00%	9.84%
Interface Inc. 'A'	4.03	0.06	6.50%	8.13%
Interpublic Group	24.25	0.38	8.50%	10.25%
Interstate Bakeries	24.02	0.28	8.50%	9.80%
Intimate Brands	14.20	0.28	10.00%	12.24%
Int'l Business Mach.	116.70	0.56	12.50%	13.06%
Int'l Paper	37.90	1.00	15.50%	18.64%
Invacare Corp.	33.86	0.05	11.50%	11.67%
Jefferson-Pilot Corp.	44.10	1.10	8.50%	11.29%
JLG Industries	11.19	0.04	11.00%	11.41%
Johnson & Johnson	59.65	0.72	12.00%	13.39%
Johnson Controls	79.25	1.24	12.00%	13.81%
KB Home	33.96	0.30	13.50%	14.53%
Kellogg	30.48	1.01	8.00%	11.69%
Kellwood Co.	22.00	0.64	9.50%	12.78%
Kennametal Inc.	38.10	0.68	13.50%	15.59%
Kerr-McGee Corp.	56.85	1.80	8.00%	11.53%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
KeyCorp	23.38	1.18	4.50%	9.94%
Kimball Int'l 'B'	12.69	0.64	8.50%	14.14%
Kimberly-Clark	56.22	1.12	10.00%	12.26%
Kinder Morgan Energy	37.35	2.20	11.50%	18.27%
Knight Ridder	61.03	1.00	7.50%	9.32%
Koninklijke Philips NV	25.85	0.27	8.00%	9.16%
Korea Electric ADR	9.01	0.21	8.00%	10.60%
Laclede Group	23.67	1.34	6.50%	12.72%
Lafarge No. America	36.75	0.95	8.50%	11.39%
Lancaster Colony	31.98	0.68	7.00%	9.35%
Landry's Restaurants	18.00	0.10	15.50%	16.16%
Lauder (Estee)	32.73	0.20	13.50%	14.22%
Lawson Products	23.87	0.64	8.00%	10.99%
La-Z-Boy Inc.	19.98	0.36	7.50%	9.50%
Lee Enterprises	35.40	0.68	7.50%	9.63%
Legg Mason	45.79	0.40	11.00%	12.00%
Leggett & Platt	22.80	0.48	12.50%	14.94%
Lehman Bros. Holdings	69.74	0.28	13.50%	13.97%
Lennar Corp.	40.48	0.05	18.50%	18.65%
Lilly (Eli)	78.97	1.12	11.00%	12.62%
Limited Inc.	13.68	0.30	8.50%	10.95%
Lincoln Elec Hldgs.	22.05	0.60	10.50%	13.60%
Lincoln Nat'l Corp.	45.23	1.22	7.50%	10.49%
Linear Technology	43.35	0.16	15.50%	15.94%
Lockheed Martin	45.47	0.44	15.50%	16.65%
Loews Corp.	54.45	0.60	12.00%	13.27%
Lone Star Steakhouse	14.29	0.50	12.00%	16.04%
Lubrizol Corp.	30.76	1.04	7.00%	10.73%
M&T Bank Corp.	70.60	1.00	12.50%	14.14%
M.D.C. Holdings	32.23	0.28	13.00%	14.01%
MacDermid Inc.	13.09	0.08	8.50%	9.18%
Magna Int'l 'A'	58.91	2.09	11.00%	15.06%
Manitowoc Co.	28.35	0.90	14.00%	17.73%
Manpower Inc.	32.17	0.20	9.00%	9.70%
Marriott Int'l	34.50	0.25	11.50%	12.33%
Marsh & McLennan	104.49	2.12	10.50%	12.81%
Marshall & Ilsley	60.57	1.16	10.50%	12.68%
Martin Marietta	43.08	0.56	8.50%	9.95%
Masco Corp.	21.25	0.54	15.00%	18.01%
May Dept. Stores	35.63	0.94	7.00%	9.91%
Maytag Corp.	29.06	0.72	10.00%	12.81%
MBIA Inc.	48.05	0.60	12.50%	13.95%
McClatchy Co.	41.61	0.40	12.50%	13.61%
McCormick & Co.	43.16	0.80	13.00%	15.16%
McDonald's Corp.	27.46	0.22	8.00%	8.89%
McGraw-Hill	58.00	0.98	12.50%	14.46%
MDU Resources	25.00	0.92	8.00%	12.10%
Mead Corp.	29.10	0.68	9.00%	11.63%
Media General	44.36	0.68	8.00%	9.71%
Medtronic Inc.	41.39	0.23	16.50%	17.17%
Mentor Corp.	27.70	0.12	15.00%	15.51%
Mercantile Bankshares	40.61	1.12	9.00%	12.10%
Merck & Co.	64.58	1.40	11.00%	13.48%
Mercury General	42.75	1.06	5.00%	7.68%
Meredith Corp.	34.81	0.34	7.50%	8.58%
Merrill Lynch & Co.	50.90	0.64	9.50%	10.92%
MGIC Investment	56.92	0.10	12.00%	12.20%
Millipore Corp.	56.24	0.44	14.50%	15.42%
Minnesota Mining	113.41	2.40	8.00%	10.36%
Mitchell Energy 'A'	53.29	0.53	10.50%	11.63%
Modine Mfg.	20.93	1.00	6.00%	11.22%
Molex Inc.	29.40	0.10	10.00%	10.39%
Moody's Corp.	35.72	0.18	13.50%	14.09%
Morgan (J.P.) Chase	39.35	1.36	8.00%	11.85%
Morgan Stanley	55.89	0.92	9.00%	10.85%
Motorola Inc.	18.17	0.16	13.00%	14.03%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
MTS Systems	10.67	0.24	9.50%	12.04%
Murphy Oil Corp.	79.75	1.50	10.00%	12.13%
Mylan Labs.	32.05	0.16	15.00%	15.59%
N.Y. Times	44.48	0.50	11.00%	12.29%
National City Corp.	28.39	1.18	6.00%	10.54%
National Fuel Gas	23.19	1 01	11.00%	15.98%
National Presto Ind.	27.90	2.00	2.50%	10.07%
Nationwide Fin'l	36.02	0.48	11.00%	12.52%
Nat'l Bank of Canada	26.82	0.84	8.50%	12.00%
New Jersey Resources	46.65	1 80	7.50%	11.78%
NICOR Inc.	38.65	1.76	7.50%	12.55%
NIKE Inc. 'B'	49.98	0.48	12.00%	13.11%
Nokia Corp. ADR	23.38	0.25	17.50%	18.80%
Norsk Hydro ADR	39.08	0.89	10.50%	13.09%
North Fork Bancorp	29.50	0.84	10.50%	13.74%
Northern Trust Corp.	56.22	0.62	11.50%	12.77%
Northrop Grumman	92.39	1.60	15.50%	17.56%
Northwest Nat. Gas	24.74	1.26	8.00%	13.67%
NorthWestern Corp.	19.90	1.19	9.50%	16.25%
Novo-Nordisk ADR	35.29	0.57	14.00%	15.90%
NSTAR	43.78	2.06	6.50%	11.67%
Nucor Corp.	44.56	0.68	11.00%	12.75%
NUI Corp.	21.68	0.98	9.50%	14.60%
Old Nat'l Bancorp	24.97	0.68	9.00%	12.06%
Old Republic	26.53	0.60	8.00%	10.52%
OM Group	60.70	0.52	14.00%	15.01%
Omnicare Inc.	20.61	0.09	12.50%	13.01%
Omnicom Group	83.60	0.80	17.00%	18.15%
ONEOK Inc.	18.11	0.62	10.50%	14.40%
Oshkosh B'Gosh 'A'	36.53	0.24	12.00%	12.76%
Otter Tail Corp.	28.57	1.04	5.50%	9.46%
Owens & Minor	18.45	0.28	12.00%	13.75%
Oxford Inds.	23.30	0.84	10.00%	14.09%
Pacific Century Fin'l	24.54	0.72	8.00%	11.27%
Pall Corp.	21.85	0.68	11.50%	15.08%
Park Electrochemical	25.00	0.24	10.00%	11.09%
Parker-Hannifin	39.25	0.72	11.00%	13.10%
PartnerRe Ltd.	47.82	1.12	15.00%	17.78%
Penford Corp.	10.10	0.24	6.00%	8.60%
Pentair Inc.	35.73	0.72	8.50%	10.75%
People's Bank	21.50	1.36	6.00%	12.91%
Peoples Energy	39.15	2.04	8.50%	14.33%
PepsiCo Inc.	49.44	0.58	11.50%	12.85%
Petro-Canada	25.24	0.40	17.00%	18.91%
Petroleo Brasileiro ADR	21.54	0.07	15.50%	15.89%
Phila. Suburban	29.47	0.66	7.50%	9.98%
Philip Morris	47.00	2.32	10.50%	16.12%
Phillips Petroleum	56.55	1.44	11.00%	13.91%
Piedmont Natural Gas	33.19	1.54	7.50%	12.64%
Pier 1 Imports	14.00	0.16	12.00%	13.32%
Pilgrim's Pride `B'	12.68	0.06	11.00%	11.54%
Pinnacle West Capital	43.05	1.60	5.50%	9.54%
Pioneer-Standard	9.00	0.12	7.00%	8.47%
Pitney Bowes	39.15	1.16	8.00%	11.30%
Pittston Co.	20.50	0.10	13.00%	13.57%
Plum Creek Timber	28.47	2.28	7.50%	16.38%
PMI Group	60.40	0.16	14.00%	14.31%
PNC Financial Serv.	59.49	1.92	11.00%	14.69%
Polaris Inds.	50.86	1.00	13.50%	15.80%
Popular Inc.	29.39	0.80	10.50%	13.60%
Potash Corp.	62.02	1.00	7.50%	9.29%
Power Corp.	36.15	0.70	13.50%	15.77%
PPG Inds.	52.82	1.68	9.50%	13.09%
Praxair Inc.	50.89	0.68	8.00%	9.49%
Precision Castparts	24.58	0.12	10.50%	11.06%
Price (T. Rowe) Group	30.77	0.60	9.50%	11.70%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
Procter & Gamble	77.86	1.52	8.50%	10.68%
Progress Energy	42.90	2.12	11.00%	16.65%
Progressive (Ohio)	142.98	0.28	16.50%	16.74%
Protective Life	29.13	0.56	9.00%	11.16%
Public Serv. (N.Mex.)	26.49	0.80	8.00%	11.36%
Public Serv. Enterprise	41.27	2.16	7.50%	13.30%
Pulitzer Inc.	48.04	0.68	17.50%	19.21%
Pulte Homes	38.60	0.16	10.00%	10.47%
Quaker Chemical	19.56	0.82	9.50%	14.23%
Quanex Corp.	26.25	0.64	8.50%	11.23%
Questar Corp.	23.78	0.72	12.00%	15.50%
RadioShack Corp.	28.70	0.22	15.00%	15.91%
Raymond James Fin'l	31.40	0.36	9.00%	10.29%
Rayonier Inc.	44.55	1.44	12.50%	16.25%
Raytheon Co.	31.25	0.80	13.00%	15.98%
Regions Financial	29.15	1.12	6.50%	10.72%
Regis Corp.	21.28	0.12	14.00%	14.66%
Reinsurance Group	32.18	0.24	13.00%	13.87%
Reuters ADR	67.25	0.33	7.00%	7.54%
Reynolds & Reynolds	25.23	0.44	6.00%	7.91%
Riviana Foods	17.96	0.66	7.50%	11.57%
RLI Corp.	38.98	0.64	8.00%	9.83%
Rock-Tenn 'A'	12.45	0.30	9.50%	12.22%
Rohm and Haas	34.30	0.80	7.00%	9.57%
Roper Inds.	39.36	0.30	18.50%	19.43%
Roslyn Bancorp	17.96	0.47	12.50%	15.54%
Ross Stores	29.15	0.17	12.00%	12.67%
Rouse Co.	29.00	1.42	3.00%	8.20%
Royal Bank of Canada	49.11	1.44	9.50%	12.81%
Royal Caribbean Cruises	12.75	0.52	6.50%	10.98%
Royal Dutch Petr.	52.24	1.04	9.00%	11.24%
RPM Inc.	13.20	0.50	5.00%	9.10%
Ruddick Corp.	15.80	0.36	5.50%	7.98%
Ryland Group	61.67	0.16	14.50%	14.81%
SAFECO Corp.	31.80	0.74	9.00%	11.61%
Sara Lee Corp.	22.30	0.60	8.00%	11.00%
Sauer-Danfoss	7.60	0.28	11.00%	15.22%
SBC Communications	37.40	1.02	9.50%	12.58%
SCANA Corp.	26.89	1.20	6.50%	11.40%
Schering-Plough	35.78	0.64	12.50%	14.57%
Schwab (Charles)	15.83	0.04	15.50%	15.80%
Scientific Atlanta	23.19	0.04	19.00%	19.21%
Scripps (E.W.) 'A'	63.79	0.60	13.50%	14.60%
Selective Ins. Group	22.28	0.60	14.50%	17.68%
Sensient Techn.	15.90	0.53	6.00%	9.64%
ServiceMaster Co.	11.69	0.40	7.50%	11.29%
Shell Canada	42.75	0.80	7.00%	9.06%
Shell Transport	45.02	0.50	10.00%	11.26%
Sherwin-Williams	25.51	0.58	8.00%	10.53%
Sigma-Aldrich	40.06	0.33	8.00%	8.92%
Smith (A.O.)	16.90	0.52	6.50%	9.88%
Smucker (J.M.)	32.71	0.64	8.50%	10.69%
Snap-on Inc.	28.55	0.96	4.50%	8.12%
Sonoco Products	24.60	0.80	7.50%	11.10%
Sony Corp. ADR	40.50	0.26	14.50%	15.26%
South Jersey Inds.	33.43	1.48	8.50%	13.45%
SouthTrust Corp.	23.77	0.56	11.00%	13.70%
Southwest Airlines	17.49	0.02	16.50%	16.64%
Southwest Gas	21.25	0.82	4.00%	8.14%
Sovereign Bancorp	11.26	0.10	9.00%	10.00%
Spiegel Inc. 'A'	5.50	0.16	16.50%	19.99%
St. Joe Corp.	26.55	0.08	13.50%	13.85%
St. Paul Cos.	47.20	1.12	9.00%	11.67%
Standard Motor Prod.	11.60	0.36	9.00%	12.49%
Standard Pacific Corp.	20.70	0.32	12.50%	14.29%
Standard Register	16.20	0.92	4.00%	10.09%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
Standex Int'l	21.45	0.84	11.00%	15.48%
Stanley Works	41.08	0.96	16.00%	18.79%
Starwood Hotels	25.44	0.77	10.00%	13.43%
State Street Corp.	50.80	0.40	14.50%	15.43%
Steelcase Inc 'A'	12.89	0.44	4.00%	7.66%
Strayer Education	45.30	0.26	14.00%	14.67%
SunTrust Banks	64.57	1.60	12.00%	14.86%
Superior Inds. Int'l	36.54	0.44	12.00%	13.39%
SUPERVALU INC.	22.90	0.56	10.50%	13.29%
Symbol Technologies	16.73	0.01	15.00%	15.07%
Synovus Financial	24.95	0.51	16.50%	18.96%
Sysco Corp.	24.72	0.28	16.00%	17.35%
Target Corp.	36.22	0.22	12.50%	13.20%
Tasty Baking	16.92	0.48	12.00%	15.28%
TCF Financial	45.31	1.00	11.50%	14.04%
TECO Energy	27.53	1.38	7.00%	12.53%
Teleflex Inc.	39.74	0.68	10.00%	11.94%
Telefonos de Mexico ADR	33.34	0.97	10.00%	13.30%
Temple-Inland	54.78	1 28	6.00%	8.55%
Tennant Co.	33.95	0.80	8.00%	10.62%
TEPPCO Partners L.P.	34.70	2.30	5.00%	12.17%
Thomas Inds.	23.70	0.34	7.50%	9.09%
Thomson Corp.	46.72	0.70	15.00%	16.78%
Thor Inds.	35.20	0.08	9.00%	9.26%
Tidewater Inc.	32.24	0.60	14.00%	16.19%
Tiffany & Co.	26.70	0.16	13.50%	14.20%
Timken Co.	14.20	0.52	7.00%	11.04%
TJX Companies	36.07	0.18	12.00%	12.58%
Tootsie Roll Ind.	37.55	0.28	8.00%	8.83%
Torchmark Corp.	39.52	0.36	10.00%	11.03%
Total Fina Elf ADR	69.50	1.81	11.00%	13.98%
Total System Svcs.	20.74	0.06	19.50%	19.86%
Toyota Motor ADR	50.40	0.38	7.00%	7.83%
Transatlantic Hldgs.	89.13	0.38	8.00%	8.47%
Tribune Co.	35.33	0.44	10.00%	11.41%
Trinity Inds.	25.65	0.72	8.00%	11.13%
Trizec Hahn	15.02	0.35	14.00%	16.74%
Tupperware Corp.	21.24	0.88	11.00%	15.74%
TXU Corp.	49.45	2.40	6.00%	11.30%
U.S. Bancorp	18.20	0.75	14.50%	19.36%
Unilever NV (NY Shs)	55.11	0.46	10.50%	11.45%
Unilever PLC ADR	31.07	0.27	11.00%	11.99%
Union Planters	43.70	2.00	10.00%	15.19%
UniSource Energy	16.81	0.40	10.00%	12.70%
United Industrial Corp.	18.50	0.40	13.50%	16.03%
United Parcel Serv.	54.24	0.76	12.00%	13.62%
United Technologies	56.95	0.90	14.50%	16.37%
UnitedHealth Group	64.95	0.03	19.00%	19.06%
Universal Corp.	34.80	1.28	4.50%	8.46%
Unocal Corp.	33.36	0.80	13.00%	15.79%
UNUMProvident Corp.	24.36	0.59	7.00%	9.67%
USA Education	86.90	0.80	16.50%	17.61%
UST Inc.	34.89	1.84	2.00%	7.55%
USX-Marathon Group	27.79	0.92	8.50%	12.20%
Valmont Inds.	15.22	0.26	9.50%	11.43%
Valspar Corp.	35.75	0.54	11.00%	12.73%
Verizon Communic.	48.89	1.54	9.50%	13.06%
Viad Corp.	20.04	0.36	10.00%	12.04%
Volvo AB ADR	15.54	0.54	9.50%	13.42%
Vulcan Materials	45.01	0.90	11.00%	13.29%
Walgreen Co.	33.12	0.14	17.50%	18.01%
Wallace Computer Serv.	16.93	0.66	7.50%	11.82%
Wal-Mart Stores	55.00	0.28	13.00%	13.59%
Walter Inds.	11.25	0.12	17.50%	18.79%
Washington Federal	24.69	0.96	9.50%	13.89%
Washington Mutual	31.93	0.96	15.50%	19.08%

Company	Stock Price	Dividend	Projected EPS Growth	Cost of Equity
Washington Post	517.00	5.60	9.50%	10.72%
Waste Management	27.72	0.01	8.50%	8.54%
Watts Inds. 'A'	13.65	0.24	10.50%	12.50%
Webster Fin'l	31.09	0.68	10.50%	12.99%
Weis Markets	28.08	1.08	6.50%	10.72%
Wells Fargo	42.44	1.04	13.00%	15.85%
Wendy's Int'l	27.97	0.24	13.50%	14.50%
Werner Enterprises	22.80	0.10	10.50%	11.00%
West Pharmac. Svcs.	24.46	0.76	7.50%	10.94%
Westcoast Energy	26.47	1.36	11.50%	17.41%
Westvaco Corp.	27.05	0.88	16.00%	19.89%
Weyerhaeuser Co.	51.77	1.60	13.50%	17.12%
WGL Holdings Inc.	27.59	1.26	8.00%	13.08%
Whirlpool Corp.	63.17	1.36	14.00%	16.53%
Wiley (John) & Sons	22.00	0.18	10.00%	10.93%
Wilmington Trust	58.68	1.92	7.50%	11.13%
Wolverine World Wide	15.59	0.16	12.50%	13.69%
WPP Group ADR	50.71	0.10	14.50%	14.73%
WPS Resources	35.47	2.10	7.50%	14.06%
Wrigley (Wm.) Jr.	51.63	0.76	9.00%	10.65%
Xcel Energy Inc.	29.45	1.50	12.50%	18.41%
York Int'l	35.15	0.60	10.50%	12.44%
Zions Bancorp.	48.10	0.80	16.00%	17.99%
Market Weighted Average				13.55%

Notes:

This DCF result is based on an application of the annual DCF model of the form, $k = D_1/P_0 + g$, where k is the cost of equity, D_1 is the expected next period dividend per Value Line, P_0 is the price from Value Line, and g is the expected growth rate, using the Value Line projected earnings growth for each company.

Source of data: The Value Line Investment Survey for Windows, November 2001 (the date of Mr. Draper's data). As noted in the text, and in accord with Mr. Draper's criteria, companies were eliminated from the Value Line universe if they did not pay a dividend, had negative dividend growth, had negative earnings growth, or had projected earnings growth exceeding 20 percent. In addition, I eliminated any results that were less than the current approximate 7.5 percent yield on Moody's A-rated utility bonds or that were greater than 20 percent. (Elimination of these companies had an negligible effect on the result.)

Company	Stock Price	Dividend	IBES g	Cost of Equity
Abbott Labs.	53.12	0.84	12.55%	14.38%
Aetna Inc.	29.92	0.04	12.48%	12.64%
AFLAC Inc.	24.89	0.20	15.66%	16.62%
Air Products & Chem.	43.01	0.80	10.29%	12.40%
Alberto Culver 'B'	43.38	0.33	10.47%	11.34%
Albertson's Inc.	32.67	0.76	10.83%	13.49%
Alcan Inc.	34.30	0.60	14.51%	16.58%
Alcoa Inc.	36.30	0.60	14.20%	16.15%
Allegheny Energy	38.27	1.72	9.46%	14.53%
Allegheny Technologies	15.79	0.80	8.90%	14.59%
Allstate Corp.	32.30	0.76	10.50%	13.18%
ALLTEL Corp.	61.27	1.36	11.14%	13.68%
Ambac Fin'l Group	51.56	0.36	14.32%	15.14%
Amer. Elec. Power	44.48	2.40	6.50%	12.42%
Amer. Express	32.15	0.32	12.88%	14.04%
Amer. Home Products	57.09	0.92	14.69%	16.60%
Amer. Int'l Group	80.90	0.17	15.12%	15.37%
Amerada Hess	60.68	1.20	13.73%	16.05%
Ameren Corp.	42.15	2.54	4.86%	11.37%
AmSouth Bancorp.	18.35	0.88	9.00%	14.39%
Anadarko Petroleum	58.88	0.30	17.91%	18.53%
Anheuser-Busch	43.40	0.72	10.62%	12.51%
Aon Corp.	34.84	0.90	11.00%	13.96%
Apache Corp.	51.14	0.72	16.76%	18.45%
Applied Biosystems	32.75	0.17	18.15%	18.78%
Ashland Inc.	42.20	1.10	7.68%	10.57%
Autodesk Inc.	36.02	0.24	15.75%	16.55%
Automatic Data Proc.	55.43	0.41	14.61%	15.48%
Avery Dennison	52.56	1.32	11.78%	14.67%
Avon Products	47.55	0.76	12.71%	14.57%
Ball Corp.	65.41	0.60	10.00%	11.04%
Bank of America	63.46	2.40	9.89%	14.17%
Bank of New York	38.59	0.72	12.21%	14.37%
Bank One Corp.	36.13	0.84	11.18%	13.84%
Bard (C.R.)	62.15	0.84	12.43%	14.00%
Barrick Gold	15.38	0.22	6.67%	8.24%
Bausch & Lomb	32.51	1.04	12.00%	15.69%
Baxter Int'l Inc.	48.94	0.58	14.26%	15.66%
BB&T Corp.	34.28	1.04	11.36%	14.84%
Becton Dickinson	33.70	0.38	12.29%	13.60%
BellSouth Corp.	38.82	0.76	10.02%	12.24%
Bemis Co.	49.20	1.00	10.93%	13.25%
Biomet	29.30	0.11	15.00%	15.45%
Black & Decker	34.49	0.48	14.25%	15.89%
Block (H&R)	38.07	0.64	15.00%	16.99%
Boise Cascade	30.82	0.60	6.75%	8.89%
Bristol-Myers Squibb	54.47	1.10	12.20%	14.54%

Company	Stock Price	Dividend	IBES g	Cost of Equity
Brunswick Corp.	18.15	0.50	10.20%	13.33%
Burlington Northern	28.27	0.48	8.86%	10.77%
Campbell Soup	30.14	0.63	8.38%	10.72%
Carnival Corp.	25.15	0.42	13.16%	15.11%
Caterpillar Inc.	48.96	1.40	11.14%	14.42%
Centex Corp.	44.56	0.16	13.13%	13.55%
CenturyTel Inc.	34.10	0.20	11.58%	12.25%
Charter One Fin'l	28.94	0.80	12.45%	15.65%
ChevronTexaco	90.17	2.80	7.00%	10.43%
Chubb Corp.	69.92	1.36	11.80%	14.04%
CIGNA Corp.	84.10	1.28	13.35%	15.13%
Cincinnati Financial	38.87	0.84	10.57%	13.03%
Cinergy Corp.	32.06	1.80	5.96%	12.09%
Cintas Corp.	45.71	0.22	17.86%	18.44%
Circuit City Group	14.91	0.07	14.03%	14.58%
Citigroup Inc.	49.95	0.64	14.29%	15.80%
Clorox Co.	39.14	0.84	10.22%	12.66%
CMS Energy Corp.	22.78	1.46	7.75%	14.87%
Coca-Cola	49.65	0.72	12.64%	14.32%
Colgate-Palmolive	57.86	0.72	12.36%	13.80%
Comerica Inc.	50.85	1.76	10.76%	14.71%
Compaq Computer	8.80	0.10	14.33%	15.67%
Computer Associates	28.65	0.08	15.88%	16.21%
ConAgra Foods	23.55	0.94	9.33%	13.83%
Conoco Inc.	26.86	0.76	9.12%	12.30%
Consol. Edison	40.20	2.20	4.26%	10.14%
Constellation Energy	25.29	0.48	7.92%	10.03%
Cooper Inds.	38.95	1.40	10.00%	14.08%
Cooper Tire & Rubber	13.40	0.42	9.50%	13.04%
Coors (Adolph) 'B'	53.70	0.82	11.08%	12.83%
Countrywide Credit	44.79	0.40	12.73%	13.77%
CSX Corp.	35.77	0.40	13.29%	14.60%
CVS Corp.	24.05	0.23	13.58%	14.70%
Danaher Corp.	57.21	0.08	16.30%	16.47%
Darden Restaurants	31.40	0.08	15.73%	16.03%
Deere & Co.	40.65	0.88	10.69%	13.16%
Delphi Automotive	12.92	0.28	8.10%	10.52%
Delta Air Lines	24.68	0.10	9.00%	9.46%
Deluxe Corp.	38.24	1.48	9.00%	13.35%
Devon Energy	38.60	0.20	14.14%	14.75%
Dillard's Inc.	14.27	0.16	9.00%	10.26%
Disney (Walt)	19.10	0.21	13.09%	14.37%
Dominion Resources	62.80	2.58	10.19%	14.86%
Donnelley (R.R) & Sons	27.35	0.96	11.25%	15.28%
Dover Corp.	36.76	0.54	13.50%	15.22%
Dow Chemical	36.04	1.34	9.00%	13.18%
Dow Jones & Co.	50.14	1.00	11.30%	13.59%

Company	Stock Price	Dividend	IBES g	Cost of Equity
DTE Energy	41.90	2.06	6.85%	12.27%
Du Pont	43.39	1.40	9.13%	12.76%
Duke Energy	40.40	1.10	12.45%	15.61%
Eastman Kodak	26.46	1.80	6.71%	14.19%
Eaton Corp.	68.65	1.76	9.83%	12.73%
Ecolab Inc.	36.75	0.52	14.00%	15.66%
El Paso Corp.	50.76	0.85	15.04%	17.03%
Electronic Data Sys.	68.50	0.60	15.34%	16.38%
Emerson Electric	53.60	1.55	10.64%	13.94%
Engelhard Corp.	27.26	0.40	11.58%	13.27%
Entergy Corp.	38.53	1.32	9.33%	13.19%
EOG Resources	36.08	0.16	16.29%	16.82%
Equifax Inc.	23.95	0.08	12.00%	12.39%
Exxon Mobil Corp.	40.50	0.92	7.65%	10.17%
Fannie Mae	84.28	1.20	13.88%	15.55%
Fifth Third Bancorp	60.87	0.80	14.29%	15.84%
First Data Corp.	73.26	0.08	15.12%	15.25%
FirstEnergy Corp.	35.10	1.50	6.35%	11.04%
FleetBoston Fin'l	37.36	1.40	10.80%	15.08%
Fluor Corp.	42.51	0.64	10.86%	12.58%
Ford Motor	16.43	0.60	6.14%	10.14%
Fortune Brands	37.83	1.00	10.40%	13.41%
FPL Group	56.08	2.24	6.75%	11.15%
Franklin Resources	36.90	0.26	13.55%	14.37%
Freddie Mac	70.04	0.80	14.51%	15.86%
Gannett Co.	67.40	0.92	10.92%	12.48%
Gap (The) Inc.	14.00	0.09	17.09%	17.87%
Gen'l Dynamics	79.25	1.12	11.00%	12.62%
Gen'l Electric	40.56	0.64	15.27%	17.15%
Gen'l Mills	49.46	1.10	11.88%	14.45%
Gen'l Motors	44.99	2.00	5.60%	10.44%
Genuine Parts	33.85	1.14	9.00%	12.78%
Georgia-Pacific Group	29.60	0.50	8.25%	10.14%
Gillette	32.10	0.65	10.40%	12.70%
Golden West Fin'l	49.43	0.29	12.39%	13.07%
Goodrich Corp.	22.90	1.10	12.36%	17.92%
Grainger (W.W.)	45.10	0.70	12.06%	13.85%
G't Lakes Chemical	22.92	0.32	8.86%	10.43%
Harley-Davidson	46.49	0.12	18.78%	19.10%
Hartford Fin'l Svcs.	57.01	1.04	12.00%	14.11%
Hasbro Inc.	18.19	0.12	9.50%	10.24%
HCA Inc.	38.21	0.08	15.28%	15.53%
Heinz (H.J.)	40.00	1.62	8.01%	12.52%
Hershey Foods	66.44	1.21	9.30%	11.35%
Hewlett-Packard	20.23	0.32	12.07%	13.90%
Hilton Hotels	9.09	0.08	13.79%	14.82%
Honeywell Int'l	31.70	0.75	12.84%	15.59%

Company	Stock Price	Dividend	IBES g	Cost of Equity
Household Int'l	60.00	0.88	14.51%	16.24%
Huntington Bancshs.	16.25	0.64	7.61%	11.98%
Illinois Tool Works	63.10	0.88	13.67%	15.30%
IMS HEALTH	21.19	0.08	18.81%	19.27%
Ingersoll-Rand	41.23	0.68	10.69%	12.57%
Intel Corp.	30.05	0.08	17.56%	17.88%
Interpublic Group	24.25	0.38	14.20%	16.04%
Int'l Business Mach.	116.70	0.56	12.43%	12.99%
Int'l Flavors & Frag.	29.64	0.60	9.00%	11.27%
ITT Industries	50.03	0.60	12.30%	13.69%
Jefferson-Pilot Corp.	44.10	1.10	10.20%	13.03%
Johnson & Johnson	59.65	0.72	13.03%	14.44%
Johnson Controls	79.25	1.24	12.14%	13.95%
KB Home	33.96	0.30	13.86%	14.90%
Kellogg	30.48	1.01	9.14%	12.87%
Kerr-McGee Corp.	56.85	1.80	8.17%	11.70%
KeyCorp	23.38	1.18	8.07%	13.69%
Kimberly-Clark	56.22	1.12	11.29%	13.58%
Knight Ridder	61.03	1.00	9.81%	11.66%
Leggett & Platt	22.80	0.48	13.17%	15.63%
Lehman Bros. Holdings	69.74	0.28	11.90%	12.36%
Lilly (Eli)	78.97	1.12	12.83%	14.48%
Limited Inc.	13.68	0.30	13.61%	16.18%
Lincoln Nat'l Corp.	45.23	1.22	10.71%	13.79%
Liz Claiborne	49.41	0.45	13.30%	14.36%
Lockheed Martin	45.47	0.44	14.55%	15.69%
Marriott Int'l	34.50	0.25	15.60%	16.46%
Marsh & McLennan	104.49	2.12	13.77%	16.15%
Masco Corp.	21.25	0.54	11.24%	14.15%
May Dept. Stores	35.63	0.94	9.62%	12.60%
Maytag Corp.	29.06	0.72	16.75%	19.73%
MBIA Inc.	48.05	0.60	12.57%	14.02%
McDonald's Corp.	27.46	0.22	16.80%	17.76%
McGraw-Hill	58.00	0.98	12.09%	14.04%
McKesson Corp.	35.50	0.24	18.44%	19.27%
Mead Corp.	29.10	0.68	8.75%	11.37%
Medtronic Inc.	41.39	0.23	17.39%	18.06%
Mellon Financial Corp.	37.25	0.48	11.37%	12.85%
Merck & Co.	64.58	1.40	11.24%	13.73%
Meredith Corp.	34.81	0.34	10.29%	11.40%
Merrill Lynch & Co.	50.90	0.64	12.82%	14.28%
MGIC Investment	56.92	0.10	13.00%	13.20%
Millipore Corp.	56.24	0.44	18.80%	19.76%
Minnesota Mining	113.41	2.40	12.62%	15.08%
Molex Inc.	29.40	0.10	15.05%	15.45%
Moody's Corp.	35.72	0.18	15.42%	16.02%
Morgan (J.P.) Chase	39.35	1.36	11.64%	15.62%

Company	Stock Price	Dividend	IBES g	Cost of Equity
Morgan Stanley	55.89	0.92	13.62%	15.55%
Motorola Inc.	18.17	0.16	15.27%	16.32%
N.Y. Times	44.48	0.50	11.24%	12.53%
National City Corp.	28.39	1.18	8.17%	12.81%
Newell Rubbermaid	26.88	0.84	13.40%	17.05%
NICOR Inc.	38.65	1.76	5.90%	10.87%
NIKE Inc. 'B'	49.98	0.48	14.00%	15.13%
NiSource Inc.	20.16	1.16	7.58%	13.96%
Nordstrom Inc.	16.28	0.36	11.71%	14.26%
Norfolk Southern	18.42	0.24	12.00%	13.50%
Northern Trust Corp.	56.22	0.62	12.90%	14.18%
Northrop Grumman	92.39	1.60	13.84%	15.87%
Nucor Corp.	44.56	0.68	11.40%	13.15%
Occidental Petroleum	25.86	1.00	9.86%	14.24%
Omnicom Group	83.60	0.80	16.02%	17.16%
PACCAR Inc.	62.90	1.20	9.00%	11.14%
Pall Corp.	21.85	0.68	13.44%	17.08%
Parker-Hannifin	39.25	0.72	11.90%	14.02%
Penney (J.C.)	25.25	0.50	6.67%	8.85%
Peoples Energy	39.15	2.04	5.57%	11.24%
PepsiCo Inc.	49.44	0.58	12.67%	14.03%
PerkinElmer Inc.	29.00	0.28	17.00%	18.16%
Philip Morris	47.00	2.32	11.25%	16.91%
Phillips Petroleum	56.55	1.44	7.89%	10.72%
Pinnacle West Capital	43.05	1.60	7.73%	11.86%
Pitney Bowes	39.15	1.16	11.20%	14.60%
Placer Dome	10.98	0.10	15.00%	16.08%
PNC Financial Serv.	59.49	1.92	9.92%	13.58%
PPG Inds.	52.82	1.68	7.32%	10.84%
PPL Corp.	36.25	1.06	9.89%	13.20%
Praxair Inc.	50.89	0.68	10.29%	11.81%
Price (T. Rowe) Group	30.77	0.60	13.29%	15.57%
Procter & Gamble	77.86	1.52	10.30%	12.52%
Progress Energy	42.90	2.12	6.88%	12.33%
Progressive (Ohio)	142.98	0.28	13.38%	13.61%
Public Serv. Enterprise	41.27	2.16	6.14%	11.87%
Pulte Homes	38.60	0.16	11.42%	11.90%
RadioShack Corp.	28.70	0.22	15.41%	16.32%
Ralston Purina Group	32.62	0.28	10.79%	11.77%
Raytheon Co.	31.25	0.80	11.80%	14.75%
Regions Financial	29.15	1.12	8.25%	12.54%
Reliant Energy	27.20	1.50	8.45%	14.62%
Rohm and Haas	34.30	0.80	11.88%	14.57%
Royal Dutch Petr.	52.24	1.04	10.31%	12.57%
Ryder System	19.35	0.60	9.80%	13.31%
SAFECO Corp.	31.80	0.74	9.40%	12.02%
Sara Lee Corp.	22.30	0.60	9.00%	12.02%

Company	Stock Price	Dividend	IBES g	Cost of Equity
SBC Communications	37.40	1.02	10.55%	13.66%
Schering-Plough	35.78	0.64	11.77%	13.83%
Scientific Atlanta	23.19	0.04	12.92%	13.12%
Sears Roebuck	44.68	0.92	9.04%	11.35%
Sempra Energy	23.77	1.00	8.67%	13.38%
Sherwin-Williams	25.51	0.58	9.80%	12.37%
Sigma-Aldrich	40.06	0.33	11.98%	12.93%
Snap-on Inc.	28.55	0.96	9.64%	13.44%
Southern Co.	24.00	1.34	6.37%	12.49%
SouthTrust Corp.	23.77	0.56	10.79%	13.48%
Southwest Airlines	17.49	0.02	14.00%	14.13%
Sprint Corp.	21.60	0.50	9.58%	12.20%
St. Paul Cos.	47.20	1.12	9.82%	12.51%
Stanley Works	41.08	0.96	12.65%	15.36%
State Street Corp.	50.80	0.40	14.21%	15.14%
Sunoco Inc.	38.72	1.00	7.76%	10.63%
SunTrust Banks	64.57	1.60	10.30%	13.12%
SUPERVALU INC.	22.90	0.56	9.00%	11.75%
Synovus Financial	24.95	0.51	14.00%	16.40%
Sysco Corp.	24.72	0.28	14.28%	15.61%
Target Corp.	36.22	0.22	15.00%	15.72%
Textron Inc.	38.24	1.30	11.75%	15.67%
Tiffany & Co.	26.70	0.16	18.00%	18.73%
TJX Companies	36.07	0.18	14.99%	15.58%
Torchmark Corp.	39.52	0.36	10.56%	11.60%
Tribune Co.	35.33	0.44	12.89%	14.34%
TRW Inc.	37.23	0.70	9.75%	11.88%
Tupperware Corp.	21.24	0.88	11.50%	16.26%
TXU Corp.	49.45	2.40	8.47%	13.90%
U.S. Bancorp	18.20	0.75	11.45%	16.18%
Union Pacific	53.72	0.80	11.63%	13.34%
Union Planters	43.70	2.00	8.82%	13.95%
United Technologies	56.95	0.90	14.07%	15.93%
UnitedHealth Group	64.95	0.03	16.77%	16.83%
Unocal Corp.	33.36	0.80	10.33%	13.06%
UNUMProvident Corp.	24.36	0.59	11.36%	14.14%
USA Education	86.90	0.80	14.00%	15.08%
UST Inc.	34.89	1.84	5.57%	11.31%
USX-Marathon Group	27.79	0.92	9.85%	13.60%
USX-U.S. Steel Group	14.63	0.40	8.25%	11.30%
Verizon Communic.	48.89	1.54	9.05%	12.59%
Vulcan Materials	45.01	0.90	13.60%	15.94%
Walgreen Co.	33.12	0.14	17.52%	18.03%
Wal-Mart Stores	55.00	0.28	14.00%	14.60%
Washington Mutual	31.93	0.96	12.82%	16.32%
Waste Management	27.72	0.01	14.00%	14.04%
Wells Fargo	42.44	1.04	12.81%	15.66%

Company	Stock Price	Dividend	IBES g	Cost of Equity
Wendy's Int'l	27.97	0.24	13.70%	14.71%
Westvaco Corp.	27.05	0.88	8.33%	11.96%
Weyerhaeuser Co.	51.77	1.60	6.75%	10.15%
Whirlpool Corp.	63.17	1.36	9.50%	11.93%
Worthington Inds.	14.00	0.64	11.24%	16.48%
Wrigley (Wm.) Jr.	51.63	0.76	10.54%	12.22%
Xcel Energy Inc.	29.45	1.50	8.05%	13.72%
XL Capital Ltd.	92.75	1.83	13.18%	15.48%
Zions Bancorp.	48.10	0.80	13.89%	15.84%
Market Weighted Average				14.45%

Notes:

This DCF result is based on an application of the annual DCF model of the form, $k = D_1/P_0 + g$, where k is the cost of equity, D_1 is the expected next period dividend per Value Line, P_0 is the price from Value Line, and g is the expected growth rate, using the I/B/E/S projected earnings growth for each company.

Source of data: The Value Line Investment Survey for Windows, November 2001 (the date of Mr. Draper's data) and Thompson Financial I/B/E/S at November 9, 2001. As noted in the text, and in accord with Mr. Draper's criteria, companies were eliminated from the universe if they did not pay a dividend, had negative dividend growth, had negative earnings growth, or had projected earnings growth exceeding 20 percent. In addition, I eliminated any results that were less than the current approximate 7.5 percent yield on Moody's A-rated utility bonds or that were greater than 20 percent. (Elimination of these companies had an negligible effect on the result.)