1 A. No. In fact, I clearly state in my testimony that the proper weights to be used for cost of
2 capital calculations should be the long-run *target* financing weights that a rational,
3 informed management team would employ *for the network element leasing business*. The
4 market value capital structure of the network element leasing business is *not observable*
5 because, as Dr. Vander Weide noted in his direct testimony, there are no publicly traded
6 companies which solely conduct that business. (Vander Weide Direct, p. 46) I also note
7 that because the network element leasing business is less risky than the aggregate
8 business of the telephone holding companies, the market value debt weights of the
9 holding companies probably understate long-run target debt weights in the capital
10 structure of the network element leasing business.
11 Consequently, I calculate a cost of capital range using the telephone holding
12 companies' market value capital structure to determine the high side of the range (which
13 provides the cost of capital for the telephone holding companies) and the book value
14 capital structure to determine the low side of the range, with the midpoint of the range
15 considered to be the best estimate of the cost of capital for the business of network
16 element provision. This midpoint cost of capital estimate implies that a reasonable proxy
17 for the target market capital structure for the network element leasing business is also the
18 midpoint between the average market and book capital structures of the telephone holding
19 companies.
20 **Q. DOES DR. VANDER WEIDE HIMSELF RECOGNIZE THAT THE TARGET**
21 **MARKET CAPITAL STRUCTURE OF THE NETWORK ELEMENT**
22 **WHOLESALING BUSINESS IS NOT OBSERVABLE?**

1 A. Yes. At page 46 of his direct testimony he wrote that "... at the present time, there are no
2 publicly traded companies that have built telecommunications networks solely for the
3 purpose of providing local exchange service in a competitive market." If there are no
4 publicly-traded local exchange companies, there are clearly no publicly-traded network
5 element wholesaling businesses. Clearly, one cannot directly observe the capital
6 structure of an ILEC, let alone of a network element leasing business.

7 **Q. WHAT DO YOU MEAN BY THE TARGET MARKET CAPITAL STRUCTURE?**

8 A. As Copeland, Koller and Murrin note:

9 The theoretically correct approach to capital structure is to use a
10 different WACC for each year that reflects the capital structure for
11 the year. In practice, we usually use one WACC for the entire
12 forecast. We also think in terms of a target capital structure rather
13 than the current capital structure because at any point a company's
14 capital structure may not reflect the capital structure expected to
15 prevail over the life of the business. Capital structure might be
16 affected by recent changes in the market value of the securities
17 outstanding and the "lumpiness" of financing activities, particularly
18 those involving securities offerings. Moreover, management may
19 have plans to change the capital mix as an active policy decision.
20 All these factors mean that future financing levels could be different
21 from current or past levels.[73]

22 **Q. DOES DR. VANDER WEIDE PROVIDE ANY PROOF THAT HIS CAPITAL**
23 **STRUCTURE ESTIMATES ARE CORRECT?**

24 A. No. The logical flaw in Dr. Vander Weide's argument is obvious. If the true target
25 capital structure of the network element leasing business is not observable, as he and I

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[73] Copeland, Tom, Tim Koller, and Jack Murrin, *Valuation: Measuring and Managing the Value of Companies*, 3rd Edition, McKinsey & Co., 2000, p.203-204.

both agree, it is *not observable*. No definitive proof can be provided by any party. Therefore, analysts can only *estimate* the true capital structure based on sound *judgment*. Using market value capital structures of holding companies with substantial high-growth businesses that appear to be far riskier than the ILEC's dominant network element leasing businesses, as Dr. Vander Weide does, does not appear to be a sound approach.

Q. DR. VANDER WEIDE EXTENSIVELY CITES YOUR COLLEAGUE DR. CORNELL ON THIS SUBJECT. (VANDER WEIDE REBUTTAL, PP. 28-29) DOES DR. VANDER WEIDE INTERPRET DR. CORNELL CORRECTLY?

A. While I am delighted at Dr. Vander Weide's high regard for Dr. Cornell, he does not understand that Dr. Cornell entirely agrees with my view that the target market value of the network element leasing business should be used, which can only be estimated, and that market value capital structures of riskier holding companies should not be used. Ironically, Dr. Vander Weide cites a specific passage from Dr. Cornell's book which states that "*[i]f the comparable firms are publicly traded*, their market value weights can be calculated directly and averaged" (*emphasis added*), apparently forgetting his own testimony that there are no publicly traded firms for the network element leasing business.

In fact, Dr. Cornell has offered cost of capital testimony in numerous state TELRIC proceedings using substantially the same methodologies that I have used in this and previous cases. Based on my recollection those state commissions have generally adopted capital structures recommended by Dr. Cornell or close thereto.

For example, the Ohio Commission found that:

> Rather than adopting the cost of capital recommended by Ameritech, we find that, on balance, the midpoint cost of capital recommendation advanced by the AT&T/MCI witness Dr. Cornell most accurately reflects the appropriate forward-looking cost of capital for use in Ameritech's TELRIC studies. In adopting the AT&T/MCI recommendation, we note that Dr. Cornell provided the most extensive support and analysis for his cost of capital recommendation. Based on the record presented to us, we are most comfortable with the analysis Dr. Cornell has undertaken.[74]

In that proceeding, the Ohio Commission adopted Prof. Cornell's recommended cost of capital of 9.74%.

Q. DR. VANDER WEIDE QUOTES YOUR TESTIMONY IN AN OHIO UNE COST PROCEEDING REGARDING THE FACT THAT THE STOCK MARKET VALUES THE ASSETS OF AN ILEC AT MARKET VALUE. (VANDER WEIDE REBUTTAL, P. 26) HE ALSO COMPLAINS THAT YOU LEVER AND UNLEVER BETAS USING MARKET VALUE CAPITAL STRUCTURES OF TELEPHONE HOLDING COMPANIES. DOES THIS CONTRADICT ANYTHING YOU ARE SAYING IN THIS PROCEEDING?

A. Not in the slightest. If Dr. Vander Weide had read my testimony more carefully, he would have seen that my analysis starts with the estimation of the cost of equity for the telephone holding companies. I consequently use market value capital structures and unlever and relever betas using market value capital structures. Because the telephone holding companies are riskier than the ILECs' network element businesses, this cost of

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[74] Opinion and Order, *In the Matter of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, et al.*, The Public Utilities Commission of Ohio, Case no. 96-922-TP-UNC (June 19, 1997).

capital estimate provides a ceiling to my range. The analytical step that Dr. Vander Weide misses is that the cost of capital for the less risky network element business will be less than the high side of the range, which incorporates the risks of all of the telephone holding companies' riskier businesses. The book value is used to estimate the *low side of the range.*

Q. IN THAT OHIO PROCEEDING, WHAT CAPITAL STRUCTURE AND COST OF CAPITAL WAS ADOPTED BY THE OHIO COMMISSION?

A. The Ohio Commission adopted Staff's recommendation to use the book capital structure for Cincinnati Bell Telephone which contained 42.24% debt and 57.76% equity, and specifically noted that this capital structure approximated the mid-point of the range proposed by me.[75] In that proceeding, the Ohio Commission adopted a cost of capital of 9.56%.

Q. IS DR. VANDER WEIDE'S TESTIMONY REGARDING CAPITAL STRUCTURE CONSISTENT WITH HIS PRIOR TESTIMONY?

A. Completely at odds with his current arguments, Dr. Vander Weide argued in his affidavit in support of Bell Atlantic's comments filed with the FCC on June 29, 1994 that it was incorrect to use the capital structure of the regional holding companies (RHCs) in place of the capital structure of the price cap LECs because some of the RHC's have financial,

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[75] "We find that, under the facts and circumstances presented in this case, the staff's book capital structure should be adopted for purposes of determining the cost of capital. Staff witness Chaney recommends that a capital structure of 42.24 percent long-term debt and 57.76 percent common equity be used for purposes of this case. ... The staff's recommended capital structure approximates the mid-point of Mr. Hirshleifer's proposed range." The Public Utilities Commission of Ohio, Supplemental Opinion and Order, *In the Matter of the Application of Cincinnati Bell Telephone Company for Approval of a Retail Pricing Plan Which May Result in Future Rate Increases and For a New Alternative Regulation Plan*, Case No. 96-899-TP-ALT, p.13.

1 cellular and cable TV subsidiaries whose "capital structure does not reflect the actual
2 financing of the price cap LECs' investments in telecommunications infrastructure."[76]
3 Dr. Vander Weide also concluded that "[t]he capital structures of these subsidiaries
4 should be removed from the RHC's consolidated capital structure to better reflect the
5 financing of the LEC's telecommunications infrastructure." [77]

6 Moreover, in his direct testimony regarding Virginia's Experimental Plan (Case
7 No. PUC920029), Dr. Vander Weide stated that:

> 8 *According to financial theory, the appropriate capital structure for*
> 9 *an enterprise is determined by its own business risk*, the liquidity and
> 10 the market value of its own assets, and its own competitive strategy.
> 11 *The proper capital structure for the LECs participating in the Plan*
> 12 *is related to their own business situation, not their parent*
> 13 *company's*. The parent companies of the LEC's each have capital
> 14 structures that reflect their particular business situations. There is
> 15 evidence of parent company diversification into financial services,
> 16 real estate, cellular, interLATA services, cable television, and
> 17 overseas ventures. *The LECs participating in the Plan have no*
> 18 *investment in their parent's diversification efforts, and the risks of*
> 19 *these ventures are unrelated to the LECs business risks as local*
> 20 *telephone companies*. [*emphasis added*]

21 **Q. DOES DR. VANDER WEIDE HIMSELF RELY ON BOOK VALUES FOR**
22 **OTHER ASPECTS OF HIS WORK IN THE CURRENT PROCEEDING?**

23 A. Yes. For example, he estimates the cost of debt for VZ-VA by using yields on Moody's
24 A-rated bonds as a proxy. However, Moody's uses *book value* capital structure ratios as
25 one of its analytical tools for assessing the riskiness of the subject companies. If Dr.

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[76] Affidavit of Dr. James H. Vander Weide In Support of Reply Comments of Bell Atlantic, Before the Federal Communications Commission, CC Docket 94-1 (June 29, 1994).

[77] *Ibid.*

1 Vander Weide believes that book values can never be used for risk assessment, he should
2 not be relying on Moody's.[78] Dr. Vander Weide additionally uses book value weights for
3 estimating the market value of debt in his capital structure calculations. As I noted earlier
4 in this testimony, Dr. Vander Weide also relies on returns on *book* equity when he
5 imputes growth rates using the "b x r" method.

6 **Q. IN HIS SCHEDULE 2, DR. VANDER WEIDE PURPORTS TO ESTIMATE THE**
7 **IMPLIED MARKET CAPITAL STRUCTURE FOR A STAND-ALONE LOCAL**
8 **EXCHANGE COMPANY USING MARKET MULTIPLES. IS HIS ANALYSIS**
9 **CORRECT?**

10 A. No. Dr. Vander Weide is using multiples derived from the stock prices of telephone
11 holding companies. These stock prices reflect the valuation and risks of all the riskier
12 businesses operated by the telephone holding companies. Dr. Vander Weide is confused
13 between publicly-traded telephone holding companies and non-public local exchange
14 operations that are owned by telephone holding companies.

15 III. DR. VANDER WEIDE'S COST OF CAPITAL ESTIMATES ARE 16 GROSSLY AT ODDS WITH ANALYSES BY INVESTMENT FIRMS 17 AND OTHER INDEPENDENT ANALYSTS.

18 **Q. WHAT HAS DR. VANDER WEIDE'S RESPONSE BEEN WHEN CONFRONTED**
19 **WITH THE EVIDENCE OF INVESTMENT BANKS AND FINANCIAL**
20 **ANALYSTS THAT THE COSTS OF CAPITAL FOR TELEPHONE HOLDING**
21 **COMPANIES ARE FAR LOWER THAN WHAT HE ESTIMATES?**

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78 Standard & Poor's also utilizes book value leverage ratios as one of it risk analysis tools.

1 A. In his rebuttal testimony Dr. Vander Weide stated that Wall Street analysts "were hired to
2 provide an opinion regarding the fairness of the stock exchange ratio to be used in
3 proposed mergers, not to estimate the cost of capital input in UNE cost studies." (Vander
4 Weide rebuttal, p. 69) In his prior testimonies in other states, Dr. Vander Weide has also
5 argued that "these analysts can not be used to justify any estimate of the
6 telecommunications companies' weighted average costs of capital" since they "were
7 forced to assume a specific discount rate because they had not performed an independent
8 analysis of the weighted average cost of capital." (see, for example, Vander Weide New
9 York responsive testimony p. 62).

10 As a former due diligence officer of a broker-dealer, I found Dr. Vander Weide's
11 testimony nothing less than astonishing. It is incredible to even suggest that competent
12 fairness opinions in multi-billion dollar mergers could be rendered when one of the key
13 parameters of the valuation analysis is simply "assumed." Merrill Lynch, Salomon Smith
14 Barney and Goldman Sachs are some of the world's largest investment firms, with
15 expertise as financial advisors to giant multinational companies in mergers and
16 acquisitions.

17 For example, to suggest that the weighted average cost of capital used in a merger
18 stock exchange ratio analysis was an "arbitrary assumption" (Vander Weide New York
19 responsive testimony, p. 65) is equivalent to saying that the whole analysis for which the
20 advisors were handsomely paid was just a charade.[79] The investment advisors to the
21 transaction relied on those estimates as part of their valuation of the two companies,

[79] GTE and Bell Atlantic each paid $15 million to their financial advisors, Goldman Sachs, Salomon Smith Barney, Chase Manhattan, Bear Stearns, Morgan Stanley Dean Witter, and Merrill Lynch, in connection with this merger.

1 which in turn was intended to ensure that shareholders received proper compensation as a
2 result of the proposed merger of the two companies. For investment advisors to rely on
3 "arbitrary assumptions" would have constituted a breach of fiduciary responsibility, by
4 the investment advisors to management and by management to shareholders.
5 On appeal from the UNE decision of the Delaware PSC in 1997, the District
6 Court in that state considered and rejected similar arguments by Bell Atlantic for
7 disregarding the discount rates used by Merrill Lynch in its exchange ratio analysis for
8 the Bell Atlantic-NYNEX merger. The discount rate for local service, 8% to 10%,
9 supported the 10.28% weighted cost of capital upheld by the Delaware PSC. *Bell*
10 *Atlantic-Delaware, Inc. v. McMahon*, 80 F.Supp.2d 218, 241 (D. Del. 2000).
11 **Q. DR. VANDER WEIDE'S SUGGESTION THAT THE DISCOUNT RATES USED**
12 **BY INVESTMENT BANKS WERE "SIMPLY ASSUMED" OR "ARBITRARY"**
13 **ALSO IMPLIES THAT THEY ARE ARBITRARILY WRONG. (VANDER**
14 **WEIDE REBUTTAL, P. 70) DO YOU BELIEVE THAT INVESTMENT BANKS**
15 **USE DISCOUNT RATES THAT THEY BELIEVE TO BE WRONG?**
16 A. Of course not. Investment banks use discount rates that they believe to be correct.
17 **Q. DR. VANDER WEIDE SAID THAT INVESTMENT BANKS ARE "FORCED" TO**
18 **USE THESE DISCOUNT RATES. WHO COULD BE "FORCING" THEM?**
19 A. Unless Dr. Vander Weide was suggesting that the telephone holding companies
20 themselves were somehow coercing their financial advisors into using discount rates that
21 were too low, no one was forcing them to use incorrect assumptions, or assumptions that
22 they did not believe in, in their valuation analyses.

1 **Q. WHAT REFINEMENT DID DR. VANDER WEIDE ADD TO THIS ARGUMENT**
2 **FOR THIS PROCEEDING?**

3 A. Dr. Vander Weide now argues that investment banks had to assume an incorrect cost of
4 capital because:

> 5 they simply could not simultaneously estimate the cost of capital at
> 6 the same time that they estimated the appropriate share price.
> 7 Indeed, these firms were faced with a situation where they had just
> 8 one equation to determine two unknowns—the value of the firm's
> 9 stock, and the cost of equity. As a simple matter of mathematics,
> 10 there are many combinations of share values and cost of capital that
> 11 will solve a single equation; and hence, no unique solution exists for
> 12 either unknown. To resolve this dilemma, the investment bankers
> 13 chose not to estimate the cost of capital. Instead, they simply
> 14 *assumed* a discount rate. (Vander Weide rebuttal p. 70).

15 **Q. IS THERE ANY MERIT TO THESE ARGUMENTS?**

16 A. No. First, with respect to the DCF model, Dr. Vander Weide forgets one of the hotly-
17 debated topics in this very proceeding: the year-by-year earnings growth rate
18 assumptions, which are several other unknown parameters to the model. By necessity, all
19 analysts must estimate both the cost of capital and the growth rates if they are to use the
20 DCF model. This does not lead to Dr. Vander Weide's faulty conclusion that investment
21 bankers are using costs of capital and, by implication, growth rate assumptions that they
22 believe to be incorrect for estimating values in fairness opinions for the mergers of giant
23 corporations. Second, Dr. Weide inaccurately assumes that all investment bankers are
24 using the DCF model to estimate the cost of capital. Investment bankers are just as likely
25 to be using the CAPM, and potentially other models for cost of capital estimation. The
26 CAPM does not use stock prices or growth rates as inputs to the model.

1 **Q. WITH RESPECT TO THE FAIRNESS OPINION WORK PERFORMED BY**
2 **INVESTMENT BANKS, DID ANYTHING PREVENT THEM FROM USING DR.**
3 **VANDER WEIDE'S COST OF CAPITAL METHODOLOGY IF THEY**
4 **BELIEVED IN IT?**
5 A. No. Dr. Vander Weide's simple application of the single-stage DCF model could easily
6 be calculated by investment banks within a very short period of time. Financial analysts
7 could have done the same for their analyst reports if they thought his approach was
8 applicable.
9 **Q. IN THIS PROCEEDING DR. VANDER WEIDE ARGUES THAT THE**
10 **DISCOUNT RATES USED BY INVESTMENT BANKS PROVIDE NO SUPPORT**
11 **FOR YOUR COST OF CAPITAL ESTIMATES BECAUSE THESE DISCOUNT**
12 **RATES WERE "SIMPLY ASSUMED" (VANDER WEIDE REBUTTAL, P. 70)**
13 **WHAT DIFFERENT ARGUMENT DID DR. VANDER WEIDE PRESENT WITH**
14 **RESPECT TO THIS SUBJECT PREVIOUSLY?**
15 A In the New York UNE cost proceeding Dr. Vander Weide e alternatively argued that the
16 discount rates used by investment banks should not be considered because the banks' cost
17 of capital methodologies were not entered into evidence. [Vander Weide New York
18 responsive testimony, p. 67] For this proceeding, however, he purports to know how the
19 investment bankers are calculating their costs of capital.
20 Dr. Vander Weide's argument made no sense because he himself uses analyst data
21 which do not disclose underlying methodologies. For example, the IBES average analyst
22 earnings growth forecasts for hundreds of companies are critical inputs to his single-stage
23 DCF model. For each company in his sample, these forecasts are averages of several

1 forecasts made by different financial analysts. No explanation is provided as to how each
2 individual analyst made its forecast of future earnings growth.
3 I have also seen Dr. Vander Weide's testimony before several state commissions
4 stating that the 8% - 10% DCF discount rates disclosed in the Bell Atlantic/NYNEX
5 prospectus/proxy statement for valuing the telephone operations of the company were not
6 probative because, among other things, they were intended merely to provide relative
7 values of the companies for purposes of evaluating the fairness of the exchange ratio. He
8 testified that "when estimating the relative values, it doesn't really matter what the cost of
9 capital is, as long as the same cost of capital is used for both companies."[80] This
10 argument was simply wrong. The choice of discount rates does affect the valuation of the
11 different segments of a subject company, which in turn would affect the exchange ratio.
12 **Q. WHAT NEW ARGUMENT DOES DR. VANDER WEIDE OFFER IN HIS**
13 **CONTINUING ATTEMPT TO CHALLENGE THE COST OF CAPITAL**
14 **ESTIMATES OF INVESTMENT BANKERS AND FINANCIAL ANALYSTS?**
15 A. In this proceeding, he argues that investment bankers and analysts use one cost of capital,
16 while investors inexplicably use a much higher one. He attempts to show this by
17 comparing the stock price valuations estimated by investment bankers to the actual stock
18 prices of the subject companies. (Vander Weide rebuttal p. 62-64) According to this
19 convoluted theory, everyone (*i.e.*, investment bankers, analysts and investors) is using the
20 same earnings growth assumptions in their DCF valuation models. Thus, if investment
21 bankers and analysts estimate higher values than the actual market price for a stock using

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80 Transcript of Dr. Vander Weide's testimony on November 7, 1996 before the New York State Public Service Commission, Case 95-C-0657, p. 3768, at 14-17.

1 their own cost of capital estimates, this "proves" that investors' cost of capital is lower.
2 This reasoning is exceptionally misinformed. As I noted above, he appears to be unaware
3 or has simply forgotten that each investment bank is using its own unique forecasts of
4 earnings growth, which is one of the main professional activities engaged in by such
5 banks and analysts.

6 The average earnings growth expectation of the market for a company is an
7 unknown, yet Dr. Vander Weide blindly assumes that it is somehow known to all and
8 uniformly utilized. Therefore, his faulty logic leads him to the conclusion that only the
9 cost of capital estimate differs, whereas growth expectations are in fact differing. Of
10 course, no one knows what the true market growth expectations are (although it is fair to
11 assume that no rational observer expects above-market growth forever). Professional
12 analysts are using their skills to estimate several important, but unknown parameters to
13 the DCF model: expectations regarding the future growth path of company earnings, and
14 the company's cost or capital.

15 **Q. IF YOU HYPOTHETICALLY INDULGE DR. VANDER WEIDE'S ARGUMENT**
16 **THAT WALL STREET ANALYSTS ARE NOT ATTEMPTING TO ESTIMATE**
17 **INVESTORS' COST OF CAPITAL, WHOSE COST OF CAPITAL ARE THEY**
18 **ESTIMATING?**

19 A. This is where Dr. Vander Weide leaves us completely in the dark. He offers no reasoning
20 why investment bankers and analysts, sophisticated investment professionals, are not
21 trying to estimate the costs of capital of investors. Consider that their clients are
22 generally investors, or companies seeking investors to either buy, or maintain the value
23 of, their shares.

1 **Q. IN HIS NEW YORK REBUTTAL TESTIMONY, DID DR. VANDER WEIDE**
2 **ARGUE THAT ANY OF THE INVESTMENT BANKS' COST OF CAPITAL**
3 **ESTIMATES SUPPORTED HIS POSITION?**
4 A. Ironically he did, although on a very selective basis. Dr. Vander Weide cited in his New
5 York responsive testimony the analyses performed by investment banks in connection
6 with proposed mergers of Alltell/Aliant and MCI Worldcom/ Sprint. [Vander Weide New
7 York responsive testimony p. 66] Dr. Vander Weide claimed that in these analyses the
8 assumed discount rates ranged from 10% - 12% for local operations. However, Dr.
9 Vander Weide did not cite these analyses correctly.
10 Warburg Dillon Read in fact used discount rates from 10.0% to 11.0%, not 12%,
11 to value Sprint FON group's local telephone division (p. 59).[81] It assumed for the long
12 distance telephone division discount rates ranging from 10.5% to 11.5%. In citing that
13 fairness opinion, however, Dr. Vander Weide failed to mention that in the same filing
14 Salomon Smith Barney, acting as MCI WorldCom's financial advisor, used a weighted
15 average cost of capital range of 8.75% to 9.75% to value Sprint's local telephone division
16 (p. 74) and 9.25% to 10.25% for the long distance segment. It performed a DCF analysis
17 of Sprint PCS Group and MCI WorldCom, using discount rates reflecting a weighted
18 average cost of capital range from 10.5% to 11.5% for Sprint PCS Group and 11.5% to
19 12.5% for MCI WorldCom. Salomon Smith Barney used a higher cost of capital range
20 for Sprint's PCS Group than for Sprint FON's local segment. It also used a higher cost of
21 capital for the long distance segment than for the local telephone division.

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[81] WorldCom Inc.'s Amendment No. 3 To Form S-4 filed with the SEC on February 17, 2000.

1 When valuing the ALLTEL/Aliant merger, Merrill Lynch used discount rates
2 ranging from 10% to 12%, not for the local telephone business suggested by Dr. Vander
3 Weide, but for *all* the businesses of the companies.[82] ALLTEL and Aliant have
4 substantial riskier businesses relative to their local exchange operations.

5 **Q. ISN'T DR. VANDER WEIDE NOW ARGUING THAT THESE SAME**
6 **WARBURG DILLON READ AND MERRILL LYNCH COST OF CAPITAL**
7 **ESTIMATES DO NOT REPRESENT INVESTORS' COSTS OF CAPITAL?**

8 A. Yes. He is not at all consistent. And as noted above, he does not accept, or even consider
9 as a sanity check, Merrill Lynch's 10.20% forward-looking cost of equity for the market.

10 **Q. WHAT ELSE DOES DR. VANDER WEIDE ARGUE IS A REASON THAT**
11 **INVESTMENT BANK ANALYSES SHOULD NOT BE USED?**

12 A. Dr. Vander Weide also argues that investors "are not entitled to rely" on any single part
13 of an analysis in a fairness opinion because of exculpatory language that the investment
14 bankers include in their opinion. (Vander Weide rebuttal, p. 70). This is a transparent and
15 nonsensical argument. Investment banks routinely add this kind of exculpatory language
16 to mitigate their exposure to potential lawsuits from their issuance of fairness opinions.
17 By doing so, this does not lead to the conclusion that parties cannot consider the inputs
18 that the investment banks use in their models, nor to the conclusion that investment
19 bankers use assumptions that they believe to be wrong

20 **Q. DO ANALYST REPORTS CONTAIN THIS EXCULPATORY LANGUAGE?**

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82 Alltel Corp.'s Form S-4 which was filed to SEC on March 24, 1999.

1 A. Generally not, to my knowledge. In addition to the analyst reports that I have previously
2 cited, many other analyst reports also indicate that analysts consider the cost of capital for
3 various telecommunications businesses to be much lower than what Dr. Vander Weide
4 suggests. For example, Morgan Stanley Dean Witter used a 10% estimate of the cost of
5 capital in its DCF valuation of ALLTEL in a report dated March 13, 2000.[83] In April
6 2000, BHF-Bank used an 8.2% cost of equity and 7.7% WACC for valuing Deutsche
7 Telekom.[84] In January 2000 ABN Amro used a 10% discount rate to value Bell
8 Atlantic's local, long-distance, directory assistance and wireless services.[85] In its
9 September 29, 2000 DCF valuation of SBC Communications, A.G. Edwards employed a
10 8.70% cost of capital for the holding company in aggregate.[86] Prudential Financial has
11 recently issued a report on regional Bell operating companies and integrated long-
12 distance companies and used a 9.5% discount rate for the RBOCs and a 10.5% discount
13 rate for the integrated long-distance companies.[87]

14 **Q. DR. VANDER WEIDE CITES IN HIS TESTIMONY THE COST OF CAPITAL**
15 **ESTIMATES FOR THE AGGREGATE TELECOMMUNICATIONS INDUSTRY**
16 **PROVIDED BY IBBOTSON ASSOCIATES' COST OF CAPITAL QUARTERLY.**
17 **(VANDER WEIDE REBUTTAL, P. 70-71) HE STATES THAT THESE**

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83 Morgan Stanley Dean Witter, "Alltel Corporation", March 10, 2000, p. 4, and March 13, 2000, p. 3.

84 BHF-Bank, "Deutsche Telekom", April 27, 2000, p. 6.

85 ABN Amro, "Bell Atlantic Corporation," January 20, 2000, pp. 12, 19.

86 A.G. Edwards, "SBC Communications," September 29, 2000, pp. 9-10.

87 Prudential Financial, "Wireline Telecommunications Services", May 29, 2001, p. 142.

1 **ESTIMATES ARE HIGHER THAN YOUR ESTIMATES FOR THE UNE**
2 **LEASING BUSINESS. WHAT IS YOUR VIEW?**
3 A. It is interesting that Dr. Vander Weide considers this summary of cost of capital
4 calculations for telecommunications holding companies helpful to him, because when
5 looked at with a more analytical eye, I think that it is far more supportive of my cost of
6 capital estimate.
7 First, Dr. Vander Weide fails to note that this sample of 20 companies includes
8 companies engaged in all of the business activities riskier than the telephone network
9 leasing business. Therefore, all of the cost of capital calculations, even if one were to
10 assume that they were correct, overstate the cost of capital of the network element leasing
11 business. In my analysis, I judgmentally attempt to include in my sample companies
12 which have some involvement in the local exchange business and to not include those
13 which are much more focused on riskier activities. Dr. Vander Weide focuses on the cost
14 of capital estimates for the "Large Composite" group, which in addition to RBHC's and
15 GTE, includes several companies much more heavily engaged in businesses riskier than
16 the local exchange business. For example, the ten large companies probably also include
17 AT&T, Broadwing, MCI Worldcom and Sprint FON Group.[88] Three of these ten
18 companies have debt rated at BB or below according to the 2000 Cost of Capital
19 Yearbook.
20 For this reason, and because the giant RBHC's like Verizon are likely to have the
21 lowest cost of capital relative to riskier companies in this telecommunications group, Dr.

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88 The 2000 Cost of Capital Yearbook does not identify the specific companies that make up its large composite, but does indicate that AT&T is the largest company by sales and total capital.

1 Vander Weide should be focusing his attention on the 25th percentile results for the costs
2 of capital.
3 Second, two of the cost of capital calculations use the CAPM model, which
4 employs Ibbotson Associates' high estimate of the equity risk premium based solely on
5 its historical methodology. However, as I discuss extensively in my testimony, I consider
6 research performed by numerous scholars and practitioners that conclude that the
7 forward-looking equity risk premium is far lower than that determined using Ibbotson
8 Associates' method. Consequently, Dr. Vander Weide is really saying once again that he
9 only believes Ibbotson Associates' approach to the risk premium estimate, and that he
10 inexplicably ignores all other views, including the stated position of Roger Ibbotson
11 himself. As I explained above, however, Dr. Vander Weide has previously indicated that
12 the equity risk premium is not stable over time, so he does not believe the fundamental
13 premise of the Ibbotson Associates historical risk premium approach.
14 In contrast, I consider a far larger set of approaches regarding the equity risk
15 premium and utilize an estimate that falls somewhere between the high and low
16 approaches, even though the preponderance of the current research and opinions indicate
17 that the equity risk premium is currently very low. If a lower risk premium were used in
18 Ibbotson Associates' CAPM model, a lower cost of equity would result.
19 Notably, Ibbotson Associates estimate of beta at the 25th percentile is lower than
20 the 0.77 beta that I use, and not at all close to the beta suggested by Dr. Vander Weide.
21 Therefore, if one were to use of an equity risk premium in the range of 5.5% in their
22 model along with a beta of 0.65, it would result in cost of equity estimate of 9.84%. If

1 even lower equity risk premium estimates were used, lower CAPM cost of equity
2 estimates would result.
3 Another cost of equity calculation reflected in the Ibbotson Associates publication
4 uses the Fama/French model. Neither Dr. Vander Weide nor I have used this model, and
5 to my knowledge this model has not developed any serious following.
6 Ibbotson Associates calculates DCF-based costs of equity using two models, a
7 single-stage model and a three-stage model. To no one's surprise, the single-stage model
8 which Dr. Vander Weide uses yields a higher cost of capital. In contrast, the three-stage
9 model yields a lower cost of equity estimate. Ibbotson's three-stage model uses a higher
10 estimate of the long-run growth rate for the economy than does my model, which
11 averages the growth rate estimates of WEFA and Ibbotson Associates.
12 While he has dropped the argument for this proceeding, in his New York
13 responsive testimony Dr. Vander Weide then implied that Ibbotson Associates' three-
14 stage model cost of equity estimate should be ignored. In making this suggestion, he
15 completely ignored Ibbotson Associates' unequivocal statement in its 2000 Yearbook that
16 "[t]o produce a better estimate of the equity cost of capital, one can use a multi-stage
17 discounted cash flow model."[89] In this instance, the 3-stage discounted cash flow method
18 cost of equity for industry SIC Code 4813 (Telephone Communications, Except
19 Radiotelephone) is 9.57% at the 25th percentile.
20 **Q. DR. VANDER WEIDE CLAIMS THAT A COST OF MONEY INPUT USED BY**
21 **AT&T IN 1997 IN ITS TOTAL INCREMENTAL COST MODEL ("TICM") FOR**

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[89] Ibbotson Associates, *SBBI: Valuation Edition 2000 Yearbook*, p. 47.

LONG DISTANCE SERVICES SHOWS THAT YOUR FORWARD-LOOKING COST OF CAPITAL ESTIMATE FOR VERIZON'S NETWORK ELEMENT LEASING BUSINESS IS "UNJUSTIFIABLY LOW." (VANDER WEIDE REBUTTAL, P. 62) PLEASE RESPOND.

A. I find it ironic that Dr. Vander Weide purports to endorse AT&T's undefined model input regarding the cost of money for certain long distance services in 1997, while in so many other respects, in all TELRIC proceedings that I am aware of, he vehemently disagrees with AT&T's assumptions. More fundamentally, Dr. Vander Weide fails to explain, as an initial matter, how this view regarding a long distance model relates to the forward-looking cost of capital of an ILEC's network element leasing business as of today.

To analyze this question, I return to some of the reality checks that I have cited in my testimony. For example, Warburg Dillon Read, in its February 2000 assessment of the WorldCom/Sprint merger, assumed discount rates ranging from 10.5% to 11.5% for long distance telephone operations. *In his New York rebuttal testimony, Dr. Vander Weide specifically cited (although inaccurately) as evidence of the cost of capital for the local telephone business the fairness opinions rendered for this merger, which opinions included Warburg Dillon Read's range of 10% to 11% regarding the cost of capital for Sprint FON's local telephone operations* (New York responsive testimony, p. 66). He fails to explain why he then had faith in Warburg Dillon Read's estimate for local telephone operations, but is now somehow persuaded that the cost of capital for the long distance business is dramatically higher than what Warburg suggests. In this same filing, the fairness opinion of Salomon Smith Barney used a lower range of 9.25% to 10.25% to

analyze the long distance segment of Sprint FON Group and a range of 8.75% to 9.75% for local operations.

Consequently, Dr. Vander Weide's reliance on this input to an AT&T model appears to be inconsistent with other evidence. As the long distance business is generally recognized as being riskier than local telephone operations, the investment banks' estimates of cost of capital ranges for long distance operations appear to be far more consistent on a relative basis with their own lower estimates of the cost of capital for local exchange operations, and with my estimates and state commission decisions regarding the cost of capital for the provision of network elements.

Q. WHAT OTHER COMPANY-SPECIFIC INFORMATION FROM A SIMILAR TIME PERIOD COULD DR. VANDER WEIDE HAVE CONSIDERED AS A SANITY CHECK?

A. In a 1997 Ameritech UNE cost proceeding, the Ohio Public Utility Commission considered an internal Ameritech cost of capital estimate for the telephone holding company. This estimate was dramatically lower than what Ameritech was advocating as its UNE cost of capital:

> Ameritech has failed to convince this Commission that the risk-adjusted cost of capital used either in its TELRIC studies (13.6 percent) or in its modified TELRIC studies (11.5 percent) reflects an appropriate cost of capital. A number of concerns justify this conclusion. At the outset, we note that both the 13.6 percent and 11.5 percent cost of capital figures recommended by the company for use in TELRIC studies are higher than the weighted average cost of capital of 10.5 percent that Mr. Domagola calculated for AIT (the holding company) in June 1996 (MCI Ex. 2). This infers that the risk associated with the provision of UNEs is greater than the risk associated with the diversified operations of the holding company parent. If anything, UNEs are the least risky element since they

represent bottleneck facilities which will be needed by competitors for a considerable time to come.[90]

IV. DR. VANDER WEIDE'S CONTRIVED "TESTS OF REASONABLENESS" UNDERSCORE THE REASONABLENESS OF MY COST OF CAPITAL ESTIMATES, NOT HIS.

Q. IN HIS REBUTTAL TESTIMONY DR. VANDER WEIDE ALLEGES THAT YOUR 3-STAGE DCF MODEL DID NOT CONFORM TO HIS SO-CALLED "TESTS OF REASONABLENESS." AS AN INITIAL MATTER, IF YOU HYPOTHETICALLY ASSUMED THAT HIS CONCLUSIONS WERE TRUE, DO THEY HELP OVERCOME THE PROBLEM NOTED BY ECONOMISTS OF USING THE SINGLE-STAGE DCF MODEL WHEN FORECAST GROWTH RATES EXCEED THAT OF THE ECONOMY?

A. No they do not. The use of the single-stage model with the assumption of perpetual supernormal growth results in cost of equity estimates that are too high.

Q. WHAT FLAWS EXIST IN HIS TESTS?

A. The flaws in his analysis are theoretical, logical and practical. As there are so many, I only attempt to address some of them in this rebuttal to provide the Commission with a sense of their ubiquity. First and foremost, Dr. Vander Weide is simply attacking a straw man: he is saying that if he ignores the analytical procedures that I recommend for estimating the cost of capital, he can perform what he describes as "tests" that gives him

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[90] Opinion and Order, *In the Matter of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, et al.*, The Public Utilities Commission of Ohio, Case no. 96-922-TP-UNC, June 19, 1997.

1 results that he does not like. This premise is analogous to taking apart a car, throwing
2 away half of the parts, attempting to reassemble the parts without the benefit of the
3 blueprints, and then pronouncing that there are problems with the car.

4 **Q. WHEN DR. VANDER WEIDE ATTEMPTS TO COMPARE VALUE LINE**
5 **BETAS TO DCF RESULTS, HE ASSUMES THAT THERE IS A DIRECT**
6 **THEORETICAL LINKAGE BETWEEN THE DCF AND THE CAPM**
7 **APPROACHES. DOES THIS LINKAGE IN FACT EXIST?**

8 A. No. The two approaches are theoretically distinct, and as can be clearly seen in my direct
9 testimony, do not have a single common parameter in their models. Dr. Vander Weide is
10 implicitly saying that both models are indisputably correct, and that if you knew the
11 "true" inputs (such as betas that had no measurement error), you would get the same
12 answers from each. There is no evidence in the academic literature that has yet proved
13 one or both theories to be unequivocally correct. Therefore, you cannot necessarily
14 assume that there is a direct relationship between the beta input to the CAPM, even if you
15 could determine the "true" beta without any measurement error, and the cost of equity
16 results from the unrelated DCF model. This theoretical independence is precisely why I
17 have used both models in my analysis and taken an average of the results of the two to
18 derive a balanced estimate of the cost of equity.

19 **Q. HAS DR. VANDER WEIDE USED THE CAPM TO ARRIVE AT HIS COST OF**
20 **CAPITAL ESTIMATE IN THIS PROCEEDING?**

21 A. No, and from my experience, he never has in prior TELRIC proceedings. As I discuss
22 above, Dr. Vander Weide has testified in the past that the CAPM is not suitable because
23 betas are not forward-looking in his opinion. He has specifically criticized Value Line

betas, which are computed over a 5-year historical period, as not being forward-looking. So on the one hand, he posits that the CAPM should not be used at all, while on the other he posits both that there is a direct relationship between the two distinct models, and that Value Line betas are accurate measures of risk.

Q. DOES DR. VANDER WEIDE'S SINGLE-STAGE DCF MODEL DEMONSTRATE INCONSISTENCIES WITH HIS FORMULATION OF THE CAPM APPROACH?

A. Yes. As a simple illustration consider the estimate of Intel's cost of equity using a single-stage DCF model. As of September 1999, Intel was expected to grow at 21.08% for the next 5 years and had a very low forward-looking dividend yield of 0.19%. Consequently, the single-stage model estimates Intel's cost of equity to be 21.27%. Now consider the CAPM. Intel's beta according to Value Line, as suggested by Dr. Vander Weide, was 1.0. Consequently, Intel's cost of equity using the CAPM model is 6.47% + (1.0 * Risk Premium). Whatever risk premium is selected, the cost of equity is substantially lower than the 21% that the single-stage model calculates.

Q. ONE OF DR. VANDER WEIDE'S TESTS PURPORTS TO RANK AND COMPARE THE RESULTS OF THE 3-STAGE DCF MODEL FOR VARIOUS GROUPS OF COMPANIES. (VANDER WEIDE REBUTTAL, PP. 72-75). HOW IS THIS FLAWED?

A. As an example, Dr. Vander Weide inexplicably ignores my observation that companies that pay low dividends may have cost of capital estimates which are biased downwards. As he himself noted in his rebuttal testimony, when I estimated a cost of equity on the market in prior testimonies, I specifically excluded companies with dividends under 1.5%. His own estimate of the cost of equity for the S&P 500 which, according to him,

1 used my methodology was 10.93%. In contrast, Dr. Vander Weide's Table 1 now shows
2 9.00% as the cost of equity for the S&P 500, inconsistent with his own calculation. His
3 estimate of the S&P Industrials in Table 1 makes the same mistake, and he includes
4 Century Telephone in his small sample of local exchange carriers which I specifically
5 excluded because the DCF approach may be less accurate for companies that pay small
6 dividends.

7 He is also not consistent regarding his position on sample size. He argues in his
8 rebuttal testimony that an average of four to five companies will not yield an accurate
9 estimate of a group's cost of capital, presumably because of measurement error. Yet, for
10 purposes of this alleged ranking comparison, he is quite comfortable using an average of
11 only three "natural gas distribution companies", even though there are many such
12 companies doing business in the United States.

13 Dr. Vander Weide also makes some rather broad assumptions about relative risk.
14 For example, Dr. Vander Weide's "electric" group is composed of companies which are
15 involved in electric, gas and nuclear energy, telecommunications, real estate, financial
16 services and international businesses. Over the past year there have been unanticipated
17 increases in natural gas prices which have had dramatic impact on certain electricity
18 markets, such as in California. As a result PG&E has entered bankruptcy and Edison
19 teeters on the brink. Therefore, it is not at all clear that these companies are as "low risk"
20 as Dr. Vander Weide tries to portray them.

21 **Q. DR. VANDER WEIDE TURNS TO STATISTICAL REGRESSIONS AS**
22 **ANOTHER ATTEMPT AT "TESTING REASONABLENESS." DO THESE**
23 **TESTS SUFFER FROM THE SAME FLAWS?**

1 A. Yes. Dr. Vander Weide consistently ignores the analytical procedures that I use. He has
2 used cost of equity and beta inputs in his regressions that would not have resulted if I had
3 done the analysis. For example, my approach involves averaging betas and costs of
4 equity of comparable companies in order to reduce measurement error. In his regression
5 reflected at his Table 2, he does no such averaging and simply compares raw Value Line
6 betas against raw costs of equity. More significantly, he incorrectly assumes that there is
7 a direct linkage between the CAPM and DCF models. That incorrect assumption alone
8 renders the regression hypothesis meaningless. He additionally uses Value Line betas,
9 which I do not use and which he himself has said are inappropriate. He does not explain
10 why he did not use other measures of beta, such as averaged betas, or BARRA predicted
11 betas, or Ibbotson Associates' betas, or betas calculated over one or two-year time
12 periods.

13 **Q. DR. VANDER WEIDE SIMILARLY ATTEMPTS TO CRITIQUE THE 3-STAGE**
14 **DCF MODEL BY RUNNING REGRESSIONS OF THE COST OF EQUITY**
15 **RESULTS AGAINST THE IBES GROWTH RATES. DOES THIS SUFFER**
16 **FROM THE SAME PROBLEMS THAT YOU HAVE DISCUSSED?**

17 A. Yes. And significantly, Dr. Vander Weide does not test the correct theoretical
18 proposition. One question that could be tested is how cost of equity results from different
19 DCF models correlate with *true* growth rate expectations over the long-term. As I have
20 repeatedly cited from leading scholars and practitioners, analyst growth rates above a
21 sustainable long-run growth rate of the economy cannot persist forever. Moreover, I have
22 shown with actual telephone holding company examples that the analysts themselves do
23 not assume high-growth rates for particularly long periods of time.

1 Dr. Vander Weide's regression is intentionally designed to test the relationship
2 between the 5-year IBES growth rates and the cost of equity results from the one-stage
3 DCF model, which assumes that the 5-year growth rates continue forever. Therefore, one
4 would expect a higher correlation for a model that uses the 5-year growth rate perpetually
5 as an input when compared with a model that uses the 5-year growth rates for only an
6 initial growth period, and then uses growth rates that change annually and linearly
7 converge to the growth rate of the economy in year 20.
8 Dr. Vander Weide has essentially created a self-fulfilling—but irrelevant—
9 proposition: it is no surprise that the 5-year growth rate correlates well with the results of
10 a one-stage model that uses the 5-year growth rate as the only growth input. This
11 obviously does not test a more important question: how do the results correlate with true
12 expected growth rates? As these rates can only be inferred with reasonable analytical
13 procedures, it would be difficult to properly specify a regression to test them. However,
14 it is already clear from simple logic, let alone the wealth of expert opinions, that
15 supernormal growth rates cannot last indefinitely as Dr. Vander Weide unreasonably
16 suggests.
17 **Q. DR. VANDER WEIDE ALSO PURPORTS TO REGRESS DIVIDEND YIELDS**
18 **AGAINST COST OF EQUITY RESULTS. DOES THIS ANALYSIS SUFFER**
19 **FROM SIMILAR PROBLEMS?**
20 A. Yes. Dr. Vander Weide also makes an assumption that he fails to support: he states that
21 high dividend yield companies should have lower costs of equity. There has been a fair
22 amount of academic research regarding the relationship between dividend yields and
23 returns.

1 For example, Grinblatt and Titman state that:

2 Stocks with high dividend yields do, in fact, have higher returns, on
3 average, than stocks with low dividend yields...Stocks with zero
4 dividend yields have substantially higher expected returns than
5 stocks with low dividend yields, but for stocks that do pay dividends,
6 expected returns increase with dividend yields.[91]

7 Dr. Vander Weide himself has noted in his own prior testimony that increases in
8 the dividend yield "reflects a general increase in the cost of capital."[92]
9 As higher dividend yields on average indicate higher expected returns, even if you
10 accepted Dr. Vander Weide's approach, according to his own theory Dr. Vander Weide's
11 regression appears to demonstrate the inferiority of the single-stage model.

12 **Q. DOES DR. VANDER WEIDE MISS THE MOST OBVIOUS TEST OF**
13 **REASONABLENESS?**

14 A. Yes. Dr. Vander Weide does not ask himself in any reasonable fashion why his cost of
15 equity results are so far away from those of analysts, which provide real-world views of
16 the cost of capital and are independent of this proceeding. Instead, Dr. Vander Weide
17 strains to offer several far-fetched arguments in an attempt to explain away this evidence.

18 **Q. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

19 A. Yes, it does.

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91 Grinblatt, Mark and Sheridan Titman, *Financial Markets and Corporate Strategy*, McGraw-Hill, 1998, p. 532.

92 Affidavit of Dr. James H. Vander Weide In Support of Reply Comments of Bell Atlantic, Before the Federal Communications Commission, CC Docket 94-1, June 29, 1994, p. 20, ¶34.

I, JOHN I. HIRSHLEIFER hereby certify under penalty of perjury that the foregoing surrebuttal testimony is true and accurate to the best of my knowledge and belief.

Signed:

September 21, 2001

John I. Hirshleifer

COMPARATIVE ILLUSTRATION OF RESULTS PRODUCED BY 1-STAGE, 2-STAGE AND 3-STAGE DCF MODELS

	Length of			1st stage Growth Rate [1]	Terminal Growth Rate [2]	DCF Cost of Equity	1-Stage DCF overstates by:
	1st Stage	2nd Stage	3rd Stage				
1-stage DCF Model	Perpetual	N/A	N/A	12.15%	12.15%	14.68% [3]	
2-stage DCF Model	20 yrs	Perpetual	N/A	12.15%	6.29%	11.48%	3.20%
2-stage DCF Model	40 yrs	Perpetual	N/A	12.15%	6.29%	13.15%	1.53%
3-stage DCF Model	20 yrs	20 yrs [4]	Perpetual	12.15%	6.29%	12.38%	2.30%
3-stage DCF Model	5 yrs	15 yrs [4]	Perpetual	12.15%	6.29%	10.38%	4.30%

[1] The 1st stage growth rate is set equal to the weighted average 5-yr IBES earnings growth forecasts for Verizon, BellSouth, SBC Communications, ALLTEL and CenturyTel as of 6/30/00.

[2] The terminal growth rate for the multiple-stage DCF models is set equal to the expected long-term growth rate of the U.S. economy calculated by averaging the WEFA (4.97%) and Ibbotson Associates' (7.60%) forecasts as of 6/30/00.

[3] The 1-stage DCF cost of equity of 14.68% is calculated by adding the growth rate of 12.15% and a weighted average forward-looking dividend yield for the sample of 2.53% as of 6/30/00.

[4] Assumes linear decline to the terminal growth rate.