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1 A. No. Verizon MA faces a number of disadvantages in its efforts to
2 compete in a fully competitive local exchange market. First, as the
3 current incumbent LEC, Verizon MA has the unique obligation to
4 provide telecommunications services to all customers, even those
5 whose rates fail to cover the cost of providing service.
6 Telecommunications prices have historically been set to provide
7 subsidies to high-cost customers in low-density geographic areas.
8 Such subsidies are inconsistent with the competitive framework of the
9 Act. Although the Act provides for the FCC and the States to
10 implement mechanisms that eliminate the implicit subsidies that have
11 previously financed the provision of basic local telecommunications
12 service, the Act fails to identify how such subsidies can be replaced.
13 In truly competitive markets, there are no sources to subsidize prices
14 that are lower than cost. Investors are concerned that the universal
15 service support mechanisms that will be put in place may not be
16 sufficient to balance the incumbent LEC's obligation to continue to
17 provide service in high-cost areas, while competitors are free to serve
18 only the most profitable markets.

19 Second, Verizon MA has the unique obligation to make
20 significant investments in the technology and software needed to
21 provide unbundled network elements to competitors. Verizon MA's

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1 competitors, however, have announced their intention to develop their
2 own facilities for providing local exchange service. Thus, Verizon MA
3 faces the considerable risk that its investments in the technology and
4 software needed to provide unbundled network elements to
5 competitors will not be recovered. Thus, Verizon MA is at a cost
6 disadvantage relative to its competitors.

7 Third, Verizon MA has the unique obligation to share the
8 benefits of network investments with competitors. When Verizon MA
9 invests to upgrade the technology in its network, Verizon MA must
10 share the benefits of this investment with competitors through the
11 leasing of unbundled network elements. However, when Verizon MA's
12 competitors invest to upgrade the technology in their networks,
13 Verizon MA receives no benefit from the CLECs' investments because
14 Verizon MA's competitors are not required to unbundle their networks.
15 For example, if AT&T is able to provide a complete package of video,
16 Internet, and voice services from its investments in TCI and
17 MediaOne, AT&T will have a significant competitive advantage
18 compared to Verizon MA, who is unable to offer such bundled
19 services. However, when Verizon MA enhances the local portion of its
20 service offerings through upgrades of its network, it is required to
21 share these benefits with all competitors, including AT&T.

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1 Q. What is the impact of rapidly changing technology on
2 telecommunications competition?

3 A. Rapid advances in telecommunications technology are a major driver
4 behind the increasing risk of investing in the LECs' local exchange
5 operations. Advances in semiconductor technology have both
6 increased the capability and shortened the economic life of
7 telecommunications equipment, so other firms can compete more
8 easily with local exchange companies. Breakthroughs are also
9 occurring in fiber optic, data communications, and wireless
10 technologies. The capacity of fiber optic networks is increasing
11 significantly, thus allowing fiber-based competitive access providers to
12 offer more services. Recent advances in data communications and
13 Internet protocol technologies, especially technologies for transporting
14 voice signals over data communications networks, offer yet another
15 opportunity for bypassing the local loop. Sprint has announced plans
16 to offer local exchange services over a new nationwide packet-
17 switched data network. New data networking and Internet protocol
18 technologies are also the major factors reducing the cost of providing
19 local exchange services over cable networks. AT&T has announced
20 its intention to rely on these technologies in its upgrade of the TCI
21 network. Wireless technology is also changing rapidly. Analysts

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1 anticipate that customers will soon be able to use their mobile wireless
2 phones to receive a complete suite of voice, video, data, and Internet
3 services. Fixed wireless technology also allows competitors to
4 completely bypass the local loop. In sum, technological developments
5 have substantially eroded the competitive advantage once enjoyed by
6 incumbent local exchange companies.

7 Q. How does rapidly changing technology affect the risk of investing in
8 incumbent local exchange companies such as Verizon MA?

9 A. Rapidly changing technology increases Verizon MA's risk in two ways.
10 First, it threatens Verizon MA's ability to recover the investment cost of
11 its new telecommunications plant. Second, it reduces the cost of entry
12 for competitors. Rapid advances in fiber optics, wireless, and
13 multimedia transmission technologies, for example, have shortened
14 the economic lives of the incumbent LECs' current investments in
15 copper-based facilities and allowed cable TV, interexchange, and
16 wireless companies to compete efficiently to offer local exchange
17 service. Advances in these technologies further threaten the
18 incumbent LECs' heavy investment in landline telecommunications
19 service.

20 Q. How does regulation affect the risk of Verizon MA?

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1 A. Since regulation constrains Verizon MA's activities more than those of
2 its competitors, and, thus impairs Verizon MA's ability to compete on
3 the same terms as its competitors, regulation increases the risk of
4 investing in Verizon MA.

5 Q. This proceeding is concerned with rates for unbundled network
6 elements rather than rates for local exchange service. How do the
7 facilities required to provide unbundled network elements compare to
8 the facilities required to provide local exchange service?

9 A. Since the network components and functionalities comprising the
10 Department's list of unbundled network elements represent virtually
11 the entirety of Verizon MA's network, the facilities required to provide
12 unbundled network elements are identical to the facilities required to
13 provide Verizon MA's local exchange services.

14 Q. How does the risk of providing unbundled network elements compare
15 to the risk of providing local exchange service in Massachusetts?

16 A. The risk of providing unbundled network elements is greater than the
17 risk of providing local exchange service in the current regulatory
18 environment.

19 Q. Why is the risk of providing unbundled network elements greater than
20 the risk of providing local exchange service in the current regulatory
21 environment?

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1 A. In their eagerness to promote competition for local exchange service
2 at the residential level, regulators have generally set rates for
3 unbundled network elements based on forward-looking economic cost
4 studies that include: (1) aggressive assumptions about the expenses
5 and amount of investment required to build a new telecommunications
6 network using the most efficient technology currently available; and
7 (2) conservative estimates of the appropriate rate of depreciation and
8 cost of capital for that forward-looking network. As a result of these
9 contradictory approaches to estimating these four components of the
10 forward-looking economic cost of providing unbundled network
11 elements (that is, expenses, investment, cost of capital, and
12 depreciation), local exchange carriers such as Verizon MA have been
13 required to lease unbundled network elements at rates that are below
14 the cost of providing these elements in a competitive environment.
15 Thus, the risk of providing unbundled network elements has exceeded
16 the risk of providing local exchange service.

17 Q. Have you considered the potential impact of long-term commitments to
18 take and pay for unbundled network elements on the risk of investing
19 in the facilities required to provide unbundled network elements?

20 A. Yes. Long-term commitments to take and pay for unbundled network
21 elements, in theory, could minimize the risk of Verizon MA's forward-

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1 looking investment in facilities to provide unbundled network elements.
2 However, the key rates to be established in this proceeding are quoted
3 at a price per month, or per minute of use. A competing carrier may
4 choose not to use Verizon MA's facilities, or it may choose to use
5 these facilities for one month at a time. Furthermore, a competing
6 carrier may chose to take the unbundled network elements at the
7 contract rate or the tariff rate, whichever is lower. Thus, while
8 Verizon MA is required to provide other carriers with unbundled
9 network elements, competitors are under no obligation to either use
10 Verizon MA's elements for any specific period of time or pay the
11 contract rate. In short, there are no long-term commitments to take
12 and pay for unbundled network elements that might reduce the risk of
13 Verizon MA's investment in the facilities and software to provide
14 interconnection and unbundled network elements.

15 Q. How does the forward-looking risk of investing in Verizon MA's local
16 exchange business in Massachusetts compare to the forward-looking
17 risk of investing in Verizon MA's parent company?

18 A. The forward-looking risk of investing in Verizon MA's local exchange
19 business in Massachusetts is greater than the forward-looking risk of
20 investing in Verizon MA's parent company because Verizon MA's local
21 exchange business in Massachusetts has less geographic diversity,

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1 less diversity of products and services, less ability to realize
2 economies of scale and scope, and less access to the capital markets.

3 Q. How does the forward-looking risk of investing in the facilities required
4 to provide unbundled network elements compare to the forward-
5 looking risk of investing in the S&P Industrials?

6 A. The forward-looking risk of investing in the facilities required to
7 provide unbundled network elements in Massachusetts is at least as
8 great as the forward-looking risk of investing in the S&P Industrials.

9 Q. Why do you believe that the risk of investing in the facilities required
10 to provide unbundled network elements in Massachusetts is at least as
11 great as the forward-looking risk of investing in the S&P Industrials?

12 A. As I noted above, the risk of investing in the facilities to provide
13 unbundled network elements depends on operating leverage, the
14 degree of competition, rapidly changing technology, and the regulatory
15 environment. The degree of operating leverage required to provide
16 facilities-based telecommunications services far exceeds the average
17 degree of operating leverage required to provide the goods and
18 services offered by companies in the S&P Industrials.

19 Telecommunications is also a high technology business that is
20 particularly sensitive to the risks of rapidly changing technology.

21 Furthermore, the regulatory environment has placed restrictions on

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1 incumbents in their ability to compete on equal terms with their
2 competitors. These three factors—high operating leverage, rapidly
3 changing technology, and the regulatory environment—tend to make
4 the risk of investing in the facilities required to provide unbundled
5 network elements greater than the risk of investing in the S&P
6 Industrials.

7 The only factor that might reduce the risk of investing in the
8 facilities required to provide unbundled network elements is the level
9 of competition. However, the FCC's cost study principles require that
10 cost studies "replicate...the conditions of a competitive market" for
11 unbundled network elements. In addition, the level of competition for
12 unbundled network elements is increasing rapidly. Taken as a whole,
13 my analysis of the factors affecting the risk of investing in the facilities
14 required to provide unbundled network elements causes me to believe
15 that this risk is at least as great as the risk of investing in the S&P
16 Industrials.

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1 **IV. ESTIMATE OF THE WEIGHTED AVERAGE COST OF**
2 **CAPITAL FOR USE IN VERIZON MA'S FORWARD-LOOKING**
3 **COST STUDIES**

4 Q. How did you calculate the weighted average cost of capital that you
5 recommend for use in Verizon MA's forward-looking cost studies?

6 A. I calculated the weighted average cost of capital to be used in
7 Verizon MA's forward-looking cost studies by analyzing the market-
8 based percentages of debt and equity in the capital structures of
9 competitive firms, the market cost of debt, and the market required
10 rate of return on an equity investment in competitive firms of
11 comparable risk.

12 **A. TARGET CAPITAL STRUCTURE**

13 Q. How did you determine an appropriate target capital structure for use
14 in Verizon MA's forward-looking cost studies?

15 A. To determine an appropriate target capital structure for use in
16 Verizon MA's forward-looking cost studies, I examined capital
17 structure data for both my proxy group of S&P Industrials and a group
18 of telecommunications companies with incumbent local exchange
19 operations. I examined the most current available data for these
20 companies, and I also reviewed data for the past five years. In all
21 periods, the average market value capital structure for these

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1 companies contains no more than 25 percent debt, and no less than
2 75 percent equity.

3 Q. What are the average market value capital structures of the S&P
4 Industrials and the telecommunications companies?

5 A. Table 1 below shows the average year-end market value capital
6 structures of the S&P Industrials and the telecommunications
7 companies for the five-year period 1996 through 2000. These data
8 show that both groups, on average, have at least 75 percent equity
9 (and generally have more than 75 percent equity) in their capital
10 structures.

Table 1

11 Capital Structure of the S&P Industrials
12 and Telecommunications Companies at Year End
13 (\$ in Millions)
14

	S&P Industrials			Telecom Companies		
	Market Value	Total Debt	Percent Equity	Market Value	Total Debt	Percent Equity
1996	1,700,587	285,381	85.6%	107,320	28,004	79.3%
1997	2,289,166	323,858	87.6%	204,385	50,221	80.3%
1998	2,863,543	353,205	89.0%	308,876	53,124	85.3%
1999	3,052,212	405,374	88.3%	381,874	68,495	84.8%
2000	3,041,722	469,285	86.6%	398,381	111,479	78.1%
Total	10,798,316	1,553,260	87.4%	1,400,837	311,324	81.8%

15 Q. Based on your review of these data, what is your recommended target
16 market value capital structure for use in Verizon MA's forward-looking
17 cost studies?

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1 A. Based on my examination of these data, I recommend that a target
2 market value capital structure containing 25 percent debt and
3 75 percent equity be used to calculate Verizon MA's weighted average
4 cost of capital.

5 Q. How does your recommended capital structure compare to the capital
6 structure the Department used for Verizon MA in its prior UNE
7 proceeding?

8 A. In its prior Order, the Department used a market value capital
9 structure containing 23.51 percent debt and 76.49 percent equity.
10 (See pages 52--53 of the Phase 4 Order in D.P.U. 96-73/74, 96-75,
11 96-80/81, 96-83, 96-94.)

12 Q. Did the Department recognize the requirement to use a market value
13 capital structure in determining the cost of capital input in forward-
14 looking cost studies?

15 A. Yes. The Department noted on page 53 of its Order, "We agree with
16 Dr. Vander Weide that it would be inconsistent to use forward-looking
17 competitive assumptions in the investment and expense components
18 of a TELRIC study, but historical accounting-based capital structures
19 in the cost of capital component."

20 **B. COST OF DEBT**

21 Q. How did you measure the market cost of debt investments?

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1 A. I used the 7.55 percent average yield to maturity on Moody's A-rated
2 industrial bonds for March 2001, as reported by Moody's Investors
3 Service. This estimate is conservative because it does not include the
4 flotation costs that must be paid to issue the debt securities required
5 to finance the building of local exchange facilities on a forward-looking
6 basis.

7 **C. COST OF EQUITY**

8 Q. How did you measure the market cost of an equity investment in
9 Verizon MA?

10 A. I applied the DCF Model to the S&P Industrials.

11 Q. Why did you apply the DCF Model to the S&P industrials?

12 A. A proper definition of the cost of capital for use in Verizon MA's
13 forward-looking cost studies is based on the assumption that the
14 market for local exchange services is competitive. As AT&T Witness
15 John Mayo stated in a Pennsylvania proceeding, "Simply put, the
16 Commission must prescribe a set of permanent prices for unbundled
17 network elements that as accurately as possible mirror the prices
18 which would be observed if those elements were supplied by sellers in
19 a competitive market."¹ However, at the present time, there are no

¹ Testimony of John Mayo, Page 11, line 18, Docket No. A-310325F0002, November 13, 1997, Before the Pennsylvania Public Utility Commission.

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1 publicly-traded companies that have built telecommunications
2 networks solely for the purpose of providing local exchange services
3 in a competitive market. Since the S&P Industrials are a well-known
4 sample of publicly-traded competitive companies whose risk, on
5 average, approximates the risk of providing telecommunications
6 services in a competitive market, I believe the S&P Industrial group is
7 a good proxy for the risks of investing in the facilities required to
8 provide local exchange services on a forward-looking basis.

9 Q. Is your use of the S&P Industrial group consistent with the
10 Department's prior practice in the previous UNE proceeding?

11 A. Yes. In the prior UNE proceeding, the Department used data for the
12 S&P Industrials in establishing an appropriate cost of equity. In
13 choosing the S&P Industrials as a proxy for the risk of supplying
14 unbundled network elements, the Department stated,

15 There is not yet a competitive market for unbundled
16 network services, but there will be one shortly. We need a
17 surrogate to describe the risks of that to-be-developed market,
18 and we choose to rely on one of the most liquid and well
19 publicized markets, the stock market, whose performance is
20 often measured by the S&P 400. It is a diverse market
21 representing a portfolio of companies and their incumbent risk.
22 As such, we find that it presents a composite view of the risks of
23 competitive organizations, against which it is reasonable to
24 compare the likely risk of building and leasing unbundled
25 network elements.

26 We recognize that our approach here is quite different
27 from that employed by us in determining the rate of return for

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1 NYNEX and other companies in our jurisdiction, but, as we
2 have stated, our task is different. We seek to estimate the cost
3 of equity for a service offering that does not yet exist in a
4 marketplace that is about to come into existence. We
5 recognize that our finding must be inherently qualitative, and we
6 are aware of the possibility that the S&P 400 might be less risky
7 or more risky than a company selling unbundled network
8 elements. We have already acknowledged that, based on this
9 record, we cannot precisely determine the degree of risk
10 associated with offering unbundled network elements. We
11 know it is more risky than the provision of monopoly services.
12 We know it is less risky than speculative real estate or power
13 plant projects. It has some characteristics of the two, in that, for
14 common carriers who lack the capital or the ability to build
15 facilities, it does provide an essential service. For other
16 carriers, however, it offers a no-obligation option to use and
17 later abandon, perhaps to preserve capital in the short run and
18 then to spend it on those facilities that have a high financial
19 priority.

20 In total, we see no systemic reason that the level of risk
21 represented by the S&P 400 as a group should be biased either
22 above or below that of an ILEC providing unbundled network
23 elements. Accordingly, we find that the comparison group
24 employed by Dr. Vander Weide is of value in determining the
25 appropriate cost of equity in the TELRIC studies. [D.P.U. Order
26 at pp. 49—51.]

27 Q. What DCF result did you obtain from your application of the DCF
28 Model to the S&P industrials?

29 A. As shown in the Schedule JVW-1, I obtained a market-weighted
30 average DCF cost of equity of 14.75 percent for the S&P Industrials.

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1 D. WEIGHTED AVERAGE COST OF CAPITAL

2 Q. What is your estimate of Verizon MA's overall weighted average cost
3 of capital?

4 A. I estimate Verizon MA's overall weighted average cost of capital to be
5 12.95 percent. This estimate is based on a 7.55 percent market cost
6 of debt, a target market value capital structure containing 25 percent
7 debt and 75 percent equity, and a cost of equity of 14.75 percent (see
8 Table 2).

9 **Table 2**

10 Weighted Average Cost of Capital Using 25/75 Capital Structure
11

Source of Capital	Cost Rate	Percent	Weighted Cost
Debt	7.55%	25.00%	1.89%
Equity	14.75%	75.00%	11.06%
WACC			12.95%

12 Q. On the basis of your cost of capital studies, what is your conclusion
13 regarding the reasonableness of the 12.6 percent weighted average
14 cost of capital Verizon MA used in its forward-looking cost studies?

15 A. I conclude that 12.6 percent is a conservative estimate of the weighted
16 average cost of capital that should be used in Verizon MA's forward-
17 looking studies of the cost of providing unbundled network elements
18 and interconnection.

19 Q. Does this conclude your testimony?

20 A. Yes, it does.

SCHEDULE JWV-1
Discounted Cash Flow Analysis for the S&P Industrials
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Company	Average Price	Annual Dividend	I/B/E/S Mean Growth	Cost Of Equity
Albertsons Inc	29.63	0.760	11.4%	14.44%
Abbott Laboratories	46.12	0.760	12.4%	14.36%
Archer-Daniels-Midland Co	14.03	0.200	11.8%	13.49%
Automatic Data Processing	54.14	0.410	15.1%	16.02%
Aetna Inc	35.56	0.800	12.7%	15.39%
American Home Products Corp	57.40	0.920	13.5%	15.43%
American Greetings	12.53	0.400	9.5%	13.23%
Air Products & Chemicals Inc	39.93	0.760	11.1%	13.34%
Allegheny Technologies Inc	17.80	0.800	10.6%	15.93%
Avon Products	40.70	0.740	12.4%	14.57%
Avery Dennison Corp	52.78	1.200	12.8%	15.52%
Baxter International Inc	90.11	1.164	13.5%	15.05%
Brunswick Corp	21.06	0.500	12.8%	15.65%
Bard (C.R.) Inc	43.53	0.840	12.2%	14.50%
Black & Decker Corp	40.14	0.480	14.5%	15.95%
Becton Dickinson & Co	33.73	0.380	12.2%	13.54%
BellSouth Corp	39.48	0.760	11.9%	14.18%
Biomet Inc	39.38	0.107	15.0%	15.33%
Bemis Co	33.67	0.960	11.4%	14.78%
Bristol Myers Squibb	57.65	0.980	12.5%	14.53%
Computer Associates Intl Inc	27.64	0.080	15.7%	16.05%
Conagra Foods Inc	18.75	0.900	9.8%	15.46%
Caterpillar Inc	44.08	1.360	9.8%	13.41%
Cooper Industries Inc	39.23	1.400	10.3%	14.50%
Carnival Corp	28.50	0.420	14.0%	15.78%
Cigna Corp	107.60	1.240	13.2%	14.58%
Colgate-Palmolive Co	54.40	0.630	12.5%	13.88%
Clorox Co/De	33.05	0.840	11.9%	14.92%
Cooper Tire & Rubber	12.80	0.420	10.3%	14.16%
CenturyTel Inc	27.68	0.190	13.6%	14.42%
Centex Corp	40.48	0.160	13.0%	13.47%
Disney (Walt) Company	28.53	0.210	14.6%	15.49%
Dow Jones & Co Inc	56.20	1.000	11.1%	13.20%
Deluxe Corp	23.24	1.480	6.7%	14.04%
Donnelley (R R) & Sons Co	27.52	0.920	11.6%	15.58%
Darden Restaurants Inc	22.83	0.080	14.9%	15.32%
Engelhard Corp	25.18	0.400	12.6%	14.50%
Ecolab Inc	40.98	0.520	14.0%	15.53%
Eastman Kodak Co	42.72	1.760	8.5%	13.28%
Emerson Electric Co	64.48	1.530	12.6%	15.44%
EOG Resources Inc	45.00	0.140	14.4%	14.78%
Eaton Corp	69.89	1.760	10.5%	13.46%
First Data Corp	58.90	0.080	14.5%	14.66%
Fortune Brands Inc	32.63	0.960	11.6%	15.10%
Sprint FON Group	21.77	0.500	12.3%	15.04%
Gillette Co	31.71	0.650	11.6%	14.03%
Gannett Co	60.68	0.880	12.0%	13.72%
General Mills Inc	43.55	1.100	10.7%	13.67%
Genuine Parts Co	25.84	1.140	8.2%	13.31%
Goodrich (B F) Co	38.40	1.100	12.1%	15.52%
Goodyear Tire & Rubber Co	25.10	1.200	9.6%	15.22%

SCHEDULE JWV-1
Discounted Cash Flow Analysis for the S&P Industrials
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Company	Average Price	Annual Dividend	I/B/E/S Mean Growth	Cost Of Equity
Grainger (W W) Inc	33.51	0.680	12.3%	14.72%
Harcourt General Inc	55.85	0.840	14.3%	16.12%
HCA-Healthcare Co	37.15	0.080	14.9%	15.16%
Hilton Hotels Corp	10.90	0.080	12.5%	13.37%
Heinz (H J) Co	40.29	1.570	9.2%	13.75%
Honeywell International Inc	40.99	0.750	13.9%	16.11%
Hewlett-Packard Co	30.30	0.320	14.3%	15.58%
Intl Business Machines Corp	98.03	0.520	13.2%	13.83%
ITT Industries Inc	39.61	0.600	13.9%	15.73%
Illinois Tool Works	61.15	0.800	12.9%	14.46%
Johnson Controls Inc	64.59	1.240	13.6%	15.91%
Johnson & Johnson	90.18	1.280	12.9%	14.60%
Nordstrom Inc	17.03	0.360	13.0%	15.54%
Kimberly-Clark Corp	68.11	1.080	11.3%	13.17%
Kerr-McGee Corp	66.75	1.800	11.8%	15.01%
Coca-Cola Co	48.83	0.680	13.0%	14.67%
Leggett & Platt Inc	19.65	0.440	12.7%	15.38%
Liz Claiborne Inc	46.86	0.450	12.3%	13.44%
Lilly (Eli) & Co	75.20	1.120	13.2%	14.99%
Lockheed Martin Corp	35.55	0.440	11.9%	13.37%
May Department Stores Co	37.83	0.930	10.6%	13.49%
McGraw-Hill Companies	57.65	0.940	13.1%	15.05%
Minnesota Mining & Mfg Co	109.13	2.320	11.4%	13.91%
Molex Inc	37.25	0.100	14.9%	15.23%
Merck & Co	73.52	1.360	11.9%	14.10%
USX-Marathon Group	27.92	0.920	10.1%	13.97%
Maytag Corp	34.00	0.720	13.3%	15.85%
Nucor Corp	43.58	0.600	14.3%	15.97%
New York Times Co	42.20	0.460	12.5%	13.80%
Pitney Bowes Inc	34.70	1.160	11.9%	15.89%
Pepsico Inc	43.68	0.560	13.3%	14.84%
Procter & Gamble Co	65.33	1.400	11.4%	13.93%
Parker-Hannifin Corp	41.81	0.720	11.6%	13.64%
Rohm & Haas Co	34.24	0.800	11.6%	14.37%
Rockwell Intl Corp	42.38	1.020	11.0%	13.84%
Raytheon Co -Cl B	29.02	0.800	10.8%	14.05%
Sears Roebuck & Co	36.88	0.920	10.3%	13.22%
SBC Communications Inc	43.88	1.015	13.3%	16.08%
Schering-Plough	36.98	0.560	13.7%	15.52%
Sherwin-Williams Co	25.49	0.540	11.0%	13.50%
Snap-On Inc	29.28	0.960	10.1%	13.95%
Supervalu Inc	13.38	0.550	11.0%	15.88%
Stanley Works	34.62	0.920	11.7%	14.86%
Target Corp	36.08	0.220	15.1%	15.84%
Tosco Corp	42.02	0.320	12.7%	13.61%
Tribune Co	39.17	0.440	13.1%	14.44%
TRW Inc	36.90	1.400	9.6%	14.04%
Tupperware Corp	23.95	0.880	11.8%	16.19%
Texaco Inc	66.94	1.800	10.7%	13.87%
Textron Inc	55.62	1.300	13.1%	15.91%
United Technologies Corp	73.70	0.900	13.8%	15.27%

SCHEDULE JWV-1
Discounted Cash Flow Analysis for the S&P Industrials
Page 3 of 3

Company	Average Price	Annual Dividend	I/B/E/S Mean Growth	Cost Of Equity
VF Corp	34.96	0.920	11.2%	14.31%
Verizon Communications	47.15	1.540	11.6%	15.49%
Wendy's International Inc	22.78	0.240	14.1%	15.37%
Whirlpool Corp	52.44	1.360	11.4%	14.47%
Waste Management Inc	25.70	0.010	14.2%	14.25%
Wal-Mart Stores	48.55	0.240	14.5%	15.10%
USX-U S Steel Group	15.68	1.000	8.1%	15.54%
Market Weighted Average				14.75%

Source: Standard & Poor's Compustat Database April 2001. Price is average of March 2001 high and low prices. Quarterly dividend obtained from the annual dividend rate as reported by Compustat, divided by 4. I/B/E/S growth rate is the April mean estimate of the long-term growth rate as reported by Compustat.

Notes: In applying the DCF Model to the S&P Industrials, I included in the DCF analysis only those companies in the S&P Industrial group which have a reported stock price, pay a dividend, have a positive growth rate, have at least 3 analysts' long-term growth estimates, and have at least one common share outstanding. To be conservative, I also eliminated those 25 percent of companies with the highest and lowest DCF results, those companies with cost of equity results equal to or below the March 2001 average yield on Moody's A-rated industrial bonds or equal to or above 20 percent. The weighted average DCF result for all four quartiles of the S&P Industrials was 15.01 percent, while the weighted average DCF result for 2nd and 3rd quartiles shown here on Schedule JWV-1 is 14.75 percent. Elimination of the 1st and 4th quartiles of the S&P Industrials had a negligible effect on the market value capital structure.

Notation:

- d_0 = Quarterly Dividend (indicated annual dividend divided by 4).
- P_0 = Average of the monthly high and low stock prices March 2001.
- FC = Flotation costs expressed as a percent of gross proceeds (5 percent).
- g = I/B/E/S mean forecast of future earnings growth March 2001.
- k = Cost of equity using the quarterly version of the DCF Model as shown by the formula below:

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



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. 01-20 (Part A)

REBUTTAL TESTIMONY OF ALLEN E. SOVEREIGN
ON BEHALF OF VERIZON NEW ENGLAND INC.
d/b/a VERIZON MASSACHUSETTS

July 18, 2001

1 Q. Please state your name, address and present position.

2 A. My name is Allen E. Sovereign. My business address is 1420 East Rochelle
3 Blvd., Irving, Texas 75039. I am employed by Verizon as Group
4 Manager-Capital Recovery.

5 Q. Are you the same Allen Sovereign who filed direct testimony on behalf of Verizon in
6 this docket on May 8, 2001?

7 A. Yes.

8 Q. What is the purpose of your rebuttal testimony?

9 A. The purpose of this rebuttal testimony is to respond to the direct testimony of Richard
10 Lee filed on behalf of AT&T in this docket.

11 Q. What depreciation inputs are recommended by AT&T witness Lee?

12 A. Mr. Lee recommends that the Department adopt the projection lives and future net
13 salvage values last prescribed by the FCC in 1996 for Verizon-Mass in developing
14 UNE rates.

15 Q. Does the FCC specify the plant lives to be used in the pricing of unbundled
16 network elements?

17 A. No, the FCC explicitly stated in CC Docket No. 00-217¹, that the states do not have
18 to use the FCC's prescribed lives for the pricing of unbundled network elements. As
19 stated by the FCC: "We have never stated that states should be

¹ See *In re: Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Kansas and Oklahoma, CC Docket No 00-217, Memorandum Opinion and Order, released January 22, 2001.*

1 precluded from setting depreciation rates that differ from the Commission's, and do
2 not do so here." The FCC's rules require only that forward-looking costs be used in
3 the setting of interconnection prices. The FCC-prescribed depreciation inputs were
4 developed for regulatory reporting purposes to recover both past, embedded plant
5 investment and newly placed plant investment and do not reflect the forward-looking,
6 economic depreciation parameters that are appropriate for a TELRIC analysis.
7 Verizon uses economic parameters for its reports to stockholders and those are the
8 parameters which should be used here.

9 Q. Does the Department prescribe depreciation parameters for Verizon MA?

10 A. No, it does not. In the Price Cap Plan adopted by the Department in D.T.E. 94-50,
11 the Department ruled that Verizon MA should have the flexibility to adjust its own
12 depreciation parameters. The Department further stated that the depreciation lives
13 must not exceed those prescribed by the FCC in its most recent triennial
14 represcription. Since that decision, Verizon MA has used depreciation parameters
15 that are consistent with, or shorter than the lives approved for Verizon MA in the
16 FCC's 1996 represcription for both intrastate regulatory reporting, and financial
17 reporting purposes. Those same lives should be adopted in this proceeding.

18 Q. In your opinion do the lives recommended by AT&T witness Lee represent the current
19 forward looking economic costs?

20 A. No, they do not. The lives prescribed by the FCC in 1996 are outdated. Lives set in
21 1996 could not have contemplated all the changes that have occurred in the

1 telecommunications industry in general, and in Massachusetts specifically. The fact
 2 that the 1996 FCC lives are outdated is clearly evident by just reviewing some recent
 3 FCC prescriptions. The FCC's recent prescriptions for projection lives have tended
 4 to be at the low end of the FCC range. For example, the FCC recently prescribed the
 5 bottom of the FCC range for the projection lives in Verizon's Washington, Oregon,
 6 Idaho, and Hawaii territories for rates effective January 1, 2000. Also, in 1999, the
 7 FCC prescribed a 10.5-year life, which is even shorter than the low end of its range,
 8 range for digital switching in Verizon's Virginia territory. These prescriptions are
 9 clearly indicative of the FCC's continued downward movement in recent years.
 10 Therefore, at most, the low end of the FCC range should be considered by the
 11 Department as a starting point for the forward-looking economic lives – not the
 12 outdated FCC lives recommended by AT&T's witness Lee. The following table
 13 contrasts the lives recommended by AT&T and Verizon MA with the low end of the
 14 FCC ranges, which is more reflective of the lives most recently prescribed by the
 15 FCC.

16

17

Projection Lives (Years)

18

19

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21

22

23

Account	Verizon Financial Reporting	Verizon Proposed	FCC Range	AT&T Proposed
ESS Digital	10	10	12	15
Circuit Equipment	9	9	11	11