1   BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2   REBUTTAL TESTIMONY

3   OF

4   JOHN D. QUACKENBUSH

5

6   Q.   Please state your name.

7   A.   My name is John D. Quackenbush.

8

9   Q.   Are you the same John D. Quackenbush who filed

10   direct testimony in this proceeding on May 1,

11   2000?

12

13 A.   Yes, I am.

14

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

16

17 A.   I am responding to the direct testimony of three

18   witnesses that addressed the cost of capital

19   issue. Specifically, I will discuss the testimony

20   of witness John I. Hirshleifer of AT&T

21   Communications of the Southern States and MCI

22   WorldCom; and to a lesser extent, witnesses

23   William J. Barta of the Florida Cable

1   Telecommunications Association and Carol Bentley

2   of Supra Telecommunications & Information Systems.

3

4 Q. **What are your primary observations about Mr.**

5   **Hirshleifer's testimony?**

6

7 A. Mr. Hirshleifer's cost of capital recommendations

8   should be given little weight by the Commission

9   because: 1) his "comparable" companies are based

10   on an arbitrary selection of holding companies

11   rather than on ILEC risk considerations; 2) his

12   recommended capital structures understate the

13   appropriate equity ratio because they are in part

14   based on book value capital structures; 3) his

15   cost of debt calculation is outdated; 4) his

16   idiosyncratic DCF model is subjective and not

17   reflective of investor expectations for

18   telecommunications firms; 5) his CAPM betas and

19   market risk premium are understated; 6) his

20   observation of investment banking references to

21   cost of capital are misleading; and 7) he fails to

22   acknowledge that issuance costs are a necessary

23   and legitimate cost of obtaining equity.

24

1   Q.   Because all aspects of Mr. Hirshleifer's analysis

2   are impacted by his selection of "comparable"

3   companies, please begin by commenting on his

4   "comparable" company selection process.

5

6   A.   It is clear from page 6 of Mr. Hirshleifer's

7   direct testimony that he expended minimal effort

8   and did not rely on ILEC risk considerations to

9   determine his "comparable" companies.   Mr.

10   Hirshleifer arbitrarily limited his selected

11   companies to the four remaining Bell holding

12   companies and several larger independent telephone

13   holding companies.   He later admits on page 32

14   that the risks of these holding companies are not

15   comparable to the risks that he is trying to

16   isolate.   Because Mr. Hirshleifer made no effort

17   to identity comparability based on risk, his group

18   of "comparable" companies will be comparable in

19   risk only by accident.

20

21   In contrast, I, as well as Dr. Billingsley,

22   identified comparable firms with a rigorous

23   cluster analysis approach based on accepted risk

24   measures.   Mr. Hirshleifer's flawed group of

25   "comparable" companies underlies, and thus taints,

3

1   all aspects of his analysis, including his capital

2   structure, cost of debt, DCF, and CAPM analyses.

3

4   Q.   Please comment on Mr. Hirshleifer's capital

5   structure recommendation.

6

7   A.   Mr. Hirshleifer appropriately acknowledges that

8   market value capital structures are appropriate to

9   use in a cost of capital analysis. However, he

10   recommends a hybrid capital structure with only

11   50% weight placed on the market value capital

12   structure ratios, with the other 50% weight placed

13   on the book value capital structure ratios. I

14   explained on pages 9 through 12 of my direct

15   testimony the reasons that market value capital

16   structures are appropriate for forward-looking

17   cost studies for unbundled network elements. Mr.

18   Hirshleifer indicates that he deviates from using

19   market value capital structures in order to adjust

20   for the difference in risk between his

21   "comparable" holding companies and the network

22   elements leasing business. To be clear, his

23   intended adjustment should be viewed as having two

24   components: 1) an adjustment between his

25   "comparable" holding companies and ILECs; and then

4

1   2) an adjustment between ILECs and the network

2   elements leasing business.   Any potential

3   difference in risk between Mr. Hirshleifer's

4   "comparable" companies and ILECs is a problem that

5   Mr. Hirshleifer has created for himself by his

6   flawed decision to focus his initial analysis on

7   holding companies rather than firms that are

8   comparable in risk to ILECs.   Moreover, it is

9   unnecessary to adjust for risk between ILECs and

10   the network elements leasing business.

11

12   Q.   Why is it unnecessary to adjust for risk between

13   ILECs and the network elements leasing business?

14

15   A.   Mr. Hirshleifer errs first by attempting to

16   differentiate unbundled network element risk from

17   ILEC risk and secondly by postulating that

18   unbundled network elements are low risk relative

19   to local service.   In general, the practice of

20   segmenting risk to determine different cost of

21   capital rates has intuitive appeal when a company

22   has multiple distinct projects or divisions that

23   it can invest in, for example, a computer division

24   and a grocery store division.   The company can use

25   different cost of capital rates to decide to what

1   extent it wants to make additional investments in

2   either business. However, the provision of

3   unbundled network elements is not a separate and

4   distinct line of business. The risk of providing

5   unbundled network elements is inherent in being an

6   ILEC. It makes little sense to attempt to

7   bifurcate ILEC risks into piece parts that are

8   operationally inseparable. An ILEC cannot decide

9   to invest exclusively in or withdraw from

10   providing unbundled network elements while still

11   providing local, toll and access services.

12

13   Moreover, if unbundled network element risks were

14   separable, Mr. Hirshleifer postulates the risk

15   going in the wrong direction relative to overall

16   ILEC risks. The provision of unbundled network

17   elements would intuitively be among the most risky

18   ILEC services. Investors recognize that a CLEC

19   intends to re-sell ILEC services up to the point

20   in time that the CLEC accumulates enough customers

21   to justify installing its own facilities. From an

22   investor standpoint, the ILEC is required to

23   invest in plant to accommodate CLEC customers that

24   will ultimately be switched over to CLEC

25   facilities, thus stranding the ILEC investment.

1   This expected chain of events introduces

2   additional risk to an ILEC and increases the

3   probability of ILEC investors not receiving an

4   adequate return on invested capital.

5

6   **Q.**   **What is your conclusion concerning Mr.**

7   **Hirshleifer's proposed hybrid capital structure?**

8

9   **A.**   I recommend that the Commission adopt a market

10   value capital structure rather than Mr.

11   Hirshleifer's proposed hybrid capital structure.

12

13   **Q.**   **Please describe your objections to the outdated**

14   **cost of debt employed by Mr. Hirshleifer.**

15

16   **A.**   Mr. Hirshleifer used September 30, 1999 yields to

17   maturity on seasoned debt issues to determine the

18   cost of debt information in his testimony that was

19   filed on June 8, 2000. On page 37, he attempts to

20   justify his choice of outdated data by stating

21   that 30-year Treasury bond rates have fallen

22   minimally (by 15 basis points) since September 30,

23   1999. He fails to mention that Treasury rates for

24   other maturities, and therefore the yields to

1   maturity on his selected group of seasoned debt

2   issues, have generally increased during this time

3   period.   For example, one-year, five-year, and

4   ten-year Treasury rates increased by 135, 62, and

5   31 basis points, respectively, from September 30,

6   1999 to June 23, 2000.

7

8   More importantly, corporate debt spreads have

9   significantly widened over the same time period.

10 Exhibits   JDQ-15   and   JDQ-16   compare   Mr.

11 Hirshleifer's cost of debt calculations from

12 Exhibits JH-3a and JH-3b to an update based on his

13 methodology and his selected seasoned debt issues

14 as of June 23, 2000. As shown on Exhibits JDQ-15

15 and JDQ-16, Mr. Hirshleifer's own cost of debt

16 methodology shows a 56 and 72 basis point increase

17 for BellSouth and GTE, respectively, rather than

18 the 15 basis point decrease that Mr. Hirshleifer

19 communicated in his testimony.

20

21 Q.   **Please comment on Mr. Hirshleifer's DCF analysis.**

22

23 A.   Mr. Hirshleifer creates a three-stage DCF model

24   that does not reflect investor expectations,

25   particularly for the telecommunications companies

8

1   to which he chooses to apply it. Mr. Hirshleifer

2   assumes that the growth rate will immediately

3   decline after five years. The rigid five-year time

4   period that Mr. Hirshleifer imposes on his model

5   is unsupported and not reflective of investor

6   expectations. The telecommunications industry is

7   dynamic and replete with continuous technological

8   innovation. Investors do not expect

9   telecommunications growth to taper off after five

10 years as Mr. Hirshleifer postulates. As a result,

11 Mr. Hirshleifer's idiosyncratic three-stage model

12 is of little use to the Commission in this

13 proceeding.

14

15 Q. Please comment on Mr. Hirshleifer's CAPM analysis.

16

17 A. Mr. Hirshleifer understates his CAPM cost of

18 equity estimate by understating both his beta and

19 market risk premium estimates. Mr. Hirshleifer

20 calculates his own betas in a way that is not

21 reflective of investor expectations. Value Line

22 betas more closely approximate the betas that

23 investors would use in a CAPM analysis. Mr.

24 Hirshleifer's own betas are raw historical betas

25 that are strictly based on a mechanical

1   calculation.   In   contrast,   Value   Line   betas

2   undergo an adjustment procedure that makes them

3   more forward-looking than raw historical betas.

4   Value Line's forward-looking adjustment process

5   regresses raw betas toward the mean market beta of

6   1.0.   The tendency of betas to regress toward the

7   mean is documented in "Betas and Their Regression

8   Tendencies" by Marshall Blume in The Journal of

9   Finance, June 1975.

10

11   Additionally,   Mr.   Hirshleifer   understates   the

12   market risk premium by: 1) basing his estimate on

13   the same flawed three-stage DCF model that he used

14   in his DCF approach; 2) introducing low quality

15   risk premium data prior to 1926 that was rejected

16   for   inclusion   in   the   Ibbotson   study;   and   3)

17   emphasizing   the   use   of   geometric   mean   returns

18   rather than arithmetic mean returns.   Geometric

19   mean returns should not be used in capital cost

20   estimation for the reasons that I detailed on page

21   39 of my direct testimony and as warned against in

22   the Ibbotson study itself.

23

24

1   Q.   Please explain why Mr. Hirshleifer's observations

2   of occasional investment banking references to

3   cost of capital are misleading.

4

5   A.   To begin with, investment banking cost of capital

6   estimates are almost always provided on an after-

7   tax basis and are not directly comparable to the

8   pre-tax cost of capital that is at issue in this

9   proceeding. Secondly, investment banks devote few

10   resources to calculating cost of capital

11   estimates. Investment banks are in the business

12   of recommending stocks based on relative

13   valuations. Therefore, investment banks are more

14   concerned with relative differences in risk across

15   companies and industries rather than absolute cost

16   of capital levels for a particular company or

17   industry.

18

19   Q.   Finally, did Mr. Hirshleifer incorporate an

20   issuance cost increment in his cost of capital

21   estimate?

22

23   A.   No, he did not. Mr. Hirshleifer states that

24   equity issuance costs should be considered only in

25   a traditional regulatory rate hearing context and

1   not in this proceeding. I disagree because the

2   cost of equity, whether or not for use in a

3   traditional regulatory setting, consists of two

4   components: the required return to equity

5   investors and the costs associated with accessing

6   equity investors. Issuance costs are a necessary

7   and legitimate cost of obtaining equity financing.

8   Mr. Hirshleifer further understates the cost of

9   equity by pretending that only the required return

10 component should be considered.

11

12 Q. In summary, what is your conclusion concerning Mr.

13 Hirshleifer's cost of capital analysis?

14

15 A. Mr. Hirshleifer's approaches significantly

16 understate the cost of capital for the ILECs in

17 this proceeding and offer little useful

18 information to the Commission.

19

20 Q. Please comment on the cost of capital discussion

21 offered by witnesses Barta and Bentley.

22

23 A. Witnesses William Barta and Carol Bentley, on

24 behalf of the Florida Cable Telecommunications

25 Association and Supra Telecommunications &

1   Information Systems, both discussed cost of

2   capital in their testimony. However, witnesses

3   Barta and Bentley provided no useful cost of

4   capital analysis. Witness Barta acknowledges that

5   "the appropriate cost of capital should recognize

6   current capital market conditions," but offers no

7   analysis of current capital market conditions.

8   Witness Bentley asserts a rate of return range

9   based on a belief that ILEC investments are

10 "essentially risk-free." However, she offers

11 absolutely no supporting evidence.

12

13 Additionally, witness Barta commented about

14 "widely divergent capital structures" proposed by

15 BST, GTE, and Sprint. Actually, the capital

16 structures recommended by the three ILECs are

17 quite similar. Apparently, witness Barta is not

18 aware that BST witness Billingsley recommended an

19 equity ratio of 90.17%, similar to my recommended

20 equity ratio of 89.64%.

21

22 Q.   Does this conclude your rebuttal testimony?

23 A.   Yes, it does.

Comparison of Mr. Hirshleifer's Cost of Debt Calculation
to an Updated Cost of Debt Using Mr. Hirshleifer's Methodology

BellSouth Yields

| | Per Hirshleifer Exhibit JH-3a | | | |
	Debt Outstanding at Par (mil $) as of 9/30/99	Yield to Maturity as of 9/30/99	Debt Outstanding at Par (mil $) as of 6/23/00	Yield to Maturity* as of 6/23/00
BellSouth Capital Funding				
(Issued under support agreement w/BellSouth)				
Deb 6.04s 2026	300	6.10%	300	6.16%
Deb 7.12s 2097	500	7.63%	500	8.41%
BellSouth Telecommunications				
Deb 5 7/8s 2009	350	6.83%	350	7.63%
Deb 7s 2025	300	7.41%	300	7.88%
Deb 6 3/8s 2028	500	7.46%	500	7.88%
Deb 8 1/4s 2032	250	7.97%	250	8.44%
Deb 7 7/8s 2032	300	7.79%	300	8.44%
Deb 7 1/2s 2033	300	7.70%	300	8.34%
Deb 6 3/4s 2033	400	7.66%	400	8.09%
Deb 7 5/8s 2035	300	7.76%	300	8.38%
Deb 5.85s 2045	300	6.04%	300	5.88%
Deb 7s 2095	500	7.67%	500	8.18%
Nts 6 1/2s 2000	275	7.19%	0	Matured
Nts 6 1/4s 2003	450	6.36%	450	7.32%
Nts 6 3/8s 2004	200	6.34%	200	7.26%
Nts 7s 2005	150	6.86%	150	7.32%
Nts 6 1/2s 2005	300	6.55%	300	7.54%
Southern Bell Tel. & Tel				
(Now BellSouth Telecommunications)				
Deb 4 3/4s 2000	100	7.03%	100	6.81%
Deb 4 3/8s 2001	75	6.77%	75	7.12%
Deb 4 3/8s 2003	70	6.66%	70	7.41%
Deb 6s 2004	100	6.75%	100	7.24%
Weighted Average		7.16%	**Weighted Average**	7.72%

*Source: Bloomberg Financial Markets

Comparison of Mr. Hirshleifer's Cost of Debt Calculation
to an Updated Cost of Debt Using Mr. Hirshleifer's Methodology

GTE Yields

	Per Hirschleifer Exhibit JH-3b			
	Debt Outstanding at Par (mil $) as of 9/30/99	Yield to Maturity as of 9/30/99	Debt Outstanding at Par (mil $) as of 6/23/00	Yield to Maturity* as of 6/23/00
GTE California				
Deb 'A' 5 5/8s 2001	300	6.21%	300	6.93%
Deb 'B' 6 3/4s 2004	250	6.62%	250	7.41%
Deb 'C' 8.07s 2024	250	8.14%	250	8.39%
Deb 'D' 7s 2008	100	6.96%	100	7.75%
Deb 'E' 6.70s 2009	300	7.05%	300	7.76%
Deb 'F' 6 3/4s 2027	200	7.50%	200	8.17%
Deb 'G' 5 1/2s 2009	225	6.98%	225	7.75%
GTE Corp.				
Deb 9 3/8s 2000	500	6.32%	500	7.20%
Deb 9.10s 2003	500	6.72%	500	7.69%
Deb 6.36s 2006	450	6.91%	450	7.69%
Deb 6.46s 2008	250	7.05%	250	7.92%
Deb 7.51s 2009	500	7.09%	500	7.89%
Deb 6.84s 2018	600	7.47%	600	8.04%
Deb 10 1/4s 2020	400	9.38%	400	9.61%
Deb 8 3/4s 2021	300	7.63%	300	8.07%
Deb 7.83s 2023	500	7.95%	500	8.52%
Deb 7.90s 2027	500	7.94%	500	8.51%
Deb 6.94s 2028	800	7.52%	800	8.10%
M-T Nts 'A' 6.39s 2000	100	5.97%	100	6.40%
M-T Nts 'A' 6.56s 2002	105	6.36%	105	7.64%
M-T Nts 'A' 6.60s 2005	75	6.86%	75	7.75%
GTE Florida				
Deb 'A' 6.31s 2002	200	6.57%	200	7.50%
Deb 'B' 7.41s 2023	200	7.79%	200	8.26%
Deb 'C' 7 1/4s 2025	100	7.76%	100	8.27%
Deb 'D' 6 1/4s 2005	100	6.93%	100	7.51%
Deb 'E' 6.86s 2028	300	7.50%	300	8.22%
GTE Hawaiian Tel				
1st BB 6 3/4s 2005	125	7.00%	125	8.03%
Deb 'A' 7s 2006	150	7.25%	150	8.19%
Deb 7 3/8s 2006	150	7.30%	150	8.29%

Comparison of Mr. Hirshleifer's Cost of Debt Calculation
to an Updated Cost of Debt Using Mr. Hirshleifer's Methodology

GTE Yields

| | Per Hirschleifer Exhibit JH-3b | | | |
	Debt Outstanding at Par (mil $) as of 9/30/99	Yield to Maturity as of 9/30/99	Debt Outstanding at Par (mil $) as of 6/23/00	Yield to Maturity* as of 6/23/00
GTE North Inc.				
1st 8 1/2s 2031	250	8.32%	250	8.67%
Deb 'A' 6s 2004	250	6.64%	250	7.63%
Deb 'C' 7 5/8s 2026	200	8.04%	200	8.36%
Deb 'D' 6.90s 2008	250	7.03%	250	7.96%
Deb 'E' 6.40s 2005	150	6.76%	150	7.67%
Deb 'F' 6 3/8s 2010	200	6.96%	200	8.00%
Deb 'G' 6.73s 2028	200	7.49%	200	8.16%
Deb 'H' 5.65s 2008	250	6.92%	250	7.97%
GTE Northwest (was Gen'l Tel. Northwest)				
Deb 'A' 7 3/8s 2001	200	6.44%	200	7.36%
Deb 'B' 7 7/8s 2026	175	8.02%	175	8.33%
Deb 'C' 6.30s 2010	175	7.09%	175	7.92%
Deb 'D' 5.55s 2008	200	7.06%	200	7.86%
GTE South Inc.				
Deb 7 1/4s 2002	150	6.70%	150	7.44%
Deb 'C' 6s 2008	125	7.02%	125	7.95%
Deb 'D' 7 1/2s 2026	250	8.04%	250	8.27%
Deb 'E' 6 1/8s 2007	225	7.06%	225	7.73%
GTE Southwest				
1st 8 1/2s 2031	100	7.63%	100	8.17%
Deb 'A' 5.82s '99	250	5.71%	0	Matured
Deb 'B' 6.54s 2005	250	6.89%	250	7.68%
Deb 'C' 6s 2006	150	7.04%	150	7.80%
Deb 6.23s 2007	150	7.15%	150	7.93%
	Weighted Average	7.25%	**Weighted Average**	7.97%

*Source: Bloomberg Financial Markets