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SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY

DOCKET NO. 920260-TL

DIRECT TESTIMONY OF RONALD D. NEIL

ON BEHALF OF THE STAFF OF THE FLORIDA PUBLIC SERVICE COMMISSION

DIVISION OF AUDITING AND FINANCIAL ANALYSIS

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FPSC-RECORDS/REPORTING

1 DIRECT TESTIMONY OF RONALD D. NEIL

2 Q Please state your name and address.

3 A My name is Ronald D. Neil. My business address is 101 East Gaines
4 Street, Tallahassee, Florida 32399-0850

5 Q By whom are you employed and in what capacity?

6 A I am employed by the Florida Public Service Commission as a Regulatory
7 Analyst.

8 Q Please outline your educational qualifications and work experience.

9 A I graduated from Birmingham-Southern College in 1987 with a Bachelor of
10 Arts degree in Business Management. In 1988, I received a Masters of Business
11 Administration degree from Florida State University.

12 Upon graduation in 1988, I accepted a budgets/results coordinator
13 position with ALLTEL Florida. In this capacity, I analyzed operating results
14 and formulated databases and spreadsheets for financial information. In 1989,
15 I was presented with the opportunity to transfer to the ALLTEL Service
16 Corporation in Charlotte, North Carolina as an associate analyst in the
17 Financial Planning department. In this department, I participated in
18 forecasting the ALLTEL Southern Region budget, utilized spreadsheets to
19 analyze operating expenses and capitalized costs, and audited the departmental
20 expenses of the Service Corporation.

21 In October of 1990, I accepted a position as a Regulatory Analyst in the
22 Finance Section the Florida Public Service Commission. My primary
23 responsibilities include analyzing and evaluating financial and economic data
24 in rate case filings, along with preparing and presenting recommendations to
25 the Commission regarding the cost of capital and other related issues. In

1 | addition, I conduct research, perform financial analyses, and provide
2 | technical expertise to the Commission regarding public utility finance.

3 | Q. Have you previously testified before this Commission?

4 | A. Yes, in Docket No. 920193-TL, ALLTEL Florida, Inc..

5 | Q. What is the purpose of your testimony in this case?

6 | A. The purpose of my testimony is to present studies I have prepared and
7 | recommend the appropriate required return on equity that I have determined for
8 | Southern Bell Telephone & Telegraph Company (Southern Bell or Company).

9 | Q. Have you prepared exhibits in support of your testimony?

10 | A. Yes, Exhibit___(RDN-1), consisting of eight schedules have been prepared
11 | for this purpose.

12 | Q. Please summarize your recommendation.

13 | A. Based on my analyses, I believe that a 10.8 percent return is a
14 | reasonable estimate of Southern Bell's required return on equity.

15 | Q. What principles did you consider in determining Southern Bell
16 | Telephone's cost of equity?

17 | A. The principles I relied on are based on the U. S. Supreme Court
18 | decisions in the Federal Power Commission v. Hope Natural Gas Company and
19 | Bluefield Water Works Improvement Company v. Public Service Commission of West
20 | Virginia cases. These decisions generally state that a regulated utility
21 | should be allowed the opportunity to earn a fair rate of return on its equity
22 | investment to adequately compensate present investors and attract new capital
23 | at a reasonable price.

24 | Q. Please describe the trend in long-term interest rates since 1988 and the
25 | forecast of expected long-term interest rates.

1 A. Interest rates are considered a type of systematic risk that influences
2 the required return of investors. Interest rate risk is the variability in
3 returns caused by changes in interest rates, and is inversely related to
4 security prices.

5 According to Moody's Bond Survey, from November 1988 to October 1993,
6 thirty year treasury bond yields have declined by 308 basis points, from 9.01
7 percent to 5.93 percent. The decline in AAA rated utility bonds has been from
8 9.62 percent to 6.75 percent, or 287 basis points.

9 According to the November 1993 issue of Blue Chip Financial Forecasts,
10 30 year U. S. government bond rates are expected to average 6.08 percent over
11 the period from the fourth quarter of 1993 to the fourth quarter of 1994. The
12 November 1993 issue of Data Resources, Inc.'s Review of the U.S. Economy
13 projects 30 year government bonds to average 5.88 percent in 1994, 6.07
14 percent in 1995, and 5.87 percent in 1996.

15 Q. What methods did you use to calculate the Company's required return on
16 equity?

17 A. I used a stock valuation model on telephone companies deemed similar to
18 Southern Bell. I then performed a "check" to see if my estimate falls within
19 an expected range of returns by employing a second stock valuation model on
20 the same proxy group.

21 The stock valuation model that I used estimates a required return on
22 equity by discounting expected dividends for a proxy group of companies. As
23 a check, I used Value Line's estimate of dividend yields and capital gains
24 growth over a finite period of five years to estimate a range of values for
25 the proxy group of companies.

1 Q. Why and how did you select the companies to be used as a proxy for
2 Southern Bell Telephone?

3 A. Because Southern Bell does not have common stock that is publicly
4 traded, it is necessary to find similar risk companies or proxy groups to
5 determine the common equity cost rate. I selected nine companies that include
6 Ameritech, Bell Atlantic, BellSouth, Century Telephone Enterprises, Lincoln
7 Telecommunications, NYNEX, Pacific Telesis, Southern New England
8 Telecommunications, and U.S. West. These companies are presented in Schedule
9 1.

10 These nine companies all have their operations based in the U.S., are
11 listed in Standard & Poor's (S&P) stock guide, and are reported in Value Line.
12 The common characteristic of the nine companies I selected is regulated local
13 exchange service. The nine companies obtain at least 80 percent of total
14 revenues from telephone operations that include regulated services such as
15 local exchange, network access, and toll.

16 Q. Why do you believe that your index of companies is similar in risk to
17 Southern Bell?

18 A. To show that my index of companies is similar in risk to Southern Bell,
19 I used six of the seven same risk criteria that the Company witness has used
20 to choose companies considered similar in risk to Southern Bell. I exclude
21 bond ratings because some of the companies in my index have subsidiary rather
22 than parent bond ratings. The absence of this particular criteria is
23 mitigated by the fact that I used Dr. Billingsley's other three financial risk
24 criteria (relative amount of debt, ability to service debt, and liquidity
25 risk), which are common factors that are generally encompassed in a company's

1 | bond rating.

2 | Schedule 2 of my testimony provides a comparative analysis between
3 | BellSouth Telecommunications, the nine of Dr. Billingsley's cluster companies
4 | most similar to BellSouth Telecommunications, and my index of nine companies.
5 | The last two rows of this schedule present the deviations of both my index and
6 | the Company's index relative to BellSouth Telecommunications. The indication
7 | is that the nine companies that I chose have overall risk characteristics very
8 | similar to Southern Bell, especially when total risk and business risk are
9 | measured.

10 | The schedule shows that, when total risk is considered by measuring the
11 | variability of total returns, my index of companies is closer to BellSouth
12 | Telecommunications than the cluster companies. When business risk is measured
13 | by both variability of cash flows and growth opportunities, my index is closer
14 | to BellSouth Telecommunications than the cluster companies. The financial
15 | criteria shows that my index of companies is closer than the cluster companies
16 | in one of the three financial categories.

17 | In my opinion, schedule 2 indicates that my proxy group of telephone
18 | companies is as comparable or more so to BellSouth Telecommunications than Dr.
19 | Billingsley's cluster companies. Therefore, if the risk criteria are to be
20 | considered reasonable estimates of risk, schedule 2 can be used as a
21 | quantifiable measure that my index of telephone companies exhibit
22 | characteristics similar to BellSouth Telecommunications.

23 | Q. Please describe the dividend discounting model that you used to
24 | determine the required return on equity for Southern Bell.

25 | A. A company's current stock price represents the present value of all

1 | future cash flows to the investor. The dividend discounting model or
2 | discounted cash flow (DCF) analysis shown in schedule 3 determines the cost
3 | of capital (discount rate) necessary to equate the current stock price with
4 | the cash flows that investors expect to receive.

5 | I have relied on a Value Line specific forecast of dividends for the
6 | initial five years of cash flows to the investor. From this point, to
7 | forecast long-term growth, I relied on the forecasted earnings retention rate,
8 | or the b x r method. The two stages of growth in my DCF methodology allows
9 | for more precision because specific year-by-year short-term growth
10 | expectations are added to the general long-term sustainable forecast.

11 | Q. Please explain further how the b x r method was calculated in the long-
12 | term growth forecast.

13 | A. Future growth in dividends for existing equity can only take place if
14 | a portion of the return to investors is reinvested into the company instead
15 | of paid out as dividends. In other words, reinvested earnings lead to
16 | additional investment and continual net income growth.

17 | If the future reinvestment rate and the return expected to be earned on
18 | those dollars can be predicted, then a sustainable long-term growth can be
19 | determined. The retention rate method, or b x r method, predicts future
20 | growth by multiplying the earnings expected to be retained within the company
21 | by the expected return on book equity.

22 | Value Line forecasts the expected return on book equity, dividends per
23 | share, and earnings per share for individual companies. Dividing dividends
24 | by earnings equals a payout ratio; one minus the payout ratio is the earnings
25 | retention ratio.

1 Q. Did you modify your DCF model to allow for any additional costs?

2 A. Yes, I allowed a three percent adjustment for the flotation costs that
3 a company bears when bringing new securities to market. Flotation costs
4 should be subtracted from the price used in the DCF model to account for the
5 fact that a utility does not receive the full amount of proceeds when issuing
6 equity securities. Empirical studies of flotation costs performed over
7 several time periods confirm that a three percent adjustment is reasonable.
8 The citations for these studies are presented in schedule 4.

9 Q. Based on your dividend discounting model, what are investors' average
10 required return on equity for the group of companies used as a proxy for
11 Southern Bell Telephone?

12 A. The required return on equity for the index of utilities used as a proxy
13 for Southern Bell is 11.02 percent as presented in schedule 3.

14 Q. Please describe the stock valuation model that you used as a "check" for
15 your first estimate.

16 A. When an investor buys an equity interest (common stock) in a company,
17 an income stream has been purchased represented by dividend income and
18 appreciation in the value of the investment. This income stream is the total
19 return that an investor is capable of receiving from an equity investment in
20 a company.

21 The total annual return to investors can be derived from forecasts made
22 by Value Line Investment Survey. Value Line estimates the dividend yield over
23 the next twelve months (D_1) for each of the 1,700 companies it analyzes. Value
24 Line also forecasts capital gains by estimating a range of expected stock
25 prices over the next three to five year period for each company. This three

1 | to five year forecast of stock appreciation can be discounted to an average
2 | annual growth rate (g). Therefore, by adding the concurrent dividend yield
3 | to a range of annual stock appreciation for a company (or $D_1 + g$), one can
4 | determine the range of returns on equity that investors currently require to
5 | reach forecasted expectations.

6 | Q. How does Value Line forecast the expected stock price?

7 | A. Value Line states on page 24 of its "Guide to Using the Value Line
8 | Investment Survey" that the target price is necessarily based upon an estimate
9 | of future earnings. Value Line forecasts earnings per share and a price to
10 | earnings (P/E) ratio to calculate the expected stock price.

11 | Q. Because stocks have no set maturity, how can a finite period such as the
12 | three to five year forecast of stock appreciation be used for valuation of
13 | required returns?

14 | A The forecasts that are available, such as those included in Value Line,
15 | IBES, and Zacks, commonly estimate growth for periods up to five years.
16 | Therefore, one can assume that these forecasts provide a reasonable estimate
17 | of long-term growth, or long-term growth can be derived with such methods as
18 | the b x r earnings retention method. In my "check" analysis, I am assuming
19 | that the forecasted three to five year growth for my proxy group of companies
20 | is a reasonable estimate to assume for long-term growth.

21 | Q. Please explain the result of the cash flow valuation model used as a
22 | "check".

23 | A. First, I found the expected dividend yield for each company that I have
24 | used as a proxy for Southern Bell. I then considered the high and low
25 | expected stock appreciation and discounted it to a current annual return ($n^{.25}$,

1 | where $n = 3$ to 5 year stock appreciation). The result is a range of total
2 | returns of 5.12 percent to 11.94 percent. Investors in the companies in my
3 | proxy group can expect annually to yield 3.93 percent of dividend income and
4 | expect annual growth in their stock price ranging from as low as 1.19 percent
5 | to as high as 8.00 percent. The results of this analysis are presented in
6 | schedule 5.

7 | Q. Should any adjustments be made to this result?

8 | A. Yes, flotation costs should be considered. Using a three percent
9 | adjustment for flotation costs in my dividend discounting model equates to
10 | 12.07 basis points. Therefore, this same amount should be added to the result
11 | of my valuation model resulting in a range of 5.24 percent to 12.06 percent.

12 | Q. Are the results of your two valuation models biased downward in any
13 | manner?

14 | A. As discussed earlier, the valuation model is composed of a dividend
15 | yield plus a growth component. It is conceivable that investors are valuing
16 | cellular operations and other potential opportunities such as cable television
17 | and long-distance service in the stock prices for my index of telephone
18 | companies. If these investments are viewed positively, the stock price would
19 | increase, thus the dividend yield would be biased downward. This cannot be
20 | avoided because there are no pure regulated local service companies with stock
21 | prices. The amount of adjustment necessary to compensate for this possibility
22 | would be difficult to quantify.

23 | It should be remembered, though, that the stock price is the investors'
24 | perception of the present value of all future discounted cash flows.
25 | Therefore, longer term opportunities or cash flows, after being discounted to

1 | the present, have much less impact on the stock price than near term cash
2 | flows.

3 | The growth (g) component of the valuation model for my proxy group, to
4 | this point in time, should be an accurate indicator of regulated local
5 | exchange service. As much as possible, growth opportunities in unregulated
6 | areas such as cellular operations and information services should not be
7 | considered when determining the earnings or dividend growth of Southern Bell's
8 | regulated local exchange service. For example, if cellular growth
9 | opportunities for my index of companies are not currently having a meaningful
10 | affect on the five year forecast of dividends or earnings, then the current
11 | growth forecasts are reasonable estimates of regulated local exchange service.
12 | As Company witness Billingsley states on page 33 of his direct testimony, "the
13 | growth rate (for the RBHCs) does not fully express the expected value of
14 | investments in unregulated lines of business like cellular services".

15 | Q. Are the results of your valuation models on the telephone companies
16 | biased upward in any manner?

17 | A. Yes, unregulated operations are generally considered to have more
18 | business risk than local telephone service, but I have not compensated for the
19 | fact that up to nineteen percent of my index of companies' revenues do not
20 | come from telephone operations. The amount of telephone operations for each
21 | company in my index can be seen on schedule 1.

22 | Business risk, which relates to the uncertainty of expected earnings,
23 | is accounted for by equity investors in their required return on investment.
24 | Because of the increased risk, equity investors generally require a higher
25 | return from a company with unregulated operations versus what is required from

1 | a regulated local exchange company such as Southern Bell.

2 | The amount of unregulated operations is an important consideration that
3 | affects the equity returns that investors require. As with the "stock price
4 | bias" discussed earlier, the amount of adjustment that needs to be applied to
5 | my equity return valuation model's is difficult to ascertain.

6 | Q. Are there any indicators demonstrating that Southern Bell has less
7 | business risk than your proxy group?

8 | A. Yes, the difference in business risk can be demonstrated in two separate
9 | ways. First, the increased business risk due to the involvement in
10 | unregulated operations can be seen indirectly by observing the difference in
11 | bond ratings.

12 | On page one of Standard & Poor's June 24, 1991 Telecommunications
13 | CreditReview, it states that "implicit in the rating process is an assessment
14 | of business risk -- a measure of the stability and growth of revenues and the
15 | ability to control costs." On page four of the February 10, 1992 edition, it
16 | states that "S&P has focused increasingly on company-specific business risk
17 | factors over the last several years." Therefore, it can be concluded that
18 | BellSouth's AAA S&P bond rating assumes lower business risk than the AA-
19 | average bond rating of my proxy group of companies (schedule 1).

20 | The difference in business risk also can be seen in schedule 2 of my
21 | testimony. The two measures used to represent business risk (the standard
22 | deviation of cash flow to total assets, and the geometric mean of sales
23 | growth) indicate that my proxy group has a higher amount of risk than
24 | BellSouth.

25 | However, as previously stated, the amount of adjustment necessary to

1 | reflect the difference in risk is difficult to measure. As Standard & Poor's
2 | states in its February 10, 1992 edition, "evaluations of business risk, which
3 | generally determines the stability of financial performance, are not neatly
4 | quantifiable."

5 | Q. After considering the differences in business risk, is your index of
6 | companies still a good proxy for Southern Bell?

7 | A. Yes, as indicated earlier, my group of companies obtain at least 80
8 | percent of their revenue from telephone operations, and my group's risk
9 | criteria are very similar to that of the Company. Therefore, although
10 | Southern Bell exhibits less business risk, the overall risk characteristics
11 | are similar. This can be observed by referring to schedule 2 once again. The
12 | measure of total risk (ROE standard deviation) is comparable between my proxy
13 | group and BellSouth Telecommunications.

14 | Q. Should a company's equity ratio be considered when determining a return
15 | on equity?

16 | A. Yes, in general, when considering companies of similar risk, an investor
17 | will require higher returns from the companies with a lower equity ratio than
18 | from the companies with higher ratios. All else being equal, a higher equity
19 | cushion provides a safer investment for the stockholder. Schedule 1 shows the
20 | equity ratios for my index of companies and Southern Bell.

21 | Q. If a group of companies are assumed to be similar in risk, can the
22 | effect of each company's equity ratio on investor's required return on equity
23 | be quantified in any manner?

24 | A. Yes, the leverage formula analysis used by the Commission for the water
25 | and wastewater industry attempts to evaluate the affect of a company's equity

1 ratio on required returns. This same methodology can be used for Southern
2 Bell by substituting my index of companies into the analysis. The only
3 difference from the water and wastewater industry analysis and the analysis
4 that I have done for Southern Bell is that I have not attempted to quantify
5 the difference in business risk between the proxy group and Southern Bell.
6 The water and wastewater analysis attempts to quantify the difference in
7 business risk by examining the amount of spread in the bond yields from the
8 proxy group bond rating to the target company bond rating.

9 The resulting return on equity for Southern Bell Telephone is
10 approximately 26 basis points less than the DCF result for my proxy group of
11 companies. There is a 26 basis point reduction because the average equity
12 ratio for the proxy group is less than Southern Bell's equity ratio. The
13 proxy group has an average equity ratio of 57.33 percent while Southern Bell
14 Telephone is requesting an equity ratio of 61.01 percent.

15 Q. Please explain in further detail how the leverage formula is applied to
16 Southern Bell.

17 A. The leverage formula is based on the risk premium methodology, adding
18 a premium to the current bond yield because equity investors require a rate
19 above the return paid by a debt instrument to compensate the investor for the
20 increased risk of an equity investment. The capital structure shown on
21 schedule 6 is represented by my index group of telephone companies. The
22 equity ratios are for 1993 and were found in Value Line Investment Survey.
23 The cost of debt was found by referring to the AAA bond yield in Moody's Bond
24 Survey. The required equity return is the result of my DCF model.

25 The capital structure indicates that investors will require a minimum

1 premium of 245 basis points above the current AAA bond yield to invest in the
2 equity securities. As the amount of debt in the capital structure increases,
3 the investors will require higher equity returns.

4 Q. Based on the results of your two valuation models and the leverage
5 formula analysis, what is your recommendation for Southern Bell's required
6 return on equity?

7 A. Based on the results of my two valuation studies, and an adjustment to
8 reflect the equity ratio of Southern Bell, I believe that 10.8 percent
9 reasonably represents an estimate for the required return on equity for
10 Southern Bell.

11 Q. In your opinion, are the forecasted growth rates for Dr. Billingsley's
12 group of cluster companies unlikely to be representative of investors' long-
13 term growth rate expectations?

14 A. Yes, according to the analysis in schedule 7, the IBES earnings growth
15 forecasts for the cluster companies diverge from historical earnings growth.
16 The significance being that most of these companies do not demonstrate a
17 history of constant growth and are not forecasted to continue the same rate
18 of growth. Although six of the cluster companies (McDonalds, Sara Lee,
19 Hershey Foods, Pitney Bowes, Emerson Electric, Becton Dickinson) generally
20 have exhibited constant historical growth and are expected to continue the
21 trend, the other companies do not. Therefore, it cannot be reasonably assumed
22 that the five year projections for these companies will be representative of
23 longer-term growth rate forecasts.

24 In only four of the twenty cases have the historical ten year growth
25 rates been consistent within 100 basis points of the historical five year

1 growth rates. In less than half the cases are they within even 200 basis
2 points.

3 In only five of twenty cases are the historical ten year average annual
4 earnings growth rates within 100 basis points of the IBES forecasted growth
5 rates. In only eight cases are they within 200 basis points.

6 In only seven cases are the historical five year average annual earnings
7 growth rates within 100 basis points of the IBES five year forecasts. In only
8 half the cases are they within 200 basis points.

9 Even Mobil Corp., which Southern Bell's cluster company risk criteria
10 considers the most similar to Southern Bell than any other company, has not
11 experienced constant earnings growth and is not expected to earn over the next
12 five years at the same rate as it has in the past. Because the earnings of
13 Mobil Corp. and a majority of the other cluster companies are not showing any
14 consistency to this point in time, it makes it very difficult to maintain with
15 any confidence that the IBES five year earnings projections of these companies
16 are accurate forecasts of sustainable long-term growth.

17 Q. What conclusions can be drawn from the ROE recommended in your testimony
18 as compared to the DCF result filed by the Company?

19 A. As can be observed, there is a wide disparity between my recommended
20 10.8 percent and the Company's DCF result of 13.93 percent to 13.99 percent.
21 Although there may be differences in opinion about how a cash flow valuation
22 model is calculated (such as annual versus quarterly compounding, three
23 percent versus five percent flotation cost adjustments, or dividend versus
24 earnings growth rates), the primary difference between my recommended ROE and
25 that filed by the Company is caused by the selection of the proxy groups.

1 Cash flow valuation techniques applied to the cluster companies are
2 going to render higher results than what will result from a group of telephone
3 utilities. In other words, if Dr. Billingsley applied his same DCF
4 methodology to my index of telephone companies, his result should be similar
5 to mine. On the same token, if I applied my valuation methodology to his
6 cluster companies, it would be similar to his recommendation. Therefore, the
7 Commission's focus in this rate proceeding, when considering discounted cash
8 flow valuation models, should necessarily focus on the appropriateness of the
9 proxy group of companies used to represent Southern Bell.

10 Q. Do you have any opinions concerning Dr. Billingsley's Risk Premium
11 estimate?

12 A. Witness Billingsley's analysis identifies a market risk premium on
13 public utility bonds and then adds that premium to the current return on such
14 bonds in order to determine his recommended cost of equity capital. Using the
15 same methodology that the Company witness used to calculate his Risk Premium
16 result, I formed Schedule 8 that questions, "What if Southern Bell had been
17 triple B-rated (Baa) rather than triple-A (Aaa)?" The result shows that the
18 ROE for a Baa-rated company would be lower. It violates general risk and
19 return principles for an analysis to compute a lower required return for the
20 higher risk company. The reason for the anomaly is that the equity return in
21 witness Billingsley's study (the S&P 500) would not adjust if the risk of the
22 target company is changed.

23 A Risk Premium analysis should measure the premium that is necessary to
24 coax investors to move from investing in a debt security to an equity
25 security. Investors require the premium because equity securities are more

1 | risky than debt securities. Witness Billingsley has measured the premium from
2 | a AAA-rated debt security to the equity return on the market (the S&P 500).
3 | Therefore, witness Billingsley must conclude that Southern Bell's equity is
4 | as risky as the market. In my opinion, regulated telephone service still has
5 | less business risk than a company as risky as the market.

6 | Q. Does this conclude your testimony?

7 | A. Yes, it does.

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Docket No. 920260-TL
 Florida Public Service Commission
 Exhibit _____ (RDN-1)
 Schedule 1

Proxy Group of Companies

	<u>Telephone Operations % of Revenues</u>	<u>Implied Senior Bond Rating ³</u>	<u>1993 Equity Ratio ¹</u>
Ameritech	87.9%	AA+	61.0%
Bell Atlantic	88.5%	AA-	52.0%
BellSouth	86.7%	AAA	66.0%
Century Telephone	83.0%	BBB+	50.0%
Lincoln Telecom	88.7%	AAA	80.0% ²
NYNEX	88.7%	A	58.0%
Pacific Telesis	88.0%	A+	54.5%
Southern New England Tel.	86.9%	AA	50.0%
U.S. West	81.0%	A+	44.5%
Average		AA-	57.33%
Southern Bell Telephone		AAA	61.01% ⁴

¹ Value Line Investment Survey, Edition 5, October 15, 1993
² Value Line Investment Survey, Edition 12, September 3, 1993
³ Standard & Poor's Credit Review, Telecommunications, July 19, 1993
⁴ Testimony of Southern Bell Witness, William Keck

Docket No. 920260-TL
 Florida Public Service Commission
 Exhibit _____ (RDN-1)
 Schedule 2

Southern Bell Telephone
 Risk Criteria used in Billingsley Cluster Company Analysis

	<u>TOTAL RISK</u>	<u>FINANCIAL RISK</u>			<u>BUSINESS RISK</u>	
	VARIABILITY OF TOTAL RETURN	RELATIVE AMOUNT OF DEBT	ABILITY TO SERVICE DEBT	LIQUIDITY RISK	VARIABILITY OF CASH FLOWS	GROWTH OPPORTUNITIES
	ROE Standard Deviation	Assets to Equity Ratio	Interest Coverage Ratio	Quick Ratio	Cash Flow to Total Assets Standard Deviation	Geometric Mean of Sales Growth
BELLSOUTH TELECOM	0.0097	2.32	5.04	0.58	0.0065	0.0289
<u>Company Index</u>						
Mobil Corp.	0.0172	2.48	5.40	0.52	0.0079	0.0212
Exxon Corp.	0.0254	2.51	7.56	0.54	0.0133	0.0619
So. New England Tel.	0.0177	2.78	3.76	0.79	0.0147	0.0189
McDonalds Corp.	0.0157	2.09	4.68	0.53	0.0053	0.0801
Kimberly - Clark Corp.	0.0270	2.75	5.62	0.53	0.0165	0.0774
Amoco Corp.	0.0360	2.20	4.77	0.96	0.0189	0.0462
Sara Lee Corp.	0.0152	2.95	7.83	0.47	0.0081	0.0766
Du Pont	0.0391	3.51	3.16	0.77	0.0231	0.0419
Lincoln Telecom	0.0082	1.95	6.21	1.17	0.0081	0.0069
Average	<u>0.0224</u>	<u>2.58</u>	<u>5.44</u>	<u>0.70</u>	<u>0.0129</u>	<u>0.0479</u>
<u>Neil Index</u>						
Ameritech	0.0100	3.26	4.92	0.45	0.0076	0.0318
Bell Atlantic	0.0188	3.59	3.44	0.63	0.0110	0.0419
BellSouth	0.0044	2.62	4.45	0.65	0.0086	0.0431
Century Telephone	0.0544	6.22	4.34	0.46	0.0094	0.1027
Lincoln Telecom	0.0082	1.95	6.21	1.17	0.0081	0.0069
NYNEX	0.0296	2.85	3.75	0.70	0.0154	0.0171
Pacific Telesis	0.0079	2.81	4.55	0.68	0.0148	0.0170
So. New England Tel.	0.0177	2.78	3.76	0.79	0.0147	0.0189
U.S. West	0.0328	3.38	3.71	0.48	0.0243	0.0401
Average	<u>0.0204</u>	<u>3.27</u>	<u>4.35</u>	<u>0.67</u>	<u>0.0127</u>	<u>0.0355</u>
Difference from BellSouth Telecommunications to:						
Company Index	0.0127	0.26	0.40	0.12	0.0064	0.0190
Neil Index	0.0107	0.95	-0.69	0.09	0.0062	0.0066

SOURCES: Staff's 23rd POD #228; Staff's 36th Set of Interrogatories #711

COST OF EQUITY FOR SOUTHERN BELL TELEPHONE
DIVIDEND DISCOUNTING ROE VALUATION MODEL

COMPANY	DIV0	DIV1	DIV2	DIV3	DIV4	EPS4	ROE4	Growth		HI-Price	LO-Price	October
								Yr 1-4	4+			Average
AMERITECH	3.70	3.85	3.99	4.14	4.30	6.35	16.50	1.0375	1.0533	88.500	83.125	85.813
BELL ATLANTIC	2.68	2.80	2.93	3.06	3.20	4.60	19.00	1.0455	1.0578	69.125	58.875	64.000
BELLSOUTH	2.76	2.88	3.03	3.19	3.35	4.80	14.50	1.0517	1.0438	63.875	56.625	60.250
CENTURY TELEPHONE	0.31	0.33	0.37	0.41	0.45	2.90	16.50	1.1089	1.1394	30.375	26.500	28.438
LINCOLN TELECOM	0.94	1.00	1.05	1.10	1.15	2.55	14.50	1.0477	1.0796	40.500	35.000	37.750
NYNEX	2.36	2.42	2.53	2.64	2.75	4.30	14.50	1.0435	1.0523	46.500	41.750	44.125
PACIFIC TELESIS	2.18	2.22	2.34	2.47	2.60	3.40	15.50	1.0541	1.0365	55.875	52.000	53.938
SO. NEW ENGLAND TEL	1.76	1.76	1.77	1.79	1.80	3.25	14.50	1.0075	1.0647	38.125	35.000	36.563
U.S. WEST	2.14	2.20	2.30	2.40	2.50	4.50	23.50	1.0435	1.1044	50.625	47.500	49.063
AVERAGE	2.09	2.16	2.26	2.35	2.46	4.07	16.56	1.0489	1.0702			51.104

11.02% = Cost of equity required to match the current stock price with the expected cash flows

\$49.57 = October 1993 average stock price less flotation costs, or $P_0(1-f_c)$

\$49.57 = \$1.93 \$1.81 \$1.70 \$1.60 \$1.53 \$40.99 = discounted annual expected cash flows

Data Sources:

1. Stock Prices - S&P Stock Guide, November 1993 Edition
2. DPS, EPS, ROE - Value Line Edition 12, September 3, 1993 & Value Line Edition 5, October 15, 1993

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 Schedule 3

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 Schedule 4

Empirical Studies of Issuance Costs

<u>Study</u>	<u>Study Period</u>	<u>Group</u>	<u>Average Results</u>
Logue & Jarrow	1963-1974	Utilities	-3.0% to -4.2%
Borun & Malley	1967-1980	Electric Utilities	-2.5% to -3.95%
Pettway	1973-1980	Electric Utilities	-4.1%
Finnerty	1977-1982	Utilities	-1.9% to -3.3%
Bhagat, Marr & Thompson	1982-1983	Industrials	
		Shelf	-3.7%
		Non-shelf	-5.9%
		Utilities	
		Shelf	-2.1%
		Non-shelf	-2.9%

Logue, Dennis E. and Robert A. Jarrow. "Negotiation vs. Competitive Bidding in the Sale of Securities by Public Utilities", Financial Management, Autumn 1978, p. 31-39.

Borun, Victor M. and Susan L. Malley. "Total Flotation Costs for Electric Company Issues", Public Utilities Fortnightly, February 20, 1986, p. 33-39.

Pettway, Richard H. "A Note on the Flotation Costs of New Equity Capital Issues of Electric Companies", Public Utilities Fortnightly, March 18, 1982, p. 68-69.

Finnerty, John D. "How to Lower the Cost of Floating a New Stock Issue", Public Utilities Fortnightly, March 17, 1983, p. 25-29.

Bhagat, Sanjai, W. Wayne Marr, and G. Rodney Thompson. "The Rule 415 Experiment: Equity Markets", The Journal of Finance, Vol. XL, No. 5, December 1985, p. 1385-1401.

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COST OF EQUITY FOR BELLSOUTH TELEPHONE
 Expected Dividend Yield + Capital Gains Valuation Model

	(1) Estimated Range of 3-5 Year Price Appreciation	(2) Four Year Avg Annual Stock Return *	(3) Estimated Dividend Yield Next 12 Months	(4) (2) + (3) Total Return
AMERITECH	5.0% to 30.0%	1.23% to 6.78%	4.3%	5.53% to 11.08%
BELL ATLANTIC	-10.0% to 5.0%	-2.60% to 1.23%	4.4%	1.80% to 5.63%
BELLSOUTH	0.0% to 15.0%	0.00% to 3.56%	4.6%	4.60% to 8.16%
CENTURY TELEPHONE	65.0% to 160.0%	13.34% to 26.98%	1.1%	14.44% to 28.08%
LINCOLN TELECOM	-30.0% to 10.0%	-8.53% to 2.41%	2.6%	-5.93% to 5.01%
NYNEX	10.0% to 35.0%	2.41% to 7.79%	5.2%	7.61% to 12.99%
PACIFIC TELESIS	0.0% to 25.0%	0.00% to 5.74%	4.0%	4.00% to 9.74%
SO. NEW ENGLAND TEL	10.0% to 40.0%	2.41% to 8.78%	4.9%	7.31% to 13.68%
U.S. WEST	10.0% to 40.0%	2.41% to 8.78%	4.3%	6.71% to 13.08%
AVERAGE		1.19% to 8.00%	3.93%	5.12% to 11.94%

* Annual Return = $(1+n^{.25})-1$ where n = column 1

Source: Value Line Investment Survey, Edition 5, October 15, 1993
 Value Line Investment Survey, Edition 12, September 3, 1993

LEVERAGE FORMULA ANALYSIS

Marginal Cost of Investor Capital
 Index Telephone Company

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	57.33%	11.02%	6.32%
Total Debt	<u>42.67%</u>	6.75% *	<u>2.88%</u>
	<u>100%</u>		<u>9.20%</u>

$$\text{Return on Common Equity} = 6.75\% + 2.448 / \text{ER}^{**}$$

For Southern Bell Telephone:

$$\text{Return on Common Equity} = 6.75\% + 2.448 / .61 = 10.76\%$$

- Average Aaa rate for October 1993
 Source: Moody's Bond Survey, 11/08/93

** Where:
 Equity Ratio = Common Equity / (Common Equity + Preferred Equity + Long and Short Term Debt)

Southern Bell Cluster Group of Companies
Average Annual Earnings Growth Rates

	(1) Annual Earnings Growth Rates Past 10 Years	Difference (1) to (2)	(2) Annual Earnings Growth Rates Past 5 Years	Difference (1) to (3)	Difference (2) to (3)	(3) IBES Forecasted Earnings Growth
Mobil Corp.	-2.5	5.5	3.0	12.7	7.2	10.2
Exxon Corp.	3.5	-0.5	3.0	5.2	5.7	8.7
So. New England Tel.	4.5	-1.5	3.0	1.9	3.4	6.4
McDonalds Corp.	14.0	-0.5	13.5	0.0	0.5	14.0
Kimberly-Clark Corp.	11.5	3.0	14.5	-0.1	-3.1	11.4
Amoco Corp.	-1.0	2.5	1.5	11.0	8.5	10.0
Sara Lee Corp.	14.0	2.0	16.0	-0.3	-2.3	13.7
DuPont de nemours	5.5	5.0	10.5	5.0	0.0	10.5
Lincoln Telecom	7.0	2.0	9.0	-1.5	-3.5	5.5
Anheuser-Busch Co.	15.5	-2.0	13.5	-3.9	-1.9	11.6
Hershey Foods Corp.	10.5	0.5	11.0	0.9	0.4	11.4
Chevron Corp.	-1.0	13.5	12.5	10.0	-3.5	9.0
Pitney Bowes, Inc.	13.0	-2.0	11.0	-1.5	0.5	11.5
Emerson Electric Corp.	7.5	1.0	8.5	2.8	1.8	10.3
Air Products Chemicals	7.5	4.0	11.5	4.2	0.2	11.7
Dover Corp.	6.5	3.5	10.0	2.8	-0.7	9.3
Becton Dickinson	11.0	2.5	13.5	0.6	-1.9	11.6
Proctor & Gamble	8.5	9.5	18.0	3.9	-5.6	12.4
Norfolk Southern	3.5	2.5	6.0	5.8	3.3	9.3
Texaco	-5.0	14.0	9.0	15.0	1.0	10.0
Average Variance		3.9		4.5	2.8	

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 Schedule 7

Sources: Value Line Investment Survey
 Testimony of Southern Bell Witness Dr. Randall Billingley

Dr. Billingsley Risk Premium Methodology

	(1) S&P 500 DCF Cost of Equity	(2) Aaa Bond Yields	(1) - (2) Risk Premium	(3) Baa Bond Yields	(1) - (3) Risk Premium
May-93	14.81	7.44	7.37	8.18	6.63
Apr-93	14.71	7.50	7.21	8.11	6.60
Mar-93	15.00	7.64	7.36	8.10	6.90
Feb-93	15.07	7.75	7.32	8.31	6.76
Jan-93	15.29	7.94	7.35	8.57	6.72
Dec-92	15.57	8.01	7.56	8.69	6.88
Nov-92	15.56	8.11	7.45	8.86	6.70
Oct-92	15.53	8.06	7.47	8.76	6.77
Sep-92	15.57	8.04	7.53	8.54	7.03
Aug-92	15.46	8.04	7.42	8.58	6.88
Jul-92	15.44	8.12	7.32	8.69	6.75
Jun-92	15.45	8.26	7.19	8.90	6.55
May-92	15.54	8.32	7.22	9.01	6.53
Apr-92	15.53	8.36	7.17	9.11	6.42
Mar-92	15.57	8.39	7.18	9.16	6.41
Feb-92	15.71	8.30	7.41	9.09	6.62
Jan-92	15.60	8.22	7.38	8.98	6.62
Dec-91	15.65	8.38	7.27	9.07	6.58
Nov-91	15.58	8.52	7.06	9.28	6.30
Oct-91	15.52	8.57	6.95	9.32	6.20
Sep-91	15.59	8.65	6.94	9.34	6.25
Aug-91	15.62	8.81	6.81	9.47	6.15
Jul-91	15.59	9.10	6.49	9.69	5.90
Jun-91	15.59	9.10	6.49	9.79	5.80
May-91	15.55	8.93	6.62	9.64	5.91
Apr-91	15.61	8.95	6.66	9.64	5.97
Mar-91	15.85	9.04	6.81	9.74	6.11
Feb-91	16.01	8.92	7.09	9.68	6.33
Jan-91	16.17	9.17	7.00	9.96	6.21
Dec-90	16.16	9.18	6.98	9.96	6.20
Nov-90	16.23	9.43	6.80	10.12	6.11

Dr. Billingsley Risk Premium Methodology

	(1) S&P 500 DCF Cost of Equity	(2) Aaa Bond Yields	(1) - (2) Risk Premium	(3) Baa Bond Yields	(1) - (3) Risk Premium
Oct-90	16.04	9.66	6.38	10.28	5.76
Sep-90	15.91	9.73	6.18	10.32	5.59
Aug-90	15.69	9.54	6.15	10.12	5.57
Jul-90	15.81	9.36	6.45	9.92	5.89
Jun-90	15.71	9.38	6.33	9.96	5.75
May-90	15.70	9.58	6.12	10.16	5.54
Apr-90	15.62	9.60	6.02	10.13	5.49
Mar-90	15.47	9.48	5.99	10.06	5.41
Feb-90	15.29	9.35	5.94	9.96	5.33
Jan-90	15.18	9.08	6.10	9.74	5.44
Dec-89	15.12	8.92	6.20	9.60	5.52
Nov-89	15.17	8.92	6.25	9.64	5.53
Oct-89	15.02	9.01	6.01	9.64	5.38
Sep-89	14.94	9.10	5.84	9.70	5.24
Aug-89	15.14	9.02	6.12	9.64	5.50
Jul-89	15.36	8.98	6.38	9.64	5.72
Jun-89	15.22	9.13	6.09	9.80	5.42
May-89	15.40	9.60	5.80	10.29	5.11
Apr-89	15.35	9.88	5.47	10.49	4.86
Mar-89	15.34	9.87	5.47	10.50	4.84
Feb-89	15.39	9.71	5.68	10.38	5.01
Jan-89	15.54	9.72	5.82	10.38	5.16
Dec-88	15.58	9.67	5.91	10.44	5.14
Nov-88	15.64	9.62	6.02	10.31	5.33
Oct-88	15.63	9.52	6.11	10.35	5.28
Sep-88	15.66	10.15	5.51	11.13	4.53
Aug-88	15.72	10.66	5.06	11.69	4.03
Jul-88	15.63	10.50	5.13	11.52	4.11
Jun-88	15.65	10.27	5.38	11.27	4.38
May-88	15.42	10.29	5.13	11.38	4.04
Apr-88	15.45	10.07	5.38	11.23	4.22

Dr. Billingsley Risk Premium Methodology

	(1) S&P 500 DCF Cost of Equity	(2) Aaa Bond Yields	(1) - (2) Risk Premium	(3) Baa Bond Yields	(1) - (3) Risk Premium
Mar-88	15.42	9.72	5.70	10.69	4.73
Feb-88	15.52	9.77	5.75	10.65	4.87
Jan-88	15.65	10.39	5.26	11.34	4.31
Dec-87	15.46	10.64	4.82	11.55	3.91
Nov-87	15.06	10.43	4.63	11.40	3.66
Oct-87	14.82	10.92	<u>3.90</u>	11.91	<u>2.91</u>
Average Equity Risk Premium			6.37		5.65
Current 3 Month Avg Bond Yield (Mar-May '93)			<u>7.53</u> 13.90		<u>8.13</u> 13.78

Sources: Billingsley Schedule 2; Moody's Bond Survey