SPRINTORRIGINAL DOCKET NO. 961230-TP FILED: February 11, 1998

1		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
2		DIRECT TESTIMONY
3		OF
4		JOHN D. QUACKENBUSH
5		
6	Q.	Please state your name and business address.
7	Α.	My name is John D. Quackenbush. I am currently employed
8		as the Manager, Capital Markets in the Treasury
9		Department of Sprint Corporation. My business address is
10		2330 Shawnee Mission Parkway, Westwood, Kansas 66205.
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12	Q.	Please state your work experience, educational
13		background, and professional qualifications.
14		
15	A.	I began employment with Sprint Corporation (formerly
16		named United Telecommunications, Inc.) in the Local
17		Telecommunications Division in May 1986. In February
18		1995, I began my present duties in the Treasury
19		Department. My present duties include raising capital in
20		the public and private markets, liability management,
21		debt payment and paying agent functions, indenture
22		compliance, debt refinancing analysis, debt rating agency
23		relationships, and the preparation of cost of capital
24		studies and testimony presented on behalf of Sprint local
25		exchange companies. Additionally, I currently serve as DOCUMENT NUMBER-DATE

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02165 FEB 128 FPSC-RECORDS/REPORTING the Treasurer of SprintPAC, the political action
 committee that provides Sprint employees a forum to
 support candidates for the U.S. Congress.

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I have previously testified concerning cost of capital on behalf of Sprint local exchange companies before the South Carolina Public Service Commission, the Kansas Corporation Commission, the Tennessee Public Service Commission, the New Jersey Board of Public Utilities, the Oregon Public Utility Commission, the Missouri Public Service Commission, the Nevada Public Service Commission.

12I was employed by the Illinois Commerce Commission from13January 1982 through May 1986. During my commission14employment, I held the titles of Financial Analyst,15Senior Financial Analyst, Chief Financial Analyst, and16Supervisor of the Rate of Return Section.

18 I testified before the Illinois Commerce Commission in 19 approximately thirty proceedings on topics including cost 20 of capital, rate of return, capital structure, interim 21 rate relief, phase-in plans, in-service criteria for 22 electric generating units, diversification, holding 23 company formation, mergers, and affiliated interest transactions. I also served as Governor James R. 24 25 Thompson's representative on the National Governors

Association Task Force on Nuclear Power Plant Financing.

I received the designation of Chartered Financial Analyst 3 (CFA) in September 1993. Investment professionals earn 4 the right to use the CFA designation by passing a series 5 of three comprehensive, rigorous examinations over a 6 minimum of three years. The CFA examination process 7 challenges participants to remain current with today's 8 9 rapidly changing investment environment. The CFA Body of 10 Knowledge includes ethical and professional standards, investment tools, valuation, and portfolio management. 11

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In December 1981, I received a Master of Business
Administration degree with a concentration in Finance
from Michigan State University. In May 1980, I graduated
from Calvin College in Grand Rapids, Michigan with a
Bachelor of Arts degree in Business Economics.

18 19 a member of the Association for Investment Ι am 20 Management and Research, the National Society of Rate of 21 Return Analysts, the Financial Management Association, 22 the Eastern Finance Association, the Southern Finance 23 Association, the Southwestern Finance Association, the 24 Midwest Finance Association, and the Kansas City Society 25 of Financial Analysts.

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Q. What is the purpose of your testimony?

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I quantify the weighted average cost of capital for 3 Α. Sprint - Florida, Incorporated (Sprint - Florida). Mv 4 analysis demonstrates the appropriateness of Company 5 witness Dickerson's use of the FCC authorized rate of 6 return of 11.25% in determining the annual charge factor, 7 which is used in the forward-looking cost studies for 8 9 unbundled network elements in this proceeding. My testimony also provides the Commission with a basis for 10 11 using an adequate cost of capital for Sprint - Florida if the Commission chooses not to use the FCC authorized rate 12 13 of return of 11.25% as recommended by the Company.

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Q. What is your recommendation concerning the cost of capital for Sprint ~ Florida?

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18 I recommend primary reliance on the weighted market value Α. 19 cost of capital that is consistent with Section 252(d)(1) 20 of the Telecommunications Act of 1996, which states that 21 rates for interconnection and access to unbundled 22 elements "may include a reasonable profit." The weighted 23 average cost of capital for Sprint - Florida is 12.42% 24 based on the market value capital structure shown on 25 Exhibit Q-14. The weighted average cost of capital for

Sprint - Florida is 10.80% based the book value capital 1 structure shown on Exhibit Q-13. The FCC authorized rate 2 of return of 11.25% approximates Sprint - Florida's 3 4 weighted book value cost of capital and is conservative 5 when viewed in light of the appropriate weighted market 6 value cost of capital. I therefore conclude that the FCC 7 authorized rate of return of 11.25% used to develop the 8 annual charge factor reasonable based on current capital 9 market conditions.

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- BASIC FINANCIAL CONCEPTS II.
- 11 12
- 13 What financial concepts do you rely on in developing your Q. 14 cost of capital recommendation?
- 15

16 Α. My recommendation is based on fundamental financial 17 concepts that demonstrate that the appropriate cost of 18 capital for a local exchange company is the weighted 19 average cost rate of investor-supplied capital. If the 20 cost of capital in a forward-looking cost study is set 21 equal to the company's weighted average cost of capital, 22 investors will be afforded an opportunity to earn the 23 minimum return that they require. The weighted average 24 cost of capital is the sum of the costs of the components 25 of investor-supplied capital, weighted by each

component's relative proportion. The investor-supplied
 capital structure components include debt and equity.

supply capital with the expectation of Investors 4 receiving a return on their investment. Investors 5 require a return on a potential investment based on the 6 risk of that investment in relation to the risk of other 7 potential investments. Investors make and continue only 8 those investments that are expected to provide returns 9 that meet or exceed their required returns. 10 In order to attract capital, a firm must provide investors with a 11 return equal to or exceeding their required return. 12 If 13 a local exchange company makes investments that are not expected to achieve at least its cost of capital, 14 15 investors will be unwilling to provide capital and will 16 look elsewhere for alternative investments.

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Q. Are these financial concepts consistent with the FCC
 interconnection order?

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A. Yes, the FCC interconnection order (First Report and
Order in CC Docket Nos. 96-98 and 96-195 released August
8, 1996) is consistent with these financial concepts.
The FCC interconnection order states:

The concept of normal profit is embodied in

forward-looking costs because the forwardlooking cost of capital, i.e. the cost of obtaining debt and equity financing, is one of the forward-looking costs of providing the network elements. This forward-looking cost is equal to a normal profit. (Paragraph 700).

8 Q. How do the cost rates and ratios of the capital structure 9 components in a forward-looking cost study differ from 10 the cost rates and ratios typically developed in the past 11 for conventional cost of service ratemaking?

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Not surprisingly, forward-looking cost rates and ratios 13 Α. are required in developing a forward-looking cost of 14 capital. The cost of common equity is conceptually 15 similar because conventional ratemaking has generally 16 focused on the forward-looking cost of common equity. 17 The primary conceptual differences are in the cost of 18 debt and the capital structure ratios. The forward-19 20 looking cost of debt is conceptually different from the embedded cost of debt typically developed in the past for 21 22 conventional cost of service ratemaking. The forward-23 looking debt cost rate is the rate at which new debt can 24 be issued under prevailing market conditions, whereas the 25 embedded cost of debt is the rate at which existing debt

was issued under past market conditions. Likewise,
 forward-looking capital structure ratios are based on
 market values, not the book values used in the past for
 conventional cost of service ratemaking.

Q. What practical challenge arises in attempting to apply
these financial concepts?

9 Α. The principal practical challenge lies in determining the cost of common equity. The market value capital 10 structure component amounts and ratios are readily 11 obtainable from the local exchange company's books and 12 13 records and current market prices. The market cost of the financial 14 is readily observable from debt 15 On the other hand, the cost of common marketplace. 16 equity is not easily measurable or directly observable. 17 The determination of the cost of common equity requires the implementation of financial models and reasoned 18 19 judgment to estimate investors' required return on common 20 equity as well as an appropriate issuance cost increment. 21

- 22 III. CAPITAL STRUCTURE
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Q. What capital structures do you use in determining the
cost of capital for Sprint - Florida in this proceeding?

I use both the Sprint - Florida market value capital 1 Α. structure shown on Exhibit Q-2 and the Sprint - Florida 2 book value capital structure shown on Exhibit Q-1. These 3 company-specific capital structures are determined as of 4 December 31, 1997, are the most recent capital structure 5 data available, and are representative of the market and 6 7 book value ratios that I expect to exist in near-term future periods when the interconnection rates of Sprint -8 9 Florida will be in effect. I place primary reliance on 10 the market value capital structure approach, which incorporates capital structure weights based on the value 11 of debt and equity in the financial marketplace, rather 12 than the accounting values of debt and equity that appear 13 on the balance sheet. 14 15 Why do you place primary reliance on the market value 16 ο. 17 capital structure in this proceeding? 18

19 The use of market value weights in determining the cost Α. 20 of capital in this proceeding is justified on conceptual 21 and practical grounds. The market value capital 22 structure approach is conceptually appropriate and 23 consistent with establishing a forward-looking cost of 24 The FCC interconnection order (First Report and capital. 25 Order in CC Docket Nos. 96-98 and 96-195 released August

1 8, 1996) states: 2 [T]he forward-looking costs of capital (debt 3 and equity) needed to support investments 4 required to produce a given element shall be 5 included in the forward-looking direct cost of 6 that element. (Paragraph 691). 7 8 9 A forward-looking cost study that uses forward-looking competitive market assumptions in the expense and 10 investment components also requires forward-looking 11 12 competitive market assumptions in the cost of capital component. The use of accounting-based book values is 13 less consistent with the goals of a forward-looking cost 14 15 study. 16 Basic, intermediate, and advanced finance textbooks 17 18 address the cost of capital issue by defining capital 19 structure weights as market value weights. These same 20 textbooks address capital structure challenges from a 21 market value perspective. Academic theories of optimal 22 capital structure apply to market value, rather than book value, capital structures. 23 The fundamental financial 24 concepts of using the cost of capital in decision making

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and capital budgeting to maximize shareholder value and

invest only in projects that provide returns equal to or 1 in excess of the cost of capital, are predicated on using 2 3 market value capital structure weights. Dr. Michael C. Ehrhardt, on page 75 of The Search for Value: Measuring 4 the Company's Cost of Capital (Boston, Massachusetts: 5 Harvard School Business Press, 1994), states "using book 6 values instead of market values can lead to substantial 7 8 errors in estimating the weights."

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Market values are dynamically determined in the financial 10 values 11 marketplace by investors, while book are determined by historical accounting practices. 12 One-time accounting events that do not change market values can 13 significantly alter book values. Examples of one-time 14 accounting events include restructuring charges, the 15 16 adoption of SFAS 106 for Other Post-Employment Benefits, 17 and the discontinuance of regulatory accounting under 18 Additionally, the point in time at which a SFAS 71. 19 company issued common stock in the past does not impact 20 forward-looking market values, but may significantly 21 impact backward-looking book values. Over time, market 22 values vary from book values as stock prices change. If 23 a new event or announcement significantly enhances or shareholder value, that change 24 detracts from is. 25 immediately translated into a market value change, while

there is likely to be no immediate change in book value.
 Practically, differences between market and book values
 are typical rather than the exception.

Competitive firms in competitive industries rely on 5 6 market value weights, as finance textbooks widely demonstrate to be appropriate. Conventional cost of 7 8 service ratemaking was one past forum in which book value 9 weights were widely accepted. One qoal under conventional ratemaking was to identify the book value 10 capital on the balance sheet that supported the book 11 12 value rate base. However, the goal of a forward-looking cost study is vastly different, as indicated by the FCC 13 interconnection order. It would be inappropriate to use 14 15 book value weights exclusively in this proceeding simply because they were used exclusively under conventional 16 17 ratemaking.

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19 Q. How did you determine the market value capital structure
20 ratios for Sprint - Florida?

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A. I began with the Sprint - Florida book value capital
structure shown on Exhibit Q-1. Secondly, I adjusted the
book value of debt to market value based on market prices
as of December 31, 1997 available from Bloomberg

1 Financial Services as shown on Exhibit Q-3. Thirdly, I 2 adjusted the book value of common equity to market value based on market-to-book ratios of a comparable group of 3 telecommunications firms as shown on Exhibit Q-4. 4 The 5 identification of these comparable firms is detailed in Market-Traded Group section 6 the of my testimony. 7 Finally, I used these capital structure amounts to 8 compute the market value capital structure ratios shown 9 on Exhibit Q-2. As a check, Sprint - Florida's estimated 10 total market value of \$4.7 billion is reasonable when 11 viewed on a per access line basis. The estimated market 12 value of Sprint - Florida implies a market value per 13 access line of approximately \$2,400, within the \$1,200 to 14 \$4,100 per access line range paid in recent market 15 acquisitions.

16

Q. Is Sprint - Florida's common equity ratio appropriate for
a local exchange company?

19

20 A. Yes, it is, on both a book and market value basis. A 21 local exchange company must be permitted wide latitude in 22 managing to appropriate capital structure ratios. Since 23 there is no practical methodology available to pinpoint 24 theoretically optimal capital structure ratios, targeted 25 ratios can only be broadly conceptualized. Appropriate

1 ratios may shift over time as capital market conditions 2 or business risk characteristics change. Additionally, 3 the timing of upcoming issuances and maturities may also 4 influence the capital structure ratios because both the 5 size and frequency of issuances are affected by the 6 relative cost-effectiveness of various issuance 7 increments. Given these practical considerations, 8 capital structure ratios cannot be deemed to be 9 inappropriate unless the ratios greatly diverge from 10 sound industry practice and cause a lack of financial 11 flexibility that may lead to higher overall capital 12 The Sprint - Florida market value common equity costs. 13 ratio of 85.21% shown on Exhibit 0-2 is consistent with 14 comparable telecommunications companies. The market value 15 of equity of most market-traded telecommunications 16 companies is significantly above the book value of 17 equity, while the market value of debt more closely 18 approximates book value of debt. The Sprint - Florida 19 book value common equity ratio of 59.58% shown on Exhibit 20 Q-1 does not diverge from sound industry practice by any 21 standard of comparison and maintains an adequate degree 22 of financial flexibility.

23

Q. What standards of comparison indicate that Sprint Florida's book value common equity ratio is appropriate

for a local exchange company? 1 2 equity ratios for local exchange Industry common 3 A. companies, the U.S. District Court AT&T divestiture 4 order, and Standard & Poor's debt rating financial ratio 5 guidelines all indicate that the Sprint - Florida common 6 equity ratio is appropriate for a local exchange company. 7 8 Please discuss the industry book value common equity 9 Q. ratios for local exchange companies. 10 11 Industry capital structures for local exchange companies 12 Α. are appropriate for industry comparisons because they 13 reflect the business and financial risk profile of local 14 exchange companies. The composite common equity ratio 15 for all reporting local exchange companies increased from 16 54.3% in 1985 to 58.6% in 1996 according to data from 17 United States Telephone Association (USTA) reports, as 18 shown on Exhibit Q-5. The composite common equity ratio 19 specifically for independent local exchange companies 20 increased from 53.7% in 1987 to 62.8% in 1996. 21 22 Please discuss the capital structure significance of the 23 Q. U.S. District Court AT&T divestiture order. 24 25

In the August 24, 1982 Modification of Final Judgment in 1 Α. the United States v. American Telephone & Tel. Co. 552 F. 2 Supp. 131 (D.D.C. 1982) antitrust case, Judge Harold 3 Greene ordered AT&T to divest the Bell regional companies 4 with 55% equity ratios, except for Pacific Telesis with 5 a 50% ratio. This mandate provides an indication of the 6 book value equity ratio deemed appropriate at that time 7 by the U.S. District Court for the Bell regional 8 Due to increasing business risk, the 9 companies. currently appropriate equity ratios would be higher than 10 11 those appropriate at divestiture.

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Q. Please discuss the Standard & Poor's debt rating
financial ratio guidelines.

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Moody's, Standard & Poor's, Duff & Phelps, and Fitch are 16 Α. 17 organizations that rate telecommunications debt. Sprint - Florida is rated by three organizations: Moody's (A1), 18 19 Standard & Poor's (A+), and Duff & Phelps (AA-). Only Standard & Poor's (S&P) publishes financial ratio 20 guidelines used in establishing telecommunications debt 21 ratings. These guidelines are not intended to provide an 22 absolute determination of the rating assigned to a debt 23 issue, since they are only one part of the S&P debt 24 rating process. The debt rating process must necessarily 25

incorporate a degree of subjective judgment. Moreover, strength in one financial ratio may be offset by weakness in another. However, the financial ratio guidelines provide an indication of appropriate ranges for relative risk measures as viewed by S&P. One S&P financial ratio guideline is the total debt to total capitalization ratio, or debt ratio.

In the debt rating process, S&P assesses the business 9 risk inherent in the telecommunications industry and 10 establishes a set of debt ratio guidelines that are shown 11 on Exhibit Q-6. Business risk is the risk associated 12 with the variability of operating income due to the 13 fundamental nature of the firm's business, including 14 sales volatility and operating expense uncertainty. 15 In contrast, financial risk is the risk associated with the 16 17 variability of earnings available to common stockholders due to the introduction of capital components other than 18 common equity, such as debt and preferred stock, into the 19 20 capital structure. The debt ratio is a measure of financial risk. 21

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The debt ratio guidelines shown on Exhibit Q-6 provide a general indication of the S&P bond rating associated with certain debt ratios. Obviously, a higher bond rating

corresponds to a higher degree of financial flexibility 1 and a lower bond rating corresponds to a lower degree of 2 financial flexibility. In the AA debt rating category, 3 the telecommunications debt ratio guideline shown on 4 Exhibit Q-6 is "under 42%." This debt ratio guideline 5 implies an equity ratio of over 58%. In other words, 6 telecommunications companies with average cash flow and 7 interest coverage measures would require equity ratios 8 above 58%, in order to be consistent with an AA debt 9 rating. For telecommunications companies that exhibit 10 weakness in other risk measures, an even higher equity 11 ratio threshold would be required in order to maintain an 12 13 AA debt rating.

14

In the A debt rating category, the telecommunications 15 debt ratio guideline shown on Exhibit Q-6 is "40% to 16 52%." This debt ratio quideline implies an equity ratio 17 of 48% to 60%. Thus, telecommunications companies that 18 exhibit average cash flow and interest coverage measures 19 would require equity ratios in the range of 48% to 60% in 20 order to be consistent with an A debt rating. For 21 telecommunications companies that exhibit weakness in 22 other risk measures, an equity ratio at or near the 60% 23 high end of the range would be required in order to 24 maintain an A debt rating. 25

Q.What changes in business risk characteristics havecocurred and are occurring in the telecommunicationsindustry?

5 A. Competition and technological change dominate the current 6 telecommunications environment. Competitive threats are 7 emerging and anticipated to continue to emerge.

9 Historically, the telecommunications industry was 10 operated as a regulated monopoly. The absence of competition and slow technological change produced a long 11 12 period of relatively low business risk in the post-World The industry's financial profile reflected 13 War II era. these relatively low business risk conditions through the 14 use of a relatively high degree of financial risk. 15 The industry relied on debt financing to a greater extent 16 than non-utility industries. However, the environment 17 that historically characterized the telecommunications 18 19 industry has changed and will continue to change rapidly.

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21 the 1980s, the Modification of Final Judgment In 22 fundamentally restructured the predominant company and altered the environment of the industry by requiring AT&T 23 24 to divest itself of the Bell operating companies. This 25 restructuring, well as technological advances, as

accommodated both increasing competition and
 deregulation.

3

More recently, competitive local exchange carriers Δ companies, Personal cable television (CLECS). 5 wireless (PCS) and other Communications Services 6 providers, long distance carriers, and even electric 7 utilities are actual or potential competitors of local 8 Specifically, CLECs compete for exchange companies. 9 local exchange companies' large customers that generally 10 are high margin, as well as high revenue customers 11 located in densely packed metropolitan areas such as 12 Cable television companies may metropolitan Orlando. 13 local exchange to target their networks 14 upgrade companies' small business and residential customers. 15 Wireless providers are adding customers at a faster rate 16 than local exchange companies and are expected to 17 PCS cannibalize local exchange company customers. 18 providers are intensifying wireless competition as they 19 increase the number of wireless providers beyond the 20 previously existing two cellular carriers in each market. 21 22 Electric utilities can make use of their existing 23 distribution facilities to compete with local exchange companies. Long distance companies can bypass the local 24 loop to directly serve their customers. For example, 25

AT&T provides Digital Link for business customers in 1 approximately 48 states and makes Total Simple Resale 2 available in seven markets. AT&T is planning to acquire 3 4 Teleport, the largest CLEC in the United States. 5 Teleport serves 490,000 access lines in 66 cities through 41 switches around the country. MCImetro currently 6 7 operates local city networks in 39 cities, has installed 8 29 Class 5 switches serving 31 cities, and has been 9 granted authority to offer local exchange services in 42 10 states with applications pending in 7 other states.

11

12 Sprint - Florida is exposed to the competitive nature of 13 the telecommunications industry. Sprint - Florida's 14 competitive environment is, in part, illustrated by the 15 existence of this proceeding. Other entities, including 16 MCI, are interested in providing LEC services in 17 competition with Sprint - Florida. There are 164 18 certified CLECs in the state of Florida with requests 19 pending for an additional 21 companies. Sprint - Florida 20 has identified approximately 8,500 dial tone lines lost 21 to CLEC competitors, not including losses to competitors 22 that have their own networks and are now operating as 23 Wireless providers in Florida include AT&T CLECs. 24 Wireless, 360 Communications, BellSouth Mobility, Alltel 25 Wireless, Wireless One, as well as PCS providers

Sprint PCS. There 1 PowerTel, Primeco and are 2 approximately 1,100 payphone providers certified in 3 Florida. It is clear that Sprint ~ Florida has not been exempted from the general industry trend toward greater 4 5 competition.

These technological and competitive developments provide 7 an environment in which local exchange companies confront 8 9 both increasing competition and the potential for new 10 avenues for future growth. The telecommunications industry is no longer a relatively isolated monopoly 11 12 business, and it is becoming increasingly less so over This altered environment makes less certain what 13 time. 14 once was considered a relatively secure, solid revenue 15 The resulting increased business risk has direct stream. 16 implications for financial risk tolerance and capital 17 structure management.

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Q. What are the financial risk and capital structure
 implications of the business risk developments for local
 exchange companies?

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A. It is evident that the industry's traditional financial
 policies have changed in response to increased business
 risk. In particular, the industry's traditional reliance

1 on a relatively high degree of financial risk cannot be and will not be continued in the face of competition. 2 It 3 is hardly surprising that local exchange companies have ratios, generally increased their equity thereby 4 decreasing financial risk in an attempt to partially 5 6 offset increased and increasing business risk.

- Q. Please summarize your view of the appropriateness of the
 capital structure of Sprint Florida.
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After reviewing Sprint - Florida's capital structure, the 11 Α. 12 industry capital structures for local exchange companies, 13 the capital structures deemed appropriate by the U.S. 14 District Court for the Bell regional companies, the S&P debt ratio guidelines, the relative level of business 15 16 risk in the industry, and the market-to-book ratios of comparable companies, I conclude that the capital 17 structure of Sprint - Florida is currently appropriate. 18 19 20 DEBT COST RATE IV.

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Q. What is the forward-looking cost of debt for Sprint Florida?

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25 A. The forward-looking cost of debt for Sprint - Florida is

1 7.02% as of late December 1997, as shown on Exhibit Q-7. 2 This rate represents the rate at which Sprint - Florida 3 could issue debt in late December 1997 and has three 4 components: the risk-free return, a credit spread, and an 5 issuance cost increment. The forward-looking risk-free 6 return on twenty year U.S. Treasury bonds implied by 7 futures prices of 6.23% is described in the Risk Premium 8 Analysis portion of my testimony and developed on Exhibit 9 0-11. The current credit spread for twenty year "A1" 10 rated telephone bonds over twenty-year U.S. Treasury 11 bonds is estimated at 71 basis points based on prevailing 12 market data provided by Bloomberg Financial Markets. The 13 estimated issuance cost increment for twenty-year debt is 14 8 basis points.

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- V. MARKET-TRADED GROUP
- 16 17

Q. How did you estimate the cost of common equity for Sprint
 - Florida?

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21 Α. The cost of common equity is based on investors' required 22 return on common equity. The required return on common 23 equity must be estimated with market-based 24 forward-looking financial models. I used the discounted 25 cash flow (DCF) model and the risk premium model, both of

which are market-based forward-looking models, to
 estimate the required return on common equity. I
 determined the cost of common equity by adding an
 appropriate issuance cost increment to the required
 return on common equity.

- Q. How did you apply the DCF and risk premium models to
 8 Sprint Florida?
- The implementation of market-based models requires the 10 Α. use of stock market prices. Sprint - Florida does not 11 have stock traded on a stock market as a separate entity 12 and thus, there is no way to directly observe the value 13 14 that investors would place on it. As a result, it is not possible to apply market-based models directly to Sprint 15 16 - Florida. Instead, I applied the market-based models to 17 a group of market-traded companies that, on average, are comparable in risk to Sprint - Florida. Since the 18 capital structure and debt cost rates 19 have been determined for Sprint - Florida, consistency requires 20 that the associated common equity cost rate also be 21 22 determined for Sprint - Florida.
- 23

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Q. How did you identify a group of market-traded companies
that are comparable in risk to Sprint - Florida?

1 Financial theory indicates that the cost of common equity Α. 2 is a function of risk. No precise formula exists to 3 directly measure risk. However, various risk measures can be used to estimate risk levels. I identified four 4 risk measures consisting of the common equity ratio, the 5 cash flow-to-capital ratio, the pre-tax fixed charge 6 7 coverage ratio, and the revenues-to-net plant ratio. I then identified six market-traded telecommunications 8 companies that, on average, have risk measures comparable 9 to the risk measures of Sprint - Florida. 10 11 How do the four risk measures indicate relative risk 12 ο. 13 levels? 14 The common equity ratio provides a direct indication of 15 Α. financial risk by measuring the degree of financial 16 This ratio demonstrates the percentage of 17 leverage.

total capital supplied by common stockholders rather than
preferred stockholders and debt holders. All else equal,
the higher the common equity ratio, the lower the risk to
the stockholder.

22

The cash flow-to-capital ratio provides an indication of both business and financial risk by measuring the adequacy of cash flow to the providers of capital. This

ratio demonstrates the quality of reported earnings
 levels. All else equal, the higher the cash
 flow-to-capital ratio, the lower the risk to the
 stockholder.

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6 The pre-tax fixed charge coverage ratio provides an 7 indication of both business and financial risk by 8 measuring the number of times that fixed charges, 9 including interest and preferred dividends, are earned. 10 This ratio demonstrates the adequacy of earnings levels. 11 All else equal, the higher the fixed charge coverage 12 ratio, the lower the risk to the stockholder.

14 The revenues-to-net plant ratio provides an indication of 15 business risk by measuring the ability to generate 16 revenues from fixed assets. This ratio demonstrates the 17 net plant turnover and the degree to which resources are 18 employed to generate revenues. All else equal, the 19 higher the revenues-to-net plant ratio, the lower the 20 risk to the stockholder.

22 Finally, the limitation of the group companies to involved providing 23 companies that are in 24 services also facilitates the telecommunications selection of a comparable risk group by ensuring that all 25

companies in the group are generally facing the same
 types of business risk as those faced by Sprint Florida.

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5 Q. How did you identify the six market-traded 6 telecommunications firms closest in risk to Sprint -7 Florida?

I used cluster analysis to identify the six companies. 9 Α. Cluster analysis is a statistical approach to narrow a 10 large universe down to a relatively small group of firms 11 that is closest in risk to the targeted company. In this 12 application, cluster analysis measures closeness in risk 13 of market-traded telecommunications companies to Sprint -14 15 Florida.

16

I began with all telecommunications firms available from 17 Standard & Poor's Compustat PC Plus. I initially screened 18 the telecommunications firms to include only market-19 traded, United States-based, dividend-paying companies 20 with adequate data available to calculate the risk 21 measures and required return on common equity estimates. 22 Sixteen market-traded telecommunications companies were 23 identified as candidates for the cluster analysis. After 24 determining the risk measures of each company, the risk 25

measures for all sixteen companies were standardized (for 1 2 each risk measure, the difference between each company's risk measure and the mean risk measure of all sixteen 3 companies was divided by one standard deviation). The 4 5 distance between the standardized risk measures for each company and Sprint - Florida was calculated and compared 6 to identify the shortest distances. The resulting 7 comparable group consists of the six companies with risk 8 measures clustering around, and thus, closest to, the 9 risk measures of Sprint - Florida. All six companies 10 have a major business segment that provides local 11 exchange services. 12

13

Q. How do Sprint - Florida's risk measures compare to the
risk measures of the group of six companies?

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The comparable group of six companies is shown on Exhibit 17 Α. 0-8, along with the risk measures for each company. The 18 common equity ratios are determined as of September 30, 19 20 1997. The other three risk measures are average risk measures for 1995 and 1996. It is important to quantify 21 the revenues, earnings, and cash flow risk measures over 22 a time period long enough so that possible aberrations 23 are avoided, yet short enough so that the measures can 24 still be considered current. A two-year time period 25

1 2 adequately balances these offsetting concerns.

Since the required returns on common equity for the group 3 will be averaged, the appropriate comparison is between 4 Sprint - Florida and the group average, rather than 5 Sprint - Florida and individual companies within the 6 The Sprint - Florida common equity ratio of 56.6% 7 group. is higher than the group average of 55.6%. The Sprint -8 Florida cash flow-to-capital ratio of 19.9% is higher 9 than the group average of 18.7%. The Sprint - Florida 10 pre-tax fixed charge coverage ratio of 6.22x is higher 11 than the group average of 5.71 times. The Sprint -12 Florida revenues-to-net plant ratio of 74.7% is lower 13 14 than the group average of 97.9%.

15

After reviewing the differences between the Sprint -Florida and group average risk measures and the relative magnitude of the differences, I conclude that the group, on average, is comparable in risk to Sprint - Florida.

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VI. DISCOUNTED CASH FLOW ANALYSIS

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Q. Please describe the discounted cash flow (DCF) approach
used in determining the required return on common equity.

The DCF approach is based on the fundamental financial 1 Α. concept of the time value of money and provides a 2 conceptually correct and straightforward approach for 3 determining investors' required return on common equity. 4 The DCF approach captures investors' consensus required 5 return on common equity, since the market consensus risk 6 analysis is embodied in the market price of the stock. 7 The DCF model directly establishes investors' required 8 return on common equity and is both market-based and 9 10 forward-looking.

11

12 The DCF model implies that the value of an asset is the expected cash flow generated by the asset, discounted by 13 14 the investors' required return. Specifically, the market 15 value of common stock is equal to the present value of 16 the expected stream of future dividends. Exhibit Q-9 17 demonstrates that the quarterly required return on common equity for companies that pay dividends quarterly is 18 19 determined with Equation (5) and the corresponding annual 20 required return on common equity results from Equation 21 (8).

22

23 The DCF model shown on Exhibit Q-9 is sometimes referred 24 to as the quarterly DCF model. The use of the quarterly 25 DCF model does not indicate that dividends are expected

1 to increase quarterly. Rather, the use of the quarterly 2 DCF model reflects the reality that quarterly dividend 3 payments are expected to increase annually at a rate 4 equal to the average compounded quarterly growth rate.

- 6 Q. How did you determine the current dividend yield for the 7 companies in the comparable group?
- 8

5

9 The current stock price represents the assessment by A. investors, based on all available information, of the 10 current market value of that stock. It is important to 11 note that an observed change in the market price does not 12 necessarily indicate a change in the required return on 13 14 common equity, since the price change may simply reflect 15 investors' reevaluation of the growth rate or the When using the DCF approach to 16 expected dividends. 17 estimate the required return on common equity, it is necessary to determine the current dividend yield and the 18 19 expected growth rate simultaneously. Therefore. utilizing an outdated average historical stock price 20 along with current growth expectations, or "updating" a 21 22 DCF analysis merely by combining an updated stock price 23 with past growth expectations may produce a biased 24 estimate of the required return on common equity. 25 Similarly, utilizing an outdated historical average stock

price along with outdated historical growth expectations
 will produce only an outdated historical estimate of the
 required return on common equity.

4

For each company, I utilized the most recent quarterly 5 dividend and the average closing stock market price 6 during December 19 through 31, 1997. This two-week time 7 period is current enough to avoid the use of outdated 8 9 historical stock prices and corresponds to the time The resulting 10 period of growth rate determination. 11 current quarterly dividend yields are presented on Exhibit Q-10. 12

- 13
- Q. Is the growth rate that is expected by investors directlyobservable?
- 16

17 The DCF methodology requires a growth Α. No, it is not. 18 rate that reflects the long run dividend growth rate 19 expectation of investors. Although the current market 20 price reflects aggregate investor expectations, no method 21 exists to directly measure market-consensus expected long 22 run dividend growth rates. Therefore, it is necessary to 23 develop an expected long run dividend growth rate 24 estimate based on sound financial theory. There are a 25 variety of approaches to estimate the expected growth

rate and the use of each approach introduces a certain
 amount of subjectivity.

- 3
- 4

5

6

Q. What approach did you use to estimate the growth rates of the companies in the comparable group?

7 Institutional Brokers Estimate Α. Ι used the System 8 (I/B/E/S) consensus analysts growth rate estimates. 9 I/B/E/S is an investment research service of I/B/E/S Inc. I/B/E/S is a frequently cited, readily accessible, timely 10 and objective source of analysts' forecast data. 11 On a 12 monthly basis, I/B/E/S summarizes the consensus earnings 13 growth expectations of financial analysts employed by the 14 research departments of investment brokerage firms. 15 I/B/E/S growth rates are forward-looking, expectational-16 based estimates of earnings growth. The five-year mean 17 I/B/E/S earnings per share growth rate estimates for the 18 companies in the comparable group as of December 18, 1997 19 are shown on Exhibit Q-10. These growth rates are the 20 most recent estimates available at the time of my 21 analysis. For the comparable group, there is an average 22 of thirteen analyst estimates compiled per company to 23 develop the consensus growth rate.

24

25

In order to understand the value of I/B/E/S earnings

growth estimates as proxies for dividend growth, it is 1 useful to examine the relationship between dividends and 2 3 earnings. The expected growth in dividends is a function of the expected growth in earnings. In the short run, 4 dividends may grow at a rate greater or less than 5 This short run relationship is observable when 6 earnings. 7 a company maintains a relatively steady dividend policy 8 even if earnings are quite volatile. However, dividends 9 and earnings must grow at the same rate in the long run.

- 10
- 11

12 A company that increases dividends at a higher rate than 13 earnings in the long run would ultimately pay out more in dividends than it would earn. Long run dividend growth 14 15 cannot be sustained without the support of underlying 16 Since the DCF model is based on long earnings growth. 17 run relationships, it is the long run, rather than the 18 short run, relationship between earnings and dividends 19 that is important.

20

Q. What is the average required return on common equity for
the comparable group based on your DCF analysis?

23

24A.As shown on Exhibit Q-10, the average required return on25common equity estimate for the comparable group based on

1 DCF analysis is 13.45%. 2 RISK PREMIUM ANALYSIS 3 VI. 4 Please describe the risk premium approach used in 5 Q. determining the required return on common equity. 6 7 The risk premium approach is based upon the relationship 8 Α. between the risk and return of market-traded securities. 9 I used a form of the risk premium approach often referred 10 to as the Capital Asset Pricing Model (CAPM). 11 Two financial economists who provided the foundation for and 12 13 developed the CAPM shared the 1990 Nobel Memorial Prize in Economic Science. The CAPM is based on the theory 14 that the required return for a given security is equal to 15 16 the risk-free return plus a risk premium. 17 18 The risk premium approach is consistent with the 19 observation that investors are risk averse. That is, if 20 an investor has the opportunity of purchasing one of two securities with equal expected returns, one would expect 21 the investor to purchase the security with the least 22 23 Conversely, if an investor had an opportunity to risk. purchase one of two securities with equal risk, one would 24 25 expect the investor to purchase the security with the

1		highest expected return.
2		
3		Financial theory provides the CAPM relationship as:
4		
5		$\mathbf{R}_{j} = \mathbf{R}_{f} + \mathbf{B}_{j} (\mathbf{R}_{m} - \mathbf{R}_{f})$
6		Where:
7		R_j = the required return on stock j;
8		R_f = the risk-free return;
9		R_m = the required return on the market portfolio;
10		and
11		B_j = the measure of risk for stock j.
12		
13		In order to implement this model, it is necessary to
14		estimate the risk-free return, the market risk premium
15		(R_m-R_f) , and the appropriate company-specific risk
16		measure, or beta. While the risk-free return is directly
17		observable, the implementational challenge of this
18		approach arises in the estimation of the market risk
19		premium and the company-specific risk measure.
20		
21	Q.	What did you use as the risk-free return?
22		
23	Α.	I used the 6.23% average interest rate implied by the
24		prices of U.S. Treasury bond futures contracts for
25		delivery during the period March 1998 through March 1999

as traded on the Chicago Board of Trade as of December 19 1 through 31, 1997. These interest rates are shown on 2 Exhibit Q-11. In general, the interest rates implied by 3 the prices on U.S. Treasury bond futures contracts 4 represent forward-looking assessments by the market as to 5 the risk-free return during near term future periods when 6 Sprint - Florida's new interconnection rates will be in 7 The use of forward-looking interest rates 8 effect. implied by the prices on futures contracts is preferable 9 to the use of current interest rates because both capital 10 estimation and the application of the 11 cost new interconnection rates are prospective in nature. 12 13

- Q. Why did you use U.S. Treasury bonds in measuring the
 risk-free return rather than U.S. Treasury bills?
 - 16

17 To begin with, U.S. Treasury securities are appropriate Α. to use in estimating the risk-free return because of 18 19 minimal default risk. Default risk pertains to the 20 possibility of principal default. U.S. Treasury 21 securities are considered to be virtually free of default 22 risk because of the U.S. Government's fiscal and monetary 23 authority.

24

25

In selecting the type of U.S. Treasury security to use,

it is desirable to select a security with a duration, or 1 maturity period at issuance, similar to common equity. 2 U.S. Treasury bills have maturity periods at issuance 3 4 ranging from three months to one year. U.S. Treasury bonds are generally used for long-term financing. U.S. 5 Treasury bonds have maturity periods at issuance in 6 7 excess of fifteen years, commonly twenty or thirty years. The U.S. Treasury bond yield that I used as the risk-free 8 9 rate is based on a twenty-year maturity period. Since common equity has a long-term time horizon, or in other 10 words, an infinite maturity period, U.S. Treasury bonds 11 12 are closer than U.S. Treasury bills to matching the 13 duration of common equity.

14

15 Q. What did you use as the market risk premium?

16

17 Α. I used the 7.36% risk premium for the Standard & Poor's 18 Composite Index over U.S. Treasury bonds based on data 19 from the Roger G. Ibbotson series of risk premium 20 studies. Specifically, I used Stocks, Bonds, Bills and 21 Inflation: 1997 Yearbook (Chicago, Illinois: Ibbotson 22 Associates, Inc., 1997) and the Stock, Bonds, Bills, and 23 Inflation <u>Year-End</u> Summary Report 1997 (Chicago, 24 Illinois: Ibbotson Associates, Inc, 1998). This risk 25 premium of common stock returns over U.S. Treasury bond

returns is based on market results for 1926 through 1997. 1 Admittedly, different market risk premiums can be 2 calculated by subjectively varying the time period over 3 which the return comparison is made. The realized market 4 from year-to-year and risk premium can vary 5 I used the entire period for which decade-to-decade. 6 data is available, thus avoiding the introduction of 7 additional subjectivity and capturing a wide variety of 8 The 7.36% market risk premium 9 economic circumstances. 10 and the 6.23% risk-free return imply a current required 11 return on the market portfolio of 13.59%.

12

Q. Is the 7.36% market risk premium based on arithmetic mean
returns or geometric mean returns?

15

16 The 7.36% market risk premium is based on arithmetic mean Α. 17 The arithmetic mean is a simple average while returns. 18 the geometric mean is a compounded average. In 19 determining the required return on common equity, the 20 risk premium based on arithmetic mean returns is the 21 appropriate risk premium to use because the arithmetic 22 mean, or simple average, returns provide a more direct 23 indication of expected year-by-year returns. The 24 geometric mean, or compounded average, returns provide a 25 more direct indication of changes in investor wealth over

more than one annual period, and thus should be achieved 1 However, the geometric mean returns in the long run. 2 will understate the expected year-by-year returns. The 3 expected year-by-year returns must be earned in each year 4 in order for an investor to earn the geometric mean 5 return in the long run. If the geometric mean return is 6 7 mistakenly used to estimate the required return on common 8 equity, the required return on common equity estimate will be biased downward and the geometric mean return 9 10 cannot be achieved in the long run.

11

5

Q. What measure of risk did you use to determine the
comparable group risk premium?

14

15 The implementation of the CAPM approach requires an A. 16 objective measure of risk. I used beta as the appropriate 17 measure of risk. Beta is widely recognized by the 18 financial community as an objective measure of risk in a 19 portfolio context. A beta of 1.0 indicates a risk level 20 equal to the market average risk level. A beta greater 21 than 1.0 indicates a risk level greater than the market 22 average risk level. Similarly, a beta less than 1.0 23 indicates a risk level lower than the market average risk 24 level.

25

- What beta estimates did you use for the comparable group? 1 ο. 2 I used Value Line beta estimates published in The Value 3 A. Line Investment Survey Summary and Index of December 26, 4 The Value Line betas are computed with sixty 1997. 5 months of weekly returns, and with the New York Stock 6 Exchange Composite Index as the market index. 7 Value Line's current estimated betas for the companies in the 8 comparable group are shown on Exhibit Q-11. The average 9 10 comparable group beta is 0.93.Q39. What is the average 11 required return on common equity of the comparable group 12 based on your risk premium analysis? 13 14 As shown on Exhibit Q-11, the required return on common Α. 15 equity for the comparable group is 13.07% based on risk 16 premium analysis. 17 18 **REQUIRED RETURN ON COMMON EQUITY** VIII. 19 20 Q. What is the required return on common equity for Sprint -
- 21 Florida based on the market-based analyses?

22

A. A required return on common equity analysis requires both
the application of financial models and the use of
informed judgment. A return on common equity

recommendation based solely judgment would on be 1 would be sole reliance on the 2 inappropriate, as mechanistic and arbitrary application of financial 3 My comparable group DCF analysis indicates a 4 models. required return on common equity of 13.45%, while my 5 comparable group risk premium analysis indicates a 6 7 required return on common equity of 13.07%. 8 9 In my judgment, the range of 13.07% to 13.45% represents 10 my best estimate of an appropriate range for the required 11 return on common equity for Sprint - Florida. 12 13 ο. Does the required return on common equity range of 13.07% 14 to 13.45% represent the cost of common equity range for 15 Sprint - Florida? 16 17 No, it does not. To determine the cost of common equity, Α. 18 it is necessary to add an increment for issuance costs to 19 the required return on common equity. 20 21 IX. ISSUANCE COST INCREMENT 22 23 Why is an increment for issuance costs necessary? Q. 24 25 Α. equity capital, it When а company raises common

experiences costs of issuance including an underwriting 1 fee as well as legal, accounting, printing, and other 2 out-of-pocket costs. Although Sprint - Florida does not 3 issue common stock directly to the public, Sprint -4 Florida's ultimate parent company, Sprint Corporation, 5 does make public issuances of common stock. Exhibit Q-12 6 shows the Sprint Corporation common equity issues and 7 associated costs for 1967 through the present. The 8 weighted average issuance cost as a percent of net 9 10 proceeds is 4.7%. Because Sprint Corporation raises 11 equity capital for the benefit of its subsidiary 12 investors expect each subsidiary entity, entities, 13 including Sprint - Florida, to invest in projects that provide a return that covers the associated issuance 14 15 costs.

16

17 Without explicit recognition of issuance costs, neither 18 existing nor potential investors would have an 19 opportunity to recover all costs of common equity and 20 Sprint - Florida might be unable to attract capital at a 21 reasonable cost. Since a cost of capital increment is an 22 ongoing requirement, the actual timing of issuances has 23 no bearing on the need for a cost of capital increment and it is required even if there are no recent issuances 24 25 or plans for future issuances.

Q. How did you quantify the rate of return increment for
 issuance costs?

3

An issuance cost increment can be quantified within the 4 Α. framework of the DCF model. Issuance costs are deducted 5 from the market price at the time of issuance to 6 7 determine the net proceeds available. The current issuance cost increment can be quantified by applying the 8 9 issuance cost ratio, 4.7% for Sprint Corporation as shown on Exhibit Q-12, to the current market price within the 10 framework of the DCF model. In other words, the stock 11 12 price component should be reduced by 4.7% to determine 13 the net proceeds per share under current market 14 conditions. By holding all other DCF variables constant, 15 the DCF result with this adjustment will be higher than 16 the DCF result without adjustment. The difference 17 between the two DCF results represents the appropriate 18 issuance cost increment. For Sprint Corporation and its 19 subsidiary entities, the appropriate issuance cost 20 increment is currently 10 basis points. This increment 21 is based on the 4.7% issuance cost ratio, the DCF model 22 shown on Exhibit Q-9, the current quarterly dividend of 23 \$0.25, the current stock price as of December 19 through 24 31, 1997 of \$56.82, and the I/B/E/S growth rate as of 25 December 18, 1997, of 11.41%.

Q. After incorporating the 10 basis point issuance cost
 increment, what is your estimate of the cost of common
 equity range for Sprint - Florida?

4

5 A. My estimate of the cost of common equity range for Sprint 6 - Florida is 13.17% to 13.55%, 10 basis points greater 7 than the required return on common equity range. My best 8 point estimate of the cost of common equity is the 13.36% 9 midpoint of the range.

- 10
- X. RECOMMENDED COST OF CAPITAL
- 12

11

Q. In summary, what is your recommendation concerning the
 cost of capital for Sprint - Florida in this proceeding?

15

16 Α. I recommend primary reliance on the weighted market value 17 cost of capital. The weighted average cost of capital 18 for Sprint - Florida is 12.42% based on the market value 19 capital structure shown on Exhibit Q-14. The weighted 20 average cost of capital for Sprint - Florida is 10.80% 21 based the book value capital structure shown on Exhibit 22 Q-13. The FCC authorized rate of return of 11.25% 23 approximates Sprint - Florida's weighted book value cost 24 of capital and is less than the conceptually superior 25 weighted market value cost of capital. I therefore

conclude that the FCC authorized rate of return of 11.25%
 used to develop the annual charge factor is reasonable
 based on current capital market conditions.
 Q. Does this conclude your testimony?
 A. Yes, it does.

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SPRINT - FLORIDA, INCORPORATED BOOK VALUE CAPITAL STRUCTURE AS OF DECEMBER 31, 1997

.

<u>Amount</u>	<u>Ratio</u>
\$625,513,104	40.42%
\$922,068,651	59.58%
\$1,547,581,755	100.00%
	<u>Amount</u> \$625,513,104 \$922,068,651 \$1,547,581,755

SPRINT - FLORIDA, INCORPORATED MARKET VALUE CAPITAL STRUCTURE AS OF DECEMBER 31, 1997

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Amount	Market Value <u>Ratio</u>		
\$688,342,441	14.79%		
\$3,964,895,199	85.21%		
\$4,653,237,640	100.00%		
	<u>Amount</u> \$688,342,441 \$3,964,895,199 \$4,653,237,640		

SPRINT - FLORIDA, INCORPORATED MARKET VALUE OF DEBT AS OF DECEMBER 31, 1997

	Interest	Maturity	Face Amount	Unamortized	Unamortized	Book	Market	Market
<u>Debt Issue</u>	<u>Rate</u>	Date	Outstanding	Discount	Debt Expense	Value	<u>Price</u>	Value
Series CC	9.25%	9/15/19	\$115,000,000	-\$425,800	-\$1,923,757	\$112,650,443	1.0576	\$121,624,000
Series DD	7.25%	12/15/04	\$50,000,000	-\$389,027	-\$423,906	\$49,187,067	1.0547	\$52,735,000
Series EE	6.25%	5/1/03	\$70,000,000	-\$341,543	-\$956,504	\$68,701,953	1.0002	\$70,014,000
Series FF	6.88%	7/15/13	\$60,000,000	-\$1,089,899	-\$13,568,149	\$45,341,952	1.0267	\$61,602,000
Series GG	7.13%	7/15/23	\$75,000,000	-\$1,822,992	-\$9,780,932	\$63,396,076	1.0529	\$78,967,500
Series HH	8.38%	1/15/25	\$70,000,000	-\$1,099,093	-\$581,888	\$68,319,019	1.2057	\$8 4,399,000
Series BB	9.89%	2/1/21	\$18,800,000	\$0	-\$154,687	\$18,645,313	1.0495	\$19,729,660
Advances			\$198,999,225	\$0	\$0	\$198,999,225	1.0000	\$198,999,225
Leases			\$272, 056	\$0	\$0	\$272,056	1.0000	\$272,056
Total		-	\$658,071,281	-\$5,168,354	-\$27,389,823	\$625,513,104		\$688,342,441

Source: Bloomberg Financial Markets, Series BB market price estimated.

Exhibit Q-4

COMPARABLE GROUP MARKET-TO-BOOK RATIOS AS OF DECEMBER 19 THROUGH 31, 1997

		Number		Book Value	
		of Shares as of 9/30/97	Market Value of Equity	of Equity as of 9/30/97	Market to Book
Company	Market Price	(in Millions)	(in Millions)	(in Millions)	<u>Ratio (x)</u>
ALLTEL	\$ 40.54	185.340	\$7, 513.7	\$2,2 69.0	3.3
Ameritech	\$41.26	1,094.088	\$45,142 .1	\$7,998.0	5.6
Bell Atlantic	\$8 9.91	776.639	\$69,827 .6	\$12,549.4	5.6
BellSouth	\$56.58	992.000	\$56,127.4	\$14,815.0	3.8
Century Telephone Enterprises	\$48.64	60.519	\$2,943 .6	\$1,239.5	2.4
Cincinnati Bell	\$29.85	135.992	\$4,059.4	\$ 770.7	5.3
Average					4.3

Sources: Bloomberg Financial Markets and Compustat PC Plus.

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Exhibit Q-5

LOCAL EXCHANGE COMPANIES INDUSTRY COMPOSITE COMMON EQUITY RATIOS BASED ON USTA DATA

	All Reporting LECs	Independent LECs
Year	Common Equity Ratio	Common Equity Ratio
1985	54.3%	
1986	56.2%	
1987	56.9%	53.7%
1988	58.8%	58.1%
1989	58.6%	58.6%
1990	59.5%	59.5%
1991	59.7%	59.8%
1992	60.1%	60.4%
1993	59.1%	60.1%
1994	58.3%	60.6%
1995	58.5%	62.5%
1996	58.6%	62.8%

Sources: United States Telephone Association 1988 <u>Statistics of the Telephone Industry</u> and 1989 through 1997 <u>Statistics of the Local Exchange Carriers</u>.

Exhibit Q-6

STANDARD AND POOR'S CORPORATION TELEPHONE FINANCIAL RATIO GUIDELINES TOTAL DEBT TO TOTAL CAPITAL

Bond	Total Debt to
Rating	<u>Total Capital Ratio</u>
AA	Under 42%
А	40% - 52%
BBB	50% - 62%

Source: Standard and Poor's CreditWeek; October 11, 1993, page 8.

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Exhibit Q-7

SPRINT - FLORIDA, INCORPORATED COST OF DEBT AS OF DECEMBER 19 THROUGH 31, 1997

Component	Cost Rate
Risk-Free Return	6.23%
Credit Spread	0.71%
Issuance Cost Increment	0.08%
Total	7.02%

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Sources: Exhibit Q-11 and Bloomberg Financial Markets.

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COMPARABLE GROUP RISK MEASURES

<u>Company</u>	Common Equity <u>Ratio (1)</u>	Cash Flow to Capital <u>Ratio (2)</u>	Fixed Charge Coverage <u>Ratio (x) (2)</u>	to Net Plant <u>Ratio (2)</u>
Sprint - Florida	56.6%	19.9%	6.22	74.7%
Comparable Group				
ALLTEL	54.7%	15.2%	5.03	105.5%
Ameritech	52.5%	22.0%	6.65	105.2%
Bell Atlantic	44.0%	20.3%	5.19	82.0%
BellSouth	58,7%	20.5%	6.25	83.0%
Century Telephone Enterprises	64.5%	15.7%	4.96	66.4%
Cincinnati Bell	59,4%	18.5%	6.15	145.3%
Average	55.6%	18.7%	5.71	97.9%

(1) The common equity ratios are as of September 30, 1997.

(2) The other three risk measures are two-year averages for 1995 and 1996.

Sources: Compustat PC Plus.

Exhibit Q-9 Page 1 of 2

THE DISCOUNTED CASH FLOW MODEL GENERAL FORM AND QUARTERLY MODEL

In its general form, the discounted cash flow (DCF) model is stated as follows:

(1)
$$P_o = \frac{D_1}{(1+k_c)^2} + \frac{D_2}{(1+k_c)^2} + \dots + \frac{D_n}{(1+k_c)^t} + \dots + \frac{D_n}{(1+k_c)^n}$$

where P_0 = the current market price;

 D_t = the expected dividend at the end of period t;

n = infinity; and

 k_e = the required return on common equity.

If it is anticipated that dividends will grow at the rate of g each period, then Equation (1) reduces to:

(2)
$$P_o = \frac{D_1}{(k_c-g)}$$

.-

where g = the expected growth rate.

Solving Equation (2) for ke results in:

(3) $\mathbf{k}_{e} = \frac{D_{1}}{P_{o}} + g$ and $D_{o}(1+g)$

(4)
$$k_e = \underline{\qquad} + g$$

Po

where $D_o =$ the most recent dividend.

It is important to note that Equations (1) through (4) are generic as to time period. Equation (4) should be implemented for the time period that best reflects actual dividend payments. For companies that pay dividends quarterly, a quarterly DCF model is required.

Exhibit Q-9 Page 2 of 2

THE DISCOUNTED CASH FLOW MODEL GENERAL FORM AND QUARTERLY MODEL

To emphasize that dividends are paid quarterly, Equation (4) can be restated with time period subscripts as follows:

(5) $k_{eq} = \frac{D_{oq}(1+g_q)}{P_o} + g_q$

where k_{eq} = the quarterly required return on common equity;

 D_{oq} = the most recent quarterly dividend; and

 g_q = the expected quarterly growth rate.

Quarterly and annual variables are related as follows:

(6)
$$k_{eq} = (1+k_{ea})^{0.25} - 1$$

(7) $g_q = (1+g_a)^{0.25} - 1$

where k_{ea} = the annual required return on common equity; and

 g_a = the expected annual growth rate.

Solving for kea results in:

(8) $k_{es} = (1+k_{eq})^4 - 1$.

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COMPARABLE GROUP DISCOUNTED CASH FLOW ANALYSIS AS OF DECEMBER 19 THROUGH 31, 1997

Company	Current Quarterly <u>Dividend</u>	Current Stock Price	Current Quarterly Dividend <u>Yield</u>	I/B/E/S Annual Growth <u>Rate</u>	Numb e r of <u>Estimates</u>	Quarterly Growth <u>Rate</u>	DCF Required Return on <u>Common Equity</u>
ALLTEL	\$0.290	\$40.54	0.72%	9.86%	7	2.38%	13.06%
Ameritech	\$0.300	\$41.26	0.73%	8.03%	20	1.95%	11.22%
Bell Atlantic	\$0.770	\$89.91	0.86%	7.83%	17	1.90%	11.58%
BellSouth	\$0.360	\$56.58	0.64%	8.23%	19	2.00%	11.04%
Century Telephone Enterprises	\$0.095	\$48.64	0.20%	14.33%	7	3.40%	15.23%
Cincinnati Bell	\$0.100	\$29.85	0.34%	17.00%	7	4.00%	18.58%
Average				-	13		13.45%

Sources: Bloomberg Financial Markets, and Institutional Brokers Estimate System Custom Report, <u>Utility Industry/Company LTG Report</u>, December 18, 1997.

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RISK PREMIUM ANALYSIS AS OF DECEMBER 19 THROUGH 31, 1997

				CAPM Required
	Risk-free <u>Return</u>	<u>Beta</u>	Market Risk <u>Premium</u>	Return on Common Equity
Sprint - Florida	6.23%	0.93	7.36%	13.07%

INTEREST RATES IMPLIED BY PRICES ON U.S. TREASURY BOND FUTURES CONTRACTS AS OF DECEMBER 19 THROUGH 31, 1997

Delivery Month	Interest Rate
March-98	6.19%
June-98	6.21%
September-98	6.23%
December-98	6.25%
March-98	6.27%
Average	6.23%

Source: The Wall Street Journal, December 22, 1997 through January 2, 1998.

VALUE LINE BETAS AS OF DECEMBER 26, 1997

Company	Beta
ALLTEL	
Ameritech	0.90
Bell Atlantic	0.90
BellSouth	0.95
Century Telephone Enterprises	1.00
Cincinnati Bell	0.95
	0.90
Average	
	0.93

Source: The Value Line Investment Survey Summary and Index, December 26, 1997.

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Exhibit Q-12

SPRINT CORPORATION COMMON STOCK ISSUANCE COSTS JANUARY 1967 THROUGH DECEMBER 1997

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					Issuance
					Costs as a
	Number	Offering	Issuance	Net	Percent
Date	of Shares	Price	Costs	Proceeds	of Net
of Issue	(Millions)	Per Share	Per Share	Per Share	Proceeds
6/21/85	5.000	\$23.625	\$0,732	\$22.893	3.2%
9/12/75	2.500	\$13.000	\$0,593	\$12.407	4.8%
10/31/74	2.300	\$12.625	\$0.807	\$11.818	6.8%
12/8/71	1,500	\$18.000	\$0,789	\$17.211	4.6%
10/6/70	1.500	\$17.500	\$1.091	\$16.409	6.6%
12/2/69	1.000	\$22.000	\$1.076	\$20.924	5.1%
6/6/67	1.200	\$30.000	\$1.116	\$28.884	3.9%
		SIMPLE AV	ERAGE		5.0%
		WEIGHTED	AVERAGE		4.7%

Note: The data has not been adjusted for the 1989 two-for-one stock split. The data excludes issuances through the Employee Stock Purchase Plan, the Employee Stock Ownership Plan, the Automatic Dividend Reinvestment Plan, and incentive stock option plans, as well as stock issued for acquisitions.

Source: Sprint Corporation (formerly United Telecommunications, Inc.) Prospectuses.

SPRINT - FLORIDA, INCORPORATED WEIGHTED BOOK VALUE COST OF CAPITAL BOOK VALUE CAPITAL STRUCTURE AND COST RATES AS OF DECEMBER 31, 1997

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				Weighted		Weighted
		Book Value		Pre-Tax	After Tax	After Tax
Component	Amount	<u>Ratio</u>	Cost Rate	Cost Rate	Cost Rate	Cost Rate
Debt	\$625,513,104	40.42%	7.02%	2.84%	4.31%	1.74%
Common Equity	\$922,068,651	59.58%	13.36%	7.96%	13.36%	7.96%
Total	\$1,547,581,755	100.00%		10.80%	-	9.70%

SPRINT - FLORIDA, INCORPORATED WEIGHTED MARKET COST OF CAPITAL MARKET VALUE CAPITAL STRUCTURE AND COST RATES AS OF DECEMBER 31, 1997

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				Weighted		Weighted
		Market Value		Pre-Tax	After Tax	After Tax
Component	Amount	Ratio	Cost Rate	Cost Rate	Cost Rate	Cost Rate
Debt	\$688,342,441	14.79%	7.02%	1.04%	4.31%	0.64%
Common Equity	\$3,964,895,199	85.21%	13.36%	11.38%	13.36%	11.38%
Total	\$4,653,237,640	100.00%		12.42%	-	12.02%