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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)
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Prescribing the Authorized)
Unitary Rate of Return for)
Interstate Services of Local)
Exchange Carriers)
_____)

CC Docket No. 98-166

**RESPONSIVE SUBMISSION OF AT&T CORP. TO
PRESCRIPTION PROCEEDING DIRECT CASE SUBMISSIONS
AND REPLY COMMENTS ON THE NOTICE OF PROPOSED RULEMAKING**

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SUMMARY

Since the Commission prescribed the current 11.25% unitary rate of return in 1990, economic conditions in the United States have changed dramatically. Lower inflation has led to a precipitous fall in interest rates that, in turn, has significantly reduced the financing costs of debt and equity to U.S. firms, including the incumbent LECs. *Every* accepted method of estimating the incumbent LECs' capital costs and *all* available market data confirm that the current 11.25% rate of return exceeds actual capital costs by at least several percentage points. It is not surprising, then, that while the incumbent LECs support the *status quo*, they offer only anecdotal and non-quantifiable evidence to support their position. In stark contrast to their cost of capital filings in 1990, they sponsor no data, calculation, or methodology and therefore their unsupported assertions of increased capital costs should be rejected out of hand. Without question, the Commission correctly has observed that an adjustment to its prescribed rate of return is necessary to promote just and reasonable rates for interstate and local exchange access.

In Section I, AT&T demonstrates that the Commission should use the RBOCs as its set of comparable companies. The inclusion of other publicly-traded companies that provide interstate access and local exchange access services would not appreciably affect the cost of capital estimation results and, because the RBOCs engage in a variety of relatively high risk activities in addition to their much safer core telecommunications business, the RBOCs' cost of capital provides a significant cushion over the actual capital costs of providing the relevant access services. AT&T further demonstrates that the Commission either should use the RBOCs' forward-looking cost of debt, which at 6.74% is significantly below their 7.35% book cost of debt, or at least reflect the upward bias of its existing embedded cost approach when setting the

prescribed unitary rate of return, within the cost of capital range. With respect to the cost of equity, AT&T supports the use of a multi-stage discounted cash flow ("DCF") model using forward-looking data. Use of a single-stage model requires acceptance of the patently unreasonable assumption that the RBOC growth rates will perpetually outstrip the growth rates of the market as a whole. AT&T also provides risk premium estimates employing the Capital Asset Pricing Model ("CAPM"). Despite the fact that the CAPM tends to produce high equity cost estimates, AT&T supports a cost of capital range that reflects both DCF and CAPM estimates. In constructing the weighted average cost of capital, AT&T believes that the Commission should apply the RBOCs' book weighted capital structures because a market weighted capital structure would force basic telecommunications consumers to cross subsidize the incumbent LECs' riskier business ventures. Again, however, AT&T supports a cost of capital range that errs on the side of overestimation by reflecting both book-weighted and market-weighted capital structure estimates.

As AT&T shows in Section II, the incumbent LECs have failed to identify a single reason why the Commission should ignore their market-determined costs of capital. Indeed, their own experts are the biggest proponents of market forces, yet none of them provide a shred of data to support their bald assertion that capital costs have risen despite a precipitous decline in interest rates. Instead, their experts offer only anecdotal and non-quantified tales of increased technological and regulatory risk. But the Commission already has properly recognized that market forces fully account for all such risks. Moreover, the incumbent LEC stories of increased competitive risk fail to recognize that: (i) incumbents still control the overwhelming majority of their markets; (ii) the Telecommunications Act of 1966 has spurred market growth that has produced a net gain in their total customers and revenues; (iii) competition is a diversifiable risk for which investors are not compensated through a higher expected rate of return, and (iv) in a

decreasing interest rate environment, even a business that has increased systematic risk can have a decreased cost of capital.

As AT&T explains in Section III, the Commission should implement its proposal to establish a “zone of reasonableness” for incumbent LEC rates of return. To that end, just and reasonable rates for interstate and local exchange access would best be promoted if the Commission established a zone of reasonableness from 8% to 9% and set the prescribed rate of return at the mid-point of that range. The upper end of this range gives the incumbent LECs the benefit of the doubt by using a market weighted capital structure, and the higher CAPM equity cost estimate. The 8% to 9% range also reflects a 0.5% downward adjustment to reflect: (i) the inflation of the RBOCs’ cost of capital by their riskier non-access businesses; (ii) the inflated embedded cost of debt relative to the RBOCs’ actual forward-looking cost of debt; (iii) the significant drop in interest rates since December 1997, the last date for which annual market data are available for the RBOCs; and, (iv) the overstatement of RBOC book equity due to as much as \$5 billion in phantom assets uncovered during the Commission’s recent audits.

In Section IV, AT&T shows that the Comments confirm the need for the Commission to eliminate the low-end adjustment mechanism of price cap regulation. The original justification for this mechanism – to “guard” individual LECs against the revised X-Factor producing “unreasonably low rates” – is no longer necessary because low incumbent LEC earnings in one year are quickly offset by high earnings in subsequent years. In all events, the Commission’s waiver process provides a method for incumbent LECs to obtain special relief if necessary. Further, the current lopsided regulatory scheme, in which incumbent LECs can make low-end adjustment but are not required to share excessive rates of return, defeats the Commission’s long espoused price cap regulatory objective of promoting greater efficiency that will inure to the

benefit of consumers. Either the Commission should eliminate the low-end adjustment or re-impose sharing obligations. In no event should the Commission adopt SBC's suggestion that the low-end adjustment be eliminated only in exchange for increased pricing flexibility. Until there is meaningful actual competition in the LECs' local exchange and exchange access markets, greater pricing flexibility would create unacceptable risks that the incumbent LECs would engage in widespread cross-subsidization and other discriminatory, anticompetitive pricing behavior.

Finally, in Section V, AT&T demonstrates that the Commission should order the price cap LECs to make a downward exogenous adjustment to the price cap indices to reflect the substantial decrease in their costs of capital. Without such an exogenous adjustment, the price caps would remain substantially overstated, thereby permitting those LECs to continue to reap enormous windfalls at the expense of their customers (and, ultimately, consumers nationwide). Such an adjustment would be fully consistent with past Commission precedent, including the downward exogenous adjustment to the caps the Commission made in 1990 to account for a reduction in the authorized rate of return from 12.0% to 11.25%.

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Pursuant to the Commission's *Notice*, AT&T Corp. ("AT&T") hereby submits its response to the direct cases filed with the Commission on January 19, 1999 and its reply comments on the *Notice* of Proposed Rulemaking.¹

INTRODUCTION

The Commission prescribed its current 11.25% unitary rate of return for the interstate services of local exchange carriers ("LECs") in 1990. Economic conditions have changed dramatically in the intervening decade. U.S. consumers and investors have for years enjoyed lower inflation and decreased borrowing costs. As interest rates have fallen precipitously, so have the debt and equity financing costs of U.S. firms, including incumbent LECs. As a result, the

¹ *Prescribing the Authorized Unitary Rate of Return for Interstate Services of Local Exchange Carriers*, "Notice Initiating a Prescription Proceeding and *Notice* of Proposed Rulemaking," 13 FCC Rcd. 20561 (1998)("Notice").

Commission's intuition that the "sustained low yields of the U.S. treasury securities strongly suggest that the current prescribed rate of return is much higher [than] the rate required to attract capital and earn a reasonable profit" is unquestionably correct.² Indeed, as explained in detail below, the evidence that the current prescribed return is far too high is overwhelming. Accordingly, a substantial and immediate reduction in the unitary rate of return that was prescribed in 1990 is necessary to reflect current and expected market conditions and to serve the interests of consumers who ultimately bear the enormous costs associated with excessive access charges.

Incumbent LECs predictably support the *status quo*, protesting that a reduction in the unitary rate of return would deny them full compensation or even eliminate their access to capital altogether. The incumbents offer little more than anecdotal speculation about heightened "risk" in support of this untenable position. In stark contrast to the reams of data and studies they submitted to the Commission in 1990, in this proceeding they sponsor no data, calculations or methodology, and for good reason. *Every* cost of capital methodology and *all* available market data confirm that the 11.25% rate the Commission prescribed in 1990 exceeds by at least several percentage points current costs of capital. In these circumstances, the risks the incumbents cite, even if real, are simply irrelevant – as the Commission has recognized, the market data used to estimate the cost of capital already "incorporate[s] the capital markets' assessment of all the forms of risk, including risk associated with a changing legal and regulatory environment." *Notice* ¶ 5.

As demonstrated below, applying established financial economics principles to the market data on the publicly-traded firms that operate local telephone networks yields a weighted average

² *Notice* ¶ 5.

cost of capital range of no higher than 8.5% to 9.5%, even giving the incumbents every benefit of the doubt. No commenter has identified any legitimate basis for an upward adjustment to that range, and none is appropriate. Rather, if anything, a downward adjustment is appropriate to reflect, *inter alia*, the fact, as the Commission held in 1990, that any cost of capital range based on the publicly-traded telephone holding companies is necessarily inflated by the myriad lines of business of those firms that are much riskier than their core provision of access services.

I. THE COMMISSION SHOULD ESTIMATE THE COST OF CAPITAL BY APPLYING ESTABLISHED FINANCIAL ECONOMIC PRINCIPLES TO THE RELEVANT FINANCIAL DATA.

As the *Notice* recognizes, estimating cost of capital involves a relatively straightforward four-step process. First, where, as here, the securities of the “pureplay” firm (or unit) in question are not publicly traded, securities of surrogate publicly-traded companies that face similar risks must be identified. Second, each surrogate firm’s cost of debt is estimated by dividing its total annual interest expense by its average outstanding debt measured on a “book” basis as the *Notice* contemplates, or alternatively, on a “market” basis using the current yield to maturity as reflected in the prices at which the firm’s debt securities currently trade. Third, each surrogate firm’s cost of equity is estimated, either through a DCF analysis that relies on the firm’s stock price and dividend rate and forecasted growth rates, or through a “risk premium” analysis, such as the CAPM, that adds to the yield on risk-free investments a risk premium appropriate to the surrogate firm.³ Fourth, an appropriate capital structure is determined, again based on a book or market

³ The surrogate firms have a *de minimus* amount of preferred stock. In the interests of simplicity, AT&T recommends that the Commission simply treat this preferred stock as common stock, an assumption that tends to overstate slightly the incumbent LECs’ overall cost of capital.

assessment of the surrogate firms, and that capital structure is used in conjunction with the estimated costs of debt and equity to calculate a weighted average cost of capital.

As with any forecasting methodology, estimation is required. And, as always, practical application of established theory can produce legitimate debate at the margins – here, for example, whether resort to book, market, or composite figures regarding the capital structures of the publicly-traded surrogate companies will best reflect the cost of capital associated with incumbents' provision of access services. One thing is clear, however: this forward-looking four-step analytical approach to cost of capital estimation is the best that is available. That is why it is widely and successfully employed by analysts, investors and regulators alike on a daily basis. The potential for estimation error and uncertainty at the margins is, as the Commission has long recognized, properly resolved by carrying out the analysis using a range of legitimate assumptions to produce a cost of capital range, and not, as the incumbents propose, by simply ignoring market data and established financial economics principles.

Section III, *infra*, addresses AT&T's specific proposals for the weighted average cost of capital range and the prescribed unitary rate of return within that range. The remainder of this section addresses each of the four steps to cost of capital estimation, and explains how each is best implemented to estimate accurately the cost of capital associated with incumbents' provision of interstate access and related services. Both sections make frequent reference to the attached Affidavit by Dr. Bradford Cornell and Mr. John I. Hirshleifer, which addresses the relevant financial economic principles in detail and contains the specific analysis and calculations deriving

appropriate cost of capital estimates based on those principles (“*Cornell/Hirshleifer Affidavit*”).⁴

A. **Comparable Companies.** Ideally, the Commission would observe directly the debt and equity costs associated with providing network access, including interstate and wholesale local exchange services to other carriers. Unfortunately, no public companies engage solely in these activities. The next best alternative, then, is to examine the capital costs for public companies engaged in activities that present similar risks. As the Commission found in 1990, the parent holding companies for the Regional Bell Operating companies (“RBOCs”) fit best that profile because their principal subsidiaries provide interstate and wholesale local exchange services. Hence, the Commission’s tentative conclusion that the parent holding companies of the RBOCs encounter risks that “most closely resembles the current risk encountered by the rate-of-return carriers”⁵ is an appropriate one.⁶

The Commission sought comment on whether other incumbent LEC companies should be

⁴ The *Cornell/Hirshleifer Affidavit* (see ¶ 4) relies on market data available through December 1997, because the surrogate companies have not yet reported their year-end 1998 figures. AT&T will submit updated analysis when all of the 1998 data are available.

⁵ Notice ¶ 19.

⁶ This does not mean, however, that the RBOCs are a perfect proxy for businesses providing solely interstate and local exchange access services as the GSA (Direct Case at 7) apparently concludes. Rather, as discussed in more detail, *infra*, they are the best available set of publicly traded surrogates but they clearly face a *higher* degree of risk than would pure incumbent LECs. Also, there is no reason to conclude as does the GSA (Direct Case at 6) that pure incumbent LECs would not have access to the same low cost capital to which the RBOCs have access. Even pure incumbent LECs are sufficiently large to benefit from significant economies of scale. For such large companies, further increases in magnitude of operations do not significantly increase the economies of scale. *Cornell/Hirshleifer Affidavit* ¶ 10. Indeed, it is important to recognize that RBOC-based estimates are likely to significantly overstate the capital costs of rate of return LECs, which SBC (Direct case at 6) notes, face significantly less risk.

included in the group of comparable companies.⁷ Contrary to GSA's claim (Direct Case at 7), it would be appropriate to include GTE in the group. Like the RBOCs, GTE's principal subsidiary offers network access and wholesale local exchange services to other carriers. GTE pays dividends, is publicly traded, and is tracked by industry analysts. The Commission could also include the smaller publicly-traded incumbents ALLTEL, Century Telephone Enterprise, and Cincinnati Bell in the set of comparable companies.⁸ As demonstrated in the *Cornell/Hirshleifer Affidavit*, however, little would be gained from this added complication as their costs of capital do not differ significantly or systematically from the RBOC sample.⁹ The Commission should *not* include companies like Aliant Communications, Telephone Data Systems, and Frontier Corp. because they are more heavily engaged in diverse business activities that are much riskier than the provision of basic telephone service, including extensive competitive activity (*e.g.*, long distance, cellular, etc.) outside of their traditional incumbent territories.

B. Cost of Debt. The *Notice* contemplates cost of debt calculations based on the book values of outstanding debt as reported in ARMIS 43-02 reports.¹⁰ U S WEST (Comments at 10) proposes that the Commission retain an embedded cost focus, but limit the analysis to each surrogate firm's *newest* debt issue to better reflect current debt costs. U S WEST's stated goal is a legitimate one, but its proposal does not rationally serve that goal. The surrogate firms, like

⁷ See *Notice* ¶¶ 19-20.

⁸ SNET has been acquired by SBC and is no longer separately traded.

⁹ See *Cornell/Hirshleifer Affidavit* ¶ 8.

¹⁰ See *Notice* ¶¶ 11-12. Such a method aggregates all coupon interest payments made by an incumbent LEC in a given year. It is not forward-looking because these coupon interest rates may no longer reflect the market interest rate of this debt.

most corporations, issue many different types of debt that mature at different future dates and have different costs. Subordinate debt is riskier than senior debt and consequently will have a higher cost. Investors likewise tend to require a higher yield for long term debt than for short term debt. Under, U S WEST's proposal, however, if an incumbent LEC issued a small amount of long term subordinated debt yielding 7% today, the cost of debt would be set at that rate, notwithstanding the much lower current costs associated with all other outstanding debt, including, for example, a senior, short-term debt offering made just a few months earlier yielding 4%. U S WEST's "marginal" debt approach also ignores that the interstate and local exchange access services that are the focus of this proceeding are not necessarily the marginal business activities that an incumbent LEC is issuing debt to finance; rather, the newest debt offerings may reflect new investment in riskier businesses such as cellular, PCS, and international operations.

U S WEST is correct that during periods of decreasing interest rates such as the late 1990s, embedded debt costs can overstate borrowing costs. The solution is to measure debt costs of all outstanding debt on a forward-looking basis, not to focus arbitrarily on the embedded costs of the most recent debt issue. This is because, although coupon debt payments are embedded and fixed, the forward-looking cost of this debt can be directly and easily computed with a high degree of accuracy. As explained in the *Cornell/Hirshleifer Affidavit* (¶¶ 12-13), Standard & Poor's Bond Guide provides current yields to maturity on outstanding RBOC debt issues. Yield to maturity is a forward-looking cost of debt that reflects investors' current expectations regarding the future returns on publicly-traded bonds and thus measures the rate that the firm would have to pay if its existing bonds were issued today.¹¹ Properly calculated on a forward-

¹¹ *Cornell/Hirshleifer Affidavit* ¶ 2; *id.*, Attachment 2.

looking basis, the cost of debt of the surrogate companies is significantly below the 7.35% embedded figure. Indeed, none of the surrogate companies has a current cost of debt exceeding 7%, and the market weighted average cost of debt is just 6.74%. In these circumstances, the Commission should either calculate debt cost on a forward-looking basis or, at a minimum, recognize the upward bias of the existing embedded cost debt approach in prescribing a unitary rate within the cost of capital range estimated using embedded debt costs.

C. **Cost of Equity**. AT&T agrees with the Commission's tentative conclusion that the established discounted cash flow ("DCF") approach will provide the best measure of incumbents' cost of equity capital. It is critically important, however, that the Commission use a multistage DCF model to avoid the upward bias inherent in a single stage model using a holding company growth rate forecast that reflects new, high-growth businesses.

Financial economists today agree that a single stage DCF model will not produce accurate equity cost estimates when the surrogate companies have business activities with profit growth rates exceeding the market growth rate.¹² The rationale underlying this conclusion is compelling: if any one of the companies in the surrogate group permanently sustained the supranormal profit growth rates currently forecasted by investment analysts, that single company would eventually

¹² See, e.g., *Cornell/Hirshleifer Affidavit* ¶¶ 21-22; Tom Copeland, et al., *Valuation Measuring and Managing the Value of Companies*, John Wiley & Sons, New York, 1994 ("Few companies can be expected to grow faster than the economy for long periods of time."); William F. Sharpe, et al., *Investments*, Fifth Edition, Prentice Hall, Englewood Cliffs, New Jersey, 1995; Aswath Damodaran, *Damodaran on Valuation Security Analysis for Investment and Corporate Finance*, John Wiley & Sons, New York, 1994; Shapiro, Alan C., *Modern Corporate Finance*, Macmillan Publishing Company, New York, 1990; Stewart C. Myers and Lynda S. Borucki, "Discounted Cash Flow Estimates of the Cost of Equity Capital – A Case Study," *Financial Markets, Institutions & Instruments*, Vol. 3, No. 3 (New York: New York University Salomon Center, 1994); Ibbotson Associates, *1997 Yearbook*, "Stocks, Bonds, Bills and Inflation," at 158.

devour the entire economy. Modern telephone companies, which are engaged in a variety of businesses, the earnings from some of which analysts expect to grow at 30% or more for several years, are particularly susceptible to this flaw in single-stage DCF analysis.

Such “[f]orecasted growth rates are obviously not constant forever,”¹³ as single-stage analysis assumes. Rather, it is well accepted that the terminal stage growth-rate in the DCF model should not exceed the growth rate in the economy.¹⁴ Consequently, “[v]ariable-growth DCF models, which distinguish short- and long-term growth rates, should give more accurate estimates of the cost of equity. Use of such models guards against naïve projection of short-run earnings changes into the indefinite future.”¹⁵ AT&T therefore recommends that the Commission employ a multi-stage DCF model approach – in this case a three-stage model – as do institutional investors, including the RBOCs’ financial advisers.¹⁶

¹³ Stewart C. Myers and Lynda S. Borucki, “Discounted Cash Flow Estimates of the Cost of Equity Capital – A Case Study,” *Financial Markets, Institutions & Instruments*, Vol. 3, No. 3 (New York: New York University Salomon Center, 1994).

¹⁴ Ibbotson Associates, *1997 Yearbook*, “Stocks, Bonds, Bills and Inflation,” at 158.

¹⁵ See Stewart C. Myers and Lynda S. Borucki, “Discounted Cash Flow Estimates of the Cost of Equity Capital – A Case Study,” *Financial Markets, Institutions & Instruments*, Vol. 3, No. 3 (New York: New York University Salomon Center, 1994). See also SBC/Ameritech Merger Proxy Statement at 28-29 (using a multi-stage DCF analysis).

¹⁶ See, e.g., William F. Sharpe, *et al.*, *Investments*, Fifth Edition, Prentice Hall, New Jersey, 1995 (“[institutional] investors generally prefer three-stage models, believing that they provide the best combination of realism and ease of application”). If the Commission employs a single-stage DCF model as the GSA has done (GSA Direct Case at 8), the Commission should make a downward adjustment of at least 1.5% to 2.0% to current analyst growth forecasts to compensate for the eventual return of the RBOC and GTE growth rates to those of the overall economy. Such an adjustment, although plainly inferior to a multi-stage DCF process, would better reflect RBOC and GTE long-term growth prospects than simply using short-term forecasts as long-term growth rates.

Under this approach, as described in detail in the *Cornell/Hirshleifer Affidavit* (¶¶ 23-25), the first stage lasts for five years, the period of time for which analysts' growth forecasts are available. The second stage lasts for 15 years, during which time the growth rate falls linearly to the forecasted growth rate for the U.S. economy as whole. In the third and final stage, the growth rate remains at the overall U.S. forecasted growth rate in perpetuity. Even this three-stage approach is overly generous to the incumbents, because it assumes that the telephone holding companies will achieve supranormal growth rates for 19 years, and that their growth rates will *never* fall below the growth rate of the economy as a whole.¹⁷

The data necessary to implement three-stage DCF analysis are readily available. The surrogate companies' stock prices and dividend payments are available on a real-time basis.¹⁸ ACE, I/B/E/S, First Call, and Zacks all publish earnings forecasts that can be used to establish appropriate first stage dividend growth rates. *See Notice* ¶¶ 22-23.¹⁹ Forecasting organizations such as WEFA and DRI estimate the overall U.S. economic growth rate that is an appropriate third stage growth rate, and the basis (in conjunction with the first stage growth rate) for calculating the appropriate second stage growth rate.²⁰

¹⁷ Indeed, in the Ameritech/SBC proxy statement at 28, Salomon Smith Barney used a 2-3% growth rate for Ameritech's core telecommunications business, a rate significantly below the growth rate usually forecast for the economy as a whole.

¹⁸ To ensure that stock prices reflect analyst growth rate estimates, the Commission should use actual prices on the measurement date as opposed to averages of monthly prices. *See Notice* ¶ 26. Analysts tracking major companies like the RBOCs and GTE update their forecasts frequently. On any given day, actual prices reflect all publicly available information including any analyst forecasts. Average prices, on the other hand, do not reflect analyst forecasts and other relevant information accurately at any point in time.

¹⁹ Standards & Poor's is in the process of divesting its interest in ACE.

²⁰ *See Cornell/Hirshleifer Affidavit* ¶¶ 25-26.

The *Notice* raises two potential complications with any DCF approach: quarterly dividend payments and flotation costs. AT&T, like the GSA (Direct Case at 11-13) concurs with the Commission's tentative conclusions (*Notice* ¶¶ 24-25) that neither warrants any adjustment. With respect to incumbent requests for quarterly dividend compounding, it is important to recognize that while investors receive dividends on a quarterly basis, incumbents receive *monthly* payments for network access and, consequently, reinvest their cash flows on a monthly basis. Thus, the effective rate that the telephone companies will receive is the Commission's allowed rate compounded monthly. If the Commission used a quarterly compounding DCF model, incumbents would get an effective rate compounded both quarterly (as allowed) and monthly (as actually received). Hence, in order to prevent even greater overcompensation than an annually compounded DCF model already provides, quarterly dividend compounding would necessitate "decompounding" the cost of equity to account for the fact that the telephone holding companies reinvest their proceeds on a monthly basis. This complication can be avoided by simply using an annual DCF model.²¹

Nor should any adjustment for flotation costs be made. The surrogate firms are large holding companies whose stocks trade on the NYSE in an efficient market. As part of the process of arriving at the day-to-day prices for these companies' stocks, investors in the market anticipate future events affecting corporate cash flows, including the flotation costs associated with issuing debt and equity. Thus, the stock prices used in DCF analysis already account for

²¹ AT&T does not oppose the Commission's proposed adjustment for differences in the timing of dividend increases among the surrogate companies, *see Notice* ¶ 28, but notes that the proposed adjustment should not, if implemented properly, have a significant impact on the cost of equity estimated by the DCF model.

flotation costs, and adding a flotation cost adjustment would double count these financing expenses. In addition, most incumbent LEC equity is not obtained from stock issuance, but rather from retained earnings on corporate cash flows, a source of equity that has no flotation costs. For these reasons, AT&T recommends that the Commission use a three-stage annual compounding DCF model with no flotation cost adjustment as its primary cost of equity approach.²² As detailed in the *Cornell/Hirshleifer Affidavit*, this approach yields an overall value-weighted cost of equity estimate of approximately 9.28%.²³

Notwithstanding the controversy surrounding the proper implementation of the Capital Asset Pricing Methodology,²⁴ AT&T does not oppose consideration of that risk premium approach as well in establishing a zone of reasonableness for incumbent LEC rates of return.²⁵ The Capital Asset Pricing Model (“CAPM”) estimates “the variance of [a] company’s stock price . . . relative to the market as a whole[.]”²⁶ In order to use the CAPM, estimates of the risk free rate, the market risk premium of stocks as a whole, and the surrogate companies’ correlation (or “betas”) with the market risk premium must be made.

With over 100 Treasury security issues, calculating the risk free rate of return requires some convention. Commonly, the risk premium is measured over both short-term Treasury bills

²² AT&T agrees with the Commission (*Notice* ¶ 29) that no weight should be given to historical DCF methods. Such methods do not reflect the comparable companies’ forward-looking costs of capital as determined by the financial markets.

²³ *Cornell/Hirshleifer Affidavit* ¶ 27; *id.* Attachment 3.

²⁴ *See, e.g.*, GSA Direct Case at 19-21.

²⁵ *See also* U S WEST Comments at 10-11.

²⁶ *Notice* ¶ 33.

with a maturity of three to twelve months and long-term Treasury bonds with a maturity of 10 to 30 years. AT&T recommends that the Commission use one-month Treasury bill rate and 20-year Treasury bonds.²⁷

The market risk premium can be estimated using either historical risk premium data (*i.e.*, the historical difference between the return on the stock market and the risk-free rate of return) or expected risk premiums based on forward-looking forecasts of a market proxy group such as the S&P 500 or the S&P industrials.²⁸ As the *Notice* recognizes, there are significant problems with the historical risk premium approach. Results are highly sensitive to the time frame over which historical risk premiums are measured. Further, many economists have concluded that current equity premiums are lower than they have been during any other time in U.S. history, and that the historical risk premium approach may overstate cost of equity capital no matter what historical period is used.²⁹ Even Ibbotson, one of the central proponents of historical risk premiums,³⁰ has

²⁷ In the case of the 20-year Treasury bond, the Commission need only select the rate of return on the most recent issue. The one-month Treasury bill rate, however, present some complications because the CAPM analysis estimates the *long-run* cost of equity. The *Cornell/Hirshleifer Affidavit* (¶ 45) explains the appropriate adjustment process.

²⁸ See *Notice* ¶ 33-34.

²⁹ Jeremy J. Siegel, *Stocks for the Long Run* (New York: Irwin Professional Publishing, 1994). See also, Jeremy J. Siegel, "Risk and return: start with the building blocks", *The Financial Times*, May 12, 1997 (analyzing data going back to 1802, and concluding that the current equity premium appears to be returning to the 2 - 3 percent range that existed before the second world war); Oliver Blanchard, "Movements in the Equity Premium", *Brookings Papers on Economic Activity*, 75 (2) 1993 (concluding that the risk premium has declined to 2 to 3 percent in recent years and arguing that cost of capital estimators should either use the DCF approach or recent risk premium data); Alfred Rappaport, *Creating Shareholder Value*, The Free Press, New York, 1998 (opposing the use of long-term historical risk premium averages, and noting that the relative risk of bonds has increased over the past two decades, thereby lowering risk premiums to a range from 3 to 5 percent).

³⁰ Ibbotson Associates, "Stocks, Bonds, Bills and Inflation," *1998 Yearbook*, (Chicago 1998).

recently cautioned that the long-run stock market returns calculated by his firm may not prove predictive.³¹

Accordingly, AT&T agrees that the Commission should give greater consideration to the expected risk premium approach in any CAPM analysis. The expected return on the market should be determined using a proxy group of either the S&P 500 – the index that investors traditionally view as the proxy for the market as a whole – or the S&P Industrials, which has a risk profile very similar to the S&P 500.³² A multi-stage DCF analysis can then be used to estimate the expected market rate of return, using the forecasted growth rates for the companies in the selected market proxy. An expected market risk premium is computed by subtracting the risk-free rate from the expected market rate of return. Using the S&P 500 as a starting point, the expected market risk premium is approximately 3.8% over the U.S. Treasury 20-year bond and 5.3% over the one-month U.S. Treasury bill rate.³³

If the Commission considers historical risk premiums it should take care to analyze them using different estimation time periods and both arithmetic and geometric averages. Dr. Cornell and Mr. Hirshleifer recommend a historical market risk premium of approximately 5.5% over 20-

³¹ Jonathan Clements, “Getting Going, Keeping Perspective: Lower Expectations May Bring Happier Long-Term Results”, *The Wall Street Journal*, Section C1, November 26, 1996. *See also* Roger Ibbotson and Gary P. Brinson, *GLOBAL INVESTING: The Professional’s Guide to the World Capital Markets*, McGraw Hill, Inc., New York, 1993.

³² *See Cornell/Hirshleifer Affidavit* ¶ 53.

³³ *Cornell/Hirshleifer Affidavit* ¶ 44-45; *id.* Attachment 5.

year Treasury bonds and 7.5% over the one-month Treasury bill rate.³⁴ Historical risk premiums at these levels find support in both the financial literature and analysts' reports.³⁵

The betas for the surrogate companies can be obtained from a variety of sources.³⁶ Historical individual betas obtained from Dow Jones Beta Analytics produce an estimated (unlevered) composite beta for the surrogate companies of 0.65.³⁷ BARRA (formerly Rosenberg Associates), an internationally known financial consulting firm that provides risk measurement services to investment managers, corporations, consultants, securities dealers, and traders also predicted betas based on forward-looking projections of corporate risk.³⁸ The (unlevered)

³⁴ *Cornell/Hirshleifer Affidavit* ¶ 49.

³⁵ See, e.g., Aswath Damodaran, *Damodaran On Valuation: Security Analysis for Investment and Corporate Finance*, at 22 (John Wiley & Sons, 1994) (5.5% risk premium over 20-year Treasury bonds), and Tom Copeland, et al., *Valuation: Measuring and Managing the Value of Companies* at 260 (New York: Wiley and McKinsey & Company, 1995) (recommending a risk premium of 5 to 6%). *Cornell/Hirshleifer Affidavit* n.34 (Merrill Lynch estimated market risk premium over the long-term Treasury yield at 5.01%); J.P. Morgan Securities Inc., "Industry Update: Telecommunications Review," (October 15, 1998) (5.0%). See also "Will Investors Run for Cover? When the Rain Comes," *The Economist* (October 25, 1997) ("recent studies [regarding risk premium] suggest a current figure of one to four percentage points."); *Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers*, 5 FCC Rcd. 7507, ¶¶ 136, 139 (1990) ("1990 Rate of Return Order") ("the Wall Street analyst reports, relied upon by the RHCs to support their positions on other issues, use much smaller risk premiums, ranging from 2.0% to 5.4%."); Susan E. Kuhn, "Personal Fortune/Investing: Why Bonds May Beat Stocks," *Fortune*, vol. 134, p.217, October 28, 1996 ("[t]o venture into the volatile stock market instead of cozying up to bonds, investors rightfully expect a superior return from stocks. In fact, they expect to beat the bond return by four full percentage points – something called the risk premium on stocks").

³⁶ See *Cornell/Hirshleifer Affidavit* ¶ 33.

³⁷ See *Cornell/Hirshleifer Affidavit* ¶ 37.

³⁸ S&P Compustat betas use monthly data calculated over 5 years which is consistent with the methodology AT&T uses in its own studies. Because BARRA betas account for forward-looking market information, however the Commission also should use BARRA forecasted betas as a check on the accuracy of the betas obtained from S&P Compustat and Dow Jones Beta Analytics. (continued. . .)

BARRA composite beta for the comparable companies is also 0.65.³⁹ Using a composite beta,⁴⁰ and averaging the various market risk premium estimates based on the 1-month U.S. Treasury bill and the 20-year U.S. Treasury bond, produces a market weighted CAPM cost of equity of approximately 10% (with a range of approximately 9.96% to 10.22%).⁴¹ AT&T believes that the DCF approach is the more reliable measure in the circumstances, but even an average of the CAPM and DCF estimates would produce a cost of equity of less than 9.7%.⁴²

Finally, the Commission has sought comment (*Notice* ¶ 26) on using the S&P Industrials and the large electric utilities as “benchmarks” to test its incumbent LEC equity cost calculation. No such benchmarking is appropriate. As an initial matter, neither group of companies is even engaged in the regulated businesses at issue and thus neither could be expected to provide a reliable check on required returns for a provider of regulated exchange access services. Moreover, market data confirms that the S&P Industrials, which approximate the risk of the market as a whole, are significantly riskier than even the RBOCs as a whole (and consequently should have a beta of about 1.0, much higher than the RBOC betas). As it turns out, the electric

(. . . continued)

The Commission should not use Value Line betas because Value Line makes a proprietary adjustment to its beta calculations in order to shift them toward 1.00. This proprietary bias renders them inappropriate for calculating the cost of equity or for gauging the level of risk of companies engaged in the interstate access business.

³⁹ Composite or average beta is a more accurate indicator of the true beta value because the averaging process cancels out some of the errors in the estimation process.

⁴⁰ The composite beta is relevered based on the sample companies’ capital structure as explained in the *Cornell/Hirshleifer Affidavit* ¶ 35.

⁴¹ *Cornell/Hirshleifer Affidavit*, Attachment 8.

⁴² *Cornell/Hirshleifer Affidavit* ¶ 52; *id.* Attachment 8.

utilities, although in different businesses, have similar betas to the RBOCs and thus, would support the cost of capital estimation sponsored here.⁴³ If the Commission believes that benchmarking would be useful, however, it should measure its DCF and CAPM-based cost of capital estimates against the RBOCs' own recent estimates of their capital costs, not the capital costs of companies in unrelated businesses.⁴⁴ As detailed in *Cornell/Hirshleifer Affidavit*, proxy statements filed by Bell Atlantic and NYNEX and Ameritech and SBC, based on their own financial advisors' analyses, confirm the reasonableness of the cost of capital estimates sponsored here.⁴⁵

D. Capital Structure. The only methodological issue addressed by any of the incumbents except U S WEST is the capital structure the Commission should use in weighting the debt and equity costs for the surrogate companies. Not surprisingly, the incumbents advocate significantly increasing the weight assigned to the more costly equity – from the approximately 57% equity cited by the Commission on the basis of the RBOC's average book debt/equity ratios

⁴³ See *Cornell/Hirshleifer Affidavit* ¶ 53 (S&P Industrials' beta is approximately 1.0 and electric utility holding company betas are approximately 0.62). Dr. Cornell and Mr. Hirshleifer also estimate the cost of capital for a set of electric utilities at Attachment 11 to their Affidavit.

⁴⁴ The Commission also has sought comment on the propriety of using the 1995-1996 NARUC publication, *Utility Regulatory Policy in the United States and Canada, Compilation 1995-1996, 1996 Washington D.C. National Association of Regulatory Utility Commissioners*, as a check on its cost of capital estimate. *Notice* ¶ 37. Due to the significant drop in interest in recent years, AT&T does not believe that that publication, which relies on 1994 to 1996 data, would be a reliable benchmark. If the Commission considers this publication at all, it should, at a minimum, adjust the NARUC figures to reflect the significant drop in interest rates. The 30-year U.S. Treasury bond rate has fallen by 2.36 percentage points since January 3, 1995.

⁴⁵ Bell Atlantic/NYNEX Proxy Statement at 47 (cost of capital estimated in the 8 to 10% range for core telecommunications businesses); Ameritech/SBC Proxy Statement at 28 (cost of capital estimated at 8.75 to 9.75% for core telecommunications services).

to as much as 80% based on current market values of those holding companies' debt and equity.⁴⁶ The incumbents reason that such market weighting generally provides a better estimate of current capital costs than book weighting. That may be true as a matter of abstract financial economic theory, but it does not mean that market weighting of *holding company* debt and equity will produce a reliable estimate of the *relevant* capital structure – *i.e.*, the capital structure of a firm providing solely the core access services at issue here, for which there is no observable market capital structure.

Companies manage their capital structure in a manner that reflects the relation between operating and financial risk. Companies that face less operating risk, like regulated utilities, can maintain more low-cost debt in their capital structures without raising total risk to an unacceptable level.⁴⁷ Because the provision of access services is among the least risky businesses in which the surrogate companies engage – if not the least risky – the use of a market-weighted RBOC capital structure would systematically understate the debt component properly associated with the subsidiary providing core regulated telecommunications services.

In this regard, the incumbents own statements confirm that what was true in 1990 is equally true today: “the RBOCs’ interstate access business [is] less risky than their business as a whole.”⁴⁸ The Bell Atlantic/NYNEX merger proxy statement, for example, distinguishes between

⁴⁶ See Notice ¶ 10.

⁴⁷ The electric utilities, which have lagged the RBOCs in entering riskier lines of business, have a higher market debt-equity ratio than the RBOCs and similar book debt-equity ratios. See *Cornell/Hirshleifer Affidavit*, Attachment 11. This supports the conclusion that only entry into risky lines of business has moved the incumbent LECs away from their book weighted capital structure.

⁴⁸ *1990 Rate of Return Order*, 5 FCC 7507, 7518 ¶ 90; *Notice* ¶ 20.

3 lines of business for cost of capital purposes.⁴⁹ The equally weighted average of the reported capital costs was 10.67%,⁵⁰ significantly above the 8 to 10% range estimated for their core telecommunications businesses.⁵¹ Similarly, Ameritech and SBC distinguished between 7 lines of business.⁵² There, the equally weighted average capital cost was 10.71% while the range for core telecommunications services was estimated to lie between 8.75 and 9.75%.⁵³

Table 1: ILEC Estimates of Capital Costs for Different Lines of Business

	Core Telco	Long Distance	Cellular	PCS
Ameritech/SBC Merger Proxy Statement	8.75-9.75%	10.50-11.50%	10.00-11.00%	12.50-13.50%
Bell Atlantic/NYNEX Merger Proxy Statement	8.00-10.00%	10.00-12.00%	10.00-14.00%	N/A

Using the holding companies' market capital structures – that, because of their overall higher operating risk, maintain less debt than would a pure incumbent LEC with less operating risk – would result in basic regulated telecommunications services cross-subsidizing the riskier business activities of the telephone holding companies. That is precisely why Dr. Vander Weide – one of two principle incumbent LEC affiants urging the Commission to adopt market determined

⁴⁹ Bell Atlantic/NYNEX proxy statement/prospectus at 47.

⁵⁰ The 10.67% figures is an average of the midpoints of the ranges for the Bell Atlantic/NYNEX Merger Proxy Statement listed in Table 1.

⁵¹ Bell Atlantic/NYNEX proxy statement/prospectus at 47.

⁵² Ameritech/SBC Merger Proxy Statement at 27-31.

⁵³ Bell Atlantic complains (Comments at 10) that “[w]hen the Commission set the 11.25% benchmark, there was little difference between market and book value, but today that difference has grown dramatically.” But, as Bell Atlantic’s own statements reveal, the most likely explanation for this change in capital structure is, of course, the steady entry of the RBOCs and GTE into riskier lines of business.

debt-equity ratios⁵⁴ – has urged state commissions to adopt book capital structures:

According to financial theory, the appropriate capital structure for an enterprise is determined by its own business risk, the liquidity and the market value of its own assets, and its own competitive strategy. The proper capital structure for the LECs participating in the Plan is related to their own business situation, not their parent company's. The parent companies of the LEC's each have capital structures that reflect their particular business situations. There is evidence of parent company diversification into financial services, real estate, cellular, interLATA services, cable television, and overseas ventures. The LECs participating in the Plan have no investment in their parent's diversification efforts, and the risks of these ventures are unrelated to the LECs' business risks as local telephone companies.⁵⁵

At a minimum, then, the Commission should average the cost of capital estimates derived from book-weighted and market-weighted capital structures.⁵⁶ Further, to the extent that the Commission relies on a market-weighted capital structure in estimating the incumbent LEC's capital costs, it also should use the corresponding forward-looking cost of debt rather than an embedded cost of debt.

⁵⁴ See U S WEST Comments, Appendix A, Affidavit of James H. Vander Weide, at 4 (“Vander Weide Aff.”).

⁵⁵ Direct Testimony of Dr. James H. Vander Weide, No. PUC920029 (Virginia Corp. Comm. June 9, 1995). See also *United Telephone – Southeast, Inc.*, 158 P.U.R. 4th 297 (Tenn. P.S.C. 1994) (Dr. Vander Weide told the PSC that it “should not burden local exchange ratepayers with the risks associated” with a parent company's “other investment” in higher risk projects like “long distance” or “cellular phone service[s]”); *New Jersey Bell Telephone Company*, 143 P.U.R. 4th 297 (N.J. Bd. Reg. Comm'rs. 1993) (“[Dr. Vander Weide] suggests that the use of the Company's actual capital structure is appropriate because it underlies and supports NJ Bell's ubiquitous network”).

⁵⁶ See *Cornell/Hirshleifer Affidavit* ¶ 58.

II. THE INCUMBENT LECs HAVE FAILED TO IDENTIFY ANY REASON WHY THE COMMISSION SHOULD IGNORE THEIR MARKET-DETERMINED COSTS OF CAPITAL.

All parties to this proceeding urge the Commission to apply market-based methodologies. U S WEST (Comments at 3-4), for example, argues that “if the commission is to prescribe a new rate-of-return, it should do so on a forward-looking basis utilizing a cost of capital calculated from *market* interest rates, *market* cost of equity, and the *market values* of the debt and equity components of the LECs’ capital structure.”⁵⁷ The incumbent LECs’ experts – Drs. Avera, Vander Weide, and Cummings – all endorse reliance on markets as well. Dr. Avera, for example, cites the *Economic Report of the President* for the proposition that markets are the best mechanism for “collect[ing] and distribut[ing] information on costs and benefits in a way that enables buyers and seller to make effective, responsive decisions. . . . As tastes, technology, and resource availability change, market prices will change in corresponding way[.]”⁵⁸ Despite admonishing the Commission that “the rate of return must be based on economic principles and reflect current market conditions,” (GTE Comments at 3), not one incumbent LEC presents *any* market evidence regarding costs of debt and equity. The reason for this striking omission is simple – the market data unequivocally demonstrate that cost of capital has fallen dramatically from the 11.25% figure determined in 1990.

Unable to identify any beneficial market data, the incumbent LECs instead offer only anecdotal and non-quantitative tales of increased risk and widening risk premiums of the very

⁵⁷ See also U S WEST Comments, Appendix B, Affidavit of Peter C. Cummings, at 3 (“Cummings Aff.”).

⁵⁸ USTA *et al.*, Joint Direct Case and Comments, Comments of Dr. William E. Avera, at 6 (“Avera Aff.”) (citing Council of Economic Advisors, *Economic Report of the President* 191 (1997)).

types their own affiants concede are no substitute for market analysis. *See Cummings Aff.* at 18 (“caution[ing] against risk distinctions based upon anecdotal or non-quantitative distinctions”). The short answer to such claims is that the incumbent LECs fail to explain why market data does not already reflect the various risks they assert have increased since passage of the Telecommunications Act. The market data clearly does reflect any such risk changes. As the Commission has recognized, “[m]arket-based cost-of-capital methodologies incorporate the capital markets’ assessment of *all* the forms of risk, including risk associated with a changing legal and regulatory environment.”⁵⁹

In this regard, the very financial analysts’ reports and telephone holding company public disclosures that the incumbent LECs cite confirm that financial markets have been continuously absorbing and incorporating information about changing competitive, regulatory and technological risks.⁶⁰ The incumbents’ affiants have also recognized as much. Dr. Vander Weide, for example, has written that “[e]conomists and investors consider *all* the risks that a firm might

⁵⁹ *See Notice* ¶ 5 (emphasis added); *see also* Bell Atlantic Comments at 6 (“[t]here can be little debate that the financial markets have recognized that the events of recent years have dramatically increased the risk of incumbent telecommunications carriers”).

⁶⁰ *See, e.g.*, Bell Atlantic Comments at 6 (“There can be little debate that the financial market has recognized that the events of recent years have dramatically increased the risk of incumbent telecommunications carriers”) (*citing Value Line*, p. 378 (Apr. 10, 1998); *id.* at 7 (*Business Week* has recognized these risks); *id.* at 8 (*Forbes*); GTE Comments at 6 (“Today, investors and financial practitioners recognize the competitive nature of local exchange service”); Avera Aff. at 3 (“Investors perceive that the ILECs face increasing risks and uncertainty in their core business of providing local exchange service and interstate access service”); *id.* at 10 (“PaineWebber recently stressed the significant implications of regulatory decisions for investors in telecommunications companies”) (*citing* E. Struminger (PaineWebber, Inc.), “Telecommunications Services: Regulatory Issues on the Front Burner” (Sept. 21, 1998); Avera Aff. at 14 (*Value Line* has recognized these risks); *id.* at 14-15 (the *Economist*); Vander Weide Aff. at 13 (Salomon Smith Barney); *id.* at 14 (Yankee Group).

incur over the future life of the company.”⁶¹ And, when asked in 1995 whether investors are aware of the business risks faced by incumbent local exchange carriers, he acknowledged that:

The news media, business press, and investment analysts have reported extensively about the increased business risk facing local exchange companies. Investors have ready access to information describing the competitive risks facing LECs like GTE South. They are clearly aware of the competitive threats posed by the various new technologies and by competition from the cable industry, the interexchange carriers, alternative access providers, cellular telephone companies, other local exchange companies, and PCS providers. Investors also seriously consider regulators’ responses to these technologies and competitive pressures when they make investment decisions.⁶²

If anything, coverage of the competitive, regulatory and technological risks faced by incumbent LECs has mushroomed since Dr. Vander Weide made that sensible statement four years ago, and there can be no credible claim that investors and markets have suddenly begun ignoring such information.

For his part, Dr. Avera offers the novel claim that the impact of falling interest rates has conveniently been offset by a widening of the risk premium between the risk free rate and the rate of return on stocks. This argument has several problems. To begin with, Dr. Avera presents no evidence that this theory has played out in practice either for the stock market as a whole or specifically for the surrogate telephone holding companies. That is telling, because, unlike the pre-1993 sources Dr. Avera cites,⁶³ recent articles suggest that risk premium is, in fact, *decreasing*.⁶⁴

⁶¹ Additional Supplemental Testimony of Dr. James H. Vander Weide, No. 96-899-TP-ALT (Pub. Utils. Comm. Ohio Sept. 1998).

⁶² Direct Testimony of Dr. James H. Vander Weide, No. PUC920029 at 21 (Virginia Corp. Comm. June 9, 1995).

⁶³ Robert S. Harris & Felicia C. Martson, “Estimating Shareholder Risk Premia Using Analysts’ Growth Forecasts,” *Financial Management* 63 (Summer 1992); Robert S. Harris, “Using Analysts’ Growth Forecasts to Estimate Shareholder Required Rates of Return,” *15 Financial* (continued. . .)

Dr. Avera also fails to mention that the authors of the articles he cites have warned readers about relying on their observed ratio between interest rate declines and stock risk premium declines because the model that generated those observations suffers from “misspecification.”⁶⁵ In all events, Dr. Avera’s widening risk premium theory actually *confirms* that the cost of equity falls as interest rates decline – and thus, that recent interest rate declines should be reflected in prescribed return declines. As Dr. Avera states, “[t]he evidence reveals that during a period of declining interest rates, the cost of equity *declines* by less than half the corresponding decline in bond yields.”⁶⁶ Thus, even if Dr. Avera had documented such a phenomenon here, an approximately 2 percentage point drop in the prescribed return would be appropriate because between September 1990 and January 1999 the Treasury yield fell by almost 4 percentage points.

Dr. Avera also contends – again without the slightest support – that if the Commission reduces the prescribed rate of return, incumbent LECs will not have access to adequate capital. To the contrary, a market-determined cost of capital, by definition, provides a competitive return that will attract available capital. And there certainly is no credit shortage. Just last month, the Acting Comptroller of the Currency concluded that:

We’re not in a credit crunch environment. There may have been some initial

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Management 58 (Sprint 1986); and, Robert S. Harris & Felicia C. Martson, “Risk and Return: A Revisit Using Expected Returns,” 28 *Financial Review* 117 (1993).

⁶⁴ See, e.g., James K. Glassman and Kevin A. Hassett, “Are Stocks Overvalued? Not a Chance.” *Wall Street Journal* (March 30, 1998) (“the [downward trend in the] risk premium required by shareholders . . . may not be over”).

⁶⁵ Robert S. Harris & Felicia C. Martson, “Risk and Return: A Revisit Using Expected Returns,” 28 *Financial Review* 117 at n.11 (1993).

⁶⁶ Avera Aff. at 21 (*emphasis added*).

concerns expressed that we were moving toward a credit crunch. I just don't think that's the case. Credit is available from the banking sector and lending seems to be booming.⁶⁷

Other commentators have reached similar conclusion.⁶⁸ Thus, incumbent LECs should have no problem tapping into the capital markets so long as they are well managed. Indeed, just this past year, Aliant Communications successfully sold \$100 million worth of senior unsecured debt at 6 ¾%.⁶⁹ Noting that it also could obtain external financing through existing credit lines, Aliant concluded that “no funding difficulties are anticipated.”⁷⁰

In the end, the incumbents are left to argue in circular fashion that the proof that market data does not fully reflect the risks they have identified is that market data does not yield rates of return as high as the 11.25% established in 1990. A far more plausible explanation is that the incumbents have overstated the relevant risks and ignored the corresponding opportunities created by the 1996 Act. Access competition remains virtually nonexistent in all but the most urban areas. Thus, when the incumbents talk about competition, it must be remembered that they still serve the vast majority of customers. And many of the small fraction of customers who have turned to CAPs and CLECs still receive their service at least in part over incumbent LEC facilities

⁶⁷ Beverly Foster, “Transitions: An Interview with Julie Williams,” *Journal of Lending & Credit Risk Management* 81, at 2 (February 1999).

⁶⁸ Tom Sullivan, “Trading Points: Corporate Credit Gets Less Crunchy, and Market Gobbles New Deals,” *Barron's* 78 (November 16, 1998) (“The credit crunch is more of a crackle these days in the corporate bond market”).

⁶⁹ Aliant Telecommunications, 10-Q Filing with the Securities & Exchange Commission, at 7 (August 1998).

⁷⁰ *Id.* at 12.

and thus “still generate wholesale revenues for” the incumbent LEC.⁷¹ In fact, if as the incumbents have claimed, this increased competition at the retail level discourages facilities-based competition, then it actually may make the interstate and local exchange access business *less* risky. Finally, even though they may have lost a few customers to competitors since passage of the 1996 Act, the incumbents have gained many more due to overall market growth, and thus any risk of stranded facilities is minimal.⁷² For example, GTE recently reported that “[a]t year-end 1997, we had a record 1.5 million new domestic telephone customer lines, 889,000 new long-distance customers, 738,000 new wireless customers, 202,000 new Internet-access customers, 114,000 new directory advertising customers, and 73,000 new video and competitive services customers.”⁷³ Similarly, SBC recently concluded that “1997 growth confirms that we are investing in the right businesses: Access lines grew by 5 percent, additional lines increased by 16 percent, wireless subscribers grew 24 percent and Integrated Service Digital Network (ISDN) lines grew 70 percent.”⁷⁴

In all events, the threat of competition – including facilities-based competition – is idiosyncratic or “nonsystematic” risk, which means that investors can diversify it away.⁷⁵ For

⁷¹ SBC Annual Report 1997 at 17.

⁷² Moreover, technological advances such as xDSL promise additional uses for any capacity freed up by significant competitive losses.

⁷³ GTE Annual Report at 2.

⁷⁴ SBC Annual Report at 10; GTE Annual Report at 26 (GTE has forecast at least 10% growth in core earnings per share in 1998 and a higher rate in 1999 and beyond); SBC Annual Report at 3 (SBC believes that it is ideally positioned to take advantage of the dynamic growth expected in California and Texas. Those two states alone are expected to add 8.5 million new residents and 4.4 million new jobs).

⁷⁵ Ibbotson Associates, *1997 Yearbook*, “Stocks, Bonds, Bills and Inflation,” at 148.

example, an investor can diversify the negative effects of competition on an incumbent LEC stock by, *inter alia*, purchasing stock in the incumbent LECs' competitors as well. According to modern financial theory such diversifiable "unsystematic" risk "is not relevant to investors" and "[t]herefore, investors should not expect to receive added returns for assuming [idiosyncratic] risk. Only the systematic [risk] is relevant."⁷⁶

Finally, the observed decline in incumbent LECs' cost of capital would be easily explainable even if the incumbents faced higher *systematic* risk today than they did in 1990. Without question, the rates of return on U.S. Treasury notes and bonds – the traditional indicators of the risk free rate of return – have dropped substantially since 1990. The risk free rate of return is important not just because it determines how much interest the government pays for the money it borrows, but also because it closely tracks expected inflation rates. Low risk free rates like those present in the economy today indicate that investors believe inflation will remain low. And low inflation rates translate into lower expected rates of return on risky investments as well. The reason is quite simple. Investors are not interested in the absolute number of dollars that an investment pays in the future, but in the *purchasing power* of the dollars returned. When expected inflation rates fall, a lower rate of return will create the same amount of purchasing power that a higher rate of return would have produced under higher inflation rates.⁷⁷ In sum, the

⁷⁶ Frank K. Reilly, *Investment Analysis and Portfolio Management*, at 278 (New York: The Dryden Press, 1989). See also Ibbotson Associates, *1997 Yearbook*, "Stocks, Bonds, Bills and Inflation," at 148; Stephen A. Ross, *et al.*, *Corporate Finance*, 3d. Edition, at 295 (Boston: Irwin, Inc. 1993).

⁷⁷ See, e.g., Jeremy J. Siegel, *Stocks for the Long Run*, Chapter 10 (New York: Irwin Professional Publishing, 1994) (discussing the impact of inflation the purchasing power of investment returns). For example, if the inflation rate today were 10%, one year from now the actual purchasing power on a \$100 investment in an asset with an expected 20% annual rate of return would be

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incumbents have identified no legitimate ground for ignoring the overwhelming market indications that their costs of capital have declined substantially since 1990.⁷⁸

III. THE COMMISSION SHOULD ADOPT A ZONE OF REASONABLENESS FOR INCUMBENT LEC CAPITAL COSTS OF 8 PERCENT TO 9 PERCENT.

AT&T supports the Commission practice of establishing a “zone of reasonableness” for incumbent LEC rates of return. While the Commission’s rules prescribe an (excessive) embedded debt cost of 7.35%, the Commission is free in this proceeding to choose from a range of equity cost and capital structure estimates. AT&T recommends an initial range that at the low end reflects a DCF equity cost estimate and a book-weighted capital structure and at the high end reflects a CAPM equity cost estimate and a market-weighted capital structure. Based on the equity costs estimated in the *Cornell/Hirshleifer Affidavit* (¶ 14; Attachment 13), this produces a weighted average cost of capital range of approximately 8.5% to 9.5%.

It is important to recognize that this initial range significantly overstates the current capital costs associated with the provision of interstate access services. First, and most importantly,

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about \$109.09. $(\$100 \times (1 + \text{rate of return}) / (1 + \text{inflation rate}) = \$100 \times (1.2) / (1.1) = \109.09). If the inflation rate were 2% instead, an 11.27% annual rate of return will yield the same purchasing power in one year’s time. $(\$100 \times (1 + \text{rate of return}) / (1 + \text{inflation rate}) = \$100 \times (1.1127) / (1.02) = \109.09 .)

⁷⁸ Contrary to Dr. Avera’s unsupported claim, entrant incentives to invest in local facilities will not be adversely affected by a reduction in the prescribed return to market-determined levels. Access charges will still remain far above cost and will thus continue to provide incentives for bypass of incumbent LEC facilities by would-be local competitors where it is economically feasible to do so. Dr. Avera’s purported concerns relating to the cost and quality of service to rural customers is similarly misguided. *See Avera Aff.* at 8. There is no reason to believe that excess returns will be invested voluntarily by incumbent LECs to improve rural service. In all events, the new universal service subsidy system should address any legitimate concerns.

these cost of capital estimations pertain to the parent holding companies of incumbent LECs, and not to pure incumbent LECs themselves. As explained above, these parent companies are engaged in a myriad of business activities, most of which are significantly riskier than interstate and local exchange access services. Indeed, as detailed above, the holding companies' own submissions to the Securities and Exchange Commission in connection with recent merger proposals recognize this reality.

Second, the incumbent LECs forward-looking cost of debt is significantly lower than the embedded cost of debt used in deriving this range. As detailed in the *Cornell/Hirshleifer Affidavit*, the surrogate companies' average current cost of debt is 6.74%, as opposed to the 7.35% established by the Commission's rules. At a 42.88% debt ratio, this difference alone inflates the cost of capital estimate by over 0.25%.⁷⁹ Third, the 8.5% to 9.5% range reflects the use of December 1997 market data in deriving DCF and CAPM estimates, because December 1998 data for the surrogate companies was not fully available.⁸⁰ Interest rates have continued to decline and stock prices have continued to rise since December 1997, strongly suggesting that the incumbent LECs' cost of equity has fallen further in the interim.⁸¹ Fourth, on February 24, 1999, the Commission adopted orders finding "that the RBOCs' book costs may be overstated by approximately \$5 billion" because many items reported in use could not be found during

⁷⁹ Calculation: $(0.0735 - 0.0674) \times 0.4288 = 0.002616$.

⁸⁰ AT&T will submit an updated cost of capital analysis to the Commission once all the relevant data become available.

⁸¹ *Cornell/Hirshleifer Affidavit* ¶ 4.

Continuing Property Records audits.⁸² By including this phantom property, the RBOCs have overstated the value of their book assets. Because book equity is the difference between assets and debt, a corrective adjustment to RBOC asset values would reduce their book equity values. Given that equity capital is more expensive than debt capital, a corrective downward adjustment in RBOC assets would reduce the lower bound value by increasing the proportion of debt in their capital structures.

In light of these factors, the Commission should make a downward adjustment to the zone of reasonableness, as it did in 1990. By contrast, the Commission should not make any upward adjustments, such as the “cellular adjustment” it made when originally prescribing the 11.25% rate of return.⁸³ The Commission made the cellular adjustment because it believed that analyst growth forecasts had failed to account for explosive cellular growth that would materialize in the mid-1990s. Given the maturity of the cellular industry today relative to its novelty in 1990, there is no reason for the Commission to believe that investment analysts fail to properly consider cellular growth and risk in their forecasts.⁸⁴ In fact, as noted above, recent RBOC merger proxy statements explicitly assess cellular capital costs and growth rates.

The Commission also should not make adjustments due to the recent and proposed incumbent LEC mergers or incumbent LEC entry into long distance markets.⁸⁵ The mergers should have no effect on the riskiness of the underlying network access operations unless large

⁸² “FCC Releases Audit Reports on RBOCs’ Property Records,” Report No. CC 99-3 (February 25, 1999).

⁸³ See Notice ¶ 42.

⁸⁴ See *Cornell/Hirshleifer Affidavit* ¶ 63; *id.*, Attachment 12.

⁸⁵ See Notice ¶ 41.

operational efficiencies are realized, an effect that would *reduce* risk and the associated cost of capital.⁸⁶ Similarly, no special adjustments should be made for incumbent LEC entry into the long distance market. The long distance business is separate and distinct from the network access business and faces different risks. In all events, the markets already have factored in these different business opportunities.

Accordingly, AT&T believes that a conservative compensating downward adjustment of 0.5% should be made to the initial upper and lower bounds on the zone of reasonableness,⁸⁷ producing a zone of reasonableness of 8.0% to 9.0%. A prescribed return at the mid-point of this range – 8.5% – would be appropriate.

Finally, the Commission has sought comment on whether the prescribed rate should apply to services other than interstate and interexchange access.⁸⁸ AT&T recommends that the Commission apply the same return to other uses of the incumbent LEC's same bottleneck local facilities, including competitive LEC interconnection and universal service.

IV. THE COMMENTS DEMONSTRATE THAT THE COMMISSION SHOULD ELIMINATE THE LOW-END ADJUSTMENT MECHANISM.

As AT&T showed in its January 19, 1999 comments (at 1-6), the *Notice's* suggestion (¶¶ 53-54) that the low-end adjustment mechanism of price cap regulation be retained would simply continue to reward inefficient LECs, permitting them to raise access charges in future

⁸⁶ Indeed, if the sole expected impact of the mergers is increased costs, the pending merger applications simply should be denied.

⁸⁷ If the Commission declines to make a downward adjustment, it should, at a minimum set the prescribed unitary rate toward the low end of the range.

⁸⁸ *Notice* ¶ 7.

years to make up for their alleged earnings shortfalls in the past. Accordingly, as AT&T had urged in its July 11, 1997 Petition for Reconsideration of the Commission's *Fourth Report and Order* in CC Docket No. 94-1 and *Second Report and Order* in CC Docket No. 96-262, released May 21, 1997, FCC 97-159 ("*X-Factor Order*"), the Commission should eliminate the low-end adjustment. The low-end adjustment is an acknowledged vestigial remnant of the price cap regime that had previously contained a sharing obligation, and it can and should be eliminated because it serves no legitimate purpose under incentive regulation as it is configured today.

The Commission's rationale for retaining the low-end adjustment mechanism was to "guard" individual LECs against the revised X-Factor producing "unreasonably low rates." *X-Factor Order* at ¶ 11. The low-end adjustment is entirely unnecessary for that purpose. For one, as MCI points out (Comments at 5), the risk of a confiscatory outcome is not an issue because a LEC's low earnings in one year are quickly offset by higher ones in the following years. Moreover, even without the low-end adjustment as part of the rules, the Commission still has the power to grant relief if a LEC is in dire financial circumstances. That is, in case adverse economic conditions ever truly threaten a LEC's ability to attract capital and provide adequate service, the LEC can request a waiver of the Commission's price cap rules, submit an "above-cap" filing, or request other special relief.

If, as the Commission has long espoused, the objective of price cap regulation is to create incentives for greater efficiencies and to replicate the competitive marketplace, there should be a system of equivalent rewards and penalties, as was the original intent of the price cap plan. The *X-Factor Order*'s lopsided regulatory scheme – which permits LECs to make low-end adjustments but does not require them to share excessive earnings, and thus safeguards the LECs

to the detriment of consumers – is untenable, and it should not be continued.⁸⁹ Either the present rules allowing a low-end adjustment for those price cap LECs experiencing deficient rate of return levels should be eliminated, or the Commission should reevaluate its decision to remove the sharing obligations imposed on LECs' earning at rate-of-return levels that are too high.⁹⁰

Certainly, the Commission should quickly dismiss SBC's suggestion (Direct Case at 5-7) that it eliminate the low-end adjustment only if it grants the LECs additional pricing flexibility. As AT&T has shown in other contexts, until there is meaningful actual competition in the LECs' local exchange and exchange access markets, greater pricing flexibility would create unacceptable risks that the LECs would engage in widespread cross-subsidization and other discriminatory, anticompetitive pricing behavior.⁹¹

U S WEST, apparently now wishing to retain the low-end adjustment, proposes (Comments at 17-18) that the Commission base the low-end adjustment on the forward-looking

⁸⁹ Indeed, in their comments in the proceedings leading up to the *X-Factor Order*, many LECs agreed that there is no need for the Commission to retain the low-end adjustment. *See, e.g.*, Bell Atlantic Comments at 2, 6-7 (low-end adjustment rewards inefficient companies); USTA Comments at 43; BellSouth Comments at 41; U S WEST Comments at 25; U S WEST Reply at 34.

⁹⁰ During 1997, the price cap LECs earned, on average, an interstate rate-of-return of 15.64 percent – more than 430 basis points above the Commission-prescribed rate-of-return. *See* Comments of AT&T to Refresh the Record, filed October 26, 1998, in *Access Charge Reform*, CC Docket No. 96-262, at 23 and Appendix D. Indeed, these LECs' earnings increased over 1996 levels when, on average, their earnings exceeded 14.8 percent. *See* Order, *Access Charge Reform*, 12 FCC Rcd. 10175 (1997) at ¶ 31, n.60 (denying petitions for partial stay of the *X-Factor Order*), referring to Lubin Affidavit attached to AT&T Opposition. Thus, there clearly is no unfairness to LECs in, at minimum, reinstating the current sharing thresholds.

⁹¹ *See Access Charge Reform*, CC Docket No. 96-262, Comments of AT&T To Update and Refresh The Record, filed October 26, 1998, at 8-11, and Janusz Ordover and Robert Willig, "On Reforming the Regulation of Access Pricing," at 9-12 (Attachment A thereto); Comments of AT&T, *id.*, filed January 29, 1997, at 73-74.

weighted average cost of capital. This proposal, which would trigger an upward adjustment whenever a LEC's earnings fall below the unitary authorized rate of return, should be rejected, even if the Commission were to retain the low-end adjustment (which it should not).

The purpose of the low-end adjustment was to provide a "safety net" to protect the LECs from severely depressed earnings – *not* to guarantee full recovery of all costs including return on capital. The current standard (100 basis points below the cost of capital) is already quite generous inasmuch as it results in a very favorable risk/reward ratio for the LECs. LECs have the opportunity to earn far more than the cost of capital (as most of them have) while on the downside being protected from earning significantly less than the cost of capital. Thus, there is absolutely no justification for setting the low-end adjustment threshold at the cost of capital, as US WEST proposes.⁹²

V. THE COMMISSION SHOULD REQUIRE LECS TO MAKE A DOWNWARD EXOGENOUS ADJUSTMENT TO THEIR PRICE CAPS TO REFLECT MODIFICATIONS TO THEIR INTERSTATE AUTHORIZED RATE OF RETURN.

Finally, the Commission should order the price cap LECs to make a downward exogenous adjustment to the price cap indices to reflect the substantial decrease in their costs of capital. *See* 47 C.F.R. § 61.45(d)(1)(vi). Without such an exogenous adjustment, the price caps would remain substantially overstated, thereby permitting those LECs to continue to reap enormous windfalls at the expense of their customers (and, ultimately, consumers nationwide).

⁹² Moreover, to the extent that U S WEST suggests that the low-end adjustment be computed based on the forward-looking capital structure that it supports for computation of the authorized rate-of-return and which weights equity more heavily than the Commission's proposal, it should be rejected for the reasons shown in Section I.D., *supra*.

The Commission established the original price cap indices on the basis of an 11.25% cost of capital, and thus permitted the LECs to recover that amount on an annual basis.⁹³ As shown above, however, the actual cost of capital to price cap LECs has dramatically decreased since 1991 and is now in the range of no more than 8.5% to 9.5%. As a result, the LECs' price caps are now grossly overstated because the Commission's original 11.25% rate of return remains embedded in the price caps.

In this regard, the annual adjustments to the caps do not capture these dramatic changes in the LECs' capital costs. For example, it is clear that such changes are not accurately reflected in the X-Factor. In 1997, the Commission adopted a new total factor productivity ("TFP") method for measuring the LECs' productivity.⁹⁴ In that model, the LECs' cost of capital is part of the "capital rental price," which is the cost per unit of capital input. Under the Commission's methodology, however, the capital rental price is based on the LECs' interstate rates of return, not on their real costs of capital.⁹⁵ Therefore, while the LECs' costs of capital trended downward during the 1990's as inflation and interest rates declined, the input price component of the Commission's model reflects the LECs' rates of return for the years 1990-95, which trended *upward* during that period. Thus, not only does the X-Factor fail to capture the decline in the

⁹³ See *Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket No. 87-313, Second Report and Order, ¶¶ 246-47 (1990) ("LEC Price Cap Order"); *Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 89-624, 5 FCC Rcd. 7507 (1990), *recon.*, 6 FCC Rcd 7193 (1991), *aff'd*, *Illinois Bell Tel. Co. v. FCC*, 988 F.2d 1254 (D.C. Cir. 1993).

⁹⁴ See *Price Cap Performance Review for Local Exchange Carriers, et al.*, Fourth Report and Order in CC Docket No. 94-1 and Second Report and Order in CC Docket No. 96-262 ("X-Factor Order").

⁹⁵ See *Access Charge Reform, et al.*, CC Docket Nos. 96-262 *et al.*, Reply Comments of AT&T Corp. to Refresh the Record at 16 (filed November 9, 1998).

LECs' capital costs, if anything, the X-Factor is skewed downward as if the LECs' real costs of capital had *increased*.⁹⁶

Similarly, the change in the LECs' cost of capital is not accurately reflected in the annual inflation adjustment (GDP-PI). While changes in cost of capital may be reflected to some extent in the GDP-PI, at most that economy-wide measure would reflect only the changes for a firm of average capital intensity. The price cap LECs, however, clearly are not firms of average capital intensity. Indeed, as AT&T has shown in detail elsewhere, the LECs are *twice* as capital intensive as the average firm.⁹⁷ Thus, a decrease in capital costs would result in a disproportionately large decrease in total costs for the LECs, the GDP-PI factor would at best capture only half of the impact of a change in capital costs on those LECs.

For these reasons, the Commission should order a downward exogenous adjustment to ensure that the LECs' price caps accurately reflect their true cost of capital on a going-forward basis. Such an adjustment would be fully consistent with Commission precedent. For example, at the inception of the price cap system, the Commission ordered a downward exogenous adjustment to the caps to account for the Commission's simultaneous reduction in the authorized rate of return from 12.0% to 11.25%. *See LEC Price Cap Order*, ¶¶ 246-247 ("Unless the represcription is treated as exogenous, LECs entering price cap regulation will be able to use the

⁹⁶ Nor would the X-Factor have captured changes in capital costs prior to 1997. Before 1997, the X-Factor was based on historical studies of LEC productivity that relied on data from the pre-1991 period of rate of return regulation.

⁹⁷ *See Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1, Comments of AT&T, pp. 30-33 and Exhibit E (filed May 9, 1994).

higher, pre-prescription rates as a base for their price cap rates”). Moreover, just recently the Commission expressly “recognize[d] that to the extent that decreases in the cost of capital are not reflected in the GNP-PI and GDP-PI in the original and interim plans, carriers may receive an unanticipated benefit.” *Price Cap Performance Review for Local Exchange Carriers*, CC Docket No. 94-1, Order on Reconsideration, ¶ 15 (released January 22, 1999) (“*X-Factor Recon. Order*”).⁹⁸ And the Commission has not hesitated to require the LECs to make exogenous adjustments to account for other, similar extraordinary changes in their costs, such as changes in the tax laws,⁹⁹ equal access costs,¹⁰⁰ OPEB costs,¹⁰¹ and payphone costs.¹⁰² The Commission should order such an adjustment immediately, to take effect with the LECs’ 1999 annual access filings.

⁹⁸ Although in the *X-Factor Recon. Order* the Commission declined to order a forward-looking exogenous adjustment to account for a decline in the LECs’ capital costs, it did so solely because of the Commission’s decision to retain (at that time) the 11.25 percent authorized rate of return. See *X-Factor Recon. Order*, ¶ 15 (“Because the Commission found that the cost of capital at the time of the Price Cap Performance Review First Report and Order had returned to the same levels that prevailed at the initiation of price caps, no reinitialization of PCIs was needed to reflect changes in the cost of capital on a prospective basis”).

⁹⁹ See *LEC Price Cap Order*, 5 FCC Rcd. at 6808, ¶¶ 176-77 (although tax law changes are presumptively endogenous, tax law changes that affect LECs “uniquely or disproportionately” would be treated as exogenous).

¹⁰⁰ *Access Reform Order*, 12 FCC Rcd. at 16118, *aff’d*, *Southwestern Bell Tel. Co. v. FCC*, 153 F.3d 523 (8th Cir. 1998).

¹⁰¹ *LEC Price Cap Performance Review*, 10 FCC Rcd. at 9082-83, *aff’d*, *Bell Atlantic Tel. Cos. v. FCC*, 79 F.3d at 1204 (D.C. Cir. 1996).

¹⁰² *Implementation of the Pay Telephone Reclassification and Compensation Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-128, Order on Reconsideration, 11 FCC Rcd. 21233 (1996).

CONCLUSION

For the foregoing reasons, the Commission should establish a zone of reasonableness of 8.0% to 9.0% for incumbent LECs' rates of return on interstate exchange access, set its prescribed unitary rate of return in the middle of that range at 8.5%, and use the same return for competitive LEC interconnection and universal service purposes. The Commission also should eliminate the low-end adjustment mechanisms of price cap regulation, and require an exogenous adjustment to reflect the significantly lowered allowed return.

Respectfully submitted,

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March 16, 1999

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Prescribing the Authorized)	CC Docket No. 98-166
Unitary Rate of Return for)	
Interstate Services of Local)	
Exchange Carriers)	

**AFFIDAVIT OF
BRADFORD CORNELL AND JOHN I. HIRSHLEIFER**

Qualifications and Purpose of Affidavit

1. Bradford Cornell is a Professor of Finance and Director of the Bank of America Research Center at the Anderson Graduate School of Management at the University of California, Los Angeles (UCLA). Dr. Cornell is the author of numerous articles and books, including Corporate Valuation (Homewood, Illinois: Business One Irwin 1993). He is a senior consultant to Charles River Associates, an economic consulting company through which he advises business and legal clients on financial economic issues. Dr. Cornell has testified on cost of capital issues in telecommunications proceedings before commissions in numerous states, including: Maryland, New Jersey, Pennsylvania, Washington, D.C., Texas, Missouri, Oklahoma, Michigan, Ohio, Illinois, Florida, Georgia, Virginia, and Kentucky.

2. John Hirshleifer is a principal of Charles River Associates. He has also testified in numerous proceedings regarding the cost of capital for telecommunications companies, including state commission proceeding in Delaware, Virginia, West Virginia, Ohio, Alabama, Louisiana,

Mississippi, Tennessee, and Indiana. Mr. Hirshleifer has also served as a consultant and given testimony in securities and commercial litigation.

3. We have been asked by AT&T Corp. to estimate the cost of capital associated with the provision of interstate and local exchange access services using the best available annual market data. We have also been asked to discuss other cost of capital related issues raised in the Commission's *Notice*.¹

4. Based on an examination of available market data and application of established financial economic principles through standard discounted cash flow and risk premium methodologies, we estimate that the forward-looking cost of capital of publicly traded firms that are the closest available surrogates for pure providers of interstate and local exchange access services is in the range of 8.5 to 9.5 percent. This range is supported by cost of capital estimates performed by Wall Street financial advisors. As explained more fully below, we believe this range overstates somewhat the relevant cost of capital associated with the provision of interstate and local exchange access services, because it is inflated by the much riskier businesses in which each of the surrogate firms engages in addition to its provision of access services. In addition, 30-year Treasury bond yields have fallen from 5.93% as of December 31, 1997 – the last date for which annual data on all the RBHCs currently is available – to 5.57% as of March 11, 1999. This decline of 36 basis points since the effective date of our WACC estimate most likely has reduced even further the incumbent LECs capital costs.

¹ *Prescribing the Authorized Unitary Rate of Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 98-166, "Notice Initiating a Prescription Proceeding and Notice of Proposed Rulemaking," (rel. October 5, 1998) ("*Notice*").

The Weighted Average Cost of Capital

5. A firm's overall cost of capital is computed based on the particular blend of debt and equity financing used. This overall cost of capital, which is called the firm's "weighted average cost of capital" (WACC), is specified by the following mathematical formula:

$$\text{WACC} = w_d * k_d + w_e * k_e \quad (1)$$

where,

- w_d = the fraction of debt in the capital structure,
- k_d = the forward-looking cost of debt,
- w_e = the fraction of equity in the capital structure,
- k_e = the forward-looking cost of equity.

6. To evaluate the formula, one must estimate the forward-looking cost of both debt and equity using methodologies accepted by both financial economists and regulators. In addition, one must estimate the appropriate capital structure mix of debt and equity capital. With these inputs, the WACC can be calculated from equation (1).

7. To estimate the cost of capital associated with access to local services for long distance companies, the WACC formula should first be applied to the closest comparable companies for which market data are available. Large telephone holding companies are the closest which are available for this purpose.

Comparable Telecommunications Companies

8. We support the Commission's tentative conclusion in its Notice that the five regional Bell holding companies ("RBHCs") are appropriate publicly-traded comparable companies. We have also performed cost of capital calculations for two alternative sets of comparable companies. The first alternative set consists of the five RBHCs and GTE. The second alternative set consists of the five RBHCs, GTE, ALLTEL, Century Telephone, Cincinnati

Bell, GTE, and SNET. The addition of these other companies to the Commission's proposed set of comparable companies would not have a significant effect on the ultimate cost of capital estimate.²

9. Modern diversified corporations like telephone holding companies operate dozens of different businesses, some of which are riskier than others. Consequently, the operating risk of the corporation is a weighted average of the risks of all of its constituent businesses. There are some risks associated with the business of providing long distance companies access to local telephone facilities. There is the risk of regulation itself. The return a network is allowed to earn depends on the outcome of proceedings such as this and remains somewhat uncertain. That risk is reduced by the FCC's compensatory rules which provide incumbent LECs an opportunity to recover market rates of return. In addition, there remains some risk that access customers will bypass the incumbent LEC's network as other alternatives become available.³ We understand that despite this theoretical risk, incumbent LECs continue to provide more than 90% of such access services. In any event, these risks are substantially less than the risks faced by telephone holding companies' other businesses.

10. Incumbent LECs, even those not owned by RBHCs, enjoy enormous scale economies and market power resulting from their installed infrastructures. This has been noted clearly by the FCC in its efforts to encourage nascent competition intended by the Telecommunications Act of 1996. For example, in its Local Competition Order, the FCC stated

² As noted below, we find a cost of capital range of 8.12% to 9.15% for the RBHCs. The cost of capital for the first alternative set ranges from 8.07% to 9.15%. The cost of capital for the second alternative set ranges from 8.03% to 9.15%.

³ Under capital market theory, however, competitive risks are not relevant for computing the cost of capital because they can be diversified away.

that “[t]he incumbent LECs have economies of density, connectivity, and scale; traditionally, these have been viewed as creating a natural monopoly.”⁴

11. The sample of companies for which cost of debt and equity are estimated is composed of diversified telephone companies. These companies operate a variety of businesses, virtually all of which face a great deal more operating risk than leasing a local exchange network. The company to which the WACC should be applied, however, is one which is involved exclusively in leasing network facilities, and thus the holding company-based WACC will overstate the relevant cost of capital. Under these circumstances, using a higher debt weight than the current market value weights for the sample companies is one way to take account of the relative risks.

The Cost Of Debt Capital

12. Because debt payments are fixed, the cost of debt can be computed directly and with a high degree of accuracy.⁵ The best estimate of the cost of debt for a telephone company is the weighted average forward-looking cost over all of the company’s outstanding issues, including the debt of the holding company and any subsidiaries. Standard & Poor’s Bond Guide (Bond Guide) provides information on the face value and current yields to maturity on individual bonds.⁶

13. Bond data from the Bond Guide for all of the RBHCs are presented in Attachment 2. As noted, only the weighted average yield to maturity on debt of the company whose cost of

⁴ *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, First Report and Order, CC Docket No. 96-98 (Rel. August 8, 1996), ¶ 11.

⁵ *Stocks, Bonds, Bills and Inflation, 1996 Yearbook*, Ibbotson Associates, Chicago, Illinois, pg. 146.