appropriate statistical tests show no difference in the average productivity differential between Dr. Norsworthy's short run period and the long run. In fact, while LEC input prices grew more slowly than U.S. input prices in the years immediately following divestiture, they grew *faster* in the most recent years. Thus, the forecast of a zero input price growth differential is conservative in this light.

Thirdly, in contrast to Dr. Norsworthy's claims, the proper weights for combining output growth rates to measure the growth rate of aggregate output *for a price cap plan* are revenue weights. The purpose of the productivity target in a price cap plan is so that revenue changes will track cost changes when the LEC meets the expected productivity target. Economic theory demonstrates that a productivity study that combines output quantities with revenue weights satisfies this objective, and Dr. Norsworthy is wrong in asserting that only marginal cost weights are appropriate.

In short, there is little useful information in Dr. Norsworthy's submissions. While his productivity calculations are new, they are based on an idiosyncratic notion of the price and quantity of capital, and one cannot directly translate his results into a conventional measure of total factor productivity growth. Notwithstanding Dr. Norsworthy's other claims, the best estimates of LEC historical productivity growth are those calculated by Christensen Associates, and the data continue to show that the average short-term historical input price differential is consistent with its long term average value of zero.

ATTACHMENT C

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Affidavit of Dr. James H. Vander Weide in Support of Reply Comments of the United States Telephone Association

James H. Vander Weide

James H. Vander Weide Co.

USTA Reply Comments 3/1/96

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

In the Matter of	)	
	)	
Price Cap Performance Review for Local Exchange Carriers	)	CC Docket 94-1
	)	
Fourth Further Notice of Proposed Rulemaking	)	
	)	

AFFIDAVIT OF DR. JAMES H. VANDER WEIDE IN SUPPORT OF REPLY COMMENTS OF THE UNITED STATES TELEPHONE ASSOCIATION

March 1, 1996

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AFFIDAVIT OF DR. JAMES H. VANDER WEIDE
IN SUPPORT OF REPLY COMMENTS OF
THE UNITED STATES TELEPHONE ASSOCIATION

I. Introduction

1. I am Research Professor of Finance and Economics at the Fuqua School of Business, Duke University. I have taught courses in corporate finance, investment management, management of financial institutions, statistics, economics, and operations research, as well as a Ph.D. seminar on the theory of public utility pricing. In addition to my teaching and executive education activities, I have written a book entitled *Managing Corporate Liquidity: An Introduction to Working Capital Management*, and written numerous articles and research papers on such topics as portfolio management, the cost of capital, capital budgeting, the effect of regulation on the performance of public utilities, and cash management. I hold a Ph.D. in finance from Northwestern University and a

B.A. from Cornell University. A brief review of my background is contained in Appendix 1 to this affidavit.

2. In response to the Commission's Fourth Further Notice of Proposed Rulemaking (the "Fourth Notice"), AT&T, MCI, and the Ad Hoc Telecommunications Users Committee (collectively, the "Respondents") present proposals for measuring productivity that focus on accounting rates of return on investment rather than true economic productivity. I have been asked by United States Telephone Association[1] to respond to these productivity proposals. For the reasons set forth below, I have concluded that the respondents' proposals are flawed in material respects.

3. This affidavit will demonstrate that: 1) the Respondents' productivity proposals are thinly-veiled attempts to reimpose rate of return regulation; 2) the Respondents' allegations that the LECs' accounting rates of return from 1991—1994 were excessive are neither true nor relevant; 3) the Respondents' failure to recognize the differences between economic and accounting rates of return causes them to reach incorrect conclusions concerning productivity, depreciation, and sharing; and 4) the Commission correctly moved away from rate of return regulation when it implemented its Price Cap Plan and should not reimpose rate of return regulation.

[1]I was also asked by Bell Atlantic to update the filing I made on their behalf in the initial round of this proceeding.

II. The Commission should regulate prices, and not rate of return as advocated by the Respondents.

4. In 1990, the Commission instituted a price cap plan for the participating LECs that, unlike the predecessor rate of return regulation plan, is designed to regulate the LECs' access ***prices*** rather than their ***rates of return*** on investment. The Commission correctly recognized in establishing the price cap plan that rate of return regulation: 1) "discourages efficient investment;" 2) "encourages cost shifting;" 3) provides "little profit incentive to introduce new and innovative services;" and 4) "requires elaborate regulatory oversight of all the carriers' costs."[2] In contrast, pure price cap regulation provides incentives for the price cap LECs to reduce costs, invest in new telecommunications infrastructure, and introduce new products and services. Pure price cap regulation also reduces the administrative burdens of: determining revenues, expenses, and rate base; arbitrarily allocating revenues, expenses, and rate base to the interstate jurisdiction; and determining an appropriate depreciation allowance in a rapidly changing technological environment.

5. Despite the Commission's denunciation of rate of return regulation, the Respondents continue to urge the Commission to regulate the LECs' accounting rates of return on the "interstate portion" of their investment (an investment figure that is derived using arbitrary separation procedures). In their responses to the Fourth Notice, the Respondents

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[2]*Price Cap Performance Review for Local Exchange Carriers*, 9 FCC Rcd 1687 at §11 (1994).

present proposals based on their complaint that the LECs' regulatory accounting rates of return on their interstate investment are "excessive." The Respondents claim that the Commission should adopt productivity offsets designed to produce rates of return that the respondents deem more reasonable. As a result, the Respondents propose a return to rate of return regulation rather than proposing an economically meaningful measure of productivity gains actually experienced by the LECs.

6. AT&T, for example, presents what it characterizes as a total factor productivity model, the "Performance-Based" Model, that is based on the LECs' achieved accounting rates of return on investment during the price cap period. AT&T's Performance-Based Model was developed in conjunction with their consultant, Dr. John R. Norsworthy. In his report, Dr. Norsworthy states that a "principal difference between the [Christensen] Model and the Performance-Based Model involves their respective assignment of costs to capital."[3] Dr. Norsworthy treats the price cap LECs' achieved rate of return on capital during the price cap period, based on regulatory accounting principles, as his estimate of the price cap LECs' cost of capital in the market place. Christensen, on the other hand, correctly measures the price cap LECs' cost of capital from capital market data. AT&T's "Performance-Based" Model produces a higher productivity or X-Factor for the LECs than the Christensen model partly because AT&T incorrectly uses the LECs'

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[3]Appendix A, Statement of Dr. John R. Norsworthy, "Analysis of TFP Methods for Measuring the X-Factor of the Local Exchange Carriers' Interstate Access Services," pp. 20—21.

achieved regulatory accounting rate of return on investment as their estimate of the cost of capital. By relying on accounting returns, AT&T's model has more in common with rate of return regulation than with productivity-based price caps.

7. AT&T's latest approach is fundamentally no different than another proposal it made earlier in this proceeding—a proposal it called a "Direct Method" for measuring productivity and that the Commission dubbed the Historical Revenue Method. AT&T's earlier proposal urged the Commission to set an X-Factor in the Price Cap Plan that, had it been in place during the price cap period, would have reduced the LECs' achieved accounting rates of return during the price cap period to the Commission's estimate of the cost of capital. As a result, that earlier proposal entailed a full scale retreat to rate of return regulation, and with it a return to all the problems the Commission sought to avoid by moving toward price cap regulation.

8. Despite its "new" appearance, AT&T's current model is actually just a dressed-up version of its earlier rate of return proposal. Both proposals urge the Commission to regulate the price cap LECs' accounting rates of return on investment—measured by arbitrary cost allocation, depreciation, and other regulatory accounting standards—just as the Commission did under rate of return regulation. If the LECs' accounting rates of return increase, AT&T's latest proposal—like its earlier one—would produce reductions to the LECs' access rates to the point that their

regulatory accounting rates of return equal their prescribed economic cost of capital.

9. Similarly, other respondents also focus their attention on rate of return concepts that are not relevant under price caps. For example, MCI claims that the LECs are earning "excessive profits," as measured by their regulatory accounting rates of return, and goes on to argue that these profits were not a result of under-depreciation. Based on these claims, MCI also urges the Commission to effectively retreat to rate of return regulation in order to set access rates that would eliminate the LECs' supposed "high profit levels during the price cap period."[4]

10. Likewise, the Ad Hoc Committee also urges a backtrack to rate of return concepts, and goes so far as to argue that "the Commission . . . may not regulate LEC rates without regard to whether the LECs' earnings from such rates are within the zone of reasonableness." The Ad Hoc Committee's filing also is replete with claims of "excessive profits" or "excessive returns," and it relies upon these claims as the basis for its argument that the Commission should adopt an extraordinarily high productivity factor in order to reduce the LECs' supposed excess profits.[5]

11. Because they focus on the price cap LECs' rates of return on investment rather than their true economic productivity, the

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[4]Appendix A, "Depreciation Policy in the Telecommunications Industry: Implications for Cost Recovery by the Local Exchange Carriers," page 4, by Kenneth C. Baseman and Harold Van Gieson, in MCI Telecommunications Corporation's *Comments*.

[5] Ad Hoc Committee *Comments*, p. 2, p. 8, p. 48, p. 49.

Respondents' proposals are thinly-veiled attempts to reimpose rate of return regulation. Under rate of return regulation, a firm's rates are based on the Commission's judgment of the firm's cost of capital, which becomes its authorized rate of return. If the firm increases its earnings beyond its authorized rate of return as a result of efficiency improvements or the introduction of successful new products, its "reward" will be a mandated decrease in its rates to bring its overall rate of return back to the authorized level. The effect of increasing the productivity factor and reducing the price cap index to take away alleged over earnings is the same as the effect of rate of return regulation.

12. The Commission correctly moved away from rate of return regulation, with its disincentive effects and administrative burdens, when it instituted the price cap plan. In response to the Commission's Fourth Further Notice on price cap regulation, the Respondents have recommended productivity proposals that would have the same effect as rate of return regulation: they would reduce the price cap LECs' rates whenever the price cap LECs' achieved accounting rates of return, based on regulatory cost allocations and depreciation rules, exceed the Commission's estimate of the price cap LECs' cost of capital. Adopting the Respondents' productivity proposals would reintroduce the same skewed incentives and administrative burdens that the Commission sought to avoid when it adopted its Price Cap Plan. The Commission should not return to rate of return regulation now in reaction to the ill-conceived productivity proposals of the Respondents.

III. Economic rates of return measure actual economic performance, while accounting rates of return do not.

13. While any review of earnings or returns is inappropriate in a price cap environment, if the Commission nevertheless wishes to evaluate the charge that the LECs' earned rates of return on investment are "excessive," the Commission must distinguish between the price cap LECs' economic and accounting rates of return on investment. The term "rate of return on investment" is generally defined as the ratio of the income, or profit, per period from an investment to the dollar amount of the investment at the beginning of the period. The economic and accounting definitions of "rate of return on investment" differ primarily in their definitions of "income" and "amount of the investment" at the beginning of the period.

14. Economists rely on the economic definition of "income" and "amount of investment" presented by Nobel Prize winner J. R. Hicks in his classic work titled, *Value and Capital.* On page 172 of his work, Hicks states,

> The purpose of income calculations in practical affairs is to give people an indication of the amount which they can consume without impoverishing themselves. Following out this idea, it would seem that we ought to define a man's income as the maximum value which he can consume during a week, and still expect to be as well off at the end of the week as he was at the beginning. Thus, when a person saves, he plans to be better off in the future; when he lives beyond his income, he plans to be worse off.

According to this definition, the economic income from an investment is the sum of the cash flow from the investment during the period plus the change in market value of the investment. (If an individual consumes the cash flow

plus the change in the market value of the investment, the individual's wealth will be the same at the end of the period as at the beginning.) Likewise, according to this definition, the amount of the investment is the market value of the investment at the beginning of the period. Thus, the ***economic rate of return on an investment*** is current cash flow, plus the change in market value, divided by the market value of the investment at the beginning of the period.[6]

15. In contrast to economists, accountants define income as the difference between total revenues and expenses, where revenues and expenses are defined in accordance with Generally Accepted Accounting Principles (GAAP). While it is difficult to describe GAAP briefly, GAAP is essentially based on historical costs rather than market values, accrued revenues and expenses rather than cash flows, and accounting depreciation rather than economic depreciation. In addition, accountants define the amount of investment as the book value of investment (original cost minus book depreciation), not the market value of investment.

16. Moreover, regulatory accounting for LECs does not even rely on GAAP, but instead is based on regulatory requirements. Accounting rates of return based on regulatory accounting principles distort economic reality to an even greater extent than accounting rates of return based on

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[6]See "Some Aspects of the Pure Theory of Capital," by Paul Samuelson, in *The Quarterly Journal of Economics,* May 1937; and *Investments,* 4th edition, by William F. Sharpe and Gordon J. Alexander, Prentice Hall, 1990, page 509.

GAAP because regulatory accounting rates of return depend on cost allocation and depreciation rules that are ultimately arbitrary.

17. The difference between the economic and accounting rates of return on an equity investment can now be stated succinctly. The economic rate of return is equal to the dividend yield from the investment (that is, dividend divided by price), plus the percentage change in the market value of the investment during the period (that is, the capital gain). The accounting rate of return is equal to earnings divided by the book value of the investment at the beginning of the period. Since earnings is equal to dividends plus the change in book value, however, the accounting rate of return is also equal to the dividend yield on book value (i.e., dividends divided by book value), plus the percentage change in book value during the period.[7]

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[7]These ideas are expressed mathematically as follows. The economic rate of return is equal to:

$$\textit{Economic Rate of Return} = \frac{D_t}{P_{t-1}} + \frac{P_t - P_{t-1}}{P_{t-1}}$$

where:

D_t = dividends during period t
P_t = market value of investment at end of period t
P_{t-1} = market value of investment at beginning of period t.

The accounting rate of return is equal to:

$$\textit{Accounting Rate of Return} = \frac{E_t}{B_{t-1}}$$

where:

E_t = earnings during period t

(continued...)

18. Accounting rates of return do not indicate the return investors actually receive on their investment in the price cap LECs. Accounting rates of return are based on: 1) accounting rather than economic depreciation, 2) book values rather than market values, and 3) accrued revenues and expenses rather than cash flows.[8] In addition, regulatory accounting rates of return are based on prescribed depreciation rates that are lower than those used by comparable firms in competitive markets.

19. The Commission recognized the distinction between economic and accounting rates of return in its *First Report and Order* when it

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[7](...continued)

B_{t-1} = book, or accounting, value of investment at beginning of period t.

Since earnings during period *t* can also be expressed as:

$$(B_t - B_{t-1}) + D_t$$

where:

B_t = book, or accounting, value of investment at end of period t

B_{t-1} = book, or accounting, value of investment at beginning of period t

D_t = dividends during period t,

the accounting rate of return is also equal to:

$$\textit{Accounting Rate of Return} = \frac{D_t}{B_{t-1}} + \frac{B_t - B_{t-1}}{B_{t-1}}$$

[8] See, for example, Ezra Solomon, "Alternative rate of return concepts and their implications for utility regulation," *The Bell Journal of Economics and Management Science*, Spring 1970, pp. 65—81; and Franklin M. Fisher and John J. McGowan, "On the Misuse of Accounting Rates of Return to Infer Monopoly Profits," *American Economic Review*, Vol. 73, No. 1, March 1983, pp. 82—97.

ruled that the price cap LECs cannot treat the increased accounting expenses resulting from accounting rule changes, such as SFAS 106, as "exogenous costs" under the Price Cap Plan. The Commission defended its rule by stating that:

> a change in accounting rules that has an impact on a LEC's discounted cash flow represents a change in the LEC's economic costs and should be eligible for exogenous treatment . . . Conversely, an accounting change that does not affect a LEC's discounted cash flow does not represent a change in the LEC's economic costs and should not be eligible for exogenous treatment.[9]

If the focus on economic rates of return is appropriate regarding the treatment of exogenous costs,[10] the focus on economic rates of return is even more appropriate to evaluate the Respondents' productivity proposals. The Respondents' emphasis on accounting rates of return is inconsistent with the Commission's reasoning in the *First Report and Order*.

20. Economic and accounting rates of return on investment can differ significantly and can move in different directions. If, for example, the market value of an investment is increasing less rapidly than book value,

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[9]Price Cap Performance Review for Local Exchange Carriers, *First Report and Order*, CC Docket No. 94-1, FCC No. 95-132 (released April 7, 1995), at §295.

[10]While the Commission relied on economic return concepts in its evaluation of exogenous costs, it failed to recognize when it applied the concept to new accounting standards for the LECs' post-employment benefit costs that the new accounting standard was designed to measure the true economic effect of a firm's current employment decisions. Specifically, the new accounting standard recognizes that a firm incurs a liability when it employs an individual in the current period, and that the liability, as measured by the discounted present value of a firm's future health outlays, must be recognized as a current economic expense. Thus, the new accounting standard ***does*** measure the economic costs associated with a firm's current employment decisions.

then the economic rate of return will be moving down relative to the accounting rate of return. On the other hand, if the market value is increasing more rapidly than book value, then the economic rate of return will be increasing relative to the accounting rate of return. Regardless of which circumstance prevails, ***the economic rate of return is always a better measure of actual economic performance***.

IV. The LECs' economic rates of return during the price cap period are significantly less than their accounting rates of return.

21. If the Commission wishes to evaluate the economic performance of the price cap LECs under the price cap plan, the Commission should review data regarding the LECs' economic rates of return on capital rather than their accounting rates of return on capital. As shown on Schedule 1, I have calculated the LECs' economic rates of return on total capital using Bureau of Economic Analysis data on the current value of various categories of telecommunications equipment and total dividend data for the price cap LECs. The price cap LECs' total company economic rate of return on investment was 8.94 percent for the period 1991-94.

22. These economic earnings are not only below the accounting earnings reported by the LECs, but they are also below the Commission's 11.25% rate of return benchmark. The benchmark is based on cash flows and market values, not accrued income and book values. As such, it is itself an *economic* benchmark that is only comparable to *economic* rates of return. Thus, if they were to be evaluated under a rate of

return standard, the LECs would be legally entitled to *raise* rates based on their current returns.

V. AT&T's model incorrectly relies on accounting rates of return to measure the cost of capital.

23. AT&T's proposed model not only relies on rate of return concepts, but uses regulatory accounting results rather than economic returns. According to AT&T's consultant Dr. Norsworthy,

> The difference between these models [the AT&T Model and Dr. Christensen's TFP model] lies in the respective assignments of costs to capital. The Performance-Based Model, like the regulatory process itself, treats the difference between total revenues (TR) and labor and materials expense (E_H, E_M) as **a gross return to capital.** Thus, in the Performance-Based Model all revenues received by the LEC are assigned to some input cost category. By contrast, the USTA assumed rate-of-return model presupposes a **long-term user cost** per unit of capital, and assigns a total cost of capital, AC_K, that is the product of the quantity of capital input, K, and the long term user cost, P_K^*, which is based on an *assumed* **rate of return.**[11]

Thus, one difference between the AT&T Model and the Christensen model is that the AT&T Model uses the LECs' regulatory accounting rate of return on capital to measure the LECs' cost of capital, while the Christensen model measures the LECs' cost of capital directly.

24. AT&T's use of the price cap LECs' achieved regulatory accounting rates of return as its measure of the price cap LECs' cost of capital in its "Performance-Based" Model makes no economic sense. The cost of capital is an economic concept that is based on investors' estimates

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[11] *Comments of AT&T*, page 37. (emphasis original to Dr. Norsworthy)

of future cash flows and the market value of investment. The accounting rates of return used in the AT&T model are based on accrued income and book value as measured by regulatory accounting principles. Accounting rates of return are affected by regulatory accounting rules that have little to do with the LECs' economic performance. The LECs' regulatory accounting rates of return can neither be compared to the cost of capital nor used as an estimate of their cost of capital.

25. Dr. Norsworthy defends his use of the LECs' accounting rates of return as estimates of the cost of capital in two ways. First, he alleges that the Christensen study assumes that the LECs adjust their capital stock rapidly to the cost minimizing level and that his data contradict this assumption (see pages 32-33 of Dr. Norsworthy's report). Second, Dr. Norsworthy argues that "there is no incentive under [Dr. Christensen's] approach to price cap regulation for the LECs to adjust the quantity of capital to the overall cost-minimizing level".[12] Neither of Dr. Norsworthy's arguments is correct.

26. Dr. Norsworthy uses an incorrect measure of the cost of capital, and then relies on this mistake to support his criticism of Dr. Christensen. Dr. Norsworthy attempts to test the assumption that capital stocks adjust rapidly to their overall cost-minimizing level by studying variations in the gross return to capital and variations in the capital stock from 1985 to 1994. Since the gross return to capital varies more than the

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[12]AT&T *Comments*, p. 38.

capital stock, Norsworthy concludes that Dr. Christensen's assumption of rapid capital stock adjustment is incorrect. Dr. Norsworthy's comparison of the variability in the gross return to the capital stock, however, is based on his own incorrect assumption that the gross return to capital, as measured by regulatory accounting rules, is equal to the LECs' cost of capital. As discussed above, the accounting rate of return on investment is ***not*** equal to the cost of capital because the accounting rate of return is based on accrual accounting concepts and book values rather than cash flows and market values. The observation that the LECs' accounting rates of return varied more than their capital stock, is evidence only that Dr. Norsworthy failed to measure the cost of capital correctly, not that the LECs failed to adjust their capital stocks to changes in the cost of capital.

27. Dr. Norsworthy's contention that Dr. Christensen's TFP approach provides no incentive for the LECs' to adjust their capital stock to the cost-minimizing level demonstrates his lack of understanding of the price cap plan. If the LECs' can reduce their costs by adjusting their capital stock, their economic profits will rise. So long as the price cap plan allows the LECs to retain profit increases, the LECs have every incentive to adjust their capital stock to the overall cost-minimizing level. In contrast, the AT&T Model—like any rate of return scheme—provides no incentives for the LECs' to adjust their capital stocks to the cost-minimizing level. The profits they could achieve from such adjustments would be passed through to IXCs and the IXC shareholders.

VI. MCI's depreciation study fails to distinguish between accounting concepts and economic concepts.

28. In their initial response to the FCC's price cap performance review for local exchange carriers, the LECs' demonstrated that their accounting profits for the price cap period, 1991—1993, were distorted by inadequate depreciation reserves.[13] MCI now attempts to refute the LECs' results through a depreciation study prepared by Kenneth C. Baseman and Harold Van Gieson. The Baseman/Van Gieson study presents data on the RBOCs' FCC-prescribed depreciation reserve deficit from 1983 to 1994. Since the FCC-prescribed depreciation reserve deficit declined from $21 billion in 1983 to $3.16 billion in 1994, Baseman and Van Gieson argue that the RBOCs' profits are not distorted by inadequate depreciation reserves.[14]

29. Despite their assertion to the contrary, the Baseman/Van Gieson study ***does not*** support their conclusion that the RBOCs' "current depreciation rates are adequate." Like the Norsworthy productivity study sponsored by AT&T, the Baseman/Van Gieson study fails to distinguish between accounting concepts and economic concepts. The accounting depreciation rates studied by Baseman and Van Gieson are designed to allocate the original or historical cost of the RBOCs' investments over their assumed useful lives. Many of the RBOCs' assets have useful lives ranging from 10 to 20 years. Even assuming for the moment that these useful lives

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[13]*Comments of the United States Telephone Association*, CC Docket No. 94-1, p. 16, filed May 9, 1994.

[14]Baseman and Van Gieson, *op.cit.*, page 4.

are not too long in today's environment of rapid technological changes, in a period of inflation, accounting depreciation is *never* sufficient to measure the cost of replacing long-lived assets. Economists, therefore, measure depreciation based on the replacement cost of assets, not the original or historical cost. Since the replacement cost of the RBOCs' assets exceeds their historical cost, the RBOCs' current depreciation rates are inadequate to cover the cost of replacing their assets.

30. The Baseman/Van Gieson study suffers from several additional flaws that invalidate their conclusions. First, the Baseman/Van Gieson study is based primarily on FCC-approved depreciation rates rather than market-determined depreciation rates. As noted in my previous affidavit in this docket, the RBOCs' depreciation rates are significantly less than the depreciation rates of competitors such as AT&T, whose depreciation rates effectively are unregulated. If the price cap LECs had used the same depreciation rates as AT&T during the price cap period 1991—1994, the LECs' average accounting rate of return would have been reported as 8.17%. While still failing to measure the true ***economic*** returns of the price cap LECs, this accounting return does illustrate the significant effect of inadequate depreciation on the LECs' reported accounting rates of return during the price cap period. Second, Baseman and Van Gieson report a significant increase in the depreciation reserve deficits when they include only those states with depreciation hearings in 1995. Thus, contrary to Baseman and Van Gieson's assertions, according to the most recent data, the depreciation reserve deficit is now dramatically greater than Baseman

and Van Gieson's first estimate. Third, Baseman and Van Gieson did not measure the effect of the RBOCs' depreciation reserve deficits on their reported rates of return.

VII. Retaining a sharing requirement in today's competitive access environment serves no useful economic function and is counterproductive.

31. The Respondents recommend that the Commission retain some form of sharing in the price cap plan. Their arguments to retain sharing again ignore the significant differences between accounting and economic rates of return. The Commission's current sharing rules are based on a calculation of a LEC's achieved accounting rate of return during the previous year. As noted in Section IV, the LECs' accounting rates of return exceed their economic rates of return. As long as the sharing rules are based on the LECs' accounting rates of return, the LECs may have to share their earnings with ratepayers even though their economic rate of return is not in excess of the Commission's estimate of their cost of capital. Thus, the sharing rules, based on accounting earnings, deny investors their right to earn a fair and reasonable rate of return for the use of their property invested in the LECs' telecommunications networks.

32. As the Commission has correctly recognized,[15] sharing also blunts the incentives of the LECs to reduce costs, invest in new telecommunications infrastructure, and introduce new products and services.

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[15] *Price Cap Performance Review for Local Exchange Carriers*, 9 FCC Rcd 1687 at §11 (1994).

If the LECs improve their profits through cost reductions or the introduction of new products and services, their rates will potentially be reduced through sharing. The disincentive effect of sharing is especially pronounced as the achieved accounting rate of return approaches the sharing level.

33. As long as the Commission retains the sharing mechanism, the price cap LECs are required to allocate costs between services through complex cost allocation manuals and to allocate costs over time through complicated, non-economic depreciation schedules. The allocations required by the revenue sharing mechanism, however, cannot be justified on economic grounds: they are arbitrary. Thus, the large expense and administrative burden of the cost allocation procedures produce no economic benefits to either ratepayer or shareholder. By removing the sharing mechanism, however, the Commission could eliminate the need to make expensive and economically unjustified cost allocations.

34. A major purpose of price cap regulation is to break the link between a price cap LEC's costs and its rates. Because it perpetuates the link between costs and rates, sharing is contrary to this goal of price cap regulation. The Commission recognized the need to break the link between a price cap LEC's regulatory accounting costs and its rates in its *First Report and Order*:

> Our decision to retain this aspect of cost-plus regulation was appropriate for the beginning of the transition from rates based on regulatory accounting costs to rates that approximate the prices that would be produced in a competitive market. . . As the pricing flexibility afforded by the price cap plan increasingly allows LECs to adjust rates to track economic costs, and to respond to competitive challenges, the link between current

> prices and the initial price cap rates should become more tenuous.[16]

Since sharing rules also have the "effect of perpetuating the relationship between accounting costs and rates," they should be abandoned.

35. The provision of access services has become increasingly competitive in recent years as competitive access providers have extended their networks to virtually all major cities in the United States. With the recent signing of the telecommunications legislation by the President, and its requirements for further market openings, access markets will likely become even more competitive in a very short time. In competitive markets, companies can not earn excessive rates of return because, if they do, competitors will enter the market at lower prices. Economists recognize that regulation can never replace competition as the ultimate regulator of company profits. In today's competitive access environment, it is even more clear that sharing serves no useful economic function.

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[16]Price Cap Performance Review for Local Exchange Carriers, *First Report and Order*, CC Docket 94-1, FCC No. 95-132, at §298—299.