

Impacts of the 1996 Telecom Act on Investment and Innovation

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In February 1996, the President signed into law a bill that marked an important milestone, but did little to close almost two decades of discussion, debate, and dispute over regulatory reform in telecommunications.¹ The Telecommunications Act of 1996 was widely and enthusiastically hailed as the beginning of a new era in telecommunications, promising:

- New jobs, lower rates, and more choices for consumers.
- Better and more diverse services.
- In general, a more robust and efficient information infrastructure to support a growing and more productive economy in the years to come.

President Clinton stated his goals on the day the new law was passed:

For the past three years, my administration has promoted the enactment of a telecommunications reform bill to stimulate investment, promote competition, provide open access for all citizens to the Information Superhighway, strengthen and improve universal service.... As a result of this action today, consumers will receive the benefits of lower prices, better quality, and greater choices in their telephone and cable services.... With this legislation today we are building the Informa-

tion Superhighway that will lead all Americans into a more prosperous future.²

More than a year after the act was passed, few of these benefits have been realized. The reasons are complex and subject to dispute. We count ourselves among those who maintain that it is too early to judge the long-term effects of the act. Competition is a process that simply does not materialize and yield visible results overnight. And, market processes cannot even begin here until the accumulation of the 60-year legacy of monopoly protection and regulation is first undone and redirected in regulatory proceedings that protect rights to due process and are otherwise consistent with the enormous economic and public interest stakes in play. These lags are compounded by uncertainty about how best to proceed to unwind the morass of intertwined economic relationships that have sprung up in response to decades of hands-on regulatory micro-management of market structures and commercial behavior.

While some advocates in legal proceedings and the continuing policy debates will disagree, we believe Congress intended to achieve its public interest goals via three paths:

- Increased competition.
- Less regulation.
- Increased incentives for investment and innovation.

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The Federal Communications Commission (FCC) has emphasized the first of these goals—increasing competition, particularly for local exchange telephone companies—while promising the second, and virtually ignoring the third. However, understandable though it might be, there has been little, if any, visible progress toward deregulation; and, there has been virtually no discrete, identifiable regulatory activity designed to promote investment and ensure high rates of innovation.

The focus of this article is on establishing conditions conducive to investment and innovation in this important sector of the economy.³ We are particularly concerned with the constellation of issues and questions related to the impact of the Telecommunications Act of 1996 and the FCC's implementation of it on capital markets and the incentives for carriers to undertake risky investments. In this article, we will:

- Review the recent market performance of stocks in the telecom network sector.
- Discuss some possible reasons for that performance.
- Present a simple financial valuation model to aid our understanding.
- Report on some recent research in progress on the sensitivity of telecommunications securities prices to interest rates and other factors.

Reaction of Capital Markets

Stock prices, including those for telecommunications firms, reflect all available information with implications for their value. At least, that is what the theory of efficient capital markets teaches. Investors trade on information about the environment in which firms operate. Not surprisingly, some events and activities matter more than others, and not everything has a measurable impact on shareholder valuations. Intuition and the theory of stock price determination agree that, for an industry like telecommunications which has historically been the object of considerable hands-on regulation by several levels of government, changes in the

fundamental and controlling legal framework will influence how investors regard those securities vis-à-vis the millions of other available investment opportunities.

We have compiled market data on selected companies drawn from the telecommunications and information industry sectors. We examine the market performance—as measured by their weighted average composite stock prices—of the large local exchange companies and the Big Three interexchange carriers relative to a commonly-used broad market average of industrial stocks, the Standard and Poor (S&P) 500.⁴ Table 1 illustrates similar data of S&P relatives for an expanded set of telecom network stocks, including wireless, cable television operators, and a composite of the four classes of telecom networks. We also analyze the composite index of telecom network providers (large LEC holding companies, Big Three interexchange companies, wireless service providers, and cable television system operators) against the S&P 500 index and stock price indices for selected software companies and hardware (semiconductor and computer manufacturers) companies.

These data paint a disappointing picture of the stock market performance of telecommunications network services providers in recent months. We have selected time periods that permit consideration of market performance since passage of the Telecom Act. Telephone company stocks have not fared all that well in the bull market of the past year. Using the S&P index as an admittedly crude measure of the performance of the market, the relative trends show the telephone companies losing ground to the market since the beginning of 1996, and particularly since the passage of the act in February of last year. The loss is substantial, with phones down about 25% in the past year against broad market averages.

Such averages, of course, conceal important details with critical influences on individual stocks. During this time, several events of clear consequence for some of these stocks—other than the act and its

Table 1
Telecom Network Services Providers Relative to S&P 500

Trading Dates	Large Telcos	Big 3 Long Distance Carriers	Wireless Providers	Cable TV Operators	Telecom Network Composite
December 31, 1993	100.00	100.00	100.00	100.00	100.00
December 31, 1994	93.57	93.01	115.59	64.07	94.15
December 31, 1995	100.48	90.55	82.32	63.68	96.90
February 8, 1996	100.29	86.67	85.28	65.67	96.01
December 31, 1996	82.09	72.61	56.18	44.59	73.95
April 25, 1997	80.43	60.66	48.31	37.50	70.33

Source: One Source Information Services

initial implementation—have transpired. Market watchers would point out:

- The effects of AT&T's divestiture of Lucent.
- The impact of the British Telecom and MCI merger.
- The prospective joining of Bell Atlantic and NYNEX, and of Pacific Telesis and SBC.
- The myriad forces influencing the very substantial, diversified, nontelephone activities in which these companies are engaged.

These effects are important, but other stocks in the S&P index are experiencing comparable kinds of idiosyncratic influences as well. While correlation does not establish causation, the trends here are striking and tempt us to conclude that the Telecom Act and its implementation matter to investors in telephone stocks, and that the news is not good. Table 1 expands our inquiry to include other telecom network providers—wireless and cable television operators—and focuses on specific time periods over the three years.

The performance of selected software and hardware manufacturing companies against the S&P and the Telecom Network Provider index is examined. It should come as no surprise that these companies have been outperforming the telcos for some time. The Telecom Index was approximately

flat from the end of 1994 to the passage of the act, while software and hardware stocks were up handsomely against the S&P. These trends continued after the act, as illustrated convincingly by their continued gains summing to about 25% for software companies and 33% for hardware companies since the beginning of last year.⁵

In summary, the data support our general notion that the act matters, and that the impact on shareholder values and investment incentives has not been positive.

We turn now to some possible explanations for this phenomenon by exploring some of the determinants of stock prices.

Determinants of Share Values and Stock Prices

There are many ways to estimate the value of any asset, including financial assets like stocks of telephone companies. Anyone who has bought stock, or any other asset, with an eye toward future gain has a good idea of the facts and fictions that come into play. Oskar Morgenstern, one of the fathers of economic game theory, counseled that every investor should display in clear view the Latin maxim, *Res tantum valet quantum vendi potest*—A thing is worth only what someone else will pay for it. Morgenstern was, of course, talking about a particular kind of value—market value. Market values are not static; they vary with changes in circumstances effecting potential buyers and

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sellers. Indeed, the differential impact of market-related events on potential buyers and sellers creates the basis for exchange—different estimation of value by two parties with the ability and willingness to trade.

But it is hard to know what someone else will pay for a stock in the future without some basis for evaluating how much others (potential buyers or sellers) will pay. The alternative to Morgenstern’s very subjective approach is what Malkiel calls the “firm foundation theory” of asset value.⁶ The theory maintains that stocks have “intrinsic” value that can be determined, approximately, by careful analysis of present conditions and future prospects as they might be embodied in estimates of interest rates, risk, growth, and earnings in general, and more particularly by analyzing the details for a given asset of market competition, technological change, government taxation and regulation, global economic conditions, consumer incomes and tastes, and the like.

This approach is now standard fare, and practitioners can be found in most investment banks, among gatherings of investment fund managers, and among bidders for spectrum licenses. Its principles are embodied in a methodology called the DCF (discounted cash flow) method. Applied to the determination of stock prices, the DCF model can be written as follows:

$$P = \frac{D}{K_e - G}$$

The relationship states that the price of a stock (P) can be estimated by considering its annual dividend (D), the investors required return on the stock in question (K_e), and the growth of dividends (G). Nothing offensive to common sense here. The stock’s worth depends on what it will earn, how fast those earnings will grow, and the amount of return investors require to compensate them for various kinds of risk.

This formulation suggests several ways the Telecom Act might influence stock prices in the sector. Investors may think that the

increased competition will reduce earnings for regulated telephone companies and thereby reduce the dividends. They may believe that competition will lead to lower growth rates for carriers (thereby increasing the denominator and reducing the value of the stock price, P).⁷ Or, they may believe that they should increase the return they require to invest in these stocks to reflect the added risks occasioned by the competitive and regulatory provisions of the act and its implementation. (We will have more on these risks below.)

Another way to think of this relationship is to rewrite it by slightly rearranging terms. Thus, the DCF model can be also written as:

$$K_e = D / P + G$$

This says that an investor’s required return (K_e) is equal to the yield on the stock (its dividend, D, divided by its price, P, plus the growth rate of dividends). Thus, an investor looking for a return of 10% (pretax) might look at a stock with a yield of 7% and a growth rate of 3%, or one with less yield, say 4% and higher growth of, say 6%. This formulation highlights the difference between growth stocks and income stocks and illustrates how the same return can be achieved by different combinations. Thus, if the act leads to higher required returns (K_e), the market must permit higher yields or more likely higher rates of growth.

Elements of Investors’ Required Return

As a means to better understand the forces underlying the stock prices in the tables, it is helpful to decompose the return required by investors in common stocks into discrete parts according to the different categories of risk perceived by investors. The required return on stocks of a regulated telephone company (or other companies for that matter) can be broken down as:

Payment for postponing consumption, that is the "Risk Free" Rate of Interest
 + Inflation Premium
 + Corporate Risk Premium
 + Equity Premium
 + Company Specific Market Risk
 + Company Specific Regulatory Risk

K_e = Required Return on Common Equity

Here investors' required return on a stock (the combination of current yield and growth highlighted above) is shown as the sum of several elements. The first is the amount necessary to induce investors to postpone use of cash until the future. This would yield a risk-free interest rate. Add compensation for reduction in the value of the investment due to inflation. This results, approximately, in the yield on long-term U.S. Treasury bonds, which compensate investors for giving up current consumption and sustaining the risk of inflation. Beyond that, investors realize that:

- Private corporations are more risky than the U.S. Treasury.
- Equities are riskier than debt securities since bondholders have an earlier claim on cash flows.
- Some companies face more market risk than others.
- Companies also face regulatory risks owing to the actions of courts, legislatures, and regulatory agencies.

In the remainder of this article, we want to explore two general explanations or hypotheses about the telecommunications network stock price behavior set out above. We will first examine some data for a relationship between stock prices and interest rates, and then turn to more detailed consideration of regulatory risk.

Stock Prices as a Response to Interest Rate Changes

We begin by reviewing and summarizing a study performed several years ago by John Bain.⁸ Bain gathered data on dividends and stock prices for the seven regional Bell operating companies (RBOCs), GTE, and

AT&T for the period following divestiture of AT&T (January 1984) to July 1990. Using the dividend yield as the dependent variable, Bain regressed it on long-term (30-year) Treasury bond rates, reasoning that the duration of common stocks tends to be closer to the longer-term bonds than to other shorter-term government securities. The correlation coefficients for the RBOCs were all above .73, and five of the seven showed R^2 values in excess of .80. These indicate a very high degree of correlation between the stock yields for these companies and interest rates. For the period from divestiture until mid-1990, the results suggest substantial interest sensitivity of RBOC stock yields. The results for AT&T and GTE suggested less sensitivity than for the RBOCs even during this period.

Bain also restricted the data set to the period from January 1988 to July 1990. The time periods were not, according to Bain, "chosen arbitrarily." The two periods were chosen to permit testing the hypothesis that events in 1988, 1989, and 1990 were leading to trading patterns in the stocks that reflected events and conditions other than interest rates:

- Diversification of the companies.
- The apparent imminence of the introduction of price caps as a substitute for rate of return regulation.
- The growth of RBOC cellular businesses.
- The popularity of "asset-based" valuations among some analysts.⁹

The regression results support the hypothesis that the importance of interest rates as determinants of telco stock yields was declining in the late 1980s. Bain states that "the close relationship between interest rates and dividend yields that persisted during the earlier period seemed to weaken in 1989."¹⁰ The correlation coefficients for all companies in the sample have declined. For all the companies except AT&T, the decline was substantial. The highest R^2 for this period (.61 for Bell Atlantic) is below the lowest for the longer period (.73 for PacTel).

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We have tried to replicate Bain's analysis on subsequent data. We regressed stock yields on long-term interest rates for the period January 1991¹¹ to the end of February 1997 (Table 2).¹² The R² values from our regressions for the latter period are consistent with the incipient trend observed earlier by Bain. The regression coefficients for the January 1991 to the present data set resemble Bain's 1988 to 1990 results and contrast sharply with his results for the January 1984 to July 1990 period. Again the highest R² for the January 1991 to February 1997 period (.71 for SBC) is below the lowest for the 1984-1990 data set (.73 for PacTel).

The secularly declining sensitivity of the stocks is further and dramatically indicated

by the results of the regression on data from February 1996 (corresponding to the passage of the Telecommunications Act of 1996) to February 1997 (Table 3). For this time period, the data show very weak and, in some cases, no relationship between the variables being tested.

Our statistical results confirm Bain's earlier conclusions. The linkage between interest rate movements and dividend yields, found by Bain to be weakening in the late 1980s, is even more tenuous today. Indeed, tests of correlation on the limited data available since the passage of the Telecommunications Act indicate very little, if any, sensitivity of stock prices and dividend yields to general interest rate movements.

Table 2
Regression Results—January 1991 to February 1997

Company	Coefficient	Standard Error	Intercept	R ²
Ameritech	0.822	0.090	-0.0097	0.53
Bell Atlantic	0.586	0.056	0.0098	0.60
BellSouth	0.860	0.096	-0.0133	0.53
NYNEX	0.648	0.073	0.0121	0.52
Southwestern Bell	0.894	0.068	-0.0230	0.71
GTE Corporation	0.581	0.081	0.0125	0.41
AT&T	0.596	0.058	-0.0155	0.59

Source: Darby & Fuhr

Table 3
Regression Results—February 1996 to February 1997

Company	Coefficient	Standard Error	Intercept	R ²
Ameritech	0.226	0.249	0.0233	0.07
Bell Atlantic	0.411	0.299	0.0195	0.14
BellSouth	0.045	0.318	0.0341	0.00
NYNEX	0.795	0.340	-0.0018	0.33
Southwestern Bell	0.510	0.188	0.0002	0.40
GTE Corporation	0.484	0.319	0.0126	0.17
AT&T	0.596	0.290	0.0159	0.02

Source: Darby & Fuhr

Bain found several events important to his finding of declining yield to interest rate sensitivity at the time of his 1990 study. He noted the possibility of a “cellular” bubble in the stocks, reflecting the very different risk and growth profile of wireless business compared with wireline. He also noted the impact of the expected implementation of “price caps” and the concomitant severing of earnings and earnings growth from the rate base. At the time, Bain also noted the trend among some financial analysts to substitute (for traditional DCF means) new methods of valuation, as such methods might permit more accurate valuation of the growing non-telephone parts of the holding companies’ activities.

All of these sources for eroding the yield/interest rate linkage have persisted, grown, and been joined by others since 1990. The changes can best be understood by reference to the changes influencing the components of the required return holding company stocks and to the DCF variables more generally.

Recall that the value of a share of stock in a DCF model depends on the discount rate (which incorporates time preference and risk from several different sources), the dividend, and the rate of dividend growth. The diminishing relative importance of inflation adjusted time preference-based interest rates (as measured by the cost of long-term government debt) implies that other components have become more important. A more complex model using more independent variables to reflect the importance of different sources of risk, changing patterns of growth expectations, and the like would be quite informative, but is beyond our modest intents here.

Stock Prices as a Response to Regulatory Uncertainty and Market Risk

In the absence of a good relationship between interest rates and stock prices, some plausible and intuitively appealing explanations (and testable hypotheses for further work) include the following:

- (1) *Higher risk.* Several factors suggest higher risk for the stocks under consideration. These added risk factors diminish the relative importance of risk-free interest rates as determinants of stock values. The new Telecommunications Law increases both market risk and regulatory uncertainty for all the carriers in our sample. By opening entry into key local and long distance markets by carriers previously forbidden such entry, the act leads to more market risk for each of the incumbents—IXCs and LECs alike. To no one’s surprise, the act has been subject to widely varying interpretations, and the rules implementing it are still very much up in the air. As rules and proposed rules emanate from the FCC, investors are given more information on which to base their valuations. It should not be surprising that, for example, the FCC’s declarations of intent with respect to interconnection terms and conditions, interconnection charges, universal service obligations, and funding plans and rumors of the week about resolution of “access charge reform” are taking precedence among traders over modest, short-term movements of interest rates. Investors have expressed concern regarding the considerable uncertainty about how these issues will be resolved, when they will be resolved, and who the winners and losers will be.
- (2) *Questions about growth.* The act has also changed prospects for growth of these carriers. Competition will have a dual impact on incumbent growth. On the positive side, there will be a stimulus for growth of the overall market, but that will be offset, in some measure, by reduced incumbent share of a growing pie. The net effect depends on the intensity of price and quality competition, the relative decline of prices, the overall elasticity of market demand, and the ability of incumbents to preserve market share in the face of aggressive newcomers. While growth may come to

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incumbents from entry into new markets, that opportunity is also a threat in their own areas of dominance.

- (3) *Declining importance of utility business to holding companies.* Diversification activities of the holding companies have dramatically changed the bundle of assets being traded. The companies look less and less like regulated utilities, and, indeed, for several of them, their nonregulated, noncommon carrier activities are more than half their total market valuations. Given that the diversified lines of business are generally growing faster than the traditional telephone utility business, it is very likely that the importance of the telephone company business—whose valuation is arguably the most interest sensitive—will continue to decline in importance as a component of the holding companies’ trading character. The holding company is, in a sense, the weighted average of its components. And, the utility business is contributing less and less weight over time.

The results have several implications for both investors and regulators. To the extent that interest rates explain less and less of the variation in yields and prices of telecommunications stocks over time, some other determinants must take up the slack. While the correlations do not imply causation, it is intuitively clear that the stocks are being moved by other forces. The major candidate to replace interest rates as the (*ceteris paribus*) prime mover of telecommunications stocks may well be the regulators, whose decisions implementing the provisions of the act are highly leveraged in their influence over the principal components of share value—earnings, risk, and growth.

What Can Be Done?

Late last year, FCC Chairman Reed Hundt promised to find ways to do what the commission has been historically remiss in doing—exploring the ways in which the FCC’s rules either do or do not create

incentives for carriers to invest and to innovate:

The FCC needs to analyze ways to continue to encourage investment and innovation in the networks protected by our dominant telephone companies. In February or March 1997, we will begin a proceeding to do just that. We will be working with manufacturers, incumbents, new entrants, and market observers to determine how to promote innovation and investment, without abating the pro-competitive effects of the Act’s unbundling and interconnection provisions.¹³

How might the FCC go about promoting innovation and investment?

We emphasize, at the outset, that there are no good policy models for telecommunications regulators to encourage infrastructure investment. For over 60 years, the law of telecommunications remained largely unchanged. While policy did evolve from protecting and regulating incumbent monopolists to permitting entry and regulated competition, the dominant concern has continuously centered on offsetting the market power of incumbents, with state power applied to carrier pricing, earnings, service quality, and investment.

We have searched the regulatory economics literature, albeit less systematically and completely than we would have liked, to see what policy guidance it might provide to assist in resolving some of the new and very difficult analytical issues faced by the FCC. In particular, we have tried to identify models, theories, and insights related to the impact of regulatory constraints on the investment behavior of incumbent firms, as well as on investment incentives of recent and potential entrants.

There is not much there. There is little discussion of the bridges between regulation and capital formation in the traditional literature. The literature is rich on matters related to pricing, ratemaking, rate struc-

tures, forms of earnings control, economies of scale and scope, and the general benefits of competition. Volumes and volumes and volumes have been written about “cross-subsidy”—its causes, manifestations, impacts, and cures. But there is very little literature addressing issues where traditional concerns of regulators, practitioners of corporate finance, and capital budgeting specialists overlap. The focus of the literature is overwhelmingly on questions related to price levels and structures, while matters related to the acquisition of inputs in general and investment goods more particularly are largely neglected.

The “regulatory finance” literature is also concentrated on ratemaking matters. The dominant strain of the literature has traditionally addressed questions about the cost of capital, capital structure and leverage, fair rates of return, optimal depreciation rates, and other matters directly implicated by the requirements of regulatory control over earnings. Through the years, that literature has been modestly spiced by occasional writings on “incentive” regulation, but, by and large, the focus has been on the means for controlling the exercise of established, pervasive, and enduring monopoly power.

Much of the regulatory finance literature has been rendered obsolete by the widespread substitution of price caps for rate of return regulation, as cost of capital experts have been replaced by specialists in estimating productivity. The historical view of investment under regulatory constraint is inapplicable to the current telecommunications sector. The dominant model is the Averch-Johnson-Wellisz (A-J-W) model, which implies that the problem to be solved is too much investment and inefficient investment mix choices by regulated firms. But, the model never conformed very closely with measurable facts in the real world and is, in any event, irrelevant in today’s competitive, price-cap constrained environment.

While policies in pursuit of universal service were “investment friendly,” they cannot be replicated in the current technological and market setting. The following

may be useful ways to start to fill the vacuum.

- (1) Devise “models” of investment that relate the impact of various types of rules to investment incentives. Capital budgeting processes within the companies can be identified and modeled, much like economists derive and use traditional models of the determination of output prices. Indeed, traditional micro-economic analysis is rich in theorems addressing optimal investment in the face of changes in interest rates, risk, prices of capital goods, productivity, output prices, and so forth. Traditional stock valuation models provide additional planks—risk, cash flow, and growth—in the bridge between regulation, stock prices, and capital formation decisions by managers of regulated firms.
- (2) Explore the academic literature for hints about the relation between market structure, regulation, and investment/innovation. Our preliminary survey has not been all that encouraging. Most of the literature is ambiguous and the policy conclusions tentative. Indeed, there is still uncertainty about such fundamental questions as the relation between market structure and innovation.
- (3) Examine all major proposed rule changes in the context of their anticipated impact on capital formation incentives. Regulatory commissions may find precedent for such a practice in the history of promotion of universal service. It is probably safe to say that no major rule change has been put in place in either state or federal rulemakings in the past 50 years without exhaustive analysis of the likely impact on universal service.
- (4) Undertake a “basement to attic” review of existing rules with the intention of identifying those that discourage invest-

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ment without sufficient countervailing value measurable in other dimensions of the public interest.

This is a substantial undertaking. Even so, it is only the beginning of a regulatory program to encourage investment in the telecommunications sector. nto

¹ *Telecommunications Act of 1996*, Pub. L. No. 104-104, 110 Stat. 56 (1996), to be codified at 47 U.S.C. § 151 et. seq.

² President Clinton's Remarks at the Signing Ceremony, available online at <http://www1.whitehouse.gov>.

³ The foundations for some of the ideas elaborated here are previewed in our earlier article in *New Telecom Quarterly*. See L. F. Darby and J. P. Fuhr, Jr. "Telecommunications Capital Formation, Regulation, and Economic Development: A Primer," *New Telecom Quarterly*, Vol. 2, No. 3 (August 1994):45-52.

⁴ The big LECs include the seven regional Bell operating companies and GTE, while AT&T, MCI, and Sprint are included in the IXC group.

⁵ One Source Information Services, Inc. Information concerning this source can be obtained at (800) 433-0287.

⁶ B. G. Malkiel, *A Random Walk Down Wall Street* (New York: Norton, 1990). Chapter 4 presents a very clear and understandable discussion of the determinants of stock values, including a humorous but quite relevant discussion of more subjective forces under the name Castles in the Sky theories, also known as the "Bigger Fools" theory.

⁷ The impact of new and intensified competition on carrier growth rates is a complex question. Competition among carriers in both price and quality will tend to stimulate demand and increase the size and growth of the market. However, competition implies smaller market shares for incumbents. Thus, incumbent growth depends on their abilities to minimize share loss in a growing market. Economic history reveals examples of both success and failure in this regard.

⁸ See J. S. Bain, CFA, *Interest Rate Sensitivity of the Telecommunications Common Carriers* (Raymond James & Associates, Inc., October 16, 1990).

⁹ *Ibid.*, p. 9.

¹⁰ *Ibid.*

¹¹ January 1991 was chosen because it was the beginning of price caps.

¹² The observant reader will note that we have excluded U S WEST and PacTel from our analysis. The reason is the extraordinary market behavior of these stocks resulting from their respective restructurings. While we believe their inclusion would confirm the trends in the data and support the interest insensitivity hypothesis, their inclusion creates noise that merely confuses the main issue and, for that reason, we have excluded them here.

¹³ Chairman Reed E. Hundt, "The Hard Road Ahead—An Agenda for the FCC in 1997" (December 26, 1996) (speech available on-line at <http://fcc.gov>).