Florida Cable Television Assoc., Inc.
STEVEN E. WILKERSON
President

FLORIDA CABLE TELEVISION ASSOCIATION, INC.
P.O. BOX 10383, TALLAHASSEE, FLORIDA 32302, 904/681-1990

HAND DELIVERY

November 8, 1993

Steven C. Tribble, Director
Division of Records and Reporting
Florida Public Service Commission
101 E. Gaines Street
Tallahassee, Florida 32399

RE: Docket No. 920260-TL

Dear Mr. Tribble:

Enclosed for filing in the above-referenced docket are an original and fifteen copies of the Direct Testimony of Mark A. Cicchetti on behalf of the Florida Cable Television Association, Inc. Copies have been served on the parties of record pursuant to the attached certificate of service.

A copy of this letter is enclosed. Please date-stamp the copy and return it to me.

Thank you for your assistance in processing this filing.

Yours Very Truly,

Laura L. Wilson
Regulatory Counsel

cc: All Parties of Record
Steven E. Wilkerson
Robert J. Brillante

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the Direct Testimony of Mark A. Cicchetti has been served by U. S. Mail and/or Hand Delivery (*) on November 8, 1993 to the following parties of record:

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: COMPREHENSIVE REVIEW OF THE REVENUE REQUIREMENTS AND RATE STABILIZATION PLAN OF SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY OF FL.	DOCKET NO. 920260-TL FILED NOVEMBER 8, 1993

DIRECT TESTIMONY OF MARK A. CICCHETTI

ON BEHALF OF THE

FLORIDA CABLE TELEVISION ASSOCIATION

DOCKET NO. 920260-TL

TESTIMONY OF MARK ANTHONY CICCHETTI

PAGE

Q Please state your name and address.

A My name is Mark Anthony Cicchetti and my business address is 4500 Shannon Lakes Plaza, Suite 152, Tallahassee, Florida 32308.

Q By whom are you employed and in what capacity?

A I am President of Cicchetti & Company, a financial research and consulting firm. I am also employed by the Division of Bond Finance, Florida State Board of Administration, where I am the Manager of the Arbitrage Compliance Section.

Q Please outline your educational qualifications and experience.

A I received a Bachelor of Science degree in Business Administration in 1980 and a Master of Business Administration degree in Finance in 1981, both from Florida State University.

Upon graduation I accepted a planning analyst position with Flagship Banks, Inc., a bank holding company. As a planning analyst my duties included merger and acquisition analysis, lease-buy analysis, branch feasibility analysis, and special projects.

In 1983 I accepted a regulatory analyst position with the Florida Public Service

Commission. As a regulatory analyst, I provided in-depth analysis of the cost of equity and required overall rate of return in numerous major and minor rate cases. I reviewed and analyzed the current and forecasted economic conditions surrounding those rate cases and applied financial integrity tests to determine the impacts of various regulatory treatments. I also co-developed an integrated spreadsheet model which links all elements of a rate case and calculates revenue requirements. I received a meritorious service award from the Florida Public Service Commission for my contributions to the development of that model.

In February 1987, I was promoted to Chief of the Bureau of Finance. In that capacity I provided expert testimony on the cost of common equity, risk and return, corporate structure, capital structure, and industry structure. I provided technical guidance to the Office of General Counsel regarding the development of financial rules and regulations. In addition, I authored the Commission's rules regarding diversification and affiliated transactions, chaired the Commission's Committee on Leveraged

Buyouts, supervised the finance bureau's regulatory analysts, co-developed and presented a seminar on public utility regulation to help educate the Florida Public Service Commission attorneys, and provided technical expertise to the Commission in all areas of public utility finance for all industries.

In February 1990 I accepted the position of Chief of Arbitrage Compliance in the Division of Bond Finance, Department of General Services. The Division of Bond Finance is now under the Florida State Board of Administration, and my title is Manager, Arbitrage Compliance. As Manager of the Arbitrage Compliance Section, I am responsible for assuring that over $12 billion of State of Florida tax-exempt securities remain in compliance with the federal arbitrage requirements enacted by the Tax Reform Act of 1986. I provide investment advice to trust fund managers on how to maximize yields while remaining in compliance with the federal arbitrage regulations. I designed and implemented the first statewide arbitrage compliance system which includes data gathering, financial reporting, and computation and analysis subsystems.

In July 1990 I founded Cicchetti &

Company. Through Cicchetti & Company I provide financial research and consulting services, including the provision of expert testimony, in the areas of public utility finance and economics.

Topics I have testified on include cost of equity, capital structure, corporate structure, regulatory theory, cross-subsidization, industry structure, the overall cost of capital, incentive regulation, the establishment of the leverage formula for the water and wastewater industry, reconciling rate base and capital structure, risk and return, and the appropriate treatment of construction work in progress, used and useful property, and construction cost recovery charges.

I have been certified by the Florida Public Service Commission as a Class B Practitioner in the areas of finance and accounting.

In June, 1985 I published an article in Public Utilities Fortnightly titled "Reconciling Rate Base and Capital Structure: The Balance Sheet Method." In September, 1986 I was awarded third place in the annual, national, Competitive Papers Session sponsored by Public Utilities Reports, Inc., in conjunction with the University of Georgia and Georgia State University, for my paper titled

"The Quarterly Discounted Cash Flow Model, the Ratemaking Rate of Return, and the Determination of Revenue Requirements for Regulated Public Utilities." An updated version of this paper was published in the June, 1989 edition of the National Regulatory Research Institute Quarterly Bulletin. I have since served twice as a referee for the Competitive Papers Sessions. On June 15, 1993, I published an article on incentive regulation in Public Utilities Fortnightly titled "Irregular Incentives".

I am the President, and member of the Board of Directors, of the National Society of Rate of Return Analysts (NSRRA) and a member of the Financial Management Association. I have been awarded the designation Certified Rate of Return Analyst by the NSRRA. I am listed in Who's Who in Finance and Industry.

I have made public utility and finance related presentations to various groups such as the Southeastern Public Utilities Conference, the National Society of Rate of Return Analysts, the National Association of State Treasurers, and the Government Finance Officers Association.

Q Have you previously testified before this

Commission?

A Yes, I have.

Q What is the purpose of your testimony?

A The purpose of my testimony is to address two subject areas. The first area is the determination of an appropriate incentive regulation plan for the Southern Bell Telephone and Telegraph Company of Florida (Southern Bell) which will include an overview of the company's current incentive regulation plan. The incentive regulation plan I am proposing relates to the basic services associated with Southern Bell's regulated local exchange service, such as residence and business exchange service, service connection charges, and switched access. The second area is the appropriate return Southern Bell should be allowed for ratemaking purposes. With regard to the second subject area, I will specifically address the determination of the cost of common equity capital and an appropriate equity ratio for Southern Bell.

Q Please summarize your conclusions.

A With respect to an appropriate incentive regulation plan for Southern Bell, I present an incentive plan that ties the company's reward to

specific company actions to improve production efficiency. In my opinion, such a plan provides a proxy for the economic profits, that is profits above a company's cost of capital, that can be earned in a competitive environment if a company is efficient or innovative.

With respect to an appropriate allowed return, I conclude the cost of common equity capital for Southern Bell is within the range of 9.55% to 10.20% and I recommend the Commission allow the midpoint of this range, 9.90%, for ratemaking purposes. With respect to an appropriate equity ratio I conclude Southern Bell's equity ratio should be set at 58.00% of investor capital. My recommended allowed overall rate of return is 7.25%.

INCENTIVE REGULATION

Q Should the commission continue a form of incentive regulation for Southern bell?

A Yes; but the current incentive plan is not the best solution to the problem of providing an incentive for efficient production and can be detrimental to ratepayers and competitors. Therefore, I propose a more appropriate incentive regulation plan that rewards a utility for

operating in an efficient manner. It is generally accepted that public utility regulation lacks a formal proxy for the economic profits, that is earnings above a firm's cost of capital, that can be earned in a competitive market if a firm is efficient or innovative. This is because public utility regulation, as it is commonly practiced, operates on cost-plus basis. If a utility is efficient or innovative and lowers its costs, its typical reward is to have its rates reduced. Such treatment represents a perverse incentive with regard to motivating a utility to produce at the most efficient level. In addition, since public utility regulation operates on a cost-plus basis, a utility can increase the dollar amount of its net income, all other things being equal, by overinvesting in or "gold-plating" its system - another perverse incentive.

Q What are the major points of your proposal?

A My testimony, with regard to an incentive regulation plan for Southern Bell, addresses: 1.) why Southern Bell's current incentive regulation plan is not the best solution to the problem of providing an incentive for efficient production;

2.) how it can be detrimental to the ratepayers and competitors of Southern Bell and its affiliates, and, 3.) a more appropriate incentive regulation plan that rewards a utility for operating in an efficient manner.

Q Why is Southern Bell's current incentive regulation plan not the best solution to the problem of providing an incentive for efficient production?

A Under Southern Bell's current incentive regulation plan, the rewards for efficient production are not tied directly to measures under the company's control. Under the company's current earnings sharing plan, which was initially scheduled to run for three years, the company had the opportunity, after sharing, to earn up to 16% on common equity. Although certain exogenous factors (such as refinancing from higher to lower cost long-term debt) were removed from the sharing formula, it is obvious that events such as a reduction in the company's cost of equity, declining production costs, or a booming economy could have produced returns to the company significantly above its cost of capital without an associated company controlled improvement in

efficiency. Such a scenario engenders monopoly profits as the solution to the monopoly profits problem - the reason why the company was regulated in the first place. Finally, under the current earnings sharing plan, the company faces the same type of perverse, self-serving, gold-plating incentives at the sharing points and the top of the allowed sharing range that it faces under traditional regulation.

Therefore, an incentive regulation plan that ties an appropriate reward for efficient production to specific efficiency gains is a better proxy of a purely competitive environment and is superior to an incentive plan that provides a reward for circumstances beyond the company's control or for self-serving manipulation. This is particularly true if there is no earnings cap associated with the reward for efficiency and therefore no incentive to gold-plate rather than economize. Rewards for efficient production should be tied to specific actions that achieve efficiencies.

Q How can Southern Bell's current incentive regulation plan be detrimental to ratepayers and competitors of Southern Bell?

A In order to understand how Southern Bell's current incentive regulation plan can be detrimental to the ratepayers and competitors of the Company and its affiliates, it is necessary to have an understanding of the effect market structure has on a firm's return on common equity.

Q What is market structure?

A Market structure is the range of conditions (such as the number of firms, the economies of scale or scope, the type of product sold, and the demand for that product) that may effect the behavior and performance of firms in that market. Market structure is best thought of as a continuum between pure competition and natural monopoly.

Purely competitive markets are characterized by minimal economies of scale or scope such that no single supplier has a natural cost advantage over other suppliers. In the short run, under effectively competitive conditions, a firm can earn economic profits, that is a return above its cost of capital, only if it is efficient or innovative. In the long run, under effectively competitive conditions, a firm cannot earn above its cost of capital due to the ease of entry into

and exit from the market. If a firm in an effectively competitive environment is earning above its cost of capital, new firms will enter the market to share in those profits. Another way to look at it is to recall that in economics "long term" is defined as the period of time necessary to change production processes. Consequently, in the long term, a firm's competitors will match its efficiency by changing their production processes.

Natural monopoly markets, by contrast, are characterized by substantial economies of scale or scope and decreasing average costs such that one supplier can always serve the market at lower unit costs than two or more suppliers. Barriers to entry are severe since the single most efficient provider will always be able to price below any potential entrant. Left unregulated, a natural monopoly will not produce competitive results. Assuming an industry is a natural monopoly, regulation benefits society by reducing price, increasing output, and reducing the economic profits of monopolies. Regulators accomplish this by backing away from the objectives of allocative efficiency and marginal cost pricing and instead, establish a "fair-return" price. Although this

does not produce a socially optimum price and output, it is an improvement over an unregulated natural monopoly.

Q Why do regulators back away from the objective of allocative efficiency and marginal cost pricing?

A Because utilities must meet the peak demand for their products or services, they generally have significant excess capacity during periods of normal demand. This requires a high level of facilities investment, which means the unit costs of production probably will decrease over a wide range of output. This results in the socially optimum price being below average cost. Pricing at this level would likely result in bankruptcy. Therefore, regulators set a "fair-return" price which allows a utility to recover the reasonable and prudent costs associated with the provision of utility service, including an appropriate return on common equity.

Q How does the foregoing discussion impact the issue of whether Southern Bell's current incentive regulation plan is detrimental to the Company's ratepayers and competitors?

A The cost and demand functions associated

with the provision of local exchange service continue to exhibit the characteristics of natural monopoly. Very large fixed investments are necessary to provide homogeneous local exchange service to large populations of customers and the obligation to serve does not allow free exit. In addition, there are no practical alternatives to the local exchange companies for basic telephone service at this time. This is in contrast to certain other telecommunications markets where technological advances have lowered costs to the point that at least several firms of efficient size can compete to supply the needs of high volume customers. Consequently, adequate protection for Southern Bell's ratepayers and competitors must ensure that Southern Bell's profits associated with the provision of basic monopoly services are sufficiently constrained by either effective competition or adequate regulation. An incentive regulation plan that allows a monopoly provider the opportunity to earn 16% on common equity capital as potentially for reasons beyond the company's control, when its cost of capital is significantly below 16%, is not in the best interest of ratepayers. For Southern Bell, at a cost of common

equity of 9.90%, the revenue effect associated with an earned return on common equity of 16% is approximately $200 million per year, given the company's requested capital structure. Obviously, allowing Southern Bell the opportunity to generate approximately $200 million per year from ratepayers that it may have no right to (that is, for reasons beyond the company's control), in the name of incentive regulation is of great concern to ratepayers and competitors of Southern Bell and its affiliates. A more appropriate incentive regulation plan would provide a proxy for the economic profits that could be earned by a firm in a competitive environment and would be tied directly to actions taken by the company to increase production efficiency.

Q In your opinion, does Southern Bell's current incentive regulation plan meet the criteria specified in Florida Statute 364.036?

A In my layman's opinion they do not. F.S. 364.036 requires, among other things, that the Commission find that alternative regulatory methods: 1.) are consistent with the public interest; 2.) that rates for monopoly services are just and reasonable, and not unduly discriminatory,

and do not yield excessive compensation; 3.) that there are adequate safeguards to assure that the rates for monopoly services do not subsidize competitive services, and; 4.) that there are identifiable benefits to ratepayers not available under traditional rate of return regulation.

In my opinion, an incentive regulation plan that potentially allows a regulated monopoly supplier to generate $200 million per year above its cost of capital for reasons not related to specific efficiency gains is not in the public interest, yields excessive compensation, and provides a source of funding to subsidize competitive services that would not be available if the company operated in an effectively competitive environment. It is generally accepted that regulation is to act as a proxy for competition.

Finally, F.S. 364.036 (5) states:

> The Commission may at any time, on its own motion or on petition of the local exchange telecommunications company or any interested party, and may upon being presented with and considering competent substantial evidence that customer rates for basic local exchange

telecommunications services exceed levels which would otherwise be approved by the Commission under rate of return regulation or for other good reasons, review any decision adopting an alternative method of regulation and, after notice and opportunity to be heard, impose additional regulatory safeguards including full rate base regulation under the provisions of this chapter.

Q What are the elements of the incentive regulation plan that you propose?

A The incentive regulation plan that I propose has three main components. First, the Commission would determine the company's per access line cost of providing monopoly local exchange service based on the amount invested, operations and maintenance expenses, and the capital costs associated with the amount invested. These categories relate to the Company's rate base, net operating income, and cost of capital used in rate base regulation. The amounts used for incentive regulation purposes should be company reported costs and not commission allowed costs, keeping in mind the Commission has the option of selecting

exactly which costs it would like to target to provide an incentive for efficiency. Next, the Commission would create a regional (or state or national) rural/urban index of similar costs for the local exchange providers serving the designated area. Finally, the Commission would determine what percentage of cost savings the company would receive if the company produced at a cost below the average cost of the index. It should be noted, such an index could be created for each industry under the Commission's jurisdiction, and the concept applied to all companies under the Commission's jurisdiction, since all regulated firms face the same perverse regulatory incentives previously cited.

Q Could the Commission account for factors unique to a particular firm?

A Yes. The Commission would have the ability to adjust the index or a company's results for exogenous factors where warranted. For example, years ago Florida Power and Light's tree trimming expense was questioned because it was high relative to other electric utilities. An analysis of the issue revealed FP&L was the only electric utility in the continental United States operating

in a subtropical environment and that trees in its service area did, in fact, grow at a faster rate, requiring a greater amount of tree trimming expense. Such factors could be adjusted for where warranted.

Q In what other ways is your proposed incentive plan superior to Southern Bell's current incentive plan?

A Under the incentive regulation plan I am presenting there would be no earnings cap associated with earnings stemming from cost savings and therefore no motivation to "gold-plate" rather than economize. There would be less likelihood of unwanted results, such as sales scams, relative to Southern Bell's current plan because the reward is directly tied to efficiency gains and is not tied to revenue production as is Southern Bell's current incentive regulation plan. In addition, industrywide costs and productivity improvements, including those associated with technological advances, would be reflected in the regional (or state or national) index. Unregulated industries experience technological gains and productivity improvements. For a firm facing effective competition in an unregulated industry to earn

economic profits, it must be especially efficient or innovative relative to its competitors. Therefore, the plan I am proposing is a better proxy of the competitive environment than the incentive regulation plan in place.

Q Have recent regulatory changes made your proposed regulatory incentive plan more feasible today than it would have been five or ten years ago?

A Yes. Relatively recent regulatory decisions allowing entry into markets where it was assumed that technological advances have reduced or eliminated the natural monopoly aspects have made regulated utilities keenly aware of economic and uneconomic bypass.

Economic bypass occurs when a regulated utility's product or service can be provided more efficiently by a competitor. The gains associated with bypass through trade between the customer and the utility's competitor are preserved by society because the customer's demands are met by the lowest cost provider. Assuming a regulated utility is operating in a natural monopoly market and its prices are set appropriately (that is, not above the reasonable and prudent costs associated with

providing service and not below long-run incremental cost), economic bypass could not occur.

Uneconomic bypass occurs when the customer's needs could be more efficiently met by the regulated utility supplier, but the regulated firm's price is higher than a competitor's price. This may happen if the utility's price reflects inefficiencies or is set at a point above its true cost. The customer will then seek to bypass the regulated firm's excessive price.

In my opinion, existing and potential competitors ready to attack inefficient prices makes the plan I am presenting more feasible today than it would have been before the recent regulatory evolution of allowing entry into markets considered contestable.

RATE OF RETURN

Q What guiding principles did you consider in determining a fair rate of return for Southern Bell?

A I relied on the principles established by the Supreme Court of the United States in Bluefield Waterworks and Improvement Company v. Public Service Commission of West Virginia, 262 U.S. 679 (1923) and Federal Power Commission v. Hope Natural

Gas Company, 320 U.S. 591 (1944). Briefly stated, the Hope and Bluefield decisions provide that the return to the equity owner should be commensurate with returns on investments having corresponding risks and should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital.

Q Please define the cost of common equity capital.

A The cost of common equity capital is the minimum rate of return necessary to attract capital to a common equity investment. The cost of common equity is a function of risk. The greater the risk the greater the return investors require.

Q What risks do common equity investors face?

A A stock's risk consists of company specific risk known as diversifiable risk and market risk known as non-diversifiable risk. Company specific risk is caused by events that are unique to a particular firm such as the loss of a major customer, strikes, lawsuits, and so on. Since these things occur randomly, their effects can be eliminated through diversification - negative events at one firm will be offset by

positive events at another. Market risk, on the other hand, is associated with events that affect all firms simultaneously such as inflation, war, and recession. Since all firms are affected simultaneously, the effect of these events cannot be eliminated through diversification. Therefore, since we assume investors are risk averse (that is, accept the highest return for a given level of risk or accept the lowest level of risk for a given return), the relevant risk of a stock is the risk that cannot be diversified away. Rational investors do not accept risks that can be easily eliminated. Numerous empirical studies have shown the capital markets are efficient and investors are compensated only for risks that cannot be diversified away. Therefore, the relevant risk of a stock is the risk it contributes to a well-diversified portfolio and is measured by beta. Beta ia a measure of a stock's volatility relative to an average stock. A beta of 1.0 indicates that the individual stock's return moves up or down in the same proportion as the market return. A beta above or below 1.0 indicates higher or lower return volatility, and therefore greater or lesser risk, relative to the market as a whole.

Q What determines the relevant risk of a stock?

A The relevant risk of a stock is determined by the degree to which the stock tends to move up and down with the market. The relevant risk facing a common equity investor can be disaggregated into business risk and financial risk. Business risk relates to the uncertainty surrounding the level of operating income expected to be earned, while financial risk relates to the types of securities used to finance the firm, that is, financial leverage. It is generally accepted that companies with high business risk should capitalize their operations with a relatively lower amount of debt and fixed obligations.

Q What general economic factors influence investment decisions?

A The interrelated factors of inflation and interest rates are major factors that influence the investment decision-making process.

Q Of what significance are inflation and interest rates to an investor?

A Interest rates are important to investors because the required return on an investment is affected by the returns available on alternative

investments. Additionally, rising inflation and rising interest rates erode earnings. Public utilities in general are particularly sensitive to the effects of high inflation and high interest rates. As with other industries, rising labor and other operating expenses directly impact public utility companies' earnings. Also, due to the capital intensive nature of the public utility industries, plant costs and related financing costs have a particularly strong impact on the earnings of these companies.

However, the impacts associated with inflation and interest rates currently are much less for Southern Bell than they have been in the past. Not only are inflation and interest rates down substantially but Southern Bell has been able to internally finance most of its capital expenditures despite paying out virtually all of its earnings as dividends to its parent company.

Q Have you examined changes in inflation rates?

A Yes. As shown on Schedule 1, inflation as measured by the consumer price index has subsided considerably over the last several years and is expected to range within 2.5% to 3% over the

coming year. The consumer price index dropped to 2.5% on an annual basis over the last nine months and is expected to continue around that low rate over the next several years.

Page 1 of Schedule 1 is a graph of inflation as measured by the Consumer Price Index and page 2 of the schedule graphs the five-year moving average of the annual change in the Consumer Price Index. Page 3 of the attachment provides the statistical data.

Q Have you examined changes in interest rates?

A Yes. Page 1 of Schedule 2 is a graph of yields on seasoned "A" rated public utility bonds while Page 2 of the schedule charts the five-year moving average of the bond yields. Page 3 provides the statistical data.

It should be noted that recent and current economic statistics do not provide a complete basis for determining the value of long-term investments. Rather, they only provide insight into the current environment within which long-term assets are being valued and function as a reference point for past and present forecasts.

Q Please discuss the current economic

environment and current expectations regarding inflation and interest rates.

A Ten months into the Clinton Administration, the U.S. financial markets are enjoying a reasonably comfortable ride on a relatively smooth economic road to sustained recovery. Although occasional bumps in the road are encountered - a weaker (or stronger) than expected statistic or a spike in a price report - conditions appear favorable for continued progress.

The U.S. economy is characterized by low inflation at both the consumer and producer levels, record low interest rates, moderate growth, and long run optimism.

However, the American economy lacks a catalyst to propel growth to meaningfully higher levels. Consequently, the outlook for jobs remains weak as employers are reluctant to add to their payrolls in the face of increased taxes and lingering uncertainty over the cost of new environmental regulations and the President's national health-care reform plan. Businesses and consumers are particularly apprehensive about the cost of the President's health-care plan since the health-care industry represents one-seventh of the

American economy - about twice the size of the defense industry at its peak.

An increasing aversion to government deficit spending, deep cuts in defense spending, global competition, corporate downsizing, and the absence of fiscal stimulus from Washington are powerful structural forces that likely will keep the U.S. in a disinflationary mode for some time. Also, the desire of corporations and consumers to improve their balance sheets will tend to stifle growth. The increase in private debt has lagged the increase in nominal gross domestic product (GDP) since 1990. Between 1983 and the first quarter of 1991, $643.7 billion of nonfinancial corporations' equity was retired through leveraged buyouts, stock repurchases, mergers, and similar corporate transactions. So far, since the re-equitization of Corporate America began in 1991, only $61.25 billion in equity capital has been recouped, leaving a significant amount ($582 billion) of corporate balance sheet improvement to be accomplished.

The U.S. economy, as measured by GDP, grew at an annual rate of 2.8% in the third quarter, up from 1.9% in the second quarter and up

from an anemic 0.8% rate in the first quarter. Analysts believe recent gains in housing starts and automobile production could lead to 4% GDP growth in the fourth quarter of 1993 and the first quarter of 1994.

New home sales increased 20.8% in September, the biggest monthly increase in seven years. It appears the lowest mortgage rates since the 1960's finally may be enticing buyers into the market. Retail sales in October rose 8.3% over the same period last year although retail prices are described as "flat or competitive" by the Federal Reserve. The index of leading economic indicators rose in September for the third time in four months and the nations unemployment rate held steady at 6.75 in October.

However, as economists note, it does not seem likely that the growth spurt expected for the fourth quarter of 1993 and the first quarter of 1994 can be sustained. The stimulus provided by the housing sector and increased automobile production is expected to lapse by the end of the first quarter due to housing starts being very close to their demographic cap and the improbability of automobile sales rates staying

above 7 million units for a protracted period of time. Such a scenario would leave the U.S. economy operating within a framework of slow employment growth, a weak global economy, contracting defense outlays, and continuing excess capacity in the commercial real-estate market. On the positive side, such a scenario could drive the inflation rate to a long-term trend of 2.5% from what currently is believed to be a 3% trend rate.

The future course of the economy and of inflation is difficult to predict. However, a component of required yields is compensation for expected inflation, the level of which directly impacts the cost of both debt and equity. The current Blue Chip consensus forecast for the bellwether long-term treasury bond for the coming year is 6.25% and the forecast for the consumer price index for the coming year is 3.0%.

Q Please describe Southern Bell.

A Southern Bell is a large, conservatively financed, local exchange company with over 4.9 million access lines serving Florida. The Company provides local exchange service, information access, exchange access, and intra-LATA long distance telecommunications. The Company operates

in one of the fastest growing service territories in the country and internally funds almost all of its construction expenditures. Operating cash flows are expected to continue to fund future network expansion and modernization.

As of midnight December 31, 1991 South Central Bell and Bellsouth Services were merged with and into Southern Bell (which included Southern Bell Telephone and Telegraph Company of Florida) and the new entity was renamed Bellsouth Telecommunications, Inc. (BST). According to Standard & Poor's Creditweek of July 19, 1993, BST's AAA rating reflects:

> "...the company's better-than-average business risk and managements conservative financial policy. The company's business risk profile benefits from economic and regulatory diversity across its nine-state service area, strong service quality, and increasing operating efficiency. Access lines and revenues are somewhat less concentrated in the larger metropolitan areas served than is typical for a Bell operating company. As a result, direct competition

is expected to develop relatively slowly".

As shown on Schedule 10, BST compares favorably financially with the other Bell Operating Companies (BOCS). BST's total debt to total capital ratio (39.0%) is better than the 42.3% BOC average, while BST's pretax interest coverage ratio (5.01X) is only somewhat lower than the 5.42 average for the BOCs. While BST's return on average equity (14.2%) is lower than the BOC average of 17.5%, the Company's net cash flow to capital expenditures (100.3%) and net cash flow to total debt (39.3%) ratios are in line with BOC ratios of 109.3% and 40.1% respectively.

Q You mentioned that BST's ratings reflect the Company's better-than-average business risk and that competition is expected to develop relatively slowly in BST's service area, could you please expound on the effect increased competition has on Southern Bell's cost of common equity?

A Yes. It is important for the effects of increased competition on Southern Bell's cost of common equity to be put in the proper perspective. Competition in the telecommunications industry is followed closely by investors and analysts and its

impacts and expected impacts are reflected in the stock prices of the telecommunications companies. It is important to note that increasing competition represents both challenges and opportunities to the telecommunications companies. The position of strength from which the Regional Bell Holding Companies (RBHC's) operate should not be ignored. Over the last five years the RBHC's have implemented new technology, automated many previously labor intensive tasks, added fiber loops in large cities, cut operating costs, and markedly increased operating margins. It is also recognized that regulation in general has improved and become more permissive. For example, regulators have allowed such things as incentive regulation plans, pricing flexibility, and entry into information services. It is true that local exchange companies are facing increased competition but whether there ever will be meaningful competition within the local loop is still uncertain and is years away at best. In some instances the threat of competition to local exchange companies has been exaggerated. For example, earlier this year the FCC voted to allow competitive access providers (CAP's) to connect their transmission networks directly to the

local exchange company's switch. This will allow the CAPs to extend service to areas not passed by their own facilities by reselling the local exchange company's services. The FCC's action was heralded in the popular press as the end of the local exchange monopoly. However, although the access charges subject to FCC jurisdiction represent a $20 billion dollar market and about 20% of the average telecommunications company's revenues, the "exposed" access revenues only amount to about 3% of the consolidated total. Special access, common line, and switching fees are not directly affected by the August 3 order. Also, the lion's share, 80%, of "transport" revenues are subject to the FCC's new Residential Interconnect Charge (RIC) which is charged to the CAP's for the right to connect to the local exchange company's network. More than half of the remaining 20% of "transport" revenues exposed to competition may represent traffic that is not attractive to the CAP's due to its geographic dispersion or small size. When other factors are taken into consideration such as the pricing flexibility granted to the LEC's by the FCC, annual market growth, and stimulation; the impact of the FCC's

action on the local exchange companies may be negligible.

To summarize, investor expectations and the impacts of competition and expected competition are reflected in current stock prices and therefore accounted for in a market based cost of equity analysis.

Q Have you examined the equity ratio of Southern Bell?

A Yes, I have.

Q In your opinion, should Southern Bell's equity ratio be reduced for ratemaking purposes?

A Yes.

Q Why do you believe Southern Bell's equity ratio should be reduced for ratemaking purposes?

A It is important that regulators ensure that ratepayers do not subsidize, through a utility's cost of capital, the costs associated with non-utility investments made by the utility, its parent, or affiliates. This can be accomplished by ensuring that only the reasonable and prudent costs associated with the provision of utility service are charged to ratepayers. Generally, when attempting to prevent cross-subsidization between utility and non-utility

affiliates, regulators tend to concentrate on costs such as the allocation of common plant or other shared assets and expenses. However, significant subsidization between utility and non-utility affiliates can occur if a regulator allows a company a rate of return above the required return or allows higher than necessary rates to be set using an equity ratio above the level required to allow the utility to maintain its financial integrity. Additionally, utilities can manipulate their revenue requirement and their earnings level through changes to their equity ratio. Recognizing this problem, the FCC in Order 90-315, used a hypothetical capital structure consisting of 44.2% debt and 55.8% equity in the docket "Represcribing the Authorized Rate of Return for Interstate Services of local Exchange Carriers". In its order the FCC stated:

> We find that the capital structure of the BOC's should not be used in determining the overall interstate cost of capital because the capital structure of those entities is subject to manipulation by the holding companies.

In a purely competitive environment it

would not be possible for a firm to increase its price above the market rate in one market to subsidize a price in another market. However, in a regulated environment, regulators are a proxy for competition. Therefore, as the Regional Bell Holding Companies and Bell operating companies enter more non-regulated lines of business it becomes even more important to ensure ratepayers only bear the reasonable and prudent costs associated with the provision of utility service. As shown on Schedule 13, the RBHC's percentage of revenue from lines of business other than local, toll, and access has increased to 24% today from approximately 14% in 1988.

As shown on Schedule 11, Bellsouth has the lowest total debt to total capital ratio of the RBHC's at 39.5% indicating an equity to total capital ratio of 60.5%. As shown on Schedule 12, Southern Bell has a total debt to total capital ratio of 33.72% indicating an equity to total capital ratio of 64.28% (although the company is asking for an equity ratio of 61.01% in this docket). As shown in Standard and Poor's Creditreview dated July 19, 1993, BST has an equity to total capital ratio of 61.0%. This indicates

Bellsouth Corp's risky, non-regulated ventures, in total, are not financed with more equity than the less risky regulated telephone operations of Bellsouth Telecommunications Inc. and Southern Bell, signifying reliance on the local exchange companies for credit support by the parent corporation. In fact, the July 19, 1993 Standard and Poor's Creditweek states:

> "Bellsouth Corp.'s credit strength is derived primarily from its telephone operating company unit, Bellsouth Telecommunications, Inc."

Schedule 9 shows Standard and Poor's financial benchmarks for local exchange companies. As shown on Schedule 10, the total debt to total capital benchmark for a AA local exchange company is "under 42%". As shown on Schedule 12, Southern Bell's total debt to total capital is 33.72%, significantly under that required for a AA rated local exchange company. In my opinion, Southern Bell has not justified its need for such a costly capital structure. Ratepayers should not have to bear the added costs of unnecessarily high equity ratios that are needed by the local exchange company's parent or affiliates to provide credit

support for leveraged investments in risky operations.

Based on the reasons stated above: 1.) ratepayers should pay only the reasonable and prudent costs associated with the provision of utility service; 2.) a utility's equity ratio should be reasonable and allow the Company to attract capital at a reasonable cost; 3.) increased investment by Southern Bell's affiliates into non-regulated lines of business; 4.) the ability of the Company to manipulate its equity ratio to the detriment of its ratepayers and competitors and to the benefit of itself and its affiliates; 5.) the fact that Southern Bell's equity ratio is above the industry average and well above the minimum requirement inherent in Standard and Poor's total debt to total capital benchmark for a AA rated local exchange company; 6.) Southern Bell's riskier affiliates have not been financed with more equity indicating reliance on the local exchange company for credit support and; 7.) the company has not justified the need for such a costly capital structure: I recommend Southern Bell's equity ratio be set at 58% of investor capital for ratemaking purposes. An equity ratio of 58% is the minimum

requirement inherent in Standard and Poor's total debt to total capital financial benchmark for a AA rated local exchange company.

Q What methods did you use to determine the required return on common equity for Southern Bell?

A To determine the required return on common equity, I used a two-stage, annually compounded discounted cash flow (DCF) model and a risk-premium analysis.

It is important to note that estimating the cost of common equity is a subjective procedure. It is impossible to measure it precisely and it is generally estimated within a range. The cost of common equity is a function of investor expectations and it is impossible to know all investors' expectations at any point in time. Consequently, professional judgment must be exercised when determining proxies for investor expectations. When analyzing cost of equity estimates, it is important to understand the rationale underlying the subjective inputs and how well the models relied upon reflect reality.

Q How did you apply the DCF and risk premium models to obtain Southern Bell's cost of common equity?

A I conducted DCF and risk premium analyses on the index of Regional Bell Holding Companies

Relying on an index of companies, rather than a single company, helps minimize forecasting errors and should provide more reliable information for use in measuring the cost of common equity.

Q Please describe the investment risk characteristics of the index of Regional Bell Holding companies.

A The investment risk parameters for the index of Regional Bell Holding companies are: a Value Line Safety Rank of 1, a Value Line beta of .86, an S&P and Moody's bond rating of AA/Aa2, and an average equity ratio of 58.4% of investor capital, excluding short-term debt.

Q Please briefly describe the models you used.

A The discounted cash flow model is the most commonly used market based approach for estimating a utility investor's required return on common equity capital. In a DCF analysis, the cost of equity is the discount rate which equates the present value of expected cash flows associated with a share of stock to the present price of the stock.

A risk premium analysis recognizes that equity is riskier than debt. Equity investors thus require a "risk premium" over the cost of debt as compensation for assuming additional risk.

Q Please provide the equation and define the terms for the discounted cash flow model.

A This information is provided on Schedule 4. Inherent in this basic model are several simplifying assumptions: (1) dividends are paid annually and grow at a constant rate; (2) the price, P_o, is determined on a dividend payment date; and (3) dividends increase once a year starting exactly one year hence.

Q Is Equation (4), Schedule 4, the DCF model you used to determine the cost of common equity capital?

A No, it is not. As mentioned above, the basic DCF model assumes that dividend growth rate is constant over time. If, however, the future growth rate is expected to change, a two-stage or variable growth rate model should be used. I have relied on a two-stage variable growth rate model in order to use the specific dividend forecasts for the next five years provided by Value Line. Equation (5) on Schedule 4 shows a two-stage DCF

model. In the two-stage model, dividend growth is estimated on an individual basis for an initial growth period. After the initial period, dividends are assumed to grow into perpetuity at the expected long-term growth rate.

Q How did you use this model to determine the cost of common equity capital for the index?

A The current stock price (P_o) was determined by averaging the high and the low stock price for September 1993 for each company. I assumed an initial growth period based upon Value Line's explicit dividend forecasts (n). I used Value Line's forecast of dividends for 1993 and 1997, and assumed a constant rate of growth in between to estimate the expected dividends (D_t) during the initial growth period. The long-term constant rate of growth expected after 1997 (g_n) was calculated using the earnings retention method (b x r approach) and Value Line's expected return on equity (r) and expected retention rate (b) for 1997.

Q Did you incorporate an allowance for flotation costs in applying your DCF model?

A Yes. The DCF calculations I performed include and adjustment of 3% to recognize the

expenses associated with issuing stock. An allowance for issuance costs enables the utility to recover the costs incurred when issuing common stock. Issuance expenses include registration, legal, and underwriter fees, and printing and mailing expenses. Investors would never be able to earn the required return on their investment without an issuance cost adjustment because the sales price will always exceed the net proceeds to the company as a result of incurring issuance costs. These costs will be incurred whether the stock is publicly traded or privately held.

Conceptually, the situation with common stock is similar to that of bonds and preferred stock. With bonds for example, the issuance expenses are reflected in the cost charged to ratepayers and are recovered over the life of the bond. The cost to the company for a specific bond issue is the interest expense plus the amortization of issuance costs divided by the principal value less the unamortized issuance costs. The result is that the cost to the utility is greater than the return to the creditor.

Unlike the case of bonds, however, common stock does not have a finite life. Therefore,

issuance costs cannot be amortized and must be recovered by an upward adjustment to the allowed return on equity. This adjustment reflects the fact that, due to the issuance costs, the utility earns a return on an equity balance that is less than the actual amount paid by investors. (See Brigham, E.F., Aberwald, D., and Gapenski, L.D., "Common Equity Flotation Costs and Rate Making," Public Utilities Fortnightly, May 2, 1985, pp. 28-36). Historically, utility underwriting expenses associated with issuing common stock have averaged 3 to 4 percent of gross proceeds. (See Petteway, R.H., "A Note on the Flotation Costs of New Equity Capital Issues of Electric Companies," Public Utilities Fortnightly, March 18, 1982, pp. 68-69. When the adjustment for flotation costs (FC) is recognized, the cost of equity is given by Equation (6), Schedule 4.

Q What is the required return on common equity for the index based upon your two-stage annually-compounded DCF model?

A Solving Equation (6), Schedule 4 for the cost of equity (K) produces a required return on common equity for the index of 10.20% (rounded). Schedule 5 shows the inputs and results of my

analysis.

Q Please describe the risk premium approach of determining the cost of common equity.

A The return to equity owners is a residual return and is less certain than the yield on bonds. Therefore, equity owners must be compensated for this additional risk. The risk premium approach estimates the cost of common equity by adding a premium to the cost rate of debt to compensate the investor for the greater risk inherent in an equity investment. The basic risk premium model takes the form:

$$K_e = B_y + R_p$$

where:

K_e = the cost of common equity

B_y = the yield on debt

R_p = the risk premium on common stock

In order to apply the methodology, a risk premium for common stock over some measure of debt cost must be estimated. The debt security used in a risk premium analysis should be risk free to isolate the spread component of the return and avoid default risk and circularity concerns that are associated with debt securities issued by utilities.

Q How did you estimate the equity - debt risk premium?

A I began my analysis by estimating the required market returns for the index of Regional Bell Holding Companies for each month of the January 1984 to September 1993 ten-year period (117 data points) using the same DCF methodology described previously. This was accomplished by using the Value Line data that was available to investors each month of the January 1984 to September 1993 period, and the then current stock prices.

Q How was the equity-debt risk premium determined?

A For each month, the required returns on common equity derived from my DCF analyses were compared to the then current yield on long-term government bonds, as reported by Moody's, to determine the risk premium for common equity over the yield on long-term government bonds.

Q What is your estimate of the equity - debt risk premium for the index?

A As shown on Schedule 6, the equity - debt risk premium for the index averaged 3.30% (rounded) over the period January 1984 to September, 1993.

Q What measure of debt cost did you add to the risk premium to determine the cost of equity?

A I used the October 1, 1993 Blue Chip Financial Forecasts' (Blue Chip) consensus forecast for long-term government bond yields for the coming year of 6.25%. Blue Chip Financial Forecasts is a publication that provides interest rate forecasts from approximately 50 leading financial forecasters.

Q What is the risk premium cost of common equity for the index?

A Combining the next four quarters expected yield on long-term government bonds of 6.25% with the equity-debt risk premium of 3.30% results in a risk premium cost of equity of 9.55% for the index.

Q Did you make an adjustment to the required return on equity to recognize the difference in risk between Southern Bell and the indices?

A No. Although Southern Bell is a AAA rated company and the indices are on average AA rated, I did not make a compensating adjustment because of the adjustment I am recommending to Southern Bell's equity ratio. If I had not recommended an adjustment to Southern Bell's equity

ratio I would have adjusted the determined cost of equity downward to recognize the difference in risk between Southern Bell and the indices.

Q Based on your DCF and risk premium analyses, what is your conclusion as to the investor required rate of return on common equity for Southern Bell?

A Based on my DCF analysis and risk premium analyses, I conclude the investor required rate of return on common equity for Southern Bell is within the range of 9.55% to 10.20% with a midpoint of 9.90%. As shown on Schedule 14, a return on common equity of 9.90% will allow Southern Bell a coverage ratio of 4.10X. In my opinion, such a coverage ratio, given Southern Bell's financial profile, should allow Southern Bell to attract capital at a reasonable cost.

Q Have you examined the direct testimony of Southern Bell witness Dr. Randall S. Billingsley regarding the cost of common equity for Southern Bell?

A Yes. In my opinion the estimated cost of equity range of 13.90% to 14.29% determined by Dr. Billingsley overstates the cost of common equity to Southern Bell.

Q Why do you believe Dr. Billingsley's estimate of Southern Bell's cost of common equity overstates Southern Bell's cost of common equity?

A I believe Dr. Billingsley's analysis overstates the cost of common equity for Southern Bell because Dr. Billingsley: 1) relied on estimates of earnings growth as proxies for expected dividend growth in his DCF analyses; 2) performed his discounted cash flow and risk premium analyses on companies that, in my opinion, are not comparable to Southern Bell, and; 3) relied on a quarterly compounded discounted cash flow model that produced an investor's effective required rate of return, yet he did not adjust the effective rate to its corresponding nominal rate to recognize that the Florida Public Service Commission relies on average investment and not beginning of the year investment when determining rates.

Q Why do you believe it is incorrect to rely on estimates of earnings growth as a proxy for dividend growth?

A The discounted cash flow (DCF) model is a dividend discounting model. According to DCF theory, the cost of equity is the discount rate (required rate) that equates the present value of

the expected cash flows associated with a share of stock to the price of the stock. The cash flows expected to be received from a share of stock consist of expected dividends plus the price investors expect to receive when they sell the stock. The market price in any period (t) will equal the present value of the dividends and sales price expected after period (t). Applying this concept to all future sales prices, the current stock price can be shown to equal the present value of all dividends expected to be paid in the future, including any liquidating dividend. Therefore, expected dividend growth should be used when determining the cost of common equity using a DCF model.

The expected growth in earnings is not a valid proxy for the expected growth in dividends because all earnings are not paid out as dividends when they are earned. A dollar received in the future is worth less than a dollar received today because a dollar today can be invested in an interest earning account and increase in value. This principle is known as the time value of money.

Generally, utility companies increase dividends in a lock-step fashion and only when it

is anticipated that a higher level of earnings can support a higher level of dividends. Not properly accounting for the timing and amount of expected cash flows when performing a discounted cash flow analysis produces an incorrect result.

Q Why do you believe the companies Dr. Billingsley selected for use in his DCF analysis are not comparable to Southern Bell?

A Dr. Billingsley determined his group of comparable companies for his DCF analysis by performing a "cluster analysis". The "cluster analysis" technique allegedly produces a group of firms with comparable risk by identifying firms that are "close" to the target firm on the basis of selected risk indicia. Additionally, Dr. Billingsley used the S&P 500 to determine his risk premium cost of equity for Southern Bell. In my opinion, the fact that Dr. Billingsley's comparable firms are non-regulated indicates the firms are not "close enough" to be comparable to Southern Bell. Industrial companies in general, and the companies that comprise the S&P 500 in particular, are riskier than Southern Bell. The companies are not regulated and have higher betas than even the Regional Bell Holding Companies which are partly

comprised of high risk non-regulated companies. Regulated companies are generally considered less risky than non-regulated companies because their expected earnings before interest and taxes (EBIT) are generally less variable than non-regulated firms. The reason a regulated firm's expected EBIT is less variable than a non-regulated firm's EBIT is because appropriate regulation requires regulators to balance the interests of ratepayers and shareholders and maintain the regulated firm's financial integrity. This results in less earnings variability for the regulated firm and consequently less uncertainty and therefore less risk.

As further evidence of the lower risk of regulated companies, Standard and Poor's financial benchmark for telephone companies are significantly less burdensome than the criteria for industrial companies because of the difference in risk. It also should be noted that the financial benchmarks for the telephone companies take into account the risks associated with the current status of the industry. Therefore, in my opinion, it is not appropriate to rely on the required return on equity for the S&P 500, or on unregulated

industrial companies, as a proxy for the required return on equity for Southern Bell.

Furthermore, Dr. Billingsley's states the expected long term growth of cellular earnings is not reflected in analysts' long-term forecasts of RBHC's earnings growth. However, analysts have been considering cellular earnings growth in their long-term earnings forecasts for some time. For example, Morgan Stanley forecasts five-year earnings growth of 6%, on average, for the telco's with 50% of that coming from cellular operations (see Morgan Stanley, U.S. Investment Perspectives, December 18, 1991). Given that cellular operations are much riskier than local exchange operations and investors consider the effects of cellular when evaluating RBHC's stocks, (see S&P Telecommunications Creditreview, June 24, 1991) it is my opinion the effect of risky cellular investments on the RBHC's required return on common equity would be to increase it, not decrease it.

Q Why should the investor's effective required rate of return determined using a quarterly compounded DCF model be adjusted to its corresponding nominal rate of return?

A Using the results derived from a

quarterly DCF model without making an effective to nominal rate of return adjustment, when average investment is used to determine appropriate utility rates, is inconsistent and unfair to ratepayers. The effective to nominal rate of return adjustment recognizes the time value of money associated with the company's monthly accrual of earnings which is a function of ratepayers paying their bills on a monthly basis. It is inconsistent to recognize the time value of money associated with investor's quarterly receipt of dividends, through use of a quarterly DCF model, and not recognize the time value of money associated with ratepayers paying their bills on a monthly basis and the company's monthly accrual of earnings. Ignoring the compounding effects of the company's monthly accrual of earnings , as reflected in the 12-month average equity balance, results in an overestimation of the point at which rates should be set. (See C.M. Linke and J.K. Zumwalt, "Estimation Biases in Discounted Cash Flow Analyses of Equity Capital Cost in Rate Regulation," FINANCIAL MANAGEMENT, Autumn, 1984, pp. 15-20 and M.A. Cicchetti, "The Quarterly Discounted Cash Flow Model, Effective and Nominal Rates of Return, and

the Determination of Revenue Requirements for Regulated Utilities", THE NATIONAL REGULATORY RESEARCH INSTITUTE QUARTERLY BULLETIN, June, 1989, pp. 249-259.

Q In your opinion, what effect do the inconsistencies in Dr. Billingsley's testimony have on his recommended cost of common equity for Southern Bell?

A In my opinion, the inconsistencies in Dr. Billingsley's testimony cause his recommended cost of common equity range to be overstated.

Q Please summarize your testimony.

A My testimony addressed two subject areas. The first area was the determination of an appropriate incentive regulation plan for Southern Bell which included an overview of the company's current incentive regulation plan. I presented an incentive plan that ties the company's reward to specific company actions to improve production efficiency. In my opinion, such a plan provides a proxy for the economic profits, that is profits above a company's cost of capital, that can be earned in a competitive environment if a company is efficient or innovative.

The second area I addressed was the

appropriate return Southern Bell should be allowed for ratemaking purposes. With respect to an appropriate allowed return, I concluded the cost of common equity capital for Southern Bell is within the range of 9.55% to 10.20% and I recommend the Commission allow the midpoint of this range, 9.90%, for ratemaking purposes. It is important to note that my recommended return on equity is approximately 320 basis points over the current yield on the company's long-term debt as of October 15, 1993.

With respect to an appropriate equity ratio, I concluded Southern Bell's equity ratio should be set at 58.00% of investor capital.

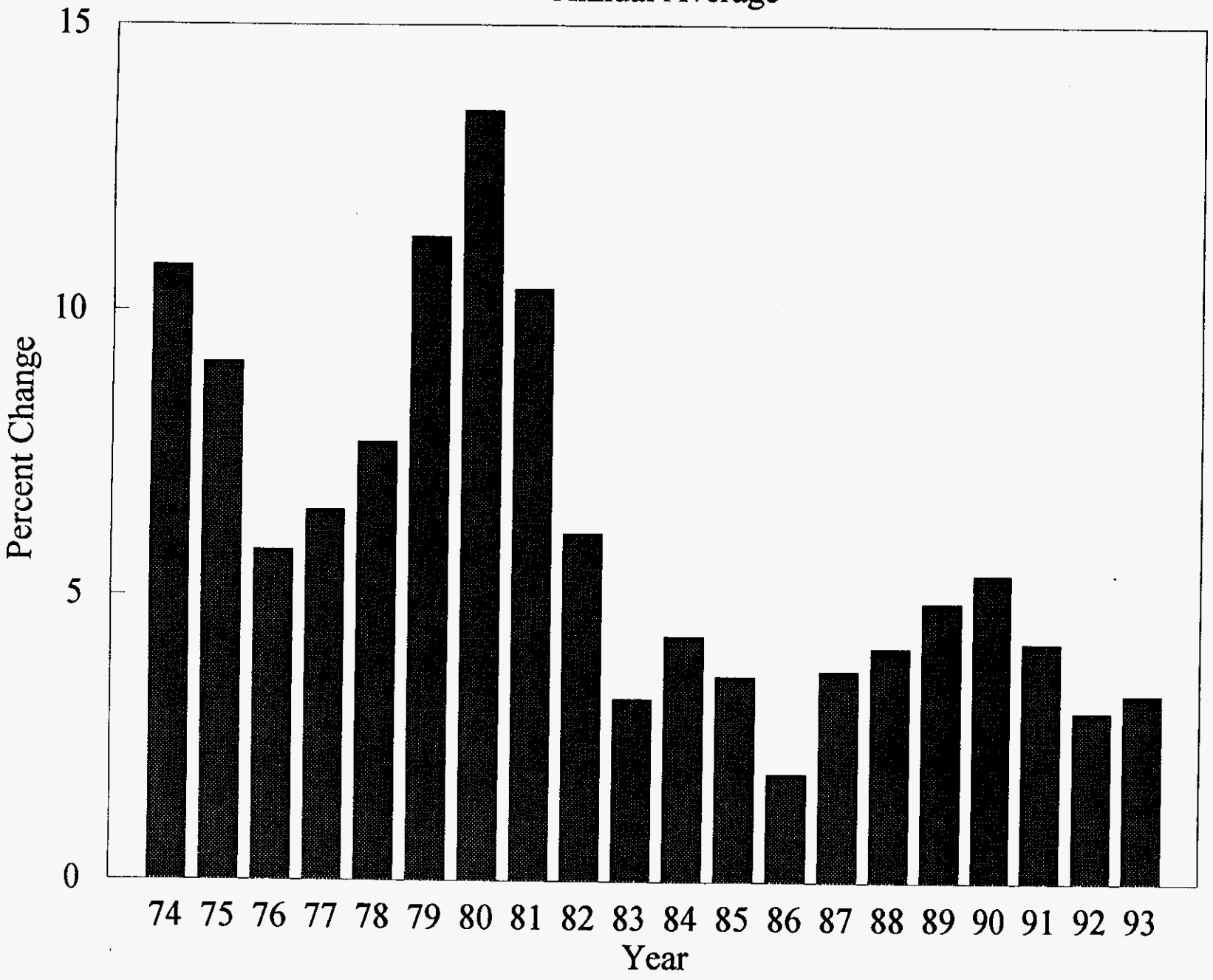
Q Does this conclude your testimony?

A Yes, it does.

LISTING OF EXHIBITS

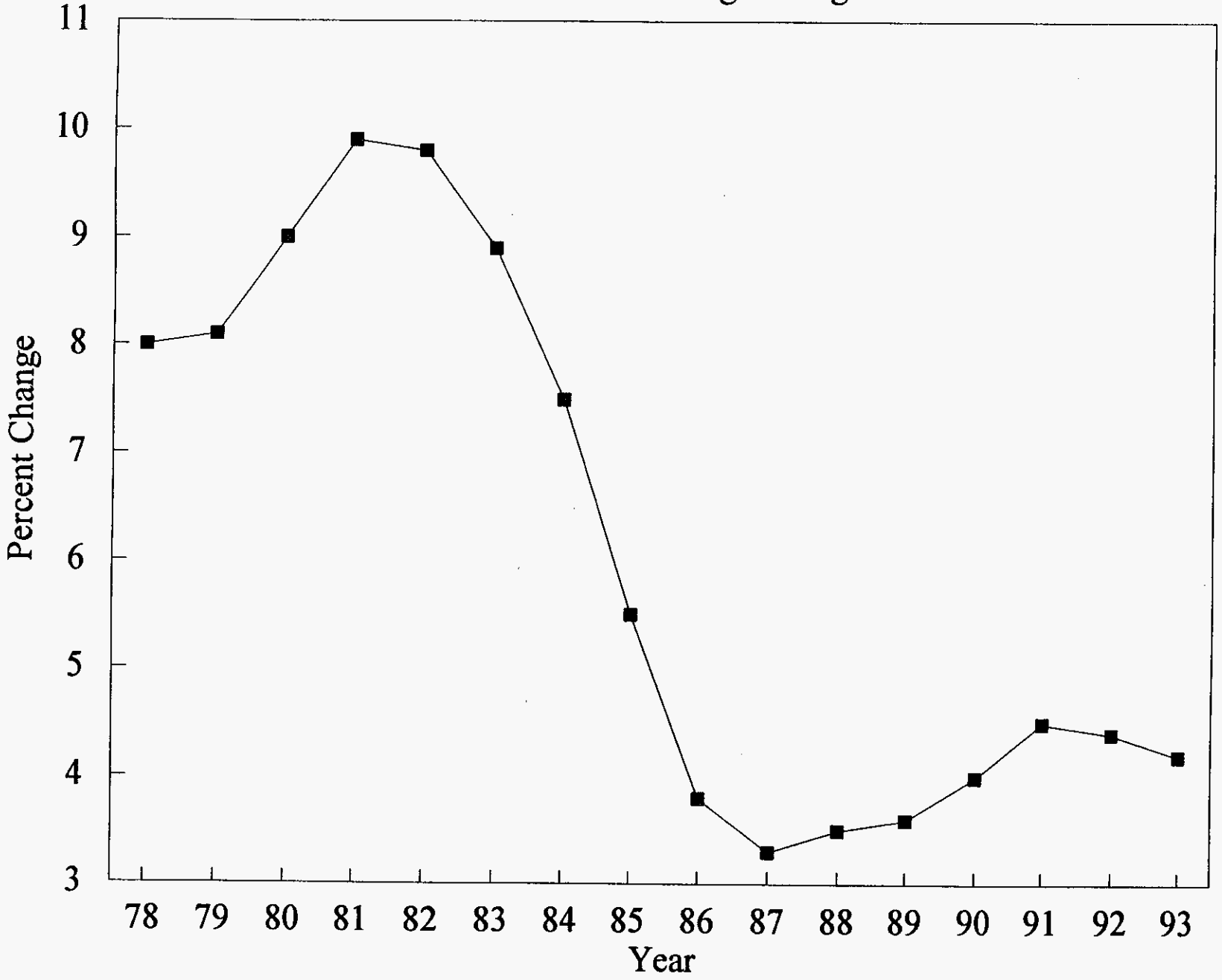
The Consumer Price Index

Annual Average



The Consumer Price Index

Five Year Moving Average



The Consumer Price Index

	Annual Average	Five Year Moving Average
1993*	3.30%	4.40%
1992	3.00%	4.30%
1991	4.20%	4.50%
1990	5.40%	4.00%
1989	4.90%	3.60%
1988	4.10%	3.50%
1987	3.70%	3.30%
1986	1.90%	3.80%
1985	3.60%	5.50%
1984	4.30%	7.50%
1983	3.20%	8.90%
1982	6.10%	9.80%
1981	10.40%	9.90%
1980	13.50%	9.00%
1979	11.30%	8.10%
1978	7.70%	8.00%
1977	6.50%	
1976	5.80%	
1975	9.10%	
1974	10.80%	

*Estimated
Source: Value Line

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Schedule 2
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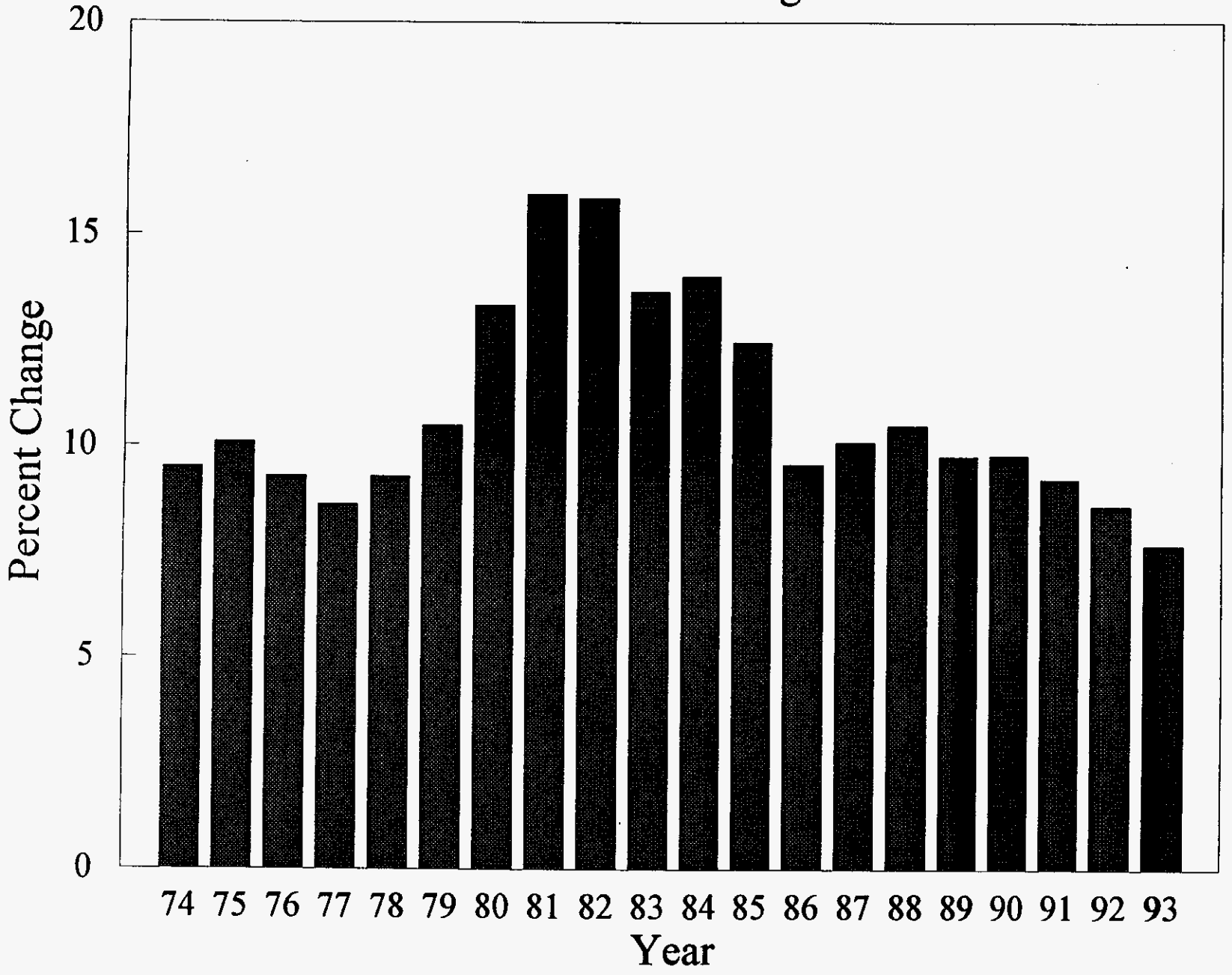
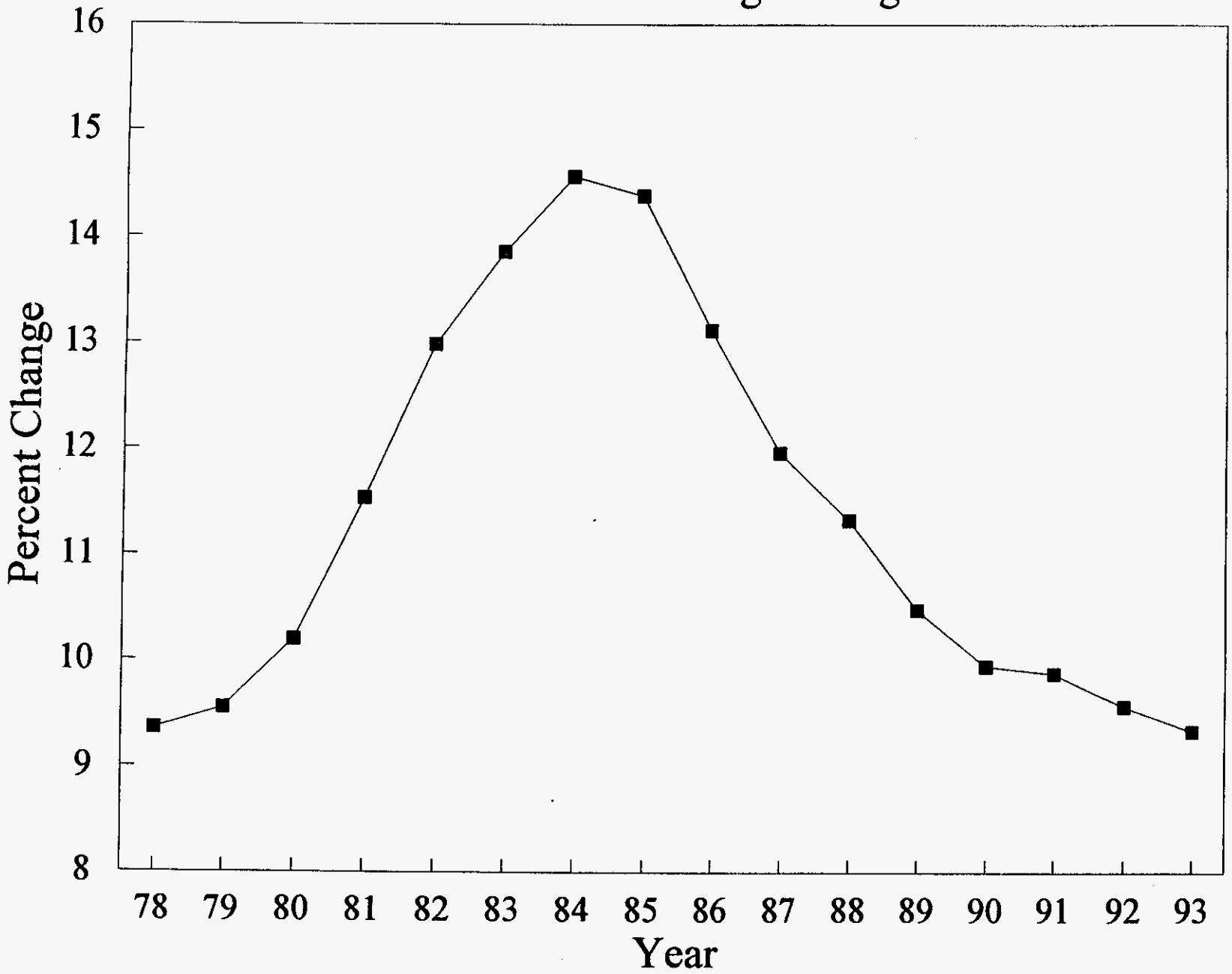
Average Yields A-Rated Utility Bonds

Annual Average



Average Yields A-Rated Utility Bonds
Five Year Moving Average



Average Yields on A-Rated Utility Bonds

	Annual Average	Five Year Moving Average
1993*	7.66%	9.34%
1992	8.59%	9.57%
1991	9.23%	9.88%
1990	9.79%	9.95%
1989	9.77%	10.48%
1988	10.49%	11.33%
1987	10.10%	11.97%
1986	9.58%	13.12%
1985	12.47%	14.39%
1984	14.03%	14.57%
1983	13.66%	13.86%
1982	15.86%	12.99%
1981	15.95%	11.54%
1980	13.34%	10.20%
1979	10.49%	9.55%
1978	9.29%	9.36%
1977	8.61%	
1976	9.29%	
1975	10.09%	
1974	9.50%	

*Through August
Source: Moody's Bond Survey

Regional Bell Holding Companies
Investment Risk Characteristics

	S&P Stock Rank	Value Line Safety Rank	Value Line Beta	Value Line Equity Ratio	Moody's Bond Rating	S&P Bond Rating
Ameritech	A-	1	.80	63.0%	Aaa	AAA
Bell Atlantic	A-	1	.90	52.0%	Aa1	AA+
[redacted]						
NYNEX	A-	1	.85	58.0%	A2	A
Pacific Telesis	A-	1	.90	56.0%	Aa3	AA-
S.W. Bell	A-	1	.90	55.0%	Aa3	A+
U.S. West	A-	1	.85	59.0%	Aa3	AA-
Average	A-	1	.86	58.4%	Aa2	AA

Source: Value Line Ratings and Reports, Edition 5, 1993
Moody's Public Utility Manual, 1992
Standard & Poor's Bond Guide, September 1993
Standard & Poor's Stock Guide, September 1993

DCF Model Equation

$$(1)\quad P_o = \frac{D_1}{(1+K)} + \frac{D_2}{(1+K)^2} + \frac{D_3}{(1+K)^3} + \ldots + \frac{D_\infty}{(1+K)^\infty}$$

Where: D_t = Dividend paid at the end of period t

K = Investor's required rate of return (the market cost of equity)

P_o = The current price of the stock

Assuming a constant growth in dividends and $g < K$, Equation (1) can be rewritten as:

$$(2)\quad P_o = \frac{D_1}{(1+K)} + \frac{D_1(1+g)^1}{(1+K)^2} + \frac{D_1(1+g)^2}{(1+K)^3} \ldots + \frac{D_1(1+g)^{n-1}}{(1+K)^n}$$

Which can be reduced to:

$$(3)\quad P_o = \frac{D_1}{K-g}$$

Which after rearranging terms, results in the familiar infinite horizon, constant growth, annual DCF model:

$$(4)\quad K = \frac{D_1}{P_o} + g$$

Two-Stage, Annually Compounded DCF Model

$$(5) \qquad P_o = \sum_{t=1}^{n} \frac{D_t}{(1+K)^t} + \left(\frac{D_n(1+g)_n}{K-g_n}\right)\left(\frac{1}{(1+K)}\right)^n$$

Where:

P_o = The current stock price

D_t = The dividends expected during the period of non-constant growth

K = Investor's required rate of return (the market cost of equity)

n = The years of non-constant growth

D_n = The dividend expected in year n

g_n = The constant rate of growth expected after year n

Issuance Costs Adjustment

$$(6) \qquad P_o(1-FC) = \sum_{t=1}^{n} \frac{D_t}{(1+K)^t} + \left(\frac{D_n(1+g_n)}{K-g_n}\right)\left(\frac{1}{(1+K)}\right)^n$$

Where:

FC = Flotation costs

Two-Stage, Annually Compounded
Discounted Cash Flow Model

	*******Expected Dividends*******					Expected EPS	Expected ROE	Average Dividend Growth 1993 -	Average Dividend Growth	Average Stock Price
	1993	1994	1995	1996	1997	1997	1997	1997	1997+	8/93
Ameritech	3.70	3.85	3.99	4.14	4.30	6.35	16.50	3.75%	5.33%	$83.63
Bell Atlantic	2.68	2.80	2.93	3.06	3.20	4.60	19.00	4.55%	5.78%	$59.88
[redacted]										
NYNEX	4.72	4.84	5.05	5.27	5.50	8.65	14.50	4.35%	5.28%	$89.88
Pacific Telesis	2.18	2.22	2.34	2.47	2.60	3.75	16.50	5.41%	5.06%	$51.63
S.W. Bell	1.50	1.57	1.66	1.75	1.84	3.25	18.50	5.43%	8.03%	$42.63
U.S. West	2.14	2.20	2.30	2.40	2.50	3.75	14.50	4.35%	4.83%	$45.94
Average	2.81	2.91	3.04	3.18	3.33	5.02	16.21	4.72%	5.51%	$61.46

The cost of common equity is calculated using a Two-Stage, Annually Compounded Discounted Cash Flow Model:

$$Po(1-fc)\sum_{t=1}^{n} = Dt/(1+k)^t + (Dn(1+gn))/(k-gn)*(1/(1+k))^t$$

Solving the above equation for k using Po = $61.46, fc = 3% and n = 5,

Provides a cost of common equity of: **10.22%**

1) Data obtained or calculated from information provided in Value Line, Edition 5, 7/16/93.
2) The average stock price is the average of the high and low price for August 1993, S&P Stock Guide, September 1993.

Estimated Monthly Risk Premium
Regional Bell Holding Companies
1984 - 1993

Year	Month	Cost of Equity RHBCS	Risk Free Rate	Risk Premium
1984	JAN	14.51	11.81	2.70
	FEB	14.12	11.65	2.47
	MAR	14.21	11.81	2.40
	APR	14.59	12.28	2.31
	MAY	14.95	12.58	2.37
	JUN	15.07	13.32	1.75
	JUL	15.28	13.43	1.85
	AUG	15.16	13.24	1.92
	SEP	14.71	12.63	2.08
	OCT	14.67	12.34	2.33
	NOV	14.55	12.00	2.55
	DEC	14.52	11.55	2.97
1985	JAN	14.42	11.51	2.91
	FEB	14.39	11.46	2.93
	MAR	14.14	11.56	2.58
	APR	13.93	11.92	2.01
	MAY	13.89	11.55	2.34
	JUN	13.72	11.08	2.64
	JUL	13.62	10.48	3.14
	AUG	13.65	10.62	3.03
	SEP	14.09	10.70	3.39
	OCT	14.15	10.78	3.37
	NOV	14.25	10.66	3.59
	DEC	13.86	10.19	3.67
1986	JAN	13.20	9.68	3.52
	FEB	13.17	9.59	3.58
	MAR	12.82	9.26	3.56
	APR	12.21	8.15	4.06
	MAY	11.60	7.58	4.02
	JUN	12.06	8.13	3.93
	JUL	11.50	8.27	3.23
	AUG	11.44	7.88	3.56
	SEP	11.14	7.74	3.40
	OCT	11.30	8.10	3.20
	NOV	11.67	8.06	3.61
	DEC	11.69	7.82	3.87

Estimated Monthly Risk Premium
Regional Bell Holding Companies
1984 - 1993

Year	Month	Cost of Equity RHBCS	Risk Free Rate	Risk Premium
1987	JAN	11.60	7.66	3.94
	FEB	11.46	7.62	3.84
	MAR	11.60	7.71	3.89
	APR	11.41	7.64	3.77
	MAY	11.90	8.35	3.55
	JUN	12.11	8.85	3.26
	JUL	11.67	8.67	3.00
	AUG	11.86	8.77	3.09
	SEP	11.42	9.06	2.36
	OCT	11.32	9.67	1.65
	NOV	12.05	9.73	2.32
	DEC	12.05	9.10	2.95
1988	JAN	12.24	9.23	3.01
	FEB	12.11	8.93	3.18
	MAR	11.81	8.48	3.33
	APR	12.00	8.64	3.36
	MAY	12.27	8.97	3.30
	JUN	12.27	9.30	2.97
	JUL	11.95	9.11	2.84
	AUG	12.14	9.28	2.86
	SEP	12.26	9.42	2.84
	OCT	12.12	9.14	2.98
	NOV	12.01	8.96	3.05
	DEC	12.59	9.09	3.50
1989	JAN	12.05	9.10	2.95
	FEB	12.01	9.05	2.96
	MAR	11.90	9.15	2.75
	APR	11.84	9.31	2.53
	MAY	11.60	9.17	2.43
	JUN	11.25	8.93	2.32
	JUL	11.31	8.37	2.94
	AUG	11.32	8.16	3.16
	SEP	11.20	8.23	2.97
	OCT	11.23	8.29	2.94
	NOV	11.25	8.12	3.13
	DEC	11.32	8.00	3.32

Estimated Monthly Risk Premium
Regional Bell Holding Companies
1984 - 1993

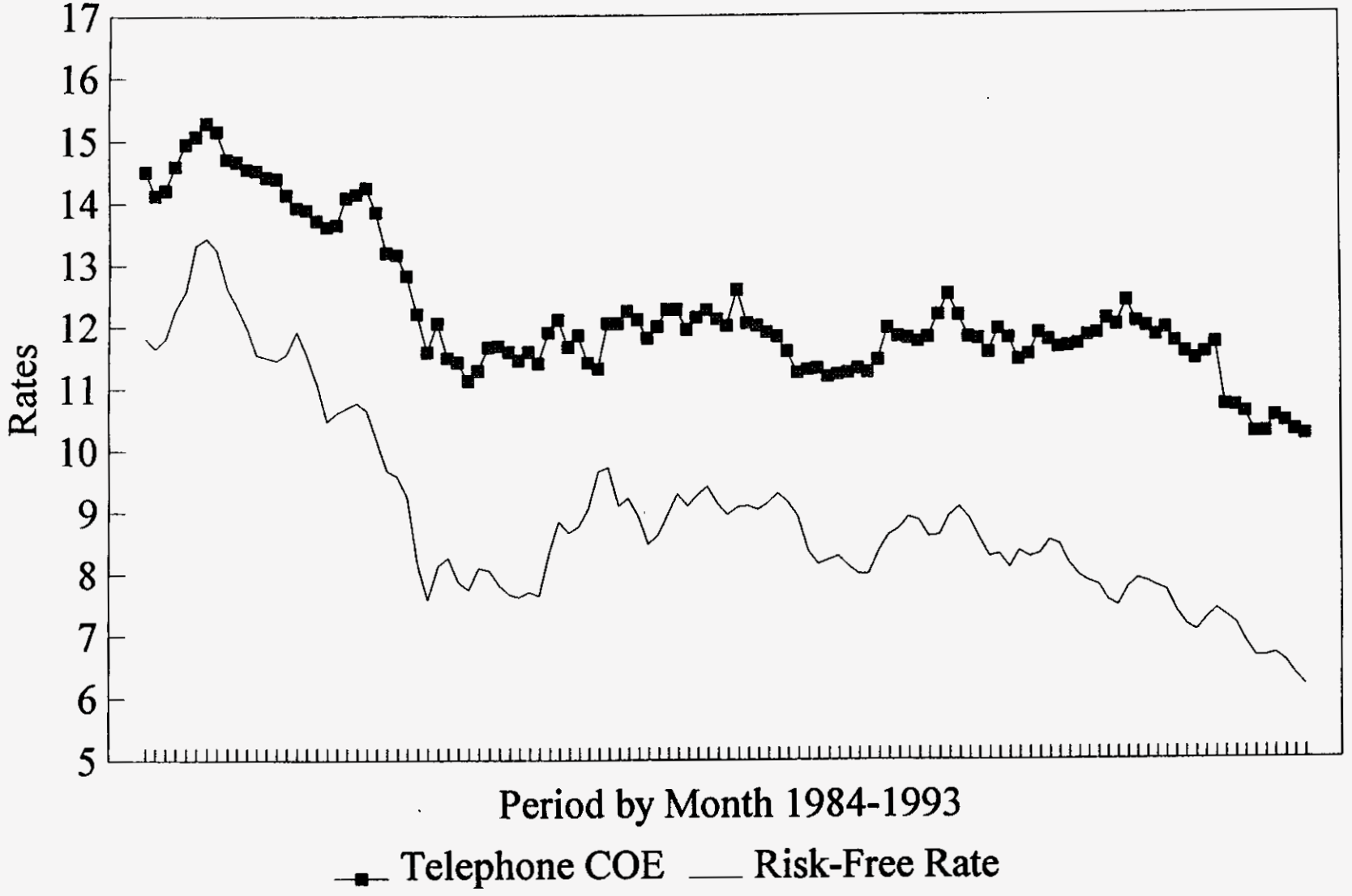
Year	Month	Cost of Equity RHBCS	Risk Free Rate	Risk Premium
1990	JAN	11.27	8.00	3.27
	FEB	11.46	8.37	3.09
	MAR	11.97	8.63	3.34
	APR	11.83	8.73	3.10
	MAY	11.81	8.92	2.89
	JUN	11.75	8.87	2.88
	JUL	11.82	8.60	3.22
	AUG	12.18	8.62	3.56
	SEP	12.51	8.93	3.58
	OCT	12.17	9.08	3.09
	NOV	11.82	8.89	2.93
	DEC	11.79	8.58	3.21
1991	JAN	11.57	8.27	3.30
	FEB	11.95	8.31	3.64
	MAR	11.80	8.09	3.71
	APR	11.45	8.36	3.09
	MAY	11.54	8.26	3.28
	JUN	11.88	8.31	3.57
	JUL	11.77	8.52	3.25
	AUG	11.65	8.47	3.18
	SEP	11.66	8.15	3.51
	OCT	11.70	7.95	3.75
	NOV	11.84	7.86	3.98
	DEC	11.87	7.80	4.07
1992	JAN	12.10	7.55	4.55
	FEB	12.01	7.46	4.55
	MAR	12.39	7.76	4.63
	APR	12.06	7.90	4.16
	MAY	11.98	7.85	4.13
	JUN	11.83	7.77	4.06
	JUL	11.95	7.70	4.25
	AUG	11.73	7.37	4.36
	SEP	11.56	7.15	4.41
	OCT	11.45	7.05	4.40
	NOV	11.55	7.24	4.31
	DEC	11.71	7.40	4.31

Estimated Monthly Risk Premium
Regional Bell Holding Companies
1984 - 1993

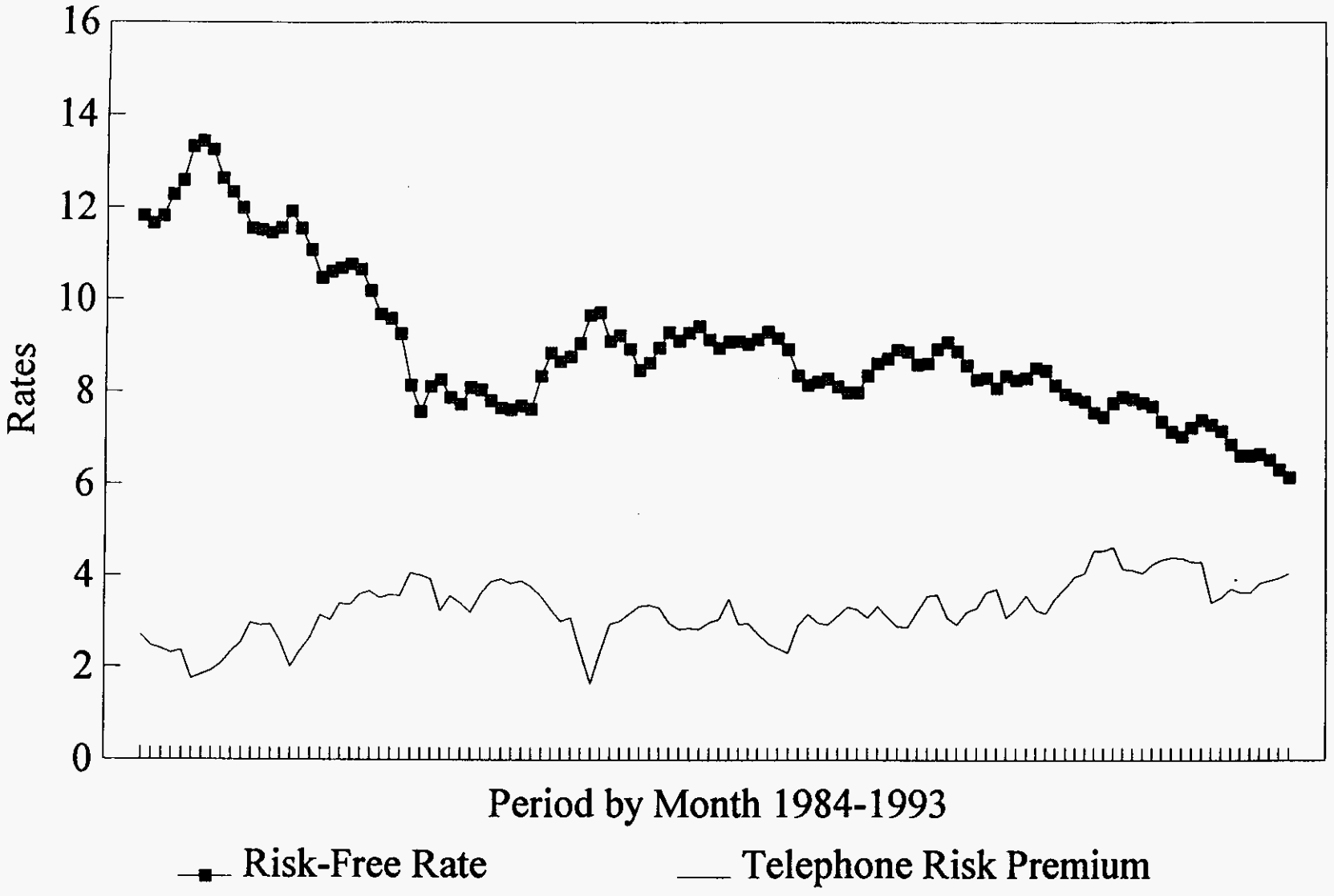
Year	Month	Cost of Equity RHBCS	Risk Free Rate	Risk Premium
1993	JAN	10.71	7.29	3.42
	FEB	10.69	7.16	3.53
	MAR	10.59	6.87	3.72
	APR	10.27	6.63	3.64
	MAY	10.27	6.63	3.64
	JUN	10.52	6.67	3.85
	JUL	10.44	6.54	3.90
	AUG	10.29	6.33	3.96
	SEP	10.22	6.16	4.06
	Average			**3.27**

Source: Value LIne 1978 - 1993, Moody's Municipal and Government Manual

Telephone DCF Cost of Equity
Versus Risk-Free Rate



Telephone Risk Premium
Versus Risk-Free Rate



Risk Premium Cost of Equity

Risk Premium + Expected Risk-Free Rate

Ke = 3.30% + 6.25%

Ke = 9.55% (Rounded)

Source: Blue Chip Financial Forecast, October 1, 1993

Standard & Poor's Financial Benchmarks

Financial Benchmarks for Local Exchange Companies

	AA	A	BBB
Total Debt/ Total Capital	Under 42%	40% - 52%	50% - 62%
Pretax Interest Coverage	Over 4.5X	3.3X - 5.0X	2.3X - 4.0X
Net Cash Flow/ Average Total Debt	Over 32%	25% - 33%	20% - 30%
Funds from Operations Interest Coverage	Over 6.5X	5.0X - 7.0X	3.5X - 5.5X

Source: Standard & Poor's Credit Review, October 11, 1993

Regional Bell Operating Companies
Financial Ratio Summary

Operating Subsidiary	Parent Company	Bond Rating	Total Capital (Mil.)	Tot. Debt/ Tot. Cap.	Pretax Interest Coverage	Return on Average Equity	Net Cash Flow/Cap. Outlays	Net Cash Flow/Total Debt
Illinois Bell	Ameritech	AAA	3,426.6	46.9	6.37	20.1	105.7	37.7
Indiana Bell	Ameritech	AAA	1,197.7	32.8	7.99	19.0	122.3	57.2
Michigan Bell	Ameritech	AAA	3,249.8	46.4	5.16	17.0	115.7	39.5
Ohio Bell	Ameritech	AAA	2,140.0	42.7	6.49	19.1	97.7	37.3
Wisconsin Bell	Ameritech	AAA	1,204.2	44.9	5.12	15.8	99.1	31.7
Bell Tel. of Pa.	Bell Atlantic	AA	3,955.1	46.5	4.81	18.0	97.1	33.2
Chesapeake & Potomac Tel.	Bell Atlantic	AA	532.6	45.3	3.50	12.3	134.6	54.1
Ches. & Pot. of Md.	Bell Atlantic	AA	2,402.7	46.6	4.94	20.0	115.1	36.9
Ches. & Pot. of Va.	Bell Atlantic	AA+	2,277.5	42.7	5.90	21.2	103.3	38.2
Ches. & Pot. Tel. of W.Va.	Bell Atlantic	AA+	680.6	42.1	6.21	19.2	104.8	39.1
Diamond State	Bell Atlantic	AAA	270.5	36.7	7.32	24.0	150.4	65.8
N.J. Bell Tel.	Bell Atlantic	AAA	3,512.0	39.6	6.39	22.2	101.8	43.0
BellSouth Telecomms. Inc.	Bellsouth	AAA	18,665.6	39.0	5.01	14.2	100.3	39.3
New Eng. Tel. & Tel.	NYNEX	AA-	5,736.5	41.6	4.80	14.9	116.3	37.9
New York Tel.	NYNEX	A	10,161.2	41.8	4.24	14.8	126.0	35.8
Pacific Bell	Pac. Telesis	AA-	12,504.0	41.7	4.71	15.6	85.9	27.5
Southwestern Bell	S.W. Bell	A+	12,082.1	41.3	4.17	13.6	102.7	32.5
U.S. West Comms., Inc.	U.S. West	AA-	11,456.4	43.6	4.39	13.3	87.7	35.0
Average		AA+	5,303.1	42.3	5.42	17.5	109.3	40.1

Source: Standard & Poor's Credit Review, July 19, 1993

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Bell Regional Holding Companies
Financial Ratio Summary

Company	Bond Rating	Total Capital (Mil.)	Tot. Debt/ Tot. Cap.	Pretax Interest Coverage	Return on Average Equity	Net Cash Flow/Cap. Outlays	Net Cash Flow/Avg. L-T Debt	Access Lines (Mil.)	Access Line Growth
Ameritech	AAA	13,696.1	48.9	4.85	17.8	105.1	34.5	17,001	2.50%
Bell Atlantic Corporation	AA+	17,868.0	56.3	3.44	18.2	112.6	27.6	18,179	2.40%
Bellsouth Corporation	AAA	22,792.9	39.5	4.44	12.3	124.7	43.2	18,677	3.40%
NYNEX	A	18,161.3	46.5	3.70	13.9	117.8	34.3	15,699	1.90%
Pacific Telesis	AA-	14,738.0	44.0	4.49	14.2	74.5	23.6	14,306	2.00%
Southwestern Bell Corporation	A+	16,299.7	42.9	4.47	14.3	130.7	39.3	12,803	3.30%
U.S. West Comms., Inc.	AA-	18,238.4	54.7	3.69	13.2	110.4	25.3	13,345	3.20%
Average	AA	17,399.2	47.5	4.2	14.8	110.8	32.5	15,716	2.67%

Source: Standard & Poor's Credit Review, July 19, 1993

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Southern Bell Telephone and Telegraph Company -
Selected FinancialRatios

% Internal funds to construction expenditures after dividends (Total Company)	90.86%
Pretax interest earned (NI+ Interest +Income Tax)/Interest (Total Company)	3.71X
Long Term Debt/Capital (Florida Intrastate)	33.72%
Short Term Debt/Capital (Florida Intrastate)	4.49%
Average adjusted achieved return on equity (Florida Intrastate)	13.29%
Adjusted year-end return on equity (Florida Intrastate)	12.77%

Source: Florida Public Service Commission, Southern Bell Telephone and Telegraph Company, Earnings Surveillance Report for 12 months ending June 30, 1993

Bell Regional Holding Companies
Revenue Breakdown (%)
1992

	Local Service	Toll	Access	Other
Ameritech	45%	11%	24%	20%
Bell Atlantic	39%	12%	23%	26%
BellSouth	41%	8%	25%	26%
Nynex	48%	8%	26%	18%
Pacific Telesis	33%	21%	22%	24%
Southwestern Bell	37%	10%	26%	27%
U.S. West	36%	14%	26%	24%
Average 1992	40%	12%	25%	24%
Average 1988	42%	14%	29%	14%

Source: Value Line, Ratings & Reports, Edition 5, July 16, 1993
Value Line, Ratings & Reports, Edition 5, April 22, 1988
Standard & Poor's Credit Review, July 19, 1993

Southern Bell Telephone and Telegraph Company
Thirteen Month Average

	FPSC Adjusted Retail	% of Total	Cost	After-Tax Weighted Cost	Pre-Tax Weighted Cost
Common Equity	$1,858,059	45.93%	9.90%	4.55%	7.30%
Long-Term Debt	$1,160,006	28.67%	7.68%	2.20%	2.20%
Short-Term Debt	$185,485	4.59%	3.30%	0.15%	0.15%
Customer Deposits	$55,679	1.38%	8.23%	0.11%	0.11%
Cost Free Capital	$681,040	16.83%	0.00%	0.00%	0.00%
Investment Tax Credits	$105,161	2.60%	9.05%	0.24%	0.38%
	$4,045,430	100.00%		7.25%	10.14%
				TIE Ratio =	4.11