Exhibit No.	
Issue:	Rate of Return
Witness:	Jay W. Moore, CMA, CRRA
Type of Exhibit:	Direct Testimony
Sponsoring Party:	MO PSC Staff
Case Nos.:	EO-97-144 and EC-97-362

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

MISSOURI PUBLIC SERVICE,

A DIVISION OF UTILICORP UNITED INC.

CASE NOS. EO-97-144 AND EC-97-362

DIRECT TESTIMONY

OF

JAY W. MOORE, CMA, CRRA

Jefferson City, Missouri

March 1997

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MISSOURI PUBLIC SERVICE,

A DIVISION OF UTILICORP UNITED INC.

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Q. Please state your name.

A. My name is Jay W. Moore.

Q. Please state your business address.

A. My business address is P.O. Box 360, Jefferson City, Missouri, 65102.

Q. What is your present occupation?

A. I am employed as Manager of the Financial Analysis Department for the Missouri Public Service Commission. I accepted this position in November 1990. From November 1987 to October 1990, I was employed as a Financial Analyst with the Missouri Public Service Commission (Commission).

Q. Were you previously employed before you joined the Commission's staff (Staff)?

A. Yes, I was employed by Summit Bank of Marion, Indiana from August 1985 to October 1987, in a Management Trainee position. I trained and assisted in the overall operation of the entire bank. I received training in the following departments: the

operations department, commercial and mortgage loan departments, investment department and the trust department.

Q. What is your educational background?

A. In 1985, I earned a Bachelor of Science degree in Mathematics with a minor in Business from Central Missouri State University. In 1987, I earned a Master of Business Administration degree with a concentration in Finance from Ball State University, Muncie, Indiana.

Q. Are you a member of any professional associations?

A. Yes. I am the President of the Society of Utility and Regulatory Financial Analysts (SURFA) formerly the National Society of Rate of Return Analysts. I am the Chair of the National Association of Regulatory Utility Commissioners' (NARUC's) Staff Subcommittee on Economics and Finance. I am also a member of the Institute of Management Accountants.

Q. Do you hold any professional designations?

A. Yes. On May 20, 1992, I was awarded the professional designation of "Certified Rate of Return Analyst" (CRRA) by the National Society of Rate of Return Analysts. This designation is based upon education, experience and the successful completion of a comprehensive examination. In addition, on June 1, 1992, I was awarded the professional designation of "Certified Management Accountant" (CMA) by the

Institute of Certified Management Accountants. This designation is a result of completing the CMA Examination and the fulfillment of the experience requirement.

Q. What is the purpose of your testimony in these cases?

A. My testimony is presented to provide a recommendation to the Commission as to a fair and reasonable rate of return for the Missouri jurisdictional electric utility rate base for UtiliCorp United Inc.'s Missouri Public Service division (MPS).

Q. Have you prepared any schedules to your analysis of the cost of capital for MPS?

A. Yes. I am sponsoring a study entitled "An Analysis of the Cost of Capital for Missouri Public Service, a division of UtiliCorp United Inc., Case No. EC-97-362" consisting of 28 schedules which are attached to this direct testimony (see Schedule 1).

Q. What do you conclude is the cost of capital for MPS?

A. My analysis leads me to conclude that the cost of capital for MPS is in the range of 9.41 to 9.59 percent.

Economic and Legal Rationale for Regulation

Q. Why are the prices charged to customers by utilities such as MPS regulated?

A. A primary purpose of price regulation is to restrain the exercise of monopoly power. Monopoly power represents the ability to charge excessive or unduly

discriminatory prices. Monopoly power may arise from the presence of economies of scale and/or from the granting of a monopoly franchise.

For services that operate efficiently and have the ability to achieve economies of scale, a monopoly is the most efficient form of market organization. Utility companies can supply service at lower costs if the duplication of facilities by competitors is avoided. This allows the use of larger and more efficient equipment and results in lower per unit costs. For instance, it may cost more to have two or more competing companies maintaining duplicate electric operations and providing competing residential services to one household. This situation could result in price wars and lead to unsatisfactory and perhaps irregular service. For these reasons, exclusive rights may be granted to a single utility to provide service to a given territory. This also creates a more stable environment for operating the utility company. Utility regulation acts as a substitute for the economic control of market competition and allows the consumer to receive adequate utility service at a reasonable price.

Electric utility companies such as MPS provide electric services essentially under a monopoly franchise. Therefore, it is clear that MPS has monopoly power.

Another purpose of price regulation is to provide the utility company with an opportunity to earn a fair return on its capital, particularly on investments made as a result of a monopoly franchise.

Q. Please discuss the legal basis for determining a fair and reasonable return for a public utility.

A. Several landmark decisions by the U.S. Supreme Court provide the legal framework for regulation and for what constitutes a fair and reasonable rate of return for a public utility. Listed below are some of the cases:

1. Munn v. People of Illinois Case (1877),
2. Bluefield Waterworks and Improvement Company Case (1923),
3. Natural Gas Pipeline Company of America Case (1942), and
4. Hope Natural Gas Company Case (1944).

In the case of Munn v. People of Illinois, 94 U.S. 113 (1877), the Court found that:

> . . . when private property is "affected with a public interest, it ceases to be *juris privati* only" . . . . Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good, to the extent of the interest he has thus created. Id at 126.

The Munn decision is important because it states the basis for regulation of both utility and non-utility industries.

In the case of Bluefield Waterworks and Improvement Company v. Public Service Commission of the State of West Virginia, 262 U.S. 679 (1923), the Supreme Court ruled that a fair return would be:

1. A return "generally being made at the same time";

2. A return achieved by other companies with "corresponding risks and uncertainties"; and

3. A return "sufficient to assure confidence in the financial soundness of the utility".

The Court specifically stated:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. Id at 692-3.

In Federal Power Commission et al. v. Natural Gas Pipeline Company of America et al., 315 U.S. 575 (1942), the Court decided that:

> The Constitution does not bind rate-making bodies to the service of any single formula or combination of formulas . . . . If the Commission's order, as applied to the facts before it and viewed in its entirety, produces no arbitrary result, our inquiry is at an end. Id at 586.

The U.S. Supreme Court also discussed the reasonableness of a return for a utility in the case of Federal Power Commission et al. v. Hope Natural Gas Company, 320 U.S. 591 (1944). The Court stated that:

> The rate-making process . . . , i. e., the fixing of "just and reasonable" rates, involves a balancing of the investor and the consumer interests. Thus we stated . . . that "regulation does not insure that the business shall produce net revenues" . . . it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock . . . . By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. Id at 603.

The Hope Case restates the concept of comparable returns to include those achieved by any other enterprises that have "corresponding risks". The Supreme Court also noted in this case that regulation does not guarantee profits to a utility company.

A more recent case heard by the Supreme Court of Pennsylvania extends the Hope Case decision beyond balancing the interests of the investors and the consumers. The Supreme Court of Pennsylvania stated that:

> We do not believe, however, . . . that the end result of a rate-making body's adjudication *must* be the setting of rates at a level that will, in any given case, guarantee the continued financial integrity of the utility concerned . . . . In cases where the balancing of consumer interests against the interests of investors causes rates to be set at a "just and reasonable" level which is insufficient to ensure the continued financial integrity of the utility, it may simply be said that the utility has encountered one of the risks that imperil any business enterprise, namely the risk of financial failure. Pennsylvania Electric Company, et al. v. Pennsylvania Public Utility Commission, 502 A.2d 130, 133-34 (1985), cert. denied, 476 U.S. 1137 (1986).

The Pennsylvania Electric Company Case is included in my testimony to illustrate this point: captive ratepayers of public utilities should not be forced to bear the brunt of

wrongful management which result in unnecessarily higher costs. It should be noted that I do not believe that utility companies should be casually subjected to risk of financial failure in a rate case proceeding. However, in a case of extremely poor management, I do not believe it would always be appropriate for a regulatory agency to provide sufficient funds to continue operations at no matter what the costs are to the ratepayers.

Through these and other court decisions, it has generally been recognized that public utilities can operate more efficiently when they operate as monopolies. It has also been recognized that regulation is required to offset the lack of competition and maintain prices at a reasonable level. It is the regulatory agency's duty to determine a fair rate of return and the appropriate revenue requirement for the utility, while maintaining reasonable prices for the public consumer.

The courts today still believe that a fair return on common equity should be similar to the return for a business with similar risks, but not as high as a highly profitable or speculative venture requires. The authorized return should provide a fair and reasonable return to the investors of the company, while ensuring that excessive earnings do not result from the utility's monopolistic powers. However, this fair and reasonable rate does not necessarily guarantee revenues or the continued financial integrity of the utility.

It should be noted that the courts have determined that a reasonable return may vary over time as economic and business conditions change. Therefore, the past, present

and projected economic and business conditions must be analyzed in order to calculate a fair and reasonable rate of return.

Historical Economic Conditions

Q. Please discuss the recent historical economic conditions in which MPS has operated.

A. One of the most commonly accepted indicators of economic conditions is the discount rate set by the Federal Reserve Board (Federal Reserve or the Fed). The Federal Reserve tries to achieve its monetary policies by controlling the discount rate - the interest rate charged by the Federal Reserve for loans of reserves to depository institutions. At the end of 1982, the U.S. economy was in the early stages of recovery from the longest post-World War II recession. This economic expansion began when the Federal Reserve reduced the discount rate seven times in the second half of 1982 in an attempt to stimulate the economy. Within a five month period, the discount rate was cut from 12.0 to 8.5 percent (see Schedule 2). This also led to a reduction in the prime interest rate (the rate charged by banks on short-term loans to borrowers with high credit ratings) from 16.50 percent in June 1982, to 11.50 percent in December 1982 (see Schedule 3). The recovery continued and the economy was stimulated even more when the Federal Reserve cut the discount rate four more times in 1986. At year-end 1986, the discount rate was 5.5 percent and the prime interest rate was 7.50 percent.

As the second quarter of 1987 came around, the expansion began to slow. Fears of increasing inflation (see Schedule 4), the falling dollar, and high Federal deficits led to increased interest rates for the second and third quarters of 1987. These fears also led to the stock market crash of October 1987 in which the Standard & Poor's 500 Composite Stock Price Index declined approximately 20 percent. After the crash, the prime interest rate was lowered to 8.50 percent, but additional fears of inflation led to the increase in the prime interest rate to 11.50 percent during the first quarter of 1989. Then the prime interest rate began to drop again. However, on February 24, 1989, the Federal Reserve increased the discount rate to 7.0 percent. This was only the third increase in the discount rate since May 1984. This increase resulted from a need to hedge the economy against the fears of increasing inflation.

The economic expansion ceased after approximately eight years when the economy entered into a recession in July 1990. In August 1990, the Iraqi invasion of Kuwait produced higher crude oil prices and spurred inflation fears again. The pressures of war in the Persian Gulf, the Savings and Loan bailouts and unfavorable business trends led to a slow-down in economic growth.

In February 1991, the economic uncertainties centered around the length of the Persian Gulf War and the length and severity of the economic recession. By March 1991, the issue of the Persian Gulf War was resolved with a quick victory by U.S. and coalition

troops. As a result, the market shifted its focus on the unresolved economic issues in the United States.

On April 30, 1991, the Federal Reserve responded to the slumping economy by lowering the discount rate to 5.5 percent. During the second quarter of 1991 the recession ended. However, the leading economic indicators at that time did not give an indication of a strong economic recovery. As a result, the discount rate was cut four more times with the discount rate being reduced to 3.0 percent on July 2, 1992, which represents the lowest level in approximately thirty years. These monetary credit-loosening steps resulted in the prime rate being reduced to 6.00 percent. Economic concerns throughout the remainder of 1992 focused on the domestic economy and the presidential election in which incumbent Republican President George Bush was defeated by Bill Clinton, the Democratic governor of Arkansas.

In 1993, as part of the Clinton Administration's plan to raise additional revenues, certain corporate and personal income tax rates were raised. Corporate downsizing resulted in large layoffs to white-collar and other skilled occupations in which employment has traditionally been considered as being secure. Perhaps the most important factor for the U.S. economy in 1993 was the passage of the North American Free Trade Agreement (NAFTA) which creates a free trade zone consisting of the United States, Canada and Mexico. The rate of economic growth for the fourth quarter of 1993 was at a rate in which the Federal Reserve believed could not be sustained without

experiencing higher inflation. In the first quarter of 1994, the Federal Reserve took steps to try and restrict the economy by increasing interest rates. As a result, on March 24, 1994, the prime interest rate as reported by The Wall Street Journal was increased to 6.25 percent. On April 18, 1994, the Federal Reserve announced its intention to raise its targeted interest rates and this in turn resulted in the prime interest rate being increased to 6.75 percent. The Federal Reserve announced action on May 17, 1994, by raising the discount rate to 3.5 percent. Three additional restrictive monetary actions were taken by the Federal Reserve with the last occurring on February 1, 1995. These actions raised the discount rate to 5.25 percent and in turn banks raised the prime interest rate to 9.00 percent.

The Federal Reserve then reversed its policy in late 1995, by lowering the Fed Fund Rate 0.25 percentage points on two separate occasions. This had the effect of lowering the prime interest rate to 8.50 percent. On January 31, 1996, the Fed lowered the discount rate to its current rate of 5.00 percent, which had the effect of lowering the prime interest rate to 8.25 percent. On March 25, 1997, the Fed announced its policy to raise the target for the Fed Fund Rate by 0.25 percentage points, causing banks to raise the prime rate to 8.50 percent.

Current economic topics seem to revolve around President Clinton's plans for his second term, the value of the dollar, the political stability or instability of key global markets and if the stock markets can sustain their current bull markets. Economists,

businesses and investors appear to be cautious despite the projections for continued economic growth and minimal levels of inflation in the near-term.

Economic changes and capital cost changes for utilities are closely reflected in the yields on public utility bonds and yields of Thirty Year U.S. Treasury Bonds (see Schedule 5-1 and 5-2). Schedule 5-3 shows how closely the Moody's "Public Utility Bond Yields" have followed the yields of Thirty Year U.S. Treasury Bonds during the period of 1982 to the present. The average spread for this time period between these two composite indices has been 138 basis points, with the spread ranging from a low of 80 basis points to a high of 304 basis points (see Schedule 5-4). These spread parameters can be utilized with numerous published forecasts of Thirty Year U.S. Treasury Bond yields to forecast future estimates of long-term debt costs for utility companies. Moody's "Public Utility Bond Yields" are also graphically compared to both Standard & Poor's "Utilities Stock Yields" and Standard & Poor's "Industrials Stock Yields" (see Schedule 6).

Q. Have the utility and industrial stocks recovered from the stock market crash that occurred during the fourth quarter of 1987?

A. Yes. According to The Value Line Investment Survey: Selection and Opinion, both utility and industrial stocks have fully recovered from the stock market crash that occurred during the fourth quarter of 1987, with the utility stocks adding approximately 45 percent and the industrial stocks adding approximately 27 percent over

the period from September 30, 1987 through March 6, 1997. This is based on the Value Line's geometric averages for both industrials and utilities. It took the utility index approximately one and a half years (estimated to be on April 18, 1989) to regain and maintain its recovery, while the industrial index took approximately eight years (estimated to be on June 6, 1995) to recover. In addition, during the stock market correction on October 13, 1989, the percentage drop for the utility index was not as sharp as the percentage drop for the industrial index. This suggests that the utility stocks were a better investment, when compared to industrial stocks, following the stock market crash and correction. However, since the respective high of the utility index, September 13, 1993, the utility index dropped approximately 22 percent for the period of September 13, 1993 through November 22, 1994, and then added approximately 22 percent since that time through March 6, 1997. During the period of September 13, 1993 through March 6, 1997, the industrial index increased approximately 37 percent. As a result when compared to industrial stocks, it suggests that utility stocks are more stable, more defensive in nature and are better investments during slumping economic times but are less stable during times of increasing interest rates.

Economic Projections

Q. What are the inflationary expectations for the remainder of 1997 and beyond?

A. The latest inflation rate, as measured by the 12-month change in the Consumer Price Index-All Urban Consumers (CPI), was 3.0 percent for February 1997. Standard & Poor's Corporation's The Outlook, June 19, 1996, predicts inflation to be 3.0 percent through the second quarter of 1997. The Value Line Investment Survey: Selection & Opinion, February 21, 1997, predicts inflation to be 2.8 percent for 1997, 2.9 percent for 1998 and 3.0 percent for 1999 (see Schedule 7). Salomon Brothers Inc's Comments On Credit, March 7, 1997, predicts the CPI will increase by 2.9 percent through 1997.

Q. What are interest rate forecasts for 1997, 1998 and 1999?

A. Short-term interest rates, those measured by Three-Month U.S. Treasury Bills, are expected to be approximately 5.2 percent through 1999 according to Value Line's predictions. Standard & Poor's foresees short-term interest rates at 5.8 percent for the second quarter of 1997. Standard & Poor's believes that long-term interest rates, those measured by Thirty Year U.S. Treasury Bonds, will be at 7.6 percent through the second quarter of 1997, while Value Line expects interest rates to remain rather steady at 6.5 percent in 1998 and increasing slightly to 6.7 percent through 1999. The current rates are 5.23 percent for 3-month T-Bills and 6.96 percent for 30-year T-Bonds, as noted from Salomon Brothers Inc's Bond Market Roundup, March 14, 1997.

Q. What are the growth expectations for real Gross Domestic Product (GDP) in the future?

A. GDP is a benchmark utilized by the Commerce Department to measure economic growth within the United States' borders. Real GDP is measured by the actual Gross Domestic Product adjusted for inflation. During the fourth quarter of 1996 real GDP increased by 3.9 percent (see Schedule 7). Salomon Brothers Inc predicts that real GDP is likely to continue to increase by 1.9 percent through 1997. Standard & Poor's believes that this economic indicator will be at 1.3 percent for the second quarter of 1997, while Value Line expects the real GDP growth to increase by 2.1 percent in 1998 and increase by 2.5 percent in 1999.

Q. Please summarize the expectations of the economic conditions for the next few years.

A. In summary, when combining the previously mentioned sources, inflation is expected to be in the range of 2.8 to 3.0 percent, real GDP in the range of 1.3 to 3.9 percent and long-term interest rates are expected to range from 6.5 to 7.6 percent. The Value Line Investment Survey: Selection & Opinion, March 21, 1997, states that "[n]evertheless, we now think that the Federal Reserve is increasingly likely to vote to tighten monetary policy over the course of the year . . . . The stock market . . . has thus far failed to regain its equilibrium." In addition, Standard & Poor's Corporation's The Outlook, March 12, 1997, states "[m]eanwhile, the risk of investors abandoning stocks seems small. Confidence continues to be bolstered by the market's exceptional performance of recent years, while the demographics favoring stock ownership remain in

effect. But that's not to say that substantial potential exists." This suggests that there is a general consensus that the U.S. economy will level off and continue to advance at a slower rate of growth in the near future.

Business Operations of UtiliCorp United Inc. and MPS

Q. Please describe UtiliCorp United Inc.'s (UtiliCorp) and MPS's business operations.

A. In 1985 a new company, UtiliCorp United Inc., was structured from the Missouri Public Service Company in order to eliminate regional ties and to facilitate expansion within the utility industry. MPS is one of seven operating divisions of UtiliCorp and provides regulated electric and natural gas distribution services in the western and north-central parts of Missouri. In UtiliCorp's 1995 Corporate Profile, the Company states:

> UtiliCorp United is an international, growth-oriented energy and services company based in Kansas City, Missouri. Since being formed in 1985 from Missouri Public Service Company, UtiliCorp has grown through regulated utility acquisitions totaling approximately $1 billion. Over the same period, the company has also spent more than $1 billion on non-regulated energy acquisitions and investments.
>
> UtiliCorp today has a strong national presence as a provider of competitive and innovative energy solutions, and a growing presence in the international arena. The company has approximately 1.7 million electric and gas utility customers in eight states, one Canadian province and Australia. It also owns interests in two electric utilities in New Zealand and markets natural gas to wholesale and industrial customers

in the United Kingdom through joint ventures with British regional electric companies.

UtiliCorp serves electric and gas utility customers in the states of Missouri, Kansas, Iowa, Nebraska, Colorado, Michigan, Minnesota and West Virginia through seven divisions - Missouri Public Service [electric and natural gas distribution], Kansas Public Service [natural gas distribution], Peoples Natural Gas [natural gas distribution], WestPlains Energy [electric], Northern Minnesota Utilities [natural gas distribution], Michigan Gas Utilities [natural gas distribution] and West Virginia Power [electric and natural gas distribution]. Customers in British Columbia are served through West Kootenay Power, a Canadian subsidiary.

In 1995, more than 90% of the company's U.S. electric power generation was coal-fired, and all of its Canadian generation was hydroelectric.

In May 1995, UtiliCorp launched EnergyOne℠, the first nationally branded line of products and services for electric and gas utility customers. The EnergyOne portfolio of value-added services and tailored energy solutions is playing a key role in establishing UtiliCorp as America's first truly national utility company.

Through its Aquila Energy subsidiary, UtiliCorp has marketed natural gas to industrial and wholesale customers in nearly all of the contiguous 48 states as well as part of Canada and Mexico. Aquila also gathers, transports and processes natural gas and sells natural gas liquids. In 1993, Aquila sold 18 percent of its Aquila Gas Pipeline Corporation subsidiary (NYSE:AQP) to the public. In 1995, the new Aquila Power subsidiary began to market electricity to large volume wholesale customers, one of the first utility affiliates authorized to launch this new type of business.

UtiliCorp's UtilCo Group subsidiary owns interests in 16 operating independent power projects in seven states, with aggregate capacity of 873 megawatts. In late 1994 UtilCo Group became a 22 percent equity partner in a 60 MW generating project currently being constructed in Kingston, Jamaica.

> In September 1995, a three-company consortium led by UtiliCorp purchased United Energy, the first electric distribution utility to be privatized in Australia, for $1.15 billion. United Energy serves more than 520,000 customers in parts of metropolitan Melbourne. UtiliCorp holds a 49.9 percent interest and manages the company.
>
> UtiliCorp United common and preference shares are listed on the New York Stock Exchange under the symbol UCU, and the common shares are also listed on the Pacific and Toronto stock exchanges. At December 31, 1995, UtiliCorp had approximately 85,000 common shareholders . . .
>
> In 1994, UtiliCorp organized its operations into four major business groups. [They are: (1) Energy Delivery: Electric and natural gas distribution utilities; (2) Power Services: Electric generation and independent power projects; (3) Energy Resources: Natural gas gathering, processing and marketing, and electricity marketing; and (4) Marketing Services: Brand management, product development, and retail sales and marketing.] All of the company's regulated electric and gas distribution operations in the U.S. are managed as UtiliCorp Energy Delivery, with each of the eight states functioning as a separate profit center . . . . The utilities still do business under their traditional names familiar to their customers.
>
> Missouri Public Service . . . has been in operation since 1917 and is headquartered in Raytown, Missouri.

Standard & Poor's Corporation's latest credit write-up provides additional insight concerning UtiliCorp's operations. Standard & Poor's Corporation's Global Sector Review: Utilities, November 1996, reports:

> **RATIONALE** UtiliCorp United Inc.'s credit quality reflects an average business position and financial measures which are weak for the rating. The business position, which measures qualitative credit fundamentals, is supported by geographic and economic diversity accorded by a service area that encompasses portions of eight states and British Columbia. As a result, sales and earnings stability is enhanced. Future sales growth should average 1-2% annually before acquisitions, which approximates

> industry norms. A large residential and commercial customer base and a large number of small industrial customers should help mitigate the risk exposure created by industrial rates that are slightly above regional competitors. Diversified asset and generation bases and no nuclear exposure aid the business position. Although management's assertiveness in a changing environment is commendable, its acquisition strategy (including plans to increase non-regulated operations), the unpredictability of future acquisitions, and the capital requirements associated with these acquisitions impair credit quality. When adjusted for off-balance sheet obligations such as operating leases, account receivable sales financing, and substantial purchase power commitments (about 40% of generating capacity is from power purchases), total debt should remain high at about 65%. Also, cash-flow interest coverage should continue being weak at about 3.1 times (x). UtiliCorp is estimated to have spent about $25 million in its failed attempt to merge with Kansas City Power & Light Co. (KLT; senior secured 'A'). Pursuant to the merger agreement, KLT will reimburse UtiliCorp about $5 million since it did not achieve the necessary shareholder support.
>
> **OUTLOOK** The outlook reflects a lack of utility spending needs and sound utility operations, offset somewhat by the company's need to strengthen financial performance and continued expansion into non-regulated operations. UtiliCorp's acquisition strategy and its level of success is an important consideration and directly impacts the credit quality of this utility.

Q. Please describe MPS's business operations.

A. MPS is the largest utility operating division of UtiliCorp (based upon assets). In addition, MPS is only smaller than one of UtiliCorp's subsidiaries, that being Aquila Energy Corporation. As of December 31, 1995, MPS's total assets (Total Utility Plant and Other Assets) accounted for approximately 19.3 percent ($758,562,000 / $3,929,101,000) of UtiliCorp's consolidated total assets. MPS accounted for approximately 17.4 percent of total revenues ($310,180,000 / $1,785,234,000) and

approximately 42.3 percent of the earnings available to common shareholders ($32,847,000 / $77,727,000) when compared to UtiliCorp's consolidated figures for the twelve-month period ended December 31, 1995.

In addition, approximately 88.6 percent ($274,862,000 / $310,180,000) of MPS's total operating revenues were provided as a result of MPS's electric operation's and approximately 11.4 percent ($35,318,000 / $310,180,000) were from MPS's natural gas distribution operations. These figures were taken from UtiliCorp's response to Staff's Data Information Request numbered 514 in Case No. EM-96-248.

Q. Please describe the credit ratings of UtiliCorp.

A. Currently, Standard & Poor's Corporation rates the senior secured and unsecured debt of UtiliCorp as "BBB", its subordinated debt as "BBB-", its preference stock as "BBB-" and its commercial paper as "A-2". Also, Moody's Investors Service Inc. rates UtiliCorp's senior note debt as "Baa3". All of these ratings are considered to be of "investment grade". It should be noted in the financial community that Standard & Poor's Corporation's "BBB-" credit rating is comparable to Moody's Investment Service Inc.'s "Baa3" credit rating.

Q. Please provide some historical financial information for UtiliCorp.

A. Schedules 8 and 9 present historical capital structures and selected financial ratios from 1991 to 1995 for UtiliCorp on a consolidated basis. UtiliCorp's consolidated common equity ratio has decreased from its high of 42.22 percent in 1993 to 34.65

percent in 1995. The Value line Investment Survey: Ratings & Reports, March 14, 1997, reported that the average common equity ratio (excluding short-term debt) for the Electric Utility Industry for 1995 was 45.4 percent and is projected to be 47.0 percent for 1996. UtiliCorp's consolidated common equity ratio for 1995, excluding short-term debt, was 38.75 percent, which is a great deal lower than the "industry average". It is my opinion that UtiliCorp's consolidated common equity ratio is at the extreme low-end of an acceptable range for electric utilities.

UtiliCorp's return on year-end common equity (ROE) has remained somewhat low over this period ranging from a high of 10.56 percent in 1991 to a low of 6.96 percent in 1992. UtiliCorp's 1995 ROE of 8.21 percent was below the average earned by the other companies within this "industry". The Value Line Investment Survey: Ratings & Reports, March 14, 1997, states that the percent earned on common equity for 1995 for the Electric Utility Industry was 11.7 percent and is projected to be the same through 2002. A possible reason for UtiliCorp's lower reported earnings on common equity could result from UtiliCorp's large dollar increase in common equity to finance its recent acquisitions.

UtiliCorp's market-to-book ratio has remained rather steady ranging from 1.31 to 1.57 times, with this ratio being 1.43 times for year-end 1995.

Determination of the Cost of Capital

Q. Please describe the cost of capital approach for determining a utility company's cost of capital.

A. The total dollars of capital for the utility company are determined for a specific point in time. This total dollar amount is proportioned into each specific capital component. A weighted cost for each capital component is determined by multiplying each capital component ratio by the appropriate embedded cost or the estimated cost of common equity component. The individual weighted costs are summed to arrive at a total weighted cost of capital. This total weighted cost of capital is synonymous with the fair rate of return for the utility company.

Q. Why is a total weighted cost of capital synonymous with a fair rate of return?

A. From a financial viewpoint, a company employs different forms of capital to support or fund the assets of the company. These funds are invested proportionately to support each dollar of the company's assets. Each different form of capital has a cost and these costs are weighted proportionately to fund each dollar invested in the assets.

Assuming that the various forms of capital are within a reasonable balance and are costed correctly, the resulting total weighted cost of capital, when applied to rate base, will provide the funds necessary to service the various forms of capital. Thus, the total weighted cost of capital corresponds to a fair rate of return for the utility company.

Capital Structure and Embedded Costs

Q. Where does MPS obtain the capital funds it uses to support the utility assets of MPS?

A. Currently, MPS does not obtain its capital funds from capital markets because MPS does not issue capital. It is UtiliCorp's corporate policy to provide all financing for all of its divisions. As a result, MPS must rely upon UtiliCorp for capital.

Q. Due to UtiliCorp's corporate finance policy, can an investor directly invest in MPS's stock or debt items?

A. No. An investor can only indirectly invest in MPS through a direct investment in UtiliCorp. As a result, potential investors can only look at the earnings potential of the entire consolidated corporate entity of UtiliCorp when evaluating decisions such as whether or not to invest in UtiliCorp's common stock. Ultimately, that investor is purchasing the earnings power of the entire consolidated corporation, consisting of its operating divisions and its subsidiaries. Therefore, in order to analyze MPS's divisional cost of capital, an investor must derive MPS's divisional cost of capital from UtiliCorp's overall cost of capital.

Q. What capital structure have you employed in developing a weighted cost of capital for MPS?

A. I have employed UtiliCorp's consolidated capital structure as of December 31, 1995 for MPS. Schedule 10 presents UtiliCorp's consolidated capital structure and

associated capital ratios. The resulting capital structure consists of 35.70 percent common stock equity, 4.57 percent preferred stock, 50.64 percent long-term debt and 9.09 percent short-term debt.

The amount of preferred stock outstanding at December 31, 1995, was reduced by $3,750,000 for unamortized issuance expenses.

The amount of long-term debt outstanding at December 31, 1995, includes current maturities due within one year and was reduced by $12,208,208 for the balance associated with the unamortized debt discount and debt issuance expense and $10,466,593 for the balance associated with the unamortized loss on reacquired debt expense.

As of December 31, 1995, UtiliCorp and subsidiaries had $288,600,000 of short-term debt outstanding. This amount of short-term debt was reduced by $47,600,000 because it was being used to fund Construction Work In Progress (CWIP), which had a book value of $47,600,000 at December 31, 1995.

It should be noted that I would have preferred to update my capital structure analysis through December 31, 1996. However, that information was not made available to me in time. Please reference page 43 of this testimony for further discussions on this matter.

Q. What was the embedded cost of short-term debt for UtiliCorp and subsidiaries at December 31, 1995?

A. According to UtiliCorp's response to Staff's Data Information Request numbered 3806 in Case No. EM-96-248, UtiliCorp's short-term borrowing comes "primarily from two general sources: commercial paper and uncommitted bank facilities . . . [and the] rate is dependent upon market conditions at the time of issuance." UtiliCorp's weighted average interest rate for its lines of credit and commercial paper at December 31, 1995, was 6.14 percent. Therefore, I utilized an embedded cost of short-term debt at December 31, 1995, of 6.14 percent.

Q. What was the embedded cost of long-term debt for UtiliCorp and subsidiaries at December 31, 1995?

A. I determined the embedded cost of long-term debt at December 31, 1995, for UtiliCorp on a consolidated basis to be 8.88 percent (see Schedule 11).

Q. What was the embedded cost of preferred stock for UtiliCorp and subsidiaries at December 31, 1995?

A. I determined the embedded cost of preferred stock at December 31, 1995, for UtiliCorp on a consolidated basis to be 9.01 percent (see Schedule 12).

Cost of Equity

Q. How do you propose to analyze those factors by which the cost of equity for UtiliCorp may be determined?

A. I have selected the discount cash flow (DCF) model as the primary tool to determine the cost of common equity for UtiliCorp on a consolidated basis.

The DCF Model

Q. Please describe the DCF model.

A. The DCF model is a market-oriented approach for deriving the cost of equity. The return on equity calculated from the DCF model is inherently capable of attracting capital. This results from the theory that security prices adjust continually over time, so that an equilibrium price exists, and the stock is neither under-valued nor over-valued. It can also be stated that stock prices continually fluctuate to reflect the required and expected return for the investor.

The continuous growth form of the DCF model was used in estimating the cost of equity for UtiliCorp on a consolidated basis. This model relies upon the fact that a company's common stock price is dependent upon the expected cash dividends and upon cash flows received through capital gains or losses that result from stock price changes. The rate which discounts the sum of the future expected cash flows to the current market price of the common stock is the calculated cost of equity. This can be expressed algebraically as:

$$\text{Present Price} = \underset{\text{Discounted by k}}{\text{Expected Dividends}} + \underset{\text{Discounted by k}}{\text{Expected Price in 1 year}} \qquad (1)$$

Since the expected price of a stock in one year is equal to the present price multiplied by one plus the growth rate, equation (1) can be restated as:

$$\text{Present Price} = \frac{\text{Expected Dividends}}{(1+k)} + \frac{\text{Present Price } (1+g)}{(1+k)} \quad (2)$$

where g equals the growth rate, and k equals the cost of equity. Letting the present price equal P_0 and expected dividends equal D_1, the equation appears as:

$$P_0 = \frac{D_1}{(1+k)} + \frac{P_0(1+g)}{(1+k)} \quad (3)$$

The cost of equity equation may also be algebraically represented as:

$$k = \frac{D_1}{P_0} + g \quad (4)$$

Thus, the cost of common stock equity, k, is equal to the expected dividend yield (D_1/P_0) plus the expected growth in dividends (g) continuously summed into the future. The growth in dividends and implied growth in earnings will be reflected in the current price. Therefore, this model also recognizes the potential of capital gains or losses associated with owning a share of common stock.

The discounted cash flow method is a continuous stock valuation model. The DCF theory is based on the following assumptions:

1. Market equilibrium,

2. Perpetual life of the company,
3. Constant payout ratio,
4. Payout of less than 100% earnings,
5. Constant price/earnings ratio,
6. Constant growth in cash dividends,
7. Stability in interest rates over time,
8. Stability in required rates of return over time, and
9. Stability in earned returns over time.

Flowing from these, it is further assumed that an investor's growth horizon is unlimited and that earnings, book values and market prices grow hand-in-hand. Even though the entire list of above assumptions is rarely met, the DCF model is a reasonable working model describing an actual investor's expectations and resulting behaviors.

Q. Can you directly analyze the cost of equity for UtiliCorp?

A. Yes. In order to arrive at a company-specific DCF result, the company must have common stock that is market-traded and must pay dividends. UtiliCorp United Inc.'s stock is publicly traded on the New York Stock Exchange under the ticker symbol of "UCU" and has paid cash dividends each year since its formation in 1985. It should be noted that no common stock exists for MPS. The investors of UtiliCorp value their stock holdings based upon the financial conditions of the consolidated entity. Therefore, the DCF model cannot be utilized to analyze the cost of common equity directly for MPS.

Q. Please explain how you determined a value range for the growth term of the DCF formula for UtiliCorp.

A. I reviewed UtiliCorp's actual dividends per share (DPS), earnings per share (EPS) and book values per share (BVPS) as well as projected growth rates for UtiliCorp. Schedule 13 lists annual compound growth rates and trend line growth rates calculated for DPS, EPS and BVPS for both the periods of 1986 through 1996 and 1991 through 1996. Schedule 14 presents the historical growth rates and projected growth rates for UtiliCorp. The projected growth rates were obtained from four outside sources. I/B/E/S Inc.'s Institutional Brokers Estimate System, February 20, 1997, projects a five-year growth forecast of 4.73 percent for UtiliCorp. Standard & Poor's Corporation's Earnings Guide, March 1997, projects a five-year EPS growth rate of 5.00 percent for UtiliCorp. Value Line's Value Screen II, March 1997, projects the compound annual rate of growth for EPS during the next three to five years will be 7.00 percent for UtiliCorp. Zacks Investment Research, Inc.'s Earnings Estimates, March 17, 1997, projects a five-year growth forecast of 4.68 percent for UtiliCorp. The average of the four outside sources produces a projected growth rate of 5.35 percent. Combining the average of the historical growth rates of 4.37 percent with the average of the projected growth rates produces a reasonable growth rate range of 4.40 to 5.40 percent. This range of growth (g) is the range that I used in the DCF model to calculate a cost of common equity for UtiliCorp.

Q. Please explain how you determined the yield term of the DCF formula for UtiliCorp.

A. The expected yield term (D_1/P_0) of the DCF model is calculated by dividing the amount of common dividends per share expected to be paid over the next twelve months (D_1) by the current market price per share of the firm's common stock (P_0). Even though the model requires the use of a current spot market price, I have chosen to use a monthly high / low average market price of UtiliCorp's common stock for the period of December 1, 1996 through March 23, 1997. This averaging technique is an attempt to minimize the effects on the dividend yield which can occur due to daily volatility in the stock market.

Schedule 15 presents the monthly high / low average stock market prices from December 1, 1996 through March 23, 1997 for UtiliCorp. UtiliCorp's common stock price has ranged from a low of $25.750 per share to a high of $28.250 per share for the above mentioned time period. This has produced a range for the monthly average high / low market price of $26.625 to $27.500 per share and reflects the most recent market conditions for the price term (P_0) in the DCF model.

The Value Line Investment Survey: Ratings & Reports, January 10, 1997, is estimating that UtiliCorp's common dividend declared per share will be $1.80 for 1997. Therefore, I have chosen to use the value of $1.80 for the amount of common dividend

per share (D_1) expected to be paid by UtiliCorp over the period ending December 31, 1997.

Combining the expected dividend of $1.80 per share and a market price range of $26.625 to $27.500 per share produces an approximate average expected dividend yield of 6.65 percent. This is the value that I used as the yield portion (D_1/P_0) in the DCF model.

Q. Please summarize the results of your expected dividend yield and growth rate analysis for the DCF return on equity for UtiliCorp.

A. The summarized DCF cost of equity estimate for UtiliCorp is presented as follows:

Yield (D_1/P_0)	+	Growth Rate (g)	=	Cost of Equity (k)
6.65%	+	4.40%	=	11.05%
6.65%	+	5.40%	=	12.05%

This range of return on common equity of 11.05 to 12.05 percent, with a mid-range of 11.55 percent, is the DCF company specific cost of equity range that I believe is a fair and reasonable return for the common equity of UtiliCorp on a consolidated basis.

Reasonableness of DCF Returns for UtiliCorp

Q. What analysis was performed to determine the reasonableness of your DCF model derived return on common equity for UtiliCorp?

A. I performed a risk premium cost of equity analysis for UtiliCorp. The risk premium concept implies that the required return on equity is found by adding an explicit premium for risk to a current interest rate. Schedule 16 shows the average risk premium above the yield of "Baa" rated Moody's Public Utility Bonds for UtiliCorp's expected return on common equity. This analysis shows, on average, UtiliCorp's expected return on equity as reported by The Value Line Investment Survey: Ratings & Reports is 217 basis points higher than the average yield on "Baa" rated Moody's Public Utility Bonds for the period of January 1986 to present. UtiliCorp's current bond rating is "BBB" and Schedule 9 reports that UtiliCorp's credit for 1991 through 1995 was "BBB".

Moody's Bond Record, February 1997, reports the average yield for "Baa" rated utility bonds for January 1997 was 8.18 percent. Adding 217 basis points to this "Baa" rated yield produces an estimated cost of equity of 10.35 percent. In addition, Salomon Brothers Inc's Bond Market Roundup: Abstract, March 14, 1997, reports the yield for "New Issue 7 Year 'BBB' Rated Utility Bonds" to be 7.29 percent and the yield for "New Issue 30 Year 'BBB' Rated Utility Bonds" to be 8.21 percent. Adding 217 basis points to these yields produces an estimated cost of equity range of 9.46 to 10.38 percent. This provides some support for the low end of my DCF cost of equity recommendation of 11.05 percent for UtiliCorp.

Q. Did you perform a Capital Asset Pricing Model (CAPM) to check the reasonableness of your DCF model derived return on common equity for UtiliCorp?

A. Yes. I performed a CAPM cost of equity analysis for UtiliCorp. The CAPM describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the rate of return which investors expect a security to earn so that its market return is comparable with the market returns earned by other securities that have similar risk. The general form of the CAPM is as follows:

$$k = R_f + \beta (R_m - R_f)$$

where:

k = the expected return on equity for a specific security;

R_f = the risk free rate;

β = beta; and

$R_m - R_f$ = the market risk premium.

The first term of the CAPM is the risk free rate (R_f). The risk free rate reflects the level of return which can be achieved without accepting any risk. In reality, there is no such riskless asset, but it is generally represented by U.S. Treasury securities. For purposes of this analysis, the risk free rate was represented by the yield on 30-Year U.S. Treasury Bonds. The appropriate rate was determined to be the high / low range of 6.36 to 7.05 percent for the six-month period ending March 13, 1997, as published in Salomon Brothers Inc's Bond Market Roundup: Abstract, March 14, 1997.

The second term of the CAPM is beta (β). Beta is a indicator of a security's investment risk. It represents the relative movement and relative risk between a particular security and the market as a whole (where beta equals 1.00). Securities with high betas exhibit greater volatility than do securities with lower betas. This causes a higher beta security to be less desirable and therefore requires a higher return in order to attract investor capital away from a lower beta security. For purposes of this analysis, the appropriate beta was determined to be 0.75 as published in The Value Line Investment Survey: Ratings & Reports, January 10, 1997.

The final term of the CAPM is the market risk premium (R_m - R_f). The market risk premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. For purposes of this analysis, the appropriate market risk premium was determined to be 7.30 percent as calculated in Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 1997 Yearbook.

Schedule 17 presents the CAPM analysis with regard to UtiliCorp. The CAPM analysis produces an estimated cost of equity range of 11.84 to 12.53 percent for UtiliCorp. This provides some support to the high end of my DCF cost of equity recommendation of 12.05 percent for UtiliCorp.

It should be noted that recent debate has somewhat diminished the reliability of CAPM as a cost of equity evaluation tool. As a result, I do not believe that CAPM

analysis should be given equal weight to DCF cost of equity analysis and should only be used as a check of DCF analysis.

Q. Did you perform an analysis on UtiliCorp's resulting pre-tax interest coverage ratios?

A. Yes. A pro forma pre-tax interest coverage calculation was completed for UtiliCorp on a consolidated basis (see Schedule 18). It reveals that the return on equity range of 11.05 to 12.05 percent would yield a pre-tax interest coverage ratio in the range of 2.46 to 2.58 times. This interest coverage range is somewhat low due to UtiliCorp's high use of debt leverage, but it still falls right on top of Standard & Poor's Corporation's "BBB" credit rating with an "average business position" benchmark of 2.50 times for electric utilities. It should be noted that in response to Staff's Data Information Request numbered 3807 in Case No. EM-96-248, UtiliCorp states that "UtiliCorp has no open indentures containing net earnings or interest coverage requirements." Thus, the pro forma pre-tax interest coverage test shows that there will be enough earnings potential for UtiliCorp to meet its capital costs based upon the above referenced return on equity range for UtiliCorp.

Q. Do you have any other evidence as to the reasonableness of your recommended cost of equity figures for UtiliCorp?

A. Yes. The Value Line Investment Survey: Ratings & Reports, January 10, 1997, predicts UtiliCorp will earn 10.00 percent on common equity through 1997 and 12.00 percent for the period of 1999 through 2001.

Q. Did you perform any cost of equity analysis on other utility companies?

A. Yes. I have selected a group of electric utility companies to analyze for determining the reasonableness of the company specific DCF results for UtiliCorp. Schedule 19 presents a list of 92 market-traded electric utility companies monitored by The Value Line Investment Survey of which UtiliCorp is one. This list was reviewed for the following criteria:

1. Standard & Poor's Utility Credit Rating of "BBB": This criterion eliminated 65 companies;

2. Nuclear Operations less than 20% of Generation: This criterion eliminated 15 additional company;

3. Electric Revenues to Total Revenues greater than 70 percent: This criterion eliminated 3 additional companies;

4. Positive Dividends Per Share Annual Compound Growth Rate for the period of 1986 through 1996: This criterion eliminated 3 additional companies; and

5. No Missouri Regulated Operations: No companies were eliminated under this criterion.

I believe that these criteria establish a comparable "BBB" rated electric company group that adequately reflects the economic and business risks generally facing MPS. On average, this final group of six publicly traded "BBB" rated electric utility companies

(comparable company group) provides a good representation of the electric utility industry. As a result, MPS should have somewhat similar business operations and financial conditions to those of the six comparable companies. The six comparable "BBB" rated electric utility companies are listed on Schedule 20.

Q. Please explain how you approached the determination of the cost of equity for the comparable company group.

A. I have calculated a DCF cost of equity for each of the six companies within the comparable company group. The first step was to calculate a growth rate. Basically, I used the same approach of obtaining a growth rate estimate for the six comparable companies as I used in calculating a growth rate for UtiliCorp. I reviewed actual dividends per share (DPS), earnings per share (EPS) and book values per share (BVPS) as well as projected growth rates for each of the comparable companies. Schedule 21 lists annual compound growth rates calculated for DPS, EPS and BVPS for the periods of 1986 through 1996. The EPS growth rates varied greatly and some were negative for the periods ending 1996, and therefore historical EPS growth rates were not used in growth estimates for the comparable company group. Schedule 22 presents the historical DPS and BVPS growth rates and projected growth rates for each of the six comparable companies.

After analyzing the maximum growth rates available from the historical DPS and BVPS growth rates and the projected growth rates available, I am of the opinion that

investors would expect a reasonable rate of growth to be in the range of 2.70 to 3.80 percent for the comparable company group. This range of growth (g) is the range that I used in the DCF model to calculate a cost of common equity for the comparable company group.

The next step was to calculate an expected dividend yield for each of the six electric companies. Schedule 23 presents the average high / low stock price for the period of December 1, 1996 through March 23, 1997 for each electric company. Column 3 of Schedule 24 shows that the projected dividend yields averaged 6.90 percent for the comparable company group.

The estimated growth rate range and projected dividend yield were then added together to reach an estimated DCF cost of equity for the industry as well as for each of the six electric companies (see Column 5 of Schedule 24). These estimates produced a DCF cost of equity range of 8.69 to 11.95 percent for the "BBB" rated electric industry.

Q. What analysis was performed to determine the reasonableness of your DCF model derived return on common equity for the comparable company group?

A. I did perform a limited CAPM analysis for the comparable company group. The betas for the comparable company group averaged 0.72, slightly below UtiliCorp's beta of 0.75. The CAPM analysis implies that, on average, the required return on equity for the comparable company group falls within the range of 11.11 to 12.89 percent (see Schedule 25). This provides support to my DCF cost of equity analysis for the

comparable company group and my estimated required return on common equity for UtiliCorp.

Q. What additional analysis was performed to determine the reasonableness of your DCF model derived returns for the comparable electric companies?

A. An analysis was performed on the reported projected returns on equity. These figures were compared to the market-to-book ratios to provide some insight into the DCF cost of equity results.

Q. Please describe the analysis completed on the reported projected returns on equity and market-to-book values for the six comparable electric companies.

A. The market-to-book ratio is an important valuation ratio. It indicates the value that the financial markets attach to the management and organization of the company. It also measures, from an investor's viewpoint, the potential earnings power of a company. A well run company with strong management and an organization that functions efficiently should have a market value at least equal to the book value of its physical assets. Market-to-book ratios having values greater than 1.0 times are one indication that investors are satisfied with the potential returns and that the investors believe the company's expected earnings will be more than its cost of capital. It is difficult to predict future values for market-to-book ratios because they are affected by the overall market conditions and factors that determine stock prices.

Schedule 26 reports market-to-book values for UtiliCorp and the six electric companies, along with the latest projected returns on common equity. Four of the companies' latest projected ROEs fell within or below the recommended ROE range of 11.05 to 12.05 percent for UtiliCorp and had market-to-book ratios ranging from 1.25 times to 1.41 times. It should be noted that UtiliCorp's latest projected ROE is 9.00 percent and maintained a market-to-book ratio of 1.30 times. This suggests that, all things remaining the same, a return on equity of at least 11.05 percent for UtiliCorp should still produce a market-to-book value of over 1.0 times, which indicates favorable valuation from the market.

Adjustments to MPS's Required Return on Common Equity

Q. Do you believe any adjustments need to be made to the required return on common equity range of 11.05 to 12.05 percent for the consolidated entity of UtiliCorp and its subsidiaries to account for risk differences between MPS's electric operations and UtiliCorp's consolidated operations?

A. Yes. I believe that virtually all utility operations face lower risks than the typical unregulated operations. Specifically in reference to UtiliCorp, as quoted previously, Standard & Poor's Corporation believes that UtiliCorp's ". . . acquisition strategy (including plans to increase non-regulated operations), the unpredictability of future acquisitions, and the capital requirements associated with these acquisitions impair

credit quality . . ." This is somewhat evident by the fact that UtiliCorp's required returns as calculated by the DCF model is somewhat higher than the average required returns of comparable "BBB" rated electric companies.

In addition, on average, the overall equity risks associated with electric utility operations has historically been less than the equity risks associated with natural gas distribution utility operations. Therefore, the consolidated cost of common equity for its regulated electric utility operations needs to be adjusted lower to account for these lower risks. Therefore, I recommend that the Commission utilize the low end to mid-point of UtiliCorp's consolidated required return on common equity for setting MPS's electric rates. This should reduce the possibility that ratepayer are subsidizing the investors' return on equity which can result from UtiliCorp's involvement in more risky non-regulated ventures.

Therefore, it is my position that MPS's electric operations required return on equity must be adjusted downward to the range of 11.05 to 11.55 percent to account for lower amounts of risk and to avoid recommending a higher return on equity than is required for MPS's electric operations.

Rate of Return for MPS

Q. Please explain how the returns developed for each capital component are used in the ratemaking approach you have adopted to be applied to MPS's electric operations.

A. The cost of service ratemaking method was adopted in these cases. This approach develops the public utility's revenue requirement. The cost of service (revenue requirement) is based on the following components: prudent operation costs, rate base and a return allowed on the rate base (see Schedule 27).

It is my responsibility to calculate and recommend a rate of return that should be authorized on the Missouri jurisdictional electric utility rate base for MPS. Under the cost of service ratemaking approach, a weighted cost of capital in the range of 9.41 to 9.59 percent was developed for MPS's electric operations (see Schedule 28). This range was calculated by applying an embedded cost of short-term debt of 6.14 percent, an embedded cost of long-term debt of 8.88 percent, an embedded cost of preferred stock of 9.01 percent, a return on common equity range of 11.05 to 11.55 percent to a capital structure consisting of 9.09 percent short-term debt, 50.64 percent long-term debt, 4.57 percent preferred stock and 35.70 percent common equity. Therefore, as I suggested earlier, I am recommending that MPS's electric operations be allowed to earn a return on its original cost rate base in the range of 9.41 to 9.59 percent.

Through my analysis, I believe that I have developed a fair and reasonable return and when applied to UtiliCorp United Inc.'s Missouri Public Service division's Missouri jurisdictional electric utility rate base will allow Missouri Public Service the opportunity to earn the revenue requirement developed in this rate case.

Necessary Updates

Q. Are there any components of your cost of capital analysis that you believe are appropriate and necessary to update?

A. Yes. In response to Staff's Data Information Requests regarding financial information (capital structure, embedded costs, etc.) for December 31, 1996, UtiliCorp's responses stated that "[t]he December 31, 1996 financial statements will not be available until April 1, 1997." However, it should be noted that UtiliCorp utilized financial information as of December 31, 1996 in its direct testimony filed on March 21, 1997 in Case No. ER-97-394. I believe that it would have been more appropriate to utilized the consolidated capital structure for UtiliCorp at December 31, 1996.

As a result, I reserve the right to update my capital structure and embedded costs analysis consistent with the financial information provided by UtiliCorp. I believe a cost of capital analysis based upon a more current capital structure and corresponding embedded costs is more appropriate than the capital structure as of December 31, 1995.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the Earnings Review of UtiliCorp United Inc., d/b/a Missouri Public Service.	))	Case No. EO-97-144
The Staff of the Missouri Public Service Commission, Complainant,	)))	
v.	))	Case No. EC-97-362
UtiliCorp United Inc., d/b/a Missouri Public Service, Respondent.	)))	

AFFIDAVIT OF JAY W. MOORE

STATE OF MISSOURI	)	
	)	ss
COUNTY OF COLE	)	

Jay W. Moore, of lawful age, on his oath states: that he has participated in the preparation of the foregoing written direct testimony in question and answer form, consisting of forty-four pages and twenty-eight schedules to be presented in the above cases; that the answers in the foregoing written direct testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Jay W. Moore

Jay W. Moore, CMA, CRRA

Subscribed and sworn to before me this 27th day of March, 1997.

Roberta A. McKiddy

Notary Public

My Commission expires _____.

ROBERTA A. McKIDDY
Notary Public, State of Missouri
County of Cole
My Commission Expires 09/11/99