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# *The Electric Utility Industry in the Central United States in Inflation: An Overview*

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## **Abstract**

This paper examines the potential impact of future inflation on a population of eleven electric utilities domiciled in the central section of the United States. This task is undertaken using generally accepted methods of financial analysis applied in a consistent manner across the sample. The study ranks the survey population on a number of criteria with an end goal of determining the relative position for each individual component.

## **Introduction**

This work is a specifically focused one in that it attempts to examine one issue - the impact of upward (inflationary) price adjustments on the financial health of a sample population of eleven electric utilities located in the central United States. The paper contains three additional sections. The first section introduces a number of qualitative/quantitative factors of potential significance to the impact of inflation on the sample companies. These issues shall then be weighed against the backdrop of the industry's structural environment as regards inflation in a second section in which an "inflation vulnerability ranking" will be presented for each company. The final section is devoted to conclusions reached by our study. The authors wish to issue a clear disclaimer that this paper is not one primarily concerned with inflation as such. It rather takes inflation as a given, whatever its form and source, and proceeds from there.

## **Sample Companies and Company-Specific Ratings**

The analysis was focused on a sample grouping of eleven electric utilities located in the central United States. The choice of this grouping reflects the determination by The Value Line Investment Survey - Condensed Edition that this particular set of companies constituted a representative sample of the investor owned electric utility business in this region of the country.<sup>1</sup> The specific companies are listed in alphabetical order as follows:

Central and South West Corporation (CSR)<sup>2</sup>  
DTE Energy Company (DTE)  
Entergy Corporation (ETR)  
Houston Industries Incorporated (HOU)  
NIPSCO Industries Incorporated (NI)  
Northern States Power Company (NSP)  
Ohio Edison Company (OEC)  
Texas Utilities Company (TXU)  
Unicom Corporation (UCM)  
Union Electric Company (UEP)  
Wisconsin Energy Corporation (WEC)

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Each shall now be examined on an individual basis for qualitative and quantitative inflationary exposure on a company specific basis. In order to accomplish this task each company in turn will be rated on a number of inflation-related criteria. These are listed below:

- I. Regulatory Climate<sup>3</sup>
  - A. elected versus appointed commissions
  - B. original cost versus fair value ratebase determination
  - C. forward versus historical test year
  - D. special factors
- II. Revenue Considerations
  - A. service area growth
  - B. customer distribution
- III. Cost Control
- IV. Accounting Conservatism

A score of +1, zero, and -1 shall be determined on each criterion with a +1 score being interpreted as meaning the utility rates relatively positive in an assumed inflationary environment on that particular standard. A score of -1 implies just the opposite while a score of zero would imply a relatively neutral rating.<sup>4</sup> Each of the four categories stipulated above is weighted equally with the exception of the "regulatory climate" which is double weighted owing to its potential for overriding other categories. Thus, the total company-specific rating for each company could theoretically range from an +5 to a -5.

Regarding the various criteria, the "regulatory climate" criterion's rating constitutes an average of separate ratings on its various subcategories. In establishing these subcategory ratings we viewed an elective commission as likely to be less politically insulated than an appointive one and thus as a relatively negative factor where present. An original cost rate base determination entails in and of itself no inflationary offset whereas a fair value rate base determination does explicitly take inflation's burdens into account.<sup>5</sup> In those cases where regulatory precedent and established procedure permits a forward test year this is viewed as a positive factor since regulated entities do not have to show historical losses in order to qualify for a rate adjustment. Included in the special factors would be the company's historical relationship with its regulatory body (if unusually good or bad) and the matter of interstate versus intrastate regulation. Concerning this latter point, interstate regulation by the Federal Energy Regulatory Commission (FERC) is standard and normal. Absence of such regulation is viewed as a strong positive.<sup>6</sup>

The "revenue considerations" criterion is handled by equally weighting its two component parts. Regarding the first, service area growth, the presence of above average growth demographics leads to a positive rating while the apparent absence of such demographics leads to just the opposite.<sup>7</sup> Regarding the second, customer distribution, we view a residential/small commercial customer mix as indicative of a relatively inelastic demand function which "ceteris paribus" should allow for rate increases. Conversely, a customer mix weighted to the large commercial/industrial side should "ceteris paribus" make inflation offsetting upward rate adjustments more difficult.

The "cost control" criterion is inherently multifaceted. Fuel costs may be held down by vertical integration of an enterprise or may be substantially offset by escalator clauses. Labor costs tend to be more of a problem for the less automated companies while pollution costs tend to be of more concern for coal burning utilities than for those using natural gas as a boiler fuel. As to interest costs, those tend to be a direct function of bond ratings which are closely linked with a particular electric utility's regulatory environment.

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Taxes can sometimes be offset by escalator clauses but such clauses, even where allowed, have seldom been used in actual practice. In short, this is a partial judgement call based not on statistics but rather on the authors considerable experience in weighting cost factors pertinent in the analysis of electric utilities.

Finally, there is the "accounting conservatism" criterion. Since all electric utilities have major percentages of their asset base embedded in fixed assets, relative depreciation rates loom large. So, potentially, does the allowance for funds used during construction (AFUDC) and its related category, construction work in progress (CWIP). Finally, there is the effective tax rate paid by the enterprise. The higher this rate, the more conservative the company's financial accounting tends to be "ceteris paribus." Since our previous research revealed that AFUDC/CWIP tended to be minor across the board we were forced to ignore it except as an earnings quality strengthening factor. Thus, we made our determination by equally weighting depreciation rates (the higher the rate the more positive the rating) and effective tax rates. Table I contains a summary of the factors involved in the determination of each company's rating.

**Table I**  
**Company Specific Ratings**

Company	Regulatory Revenue	Cost	Accounting	
	Climate	Considerations	Control	Conservatism
CSR	+1 X 2	0	+1	-1
DTE	0	0	-1	0
ETR	0	0	+1	0
HOU	+1 x 2	+1	0	0
NI	+1 x 2	-1	-1	+1
NSP	0	0	-1	0
OEC	0	0	-1	0
TXU	+1 X 2	+1	0	-1
UCM	0	0	-1	+1
UEP	0	-1	-1	+1
WEC	+1 X 2	0	0	+1

Sources: Company annual reports, SEC Form 10K and Value Line data.

We will now explain how the ratings for each company were determined.

**Central and South West Corporation (CSR)**

The Company Specific Rating for CSR is +2. The "regulatory climate" for CSR is rated as positive reflecting the presence of appointed commissions in the major portion (85%) of its service area, the historical presence of both fuel and tax escalator clauses in its rate structures, and as partial fair value rate base determination in Texas and Oklahoma. While a historical test year is used throughout the company's service area its presence has, at times, been mitigated by the allowance in Texas of interim rate relief and the historical requirement that final rate decisions are required within six months. On the criterion of "revenue considerations" CSR is only rated as neutral. Its historical growth rate has only been in line with industry averages and its 1995 customer distribution (expressed in revenue presents) residential 32%, commercial 24%, industrial 20%, and wholesale 24% is only indicative of a midrange price elasticity coefficient, assuming one could be reliably calculated. CSR's heavy reliance on natural gas as a border fuel (44%) and good overall fuel mix reduces the pressure of environmental costs. Its fuel and tax clauses have proven helpful in the past with these cost threats and its above average bond and preferred stock ratings,

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a further confirmation of above average regulation, potentially serves to reduce costs associated with capital expansion. We thus gave CSR a positive rating on "cost control." CSR's unusually low effective tax rate of 19.7% in 1995 is the reason for its subpar showing on "accounting conservatism."

### **DTE Energy Company (DTE)**

The Company Specific Rating for DTE is -1. The "regulatory climate" for DTE is rated as neutral. This ranking is reflective of the strange mix of factors present in the state of Michigan where DTE operates. The Michigan Public Service Commission (MPSC) is widely known for its consumerist tendencies as reflected in past regulatory decisions. However, the bulk of these negative decisions have tended to involve CMS Energy Corporation (the old Consumers Power Company) which historically has had disagreements with MPSC over matters related to engineering deficiencies at its plants. As to DTE, "The Edison Company", as it has been affectionately known to many of its long-time customers, the history of rate decisions has constituted a mixed bag. The statistical characteristics of Michigan regulation (an appointive commission, using original cost rate making procedures and a forward test year) are also mixed. The essentially intrastate nature of DTE has visibly reduced the significance of FERC, adding some positive element to the equation. On the criterion of "revenue consideration", DTE is also rated neutral. Its historical growth rate has been in line with industry averages, though barely so, and its 1995 customer distribution (residential 33%, commercial 41%, industrial 20%, and other 6%) has statistically merited an above average rating. However, when the large and small commercial categories are broken out, the results are mainstream. "Cost control" is a problem for DTE. An overwhelming 78% of the company's fuel sources comes from coal, exposing the company to environmental cost problems. In addition, Michigan's laws have always tended to be somewhat pro-union though labor costs have historically averaged around 15% of reported revenues, a moderate figure. Fuel costs are historically only 90% recoverable by fuel adjustment clauses which have traditionally contained 3 month time lags. Tax escalators are not present in contracts. Bond and preferred stock ratings can be classified as average at best depending on the particular securities issue. The final criterion "accounting conservatism" is also ranked as neutral. DTE's effective tax rate (38.6%) in 1995 is above the corporate statutory rate (35.0%) for large corporations. However, DTE's depreciation rate (3.2%) is a little on the low side.

### **Entergy Corporation (ETR)**

The Company Specific Rating for ETR is +1. The "regulatory climate" for ETR is rated as neutral. Louisiana regulation is below average (elected commission, original cost rate base, and historical test years) whereas the patterns in the other states are mixed. In Texas, as alluded to in connection with CSR, the commission is appointed and may use fair value to determine up to 40% of the rate base. The rest is original cost determined. A historical test year is mandated, however. In Arkansas a darker picture emerged (historical test years, rate bases determined by original costs, but with an appointive commission in place). In the state of Mississippi an elected commission employs fair value techniques in its rate basing procedures and also permits use of projected test years. Louisiana decisions, especially those involving the Gulf States Utilities Company subsidiary have been especially harsh.<sup>8</sup> However, given the geographical spread of ETR, the Louisiana situation should not be viewed as of overriding significance. Concerning the "revenue consideration" criterion ETR, is also rated neutral. The historical growth rate for system resources is slightly above average while its 1995 customer distribution (38.7% residential, 26.5% commercial, 32.1% industrial, and 2.7% other) is somewhat below average in terms of its probable price

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elasticity given especially the large industrial component and its composition (primarily high order industries). "Cost control" is rated positively. ETR is heavily protected from environmental costs by its heavy (42% of fuel sources) use of natural gas as a boiler fuel. The company has historically been permitted the extensive use of fuel escalators and tends to operate in a political environment that is not especially friendly to labor unions and their demands. Bond and preferred stock ratings are in the low average to average category except for those of the Gulf States Utilities subsidiary which are rated decidedly below average. However, it is assumed that should the system as a whole be required to raise money in the future it would avoid using Gulf States as its fund raising vehicle. "Accounting conservatism" is also rated as a neutral factor. Effective income tax rates are above average (a sign of conservative accounting) but the company's 1995 depreciation rate was only 2.9%.

### **Houston Industries Incorporated (HOU)**

The Company Specific Rating for HOU is +3. The "regulatory climate" for HOU is rated as positive. This reflects the appointed nature of the Public Utility Commission of Texas as well as the fact that this commission has historically permitted HOU to have both fuel and tax escalator clauses in its contracts. In addition, HOU has been subject to a partial fair value determined rate base, a potentially significant plus factor in a period of escalating inflation. While it is true that Texas regulators base their decisions on a historical test year, it is also true that final rate decisions are required within six months and imposition of interim rates subject to refund is allowed. HOU historically has not been subject to FERC regulation since its facilities and power lines have all been located intrastate. However, due to projected corporate restructuring this condition seems about to change. As to revenue considerations they are also rated as positive. Growth in HOU's service area has historically been strong reflecting not only regional demographic trends but the steady growth (subject to some interruption in the middle 1980's) of the petroleum industry. HOU's 1995 customer distribution (residential 43%, industrial 29%, commercial 27% and other 1%) is viewed as a moderately positive element. Regarding "cost control", HOU fuel and tax clauses have already been noted as positive elements. However, HOU derives 43% of its power generation from coal/lignite and another 9% from nuclear. The latter category has a history of operating problems while the former is potentially a source of rising environmental costs.<sup>9</sup> HOU's bond and preferred stock ratings which were among the highest in the industry for many years have recently trended downward but are still slightly above average. In summary, the overall picture on cost control is mixed. Finally there is the matter of "accounting conservation" on which HOU is rated as neutral. The company's effective income tax rate of 31.8% in 1995 registers as below the statutory rate but the 3.7% depreciation rate is somewhat above industry norms.

### **Nipsco Industries Incorporated (NI)**

The Company Specific Rating for NI is +1. The "regulating climate" for NI is rated as positive. The Indiana Utility Regulatory Commission (IURC) is an appointed body which is known for its speedy decisions in rate matters. In any event this body operates under a legislative mandate that rate decisions can not take more than 10 months to determine. The IURC has traditionally permitted the use of fuel escalators with little or no time lag. Of further interest is the fact that the commission bases its decisions on a fair value rate base. The historical test year, which is mandated, is offset by the speed of the IURC in reaching its determinations. The "revenue consideration" criterion is rated as negative. NI

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operates in a slow growth, cyclical service area. In addition, its customer distribution (industrial 42%, residential 27%, commercial 24%, and other 7%) implies an unfavorable price elasticity situation. However, fortunately for NI its industrial contracts have historically continued comprehensive "take or pay" clauses. "Cost control" is also negatively rated. Boiler fuel sources are 83% coal, a huge potential problem from an environmental standpoint, especially given the fact that low sulfur coal deposits mined by non-union coal miners are not available within the region. Bond and preferred stock ratings are only slightly above industry averages and have trended slightly downward over the years. Thus, the cost of capital is not cheap. Finally, the "accounting conservatism" criterion is rated as positive. This reflects a high (4.1%) depreciation rate and an effective tax rate for 1995 at statutory levels.

### **Northern States Power Company (NSP)**

The Company Specific Rating for NSP is -1. The "regulatory climate" for NSP is rated as neutral. NSP is primarily regulated by the Minnesota Public Utilities Commission (MPUC) but is also regulated by the Public Service Commission of Wisconsin (PSCW) and to a minor extent the South Dakota Public Utilities Commission (SDPUC) and the North Dakota Public Service Commission (MDPSC). It is also subject to regulation by FERC on its interstate rate operation. The MPUC is an appointed body which allows forward test years but which bases its decisions on an original cost rate base. The commission has historically been concerned over equity ratios being too high, a dangerous precedent in any future inflationary period (assuming such a period is accompanied by high debt costs). The PSCW rates much better being an appointed body which routinely employs a projected test year in rate setting. While this body bases its decisions on an original cost rate base it has historically used a "make whole" procedure in rate setting which allows for rate adjustments to affect increased expenses incurred since the completion of recent rate cases. Regulatory lag is not a particular problem in the state of Wisconsin since interim rate orders are permitted. Commissions in both North and South Dakota are elected, employ original cost rate bases, use historical test years and have historically rendered unfavorable decisions from a utility's point of view. As to FERC it is of course an appointive body which bases its decisions on original cost rate bases. It permits forward test years for electric rates (83% of NSP's revenues are electric) but uses historical test years for gas rates (17% of NSP's revenues are gas). The reader must bear in mind, however, that FERC only has jurisdiction over interstate and wholesale rates which constitute a relatively small portion of NSP's overall business. Regarding "revenue considerations", NSP also is rated neutral. Service area growth has historically been only average and so has customer distribution. On the matter of "cost control" NSP is 75% coal and nuclear powered. Thus, it presents an inviting target for environmentalists. In the past the company has benefited from the use of some fuel adjustment clauses but tax adjustment mechanisms have never been operative. NSP historically has enjoyed above average bond and preferred stock ratings which we consider to be a modest plus factor given the only moderate growth characteristics of NSP's service area. As to "accounting conservatism" NSP rates neutral on this criterion. Both its effective tax rate and its depreciation cluster around industry norms.

### **Ohio Edison Company (OEC)**

The Company Specific Rating for OEC is -1. The "regulatory climate" for OEC is rated as neutral. OEC is subject to regulation by the Public Utilities Commission of Ohio (PUCO) and the Pennsylvania Public Utility Commission (PPUC). Since 87% of company revenues are derived from Ohio PUCO is obviously the dominant regulatory body. In addition, since OEC is interstate in its makeup it is subject to regulation by FERC. PUCO

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is an appointed body which has historically used a partly projected test year and original cost rate making in its deliberations. The problem in Ohio has always been that regulation is split between the commission and local city councils (with jurisdiction in unincorporated areas). The state commission has historically served as an appeals body when a home rule based decision has proven unacceptable. The result has been that in the past the state body has been swamped with cases and regulatory lag has become a significant problem. However, after the regulatory lag debacle of the middle 1970's the state legislature mandated that PUCO reach a decision within 18 months. If no decision was forthcoming utilities could implement rates on their own subject to later refund if PUCO disallowed them. Regarding "revenue considerations", OEC also is rated neutral. Service area growth has been on the low side of average and customer distribution (residential 26%, commercial 21%, industrial 32%, and other 21%) has presented a mixed picture. 'Cost control' is rated as negative. This primarily reflects the company's fuel mix (74% high sulphur coal and 26% nuclear).<sup>10</sup> Bond and preferred stock ratings are below average, another negative factor should inflation escalate. Regarding the matter of "accounting conservatism", OEC is once again rated neutral. Both its effective tax rate and depreciation rate fall in the average category.

### **Texas Utilities Company (TXU)**

The Company Specific Rating for TXU is +2. The "regulatory climate" for TXU is rated as positive. As previously stated in the cases of CSR and HOU the Public Utility Commission of Texas (PUCT) is an appointive body which bases its decisions partly on original cost and partly on fair value. It also uses a historical test year.<sup>11</sup> Historically, due to its intrastate nature, TXU has been exempt from regulation by FERC but this is changing due to corporate restructuring. TXU is rated as positive on the "revenue considerations" criterion. Growth has been strong in portions of the Dallas-Fort Worth Metroplex but overall shows only an above average growth pattern. Customer distribution (residential 48%, commercial 30%, industrial 15%, and other 7%) is decidedly positive from a price elasticity viewpoint. Regarding "cost control" TXU is rated neutral. At one time, TXU would have rated positive on this standard, given its comprehensive commodity, fuel, and tax adjustment clauses coupled with high bond and preferred stock ratings and a natural gas boiler fueled plant base. However, the situation has changed materially and for the worse in recent years. A decade ago the PUCT set a new precedent by suspending all of TXU's escalator clauses. Major financial deterioration, occurring largely in connection with TXU's Glen Rose nuclear station, dropped system bond and preferred stock ratings into the average category. Finally, to complete the picture TXU gradually transformed itself into a 37% lignite, 18% nuclear fueled plant base. As to "accounting conservation", TXU is rated negatively based on a combination of relatively low depreciation and effective tax rates.

### **Unicom Corporation (UCM)**

The Company Specific Rating for UCM is 0. The "regulatory climate" for UCM is rated as neutral. The Illinois Commerce Commission (ICC) is an appointed body which uses an original cost rate base method coupled with a partly historical and partly projected test year. When these statistical factors are merged with ICC's history of rate decisions (reasonable on the whole) and time lags in reaching its decision (entirely too slow on average) a mixed picture emerges. Regarding the criterion of "revenue considerations", growth has historically been in the low average category. As to the customer distribution (residential 38%, commercial 30%, industrial 21%, and other 11%), it again produces only an average or neutral picture. Cost control is rated as a negative factor for UCM. Bond and

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preferred stock ratings fall in the low average category. Nuclear and coal burning plants account for 97% of the overall plant account, an obvious point of environmental cost vulnerability. Fuel clauses historically have covered some but not all contract categories and have involved 3 month time lags prior to implementation. There have been no tax escalator clauses. The final criterion, "accounting conservatism" is rated as positive for UCM. The company boasts average depreciation rates but carries an effective tax rate in excess of 40%, indicative of very high quality earnings.

### **Union Electric Company (UEP)**

The Company Specific Rating for UEP is -1. The "regulatory climate" for UEP is rated as neutral. UEP is subject to regulation by the Missouri Public Service Commission (MPSC), the Illinois Commerce Commission (ICC), and FERC. Since 89% of corporate revenues in 1995 were generated in Missouri we chose to treat MPSC as being utterly dominant in our regulatory calculations. MPSC is an appointive commission that historically has employed original cost rate bases and partly historical and partly projected test years. Historical rate decision patterns have been below average but not enough so to generate an outright negative regulatory environmental rating. Regarding "revenue considerations", we determined these to be negative. System wide demand growth has been historically well below average while customer distribution (residential 41%, commercial 36%, industrial 19%, and other 4%) has been average (the industrial revenue base is heavily impacted by the primary metals, chemical, and transportation equipment industries-all highly cyclical with probable elastic demand coefficients. "Cost control" is also rated as negative. UEP's use of fuel clauses has been limited.<sup>12</sup> In addition, the utility has never been allowed the use of tax escalators. Coal makes up 71% of boiler fuel requirements and nuclear another 24% with hydro constituting the remaining 5%. This fuel mix is a potential environmental cost nightmare. As to bond and preferred stock ratings, the company's senior securities are ranked slightly above average. Overall, however, the cost picture is relatively bleak. The "accounting conservatism" of UEP is positive. While depreciation rates are only average UEP in 1995 had an effective tax rate of 40%, significantly above the statutory rate.

### **Wisconsin Energy Corporation (WEC)**

The Company Specific Rating for WEC is +3. The "regulatory climate" for WEC is rated as positive. WEC is primarily regulated by the Public Service Commission of Wisconsin (PSCW) an appointed body which utilizes an original cost rate base in combination with a projected test year. Regulatory decisions by this body have historically been constructive and well reasoned. This is evidenced by the strong overall financial position enjoyed by this particular electric utility. Regarding "revenue considerations" demand side growth has been only average historically and a review of the company's service area gives little basis for material change to be expected in the future on this point. The 1995 pattern of customer distribution (residential 36%, small commercial and industrial 30%, large commercial and industrial 28%, and other 6%) reveals an overall average type of pattern. In summation, the revenue considerations side of the equation ranks as neutral. "Cost control" is ranked as neutral. Environmental cost exposure is high (coal and nuclear plants contribute 90% of revenues) but financing cost exposure is superior based on bond and preferred stock ratings that rank number one in the entire electric utility industry. Fuel clauses have historically existed and have been supervised by generally enlightened regulators. In short, the picture here is mixed. Finally, on the criterion of "accounting conservatism" WEC rates as positive. The company's effective tax rate exceeds the statutory rate and the company's depreciation rate is relatively high. Thus concludes this section of the paper.



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**The Electric Utility Industry's Structural Impact on Company - Specific Ratings**

As spelled out in our prior work the electric utility industry is not insensitive to inflationary forces. To overview the situation one must first consider the balance sheet of this particular industry. The most salient feature of any electric utility balance sheet is the presence of a huge net plant account component. This component, which in the 1960's and 1970's averaged about 90% of total assets industry wide has fallen in recent years, reflecting corporate restructuring, to around the 70% level. Even this reduced presence implies significant financial and operating leverage and thus potential earnings vulnerability in an industry that has historically been known for steady growth in its product demand function. While inventory profits have never constituted a problem for this particular industry owing to the almost complete lack of business inventories on the balance sheet the threat of under-depreciation has always been present. Thus, earnings quality for the industry as a whole has been subject to question during past periods of escalating inflation.<sup>13</sup>

To further amplify the issue of potential vulnerability to under-depreciation Table II is included. It follows:

**Table II**  
**The Implications of a Large Net Plant Account, 1995**

<u>Company</u>	<u>Plant/Total Assets</u>	<u>Debt/Capital</u>	<u>Leverage Ratio</u>
CSR	65.0%	57.2%	37.2%
DTE	76.5%	55.1%	42.2%
ETR	71.1%	55.4%	39.4%
HOU	75.0%	47.6%	35.7%
NI	74.7%	54.7%	40.9%
NSP	69.2%	46.8%	32.3%
OEC	64.5%	54.6%	35.2%
TXU	82.4%	64.3%	53.0%
UCM	74.1%	56.6%	41.9%
UEP	78.1%	46.1%	36.0%
WEC	63.8%	42.8%	27.3%

Source: Company 1995 annual reports.

Table II divulges four significant factors pertinent to the scale of plant and related fixed assets (transmission, distribution, and CWIP). First, it discloses in column two of the table the size of the overall plant account as a percentage of total assets. This single fact gives a material indication as to the size of this potential problem of under-depreciation on a company by company basis (the greater the percentage the greater the potential problem). Second, column two can be used as a proxy for the degree of operating leverage present (the greater the percentage the greater the degree of operating leverage). Third, column three of the table proxies the degree of financial leverage present. This column treats any preferred stock outstanding as if it were in fact debt (a conservative financial practice). Fourth and last, the fourth column of the table (obtained by multiplying column two times column three) proxies the overall leverage exposure on a company by company basis (the greater the percentage the greater the overall leverage exposure). On the basis of the data in Table II it is clear that TXU's balance sheet inflation problem is far greater than the sample norm. It is also clear that WEC's balance sheet inflation problem is far less than the sample norm. Thus, TXU receives an additional -1 and WEC receives an additional +1 rating. The remainder of the sample population is rated as neutral.

One other consideration arises from this balance sheet situation. In the event a company is required to raise new money outside of its own internal cash flow to address

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under-depreciation or other inflation related problems the pertinent question to ask is can it do so. The answer in general, subject to special market related circumstances, depends on two things:

- I. The company degree of leverage
- II. The company's common stock price to book value per share ratio

The first question has already been dealt with in Table II in an implicit fashion. The second, together with a brief rehash of the first, shall be the subject of Table III which follows:

**Table III**  
**The External Fund-Raising Capabilities of Selected Electric Utilities**

Company	Inverted Leverage Ratio	Price/Book Ratio	Fund Raising Ratio
CSR	62.8%	1.55x	97.3%
DTE	57.8%	1.28x	74.0%
ETR	60.6%	0.87x	52.7%
HOU	64.3%	1.27x	81.6%
NI	59.1%	1.88x	111.1%
NSP	67.7%	1.55x	104.9%
OEC	64.8%	1.28x	82.9%
TXU	47.0%	1.41x	66.3%
UCM	58.1%	1.06x	61.6%
UEP	64.0%	1.69x	108.2%
WEC	72.7%	1.68x	122.1%
<b>Sample Mean</b>			<b>87.5%</b>

Source: Company 1995 annual reports and Value Line data.

In Table III column two displays the leverage ratio data of Table II inverted so as to show a sort of non-leverage ratio. The Higher this figure the less leverage is assumed to be present in a situation and the more likely it becomes that a lender or the financial markets would be in a position to add new borrowed capital to a given company's balance sheet. Column three displays the price to book value per share (computed on 1995 average prices and year-end book value per share figures) figure for each sample company. The higher this figure the better able a given company is to float new stock issues without the presence of dilution. Column four is obtained by multiplying column two times column three. The higher the percentage figure in column four the better a company's so called "fund raising ratio" and conversely.

In order to interpret this fund raising ratio in a company-specific manner we reviewed its component parts. Our review yielded the rule of thumb that any company whose ratio fell within 25% of the mean sample average of 87.5% would be ranked as relatively neutral. Any company ranking more than 25% below this benchmark was classified as negative or carrying a -1 rating. Two companies (ETR and UCM) fell into this category largely on the basis of potential dilution in the case of new stock issues. Any company ranking more than 25% above the benchmark of 87.5% was classified as positive or carrying a +1 rating. Two companies (NI and WEC) achieved this distinction.

Given the results obtained here and in the preceding section inflation vulnerability rankings can be computed for each company. This is done in Table IV:

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**Table IV**  
**Inflation Vulnerability Rankings of Selected Elective Utilities**

<u>Company</u>	<u>Earnings Rank</u>	<u>Leverage Rank</u>	<u>Fund Raising Rank</u>	<u>Inflation Vulnerability Rank</u>
CSR	+2	0	0	+2
DTE	-1	0	0	-1
ETR	+1	0	-1	0
HOU	+3	0	+1	+2
NSP	-1	0	0	-1
OEC	-1	0	0	-1
TXU	+2	-1	0	+1
UCM	0	0	-1	-1
UEP	-1	0	0	-1
WEC	3	+1	+1	+5

Sources: Company annual reports, SEC Form 10K and Value Line data.

In Table IV the “earnings rank” is the company-specific rank obtained for each company in section two of this paper. The “leverage rank” and “fund raising rank” were obtained in this section. The “inflation vulnerability rank” is the summation of the other ranks as listed.

**Conclusions**

Table IV in a sense says it all. While the rankings are relative and not absolute in any sense it is clear to the authors that significant differences exist within our sample population concerning its vulnerability to inflation. Nearly half the sample (DTE, NSP, OEC, UCM, and UEP) ranks negatively though only slightly so overall. One company (ETR) ranks neutral while the other five companies rank positively. One company (WEC) ranks positively on all three criteria.

This study has had as its purpose the determination of the relative exposure to inflation of each of a sample population of eleven electric utilities located in the central United States. This relative exposure was determined through close examination of the sample population’s principal financial statements using established techniques of financial analysis. In addition qualitative factors were given their due weighting in determining relative outcomes.

**END NOTES**

1. Obviously missing here are non-investor owned electric utilities like TVA and a number of rural electric cooperatives as well as some minor governmentally administered companies. In addition, a number of investor owned companies of size and reputation are excluded.

2. CSR is the New York Stock Exchange (NYSE) ticker symbol for Central and South West Corporation. Each of the eleven electric utilities listed is followed by its particular NYSE ticker symbol. These symbols shall be used instead of the complete names of each company throughout the remainder of the paper. For a relatively complete listing of NYSE common stock ticker symbols see the most recent monthly edition of Standard and Poors Stock Guide.

3. One should never forget the old saying of an unknown source that the power to regulate is the power to destroy slowly. If one examines the history of utility regulation (Munn versus Illinois, Smyth versus Ames, the Hope Natural Gas Case, the establishment of the various state and federal regulatory bodies, etc.) it becomes clear that electric utilities have historically been allowed a "fair return" on investment similar in concept to the economist's concept of "fair return".

4. The reader should note well that these ratings are all relative ratings within the sample population (N). To interpret any rating as an absolute rating would, the authors believe, be dangerous in the extreme. As is well known, inflation takes on many shapes and forms. Given this fact, absolute protection from or exposure to inflation becomes problematical and a highly inexact proposition. The situation is compounded by the fact that this paper, by its nature, suffers the disadvantage of exploring conditions that have yet to occur and a future fraught with almost unlimited possibilities for material changes to occur in the environment facing any or all of our sample companies.

5. This having been said, the author wishes to make it clear that they are well aware that during the late 1960's and 1970's (a period of marked inflationary increase in the United States from the levels generally prevailing in the 1950's and early 1960's) a number of state regulatory commissions, faced with the inflexibility of original cost rate bases attempted to mitigate its negative effects by adjusting allowed rates to return.

6. While making no explicit forecast other than what was stated in our study "An Evaluation of Earnings Quality of Electric Utilities Located in the Central United States on the Eve of Deregulation" the authors implicitly assume the continuation of at least a partially regulated environment for the foreseeable future.

7. Our decision to treat demand side growth as a positive factor was by no means an easy one. Any student of electric utility history is aware that inflation can result in massive escalation of plant building costs such that superior earnings have in the past sometimes been registered by non-growth electric utilities. However, on the assumption of reasonably competent though not necessarily enlightened, regulation we are taking the traditional view that growth in demand is a positive factor.

8. At one time back in the 1980's things became so volatile that anonymous agents claiming they were acting on behalf of Gulf States accessed the listing of elective utility analysts maintained by the now defunct Financial Analysts Federation (FAF) and attempted to pressure some members of the organization to actively pressure Louisiana rate making authorities.

9. It should be noted however that the south Texas Project (HOU's nuclear division) was cited in HOU's 1996 annual report as having one of the top-performing records of any nuclear plant in the nation (see Houston Industries Incorporated 1996 Annual Report, page 18 for details).

10. In the late 1970's a number of Ohio electric utilities signed contracts with western state low sulfur coal providers in the hope of meeting environmental regulations in a cost-effective manner. In the process major orders from Ohio coal mines were not renewed and the mine owners in combination with the United Mineworkers Union successfully lobbied the state legislature to mandate the use of Ohio coal which is high sulfur in content. Low

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sulfur contracts were canceled and expensive and scientifically unproven sulphur scrubbers were installed at coal burning plants throughout Ohio with costs being absorbed by the utilities affected.

11. Rate case decisions, while not as positive as they used to be under home rule have been generally reasonable given the surrounding circumstances.

12. In an opinion issued on June 29, 1979 the Missouri Supreme Court ruled that MPSC lacked the statutory authority to apply fuel escalators to residential or small commercial rates. These together constitute over half of UEP's revenue stream.

13. The reader's attention is drawn to the inflation adjusted earnings numbers (both replacement cost and constant dollar) that were mandated by the Financial Accounting Standards Board during the 1970's. For many electric utility companies these adjustments to the reported earnings numbers completely wiped out earnings and in a few instances cash flow itself.

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