or price. Therefore, it is our assessment that there is no effect on the national price level.[1] In other words, the increase in costs attributable to recognizing the initial liability under SFAS 112 will not be reflected in the GNP-PI.

Cost of Current Production

While it is currently impossible to determine with any precision the impact of ongoing SFAS 112 costs on the GNP-PI, we believe that it is likely that such ongoing costs will have almost no impact on the GNP-PI. The data necessary to perform the calculation directly are not currently available but the methodology involved and the likely outcome of such a calculation (based on the information that is available) are described below:

To the extent that SFAS 112 increases costs related to current production it will increase the marginal cost of production and thus will affect the optimal levels of output and price for firms in the economy. Specifically, the increase in costs associated with SFAS 112 will increase the cost of labor. In analyzing the impact of SFAS 106 on the GNP-PI, a model was developed that computes the impact on the GNP-PI of an increase in the cost per unit of labor. To apply this model to the impact of SFAS 112, we would require estimates of:

(1) the percentage increase in the cost of labor for firms affected by SFAS 112.
(2) the fraction of workers in the economy subject to benefits covered by SFAS 112.

[1] Some might argue that regulated firms seeking recovery of these costs would raise their prices, and thus the GNP-PI would increase somewhat. This argument is quantified by calculating the impact on the GNP-PI by multiplying the increase in prices for regulated firms by the ratio of the output of regulated firms to GNP. Although such a calculation will likely find a very small impact on the GNP-PI, even this small result will overstate the actual impact on the GNP-PI by a substantial amount. This calculation is essentially the "back-of-the-envelope" calculation discussed in the Godwins report on the impact of SFAS 106 on the GNP-PI. As discussed in that report, the "back-of-the-envelope" calculation ignores the various macroeconomic adjustments that take place when some firms increase their prices. Taking appropriate account of these adjustments greatly reduces the calculated impact on the GNP-PI to a tiny fraction of the result obtained using the "back-of the envelope" calculation. To summarize, the "back-of-the-envelope" approach will likely find a very small impact on the GNP-PI, and this small amount grossly overstates the actual impact on the GNP-PI.

Complete data for item (2) above is not yet available. However, anecdotal evidence suggests that SFAS 112 benefits are far less prevalent than SFAS 106 benefits.[2] Below is an outline of how item (1) might be assessed.

SFAS 43: Service-related Benefits

To see that the additional costs attributable to SFAS 43 are a very small percentage of labor costs, consider the following simple example which overstates the size of the additional cost due to severance pay. Suppose a given worker is employed for a year, accruing one week's pay as severance, and then is severed at the beginning of the next year. Under "pay as you go" accounting, the cost for the worker is the 52 weeks of pay, but accounting for the additional severance liability as required by SFAS 43, the cost of the worker is 53 weeks pay. Thus, SFAS 43 increases the cost of this additional worker by 1/52 or about 2%. Of course, this is an overestimate because an additional worker is not generally severed after only one year. In fact, the calculation would discount the 2% by the probability that the worker would in fact be severed.[3]

[2] Data published by the U.S. General Accounting Office indicated that only 32% of the private-sector workforce is covered by benefits subject to SFAS 106. An informal survey indicates that less than 10% of Towers Perrin clients will recognize any material liabilities under SFAS 112.

[3] This is an over-simplification in that account would need to be taken of interest and future pay increases. However, these two factors will tend to offset one another, thus leaving the increase in ongoing labor costs for a firm with these benefits at a small fraction of the 2% benefit "accumulation rate" noted above.

The changes in ongoing labor costs for firms as a result of SFAS 5 are also quite small. Such changes are a function of the fact that each year the firm will recognize the present value of all future benefits (instead of actual benefits paid during the year) for each employee that ceases to work due to disability or a work-related injury. Under "pay as you go" accounting, the benefits will ultimately be recognized when paid (i.e., the same expense is recognized; it just occurs over a greater number of years). The acceleration of the recognition under SFAS 5 will be offset by use of interest in the present value calculation; thus there should be no increase in ongoing labor costs except to the extent that the workforce is growing and inflation causes actual benefits to increase (i.e., with a stationary beneficiary population, after the initial liability has been recognized, the balance sheet liability will only grow with benefit levels).

To see that the effect of SFAS 5 on labor costs is very small, consider a long-term inflation rate of say 4% and an annual growth in the workforce of 1.5%. In this case ongoing labor costs would increase as a result of SFAS 5 benefits being recognized under SFAS 112 by approximately 5.5% of the initial balance sheet liability. For Bell Atlantic, for example, this value is less than 0.2% of labor costs and for other firms in the economy it is likely to be comparable or possibly even lower.[4] By contrast, the Godwins report indicated that labor costs for firms providing benefits subject to SFAS 106 would increase by approximately 3% as a result of the new accounting standard.

[4] A 1993 Towers Perrin survey indicates that per capita Workers Compensation costs in the Telecommunications industry are within 5% of the per capita cost in the economy as a whole. Long-Term Disability costs are largely a function of the age of the workforce. Our previous study showed that the average worker's age in the Telecommunications industry is approximately 3.6 years higher than for the economy as a whole.

IV. Reconciliation with Previous Studies

Given the apparent similarities between SFAS 112 and SFAS 106, it is appropriate to consider how the analysis and conclusions described in this report compare with earlier analyses of the impact of SFAS 106 on the GNP-PI.

One approach previously put forth by others was to argue that SFAS 106 requires a change in accounting for costs but does not itself cause any change in costs for any company, regulated or otherwise. This approach concludes that since accounting changes are not really changes in costs, and hence do not affect pricing or production behavior, there will be no change in the GNP-PI except to the extent that regulated companies are allowed to increase prices to recover such costs. Such recovery would be granted under the theory that non-regulated firms had been factoring "true" costs into their pricing decisions while regulated companies were not allowed to do so prior to the change in accounting rules. Theoretically because SFAS 112 is an accounting change similar to SFAS 106 this argument could also be applied to evaluate the impact of SFAS 112 on the GNP-PI.

While the conclusion described above regarding the impact on GNP-PI is similar to that reached in this analysis of the impact of the recognition of initial SFAS 112 liability, our argument in reaching this conclusion is very different. In order to guard against the possibility of understating the impact on the GNP-PI, we entertain the possibility that an accounting change can represent a real change in costs. However, even assuming that accounting costs are real costs, the costs associated with the initial SFAS 112 liability are sunk costs that have already been factored into the prices of non-regulated firms. As explained earlier, these costs are related to past production and thus do not affect current marginal cost or current pricing and output decisions. Thus they have no effect on the GNP-PI.

Earlier we analyzed the impact on the GNP-PI of SFAS 106, and our findings are presented in the Godwins Report. In preparing that report, we could have argued that the amortization of the Transition Obligation under SFAS 106 is just like the recognition of initial liability under SFAS 112 in that it is associated with service rendered in the past and therefore is a sunk cost having no impact on the GNP-PI. In the interest of conservatism -

specifically to guard against understating the impact on the GNP-PI - we did not make this argument, but instead treated the amortization of the Transition Obligation as part of the ongoing costs due to SFAS 106. Even with this treatment, the impact on the GNP-PI was tiny. In our current analysis of SFAS 112, we have chosen to identify the component of SFAS 112 costs that are properly regarded as sunk costs, and to recognize that these costs do not affect the marginal cost of production. The reason that our treatment of the initial SFAS 112 liability differs from our treatment of the Transition Obligation under SFAS 106 is described below.

The amortization of the Transition Obligation under SFAS 106 generally takes place over a twenty-year horizon.[5] As a result, in any given year the amortization of the Transition Obligation represents only a fraction of the total cost recognized under SFAS 106. Because it was not possible to determine what precise fraction this amortization represents as a portion of total SFAS 106 costs for firms in the economy, we took an approach that avoided any debate that might arise over this point. We did so by making the simplifying, but conservative, assumption that the entire SFAS 106 cost was an increase in ongoing labor costs when some portion of that cost might have been viewed as sunk costs. In the case of SFAS 112, such an assumption would be inappropriate. As we have pointed out in our report, the initial liability under SFAS 112 is to be recognized immediately rather than over a twenty-year horizon. Because of this, the recognition of the initial liability under SFAS 112 represents the vast majority of the new accounting rule's impact. As we have discussed, the additional ongoing cost increases marginal cost, but the additional cost associated with the initial liability is a sunk cost. To treat the additional cost associated with the initial liability as an increase in marginal cost would grossly overstate the increase in marginal cost and thus grossly overstate the impact on the GNP-PI. Thus, we have treated the costs associated with the initial liability as sunk costs, and the costs associated with ongoing costs as marginal costs.

[5] Under SFAS 106 it is also possible to recognize the Transition Obligation over the average future working lifetime of the active plan participants.

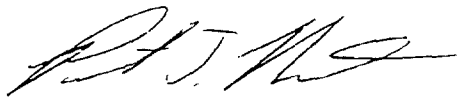
In addition to the discussion above, we note that part of the rationale for treating the Transition Obligation under SFAS 106 as an increase in marginal cost in the Godwins Report was the concern that the twenty-year amortization period might obscure the fact that this obligation is truly a sunk cost. However, this potential for confusion does not arise with the initial liability under SFAS 112 because it is to be booked entirely in one year. For both SFAS 106 and SFAS 112, any costs associated with the initial liability are really sunk costs, but this conclusion is much more obvious in the case of SFAS 112.

V. Conclusion

Adoption of SFAS 112 requires both an immediate and ongoing recognition of costs for firms providing post-employment benefits addressed in the new accounting standard. The immediate costs associated with SFAS 112 should be viewed as sunk costs and hence will not affect the GNP-PI. As a result, 100 percent of Bell Atlantic's SFAS 112 costs for the initial liability should be treated as exogenous under the FCC price cap mechanism.

In the Godwins SFAS 106 study, it was concluded that the increase in GNP-PI caused by ongoing SFAS 106 costs amounted to 0.0124%. Based on information currently available, we believe that increases in labor costs of firms as a result of SFAS 112 are likely to be considerably less than those resulting from SFAS 106. This combined with the probable lower prevalence of SFAS 112 benefits provided by firms in the economy indicates that any resulting GNP-PI impact due to ongoing SFAS 112 costs will almost certainly be negligible and less than the SFAS 106 impact we calculated previously.

Respectfully submitted,



Peter J. Neuwirth, F.S.A., M.A.A.A.

Andrew B. Abel, Ph.D.

Exhibit 24-b

Update of Analysis of Impact of SFAS 112 on the GNP-PI

December 29, 1995

Towers Perrin

In response to the Federal Communications Commission's ("FCC") Order Designating Issues for Investigation (the "Order"), Bell Atlantic has asked Towers Perrin to provide an opinion as to the extent to which the findings in its original report ("Analysis of Impact of SFAS 112 on the GNP-PI" dated October 12, 1994), should still be considered valid or whether changes or an update to the study is necessary at this time. As discussed below, we believe that even though SFAS 112 has now been adopted, and more than one year has passed since the original study was produced, the actual impact of SFAS 112 on the GNP-PI, and additional costs to Bell Atlantic that remain unrecovered due to SFAS 112, were not materially different than indicated in the original report.

SFAS 112 requires firms subject to GAAP to account for liabilities for (1) self-insured Workers Compensation benefits and self-insured long-term disability benefits in accordance with rules outlined in SFAS 5, and (2) service-related severance benefits in accordance with the rules under SFAS 43. Prior to these requirements, most firms accounted for post-employment benefits on a "pay as you go" basis although some firms prefunded at least a portion of these liabilities. In the year that the new standard was adopted, affected firms recognized a large initial liability related to costs based on the past service of employees. This liability was offset by any advance funding previously undertaken by those firms. On an ongoing basis a very small additional liability will generally be recognized in excess of "pay as you go" costs reflecting the expected growth of this "past service" liability.

The purpose of our original report was to determine the percentage, if any, of the additional costs to be incurred by Bell Atlantic as a result of the adoption of SFAS 112, that would be reflected in the GNP-PI and what percentage would not be so reflected. The original report found that the recognition of the initial liability would have <u>no</u> impact on the GNP-PI, while the impact of ongoing SFAS 112 costs on the GNP-PI would likely be extremely small and would almost certainly be less than the 0.0124% increase calculated in a previous study[1] as the impact of SFAS 106 on the GNP-PI. Thus, all of the initial SFAS 112 liability recognized by Bell Atlantic and virtually all of its SFAS 112 ongoing costs will be unrecovered through increases in the GNP-PI. These findings were based on the basic economic principles outlined below.

The introduction of SFAS 112 will have an impact on the GNP-PI only to the extent that it causes firms to change their levels of production and prices. Unregulated firms determine their levels of production and prices by equating marginal revenue and the marginal cost of production[2], and SFAS 112 will induce them to change their production and prices only if it changes marginal revenue or marginal cost. Because SFAS 112 will not affect the demand for firms' products, and because marginal revenue depends only on demand, SFAS 112 will have no effect on marginal revenue. Thus, any effect of SFAS 112 on the GNP-PI must operate by affecting the marginal cost of production.

---

[1] "Analysis of Impact of FAS 106 Costs on GNP-PI" dated February 1992 and prepared on behalf of the United States Telephone Association.

[2] Some observers might argue that regulated firms are prevented from equating marginal revenue and marginal cost, and that when these firms seek recovery of SFAS 112 costs, they would increase their prices. However, as explained in footnote 1 on page 4 of our October 1994 report, this effect is likely to be very small.

Our analysis found that the initial liability reflected under SFAS 112 has no impact on the marginal cost of production, while ongoing SFAS 112 costs are likely to have only a tiny effect on the marginal cost of production, and thus have only a tiny effect on the GNP-PI. The introduction of SFAS 112 is an accounting change. As noted in the report, we treated this change as a change in actual costs facing firms. The initial liability booked under SFAS 112 represents costs associated with past production and thus these costs are sunk costs; they do not affect the marginal cost of current or future production and are irrelevant for pricing decisions. To the extent that SFAS 112 increases the cost of ongoing production relative to pay-as-you-go, these additional costs will increase the marginal cost of production. However, these additional costs are much smaller than the initial liability. Our preliminary investigation suggests that these additional costs are also much smaller than the increase in marginal cost associated with SFAS 106. As noted in the original report, this is because it appears that SFAS 112 benefits are both less prevalent than SFAS 106 benefits within the economy and less costly on an ongoing basis for those firms that provide such benefits. Thus, the impact of SFAS 112 on the GNP-PI is almost certain to be even smaller than the 0.0124% increase calculated as the impact of SFAS 106 in the February 1992 study.

Conclusion

As the initial liability under SFAS 112 is recognized immediately rather than amortized over an extended period of time (as are the costs associated with the requirements of SFAS 106), the recognition of the initial liability under SFAS 112 represents the majority of the new accounting rule's impact. Our original study found that because this liability represents sunk costs, recognition of the initial SFAS 112 liability results in no impact on the GNP-PI. Furthermore, the study also concluded that due to the lower prevalence and cost of such benefits, the ultimate impact of ongoing SFAS 112 costs on the GNP-PI will likely be negligible. Based on information currently available, now that SFAS 112 has become effective, we conclude that our original findings are still entirely valid.

Respectfully submitted,

Peter J. Neuwirth, F.S.A., M.A.A.A.

Andrew B. Abel, Ph.D.

Exhibit 24-c

United States Telephone Association

Perspectives on Analysis of Impact of
SFAS 106 on GNP-PI

August 14, 1995

Towers Perrin

Introduction

In order to assist in responding to the FCC's recent Order Designating Issues for Investigation, the United States Telephone Association ("USTA") has asked us to provide a summary of our prior analysis of the impact of SFAS 106 on GNP-PI and to provide an opinion as to the extent to which that analysis should still be considered valid now that three years have passed since the original study was issued and SFAS 106 has now been adopted by all companies for whom it was required.

As discussed in this material, we believe that the actual impact of SFAS 106 on GNP-PI was not materially different than that estimated in our original analysis. Further, we believe that the actual portion of the Price Cap LEC's additional cost due to the adoption of FAS 106 in 1993 that recovered through the GNP-PI was not materially different than that reported in our original analysis.

The rest of this material reviews our prior analysis and discusses this conclusion in more detail.

Determination of Impact of SFAS 106 on GNP-PI

In our original study ("Analysis of Impact of FAS 106 Costs on GNP-PI") issued in February 1992, we provided an analysis of what percentage of the additional costs incurred by Local Exchange Carriers subject to Federal Price Cap regulations (hereinafter referred to as "Price Cap LECs") as a result of the Financial Accounting Standards Board's Statement No. 106 (SFAS 106) would be reflected in the GNP Price Index (GNP-PI) and what percentage would not be so reflected.

That study found that ultimately the increase in GNP-PI caused by SFAS 106 (0.0124%) would provide for recovery of only 0.7% of the additional costs incurred by Price Cap LECs. This result was produced by performing both an actuarial analysis and a macroeconomic analysis. The actuarial and macroeconomic analyses were performed in a very conservative manner to ensure that we did not understate the effect of SFAS 106 on the GNP-PI.

In addition to developing this basic result, the study included a sensitivity analysis to test the robustness of the result. That sensitivity analysis lent further support to our finding that any resulting increase in the GNP-PI would allow the Price Cap LEC's to recover only a very small fraction of their additional costs due to SFAS 106.

Subsequent to the submission of the study, we were asked by the FCC staff to extend our analysis in two ways. First, we were asked to develop a "best estimate" determination of the impact of SFAS 106 on the GNP-PI; secondly, we were asked to extend our sensitivity analysis to include every possible combination of parameter values regardless of how unreasonable or internally inconsistent those combinations might be. We performed the additional analysis and reported the results in a supplemental report issued in March 1993. In that report, we found that on a "best estimate" basis, only 0.3% of the Price Cap LEC's additional costs due to SFAS 106 would be recovered as a result of increases in the GNP-PI. As might be expected, for some of the parameter combinations examined in the extended sensitivity analysis, the percentage of additional SFAS 106 costs recovered through the GNP-PI was higher than in the original sensitivity analysis. However, even these higher values indicated that only a small fraction of additional SFAS 106 costs would be recovered through the GNP-PI. Moreover, these higher values resulted only from extremely unlikely combinations of parameter values. For example, the ten highest values were obtained only with a price elasticity of demand equal to 3.0, and with a direct impact of SFAS 106 on labor costs in sector 2 of 4.5%. As discussed in the March 1993 Supplemental Report, price elasticities of demand in sectors 1 and 2 are almost surely less than 1.0, and our baseline value of 1.5 for this elasticity was chosen to guard against understating the impact of SFAS 106 on the GNP-PI; a value of 3.0 for this elasticity is too high to be taken seriously. Also the value of 4.5% for the direct impact of SFAS 106 on labor costs in sector 2 is almost double the best estimate of 2.5% and is less plausible than the baseline estimate of 3.0%.

We want to emphasize that the original study was done in a very conservative manner and the baseline result of that study (0.7% of the Price Cap LEC's additional costs recovered through GNP-PI increases) is more than twice the value produced under a "best estimate" approach. Pages 34-38 of the original study provide a detailed discussion of the conservative nature of the analysis, including a discussion of the rationale behind the choice of each actuarial and macroeconomic parameter utilized in the study.

Additional Macroeconomic Effect of SFAS 106

Above and beyond the GNP-PI effect reported above, when the original study was done, our macroeconomic model indicated that, in response to the impact of SFAS 106, the wage rate in the national economy will, over time, reduce in relative terms by 0.93% (i.e., relative to what it would have been in the absence of SFAS 106). To the extent that a Price Cap LEC could also benefit from a relative reduction in its wage rate, this would help offset its increase in costs due to SFAS 106. If a Price Cap LEC's were able to achieve the full reduction of 0.93%, it would finance 14.5% of its additional SFAS 106 costs. As discussed in our report, this wage rate reduction reflects the ultimate effect of SFAS 106 after all macroeconomic variables have adjusted to their new equilibrium levels. This macroeconomic adjustment is unlikely to be completed within a year, and may indeed take a few years to complete. Thus, during 1993, the fraction of additional SFAS 106 costs financed by a relative reduction in wages is likely to be less than 14.5% — perhaps substantially less.

Thus, even after complete macroeconomic adjustment has taken place, the combined effect of the impact of SFAS 106 on the GNP-PI and on the wage rate would still leave 84.8% (i.e., 100% minus 0.7% minus 14.5%) of the Price Cap LEC's additional SFAS 106 costs unrecovered. The original study also included sensitivity analysis on how much of the Price Cap LEC's additional costs could potentially be recovered through the combination of increases in GNP-PI and this wage rate effect. That analysis lent additional support to our finding that 15.2% was a reasonable estimate of the fraction of additional costs that would be recovered through the combination of both sources.

Again, in response to the FCC staff requests, the analysis of the impact of the combination of GNP-PI increases and potential wage rate reductions was extended to produce a "best estimate" impact and a sensitivity analysis incorporating all combinations of actuarial and macroeconomic parameters. On a best estimate basis, we determined that 12.7% of the Price Cap LEC's additional costs would be recovered through the combination of GNP-PI increases and wage rate reductions; the additional sensitivity analysis again confirmed our finding that most of the Price Cap LEC's additional costs would not be recovered through the GNP-PI and other macroeconomic effects.

Purpose of Sensitivity Analysis

As noted above, our original report (February 1992) contained a sensitivity analysis. At the request of the FCC staff our March 1993 Supplemental Report contained additional sensitivity analysis (while this sensitivity analysis broadened the range of parameter values considered, many of these additional combinations of parameters were, as explained below, implausible.) In order to interpret and apply the results of these sensitivity analyses, it is important to keep in mind the purpose of these analyses and the conservative philosophy underlying their implementation. We have already discussed that our conservative approach produced a baseline calculation of the impact of SFAS 106 on GNP-PI that is larger than a calculation based on our best estimates. The comprehensive sensitivity analysis provides an additional degree of comfort that the baseline results are, in fact, conservative.

The primary goal of the sensitivity analysis was to explore the robustness of our findings and to illustrate the quantitative impact on our findings of various changes in the numerical values of the inputs. *The ranges of values used in the sensitivity analysis were not intended to represent the ranges of plausible parameter values.* Instead, our conservative approach led us to choose ranges of values so wide they include all plausible values, and then some. To guard against the risk of omitting some plausible values, we intentionally used ranges of values so wide they include implausible values as well. As a consequence, some of the extreme values of the calculated effect of SFAS 106 on the GNP-PI simply reflect implausible values for inputs.

As discussed earlier, our March 1993 Supplemental Report contains a best estimate of the impact of SFAS 106, as well as a conservative baseline estimate, and a comprehensive sensitivity analysis. Our best estimate (p. 14) is that only 0.3% of the increase in the Price Cap LECs' costs due to SFAS 106 are recovered through the GNP-PI. This finding illustrates that our baseline calculation of 0.7% is indeed conservative. The comprehensive sensitivity analysis, which included input values that are clearly implausible, produced some results for the impact on GNP-PI that are considerably larger. The sensitivity analysis considered three different values of each of four different inputs to the macroeconomic model, two different values of one input, and four different values of one input,[1] and computed results using all 648 (= 3 x 3 x 3 x 3 x 2 x 4) combinations of these values.

Finally, note that using two or more implausible values together heightens the degree of implausibility. For example, suppose there is only a one in a hundred chance that the price elasticity of demand is as high as 3.0 and there is only one in a hundred chance that the direct impact of SFAS 106 on labor cost in sector 2 is as high as 4.5%. Then there is only one chance in 10,000 that both values together are appropriate. To reiterate, our sensitivity analysis

[1] Three values of the direct impact of SFAS 106 on labor costs in sector 2, 3 values of labor share in total cost in sector 1; 3 values of labor share in total cost in sector 2; 3 values of the fraction of labor employed in sector 2; 2 values of the price elasticity of demand; 4 values of the labor supply elasticity.

presents the results for all combinations of parameter values, including many combinations too implausible to merit any attention.

Validity of Original Study

Based on the discussion above, it is clear that our original study was done in a conservative manner, most likely overestimating the impact of SFAS 106 on the GNP-PI. In addition, comprehensive sensitivity analysis was performed to confirm the robustness of the result against the possibility of error in estimating one or more of the economic or actuarial parameters used in the study.

Three years have passed since the original study was issued. During that time, all companies providing postretirement welfare benefits adopted SFAS 106. Based on what we now know, we believe our estimate of the impact of SFAS 106 on the GNP-PI[2] and of the percentage recovery of the Price Cap LEC's additional costs incurred by their adoption of SFAS 106 is still reasonable. Furthermore, the conservatism inherent in our original study gives us confidence that the actual recovery of additional SFAS 106 costs through the GNP-PI when SFAS 106 became mandatorily effective in 1993 was not materially greater than the 0.7% in our baseline results.

Respectfully submitted,

Peter J. Neuwirth, F.S.A., M.A.A.A.

Andrew B. Abel, Ph.D.

2 Since our original report was issued, the measure used in the FCC's price cap methodology was changed from GNP-PI to GDP-PI. This change would have no impact on the results of our study. Not only does the formal mathematical model ignore any distinction between GNP-PI and GDP-PI, the actual data (presented in Table I) show only a minuscule difference between these two measures of the overall price level.

Table 1: GDP-PI and GNP-PI

price index	1988	1989	1990	1991	1992	1993
GDP-PI	104.0	108.6	113.6	118.1	121.9	125.5
GNP-PI	104.0	108.6	113.6	118.1	121.8	125.4

Source: Survey of Current Business, August 1994. GDP-PI is from Table 7.1, p. 32, line 5, price index, fixed 1987 weights; GNP-PI is from Table 7.3, p. 40, line 5, price index, fixed 1987 weights.

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Exhibit 24-d

UNITED STATES TELEPHONE ASSOCIATION

Analysis of Impact of SFAS 106 Costs on GNP-PI

February 18, 1992

Godwins

BACKGROUND

Godwins has been engaged by the United States Telephone Association to perform an analysis of the impact of SFAS 106 on the GNP-PI. In particular, Godwins was asked to determine the extent to which the price cap mechanism utilized by the FCC will reflect the impact of SFAS 106 and will enable Local Exchange Carriers to recover their increase in total operating costs incurred due to their adoption of the new accounting standard.

This report describes the results of that analysis and provides detailed documentation of the data, methods, and assumptions utilized in the study.

Respectfully submitted,

Peter J. Neuwirth, F.S.A., M.A.A.A.

Andrew B. Abel, Ph.D.

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I. EXECUTIVE SUMMARY

The purpose of this study is to determine what percentage of the additional costs incurred by Local Exchange Carriers subject to Federal Price Cap regulations (hereinafter referred to as "Price Cap LECs") as a result of the Financial Accounting Standards Board's Statement No. 106 (SFAS 106) will be reflected in the GNP Price Index (GNP-PI) and what percentage will not be so reflected.

This study finds that ultimately the increase in GNP-PI caused by SFAS 106 (.0124%) will provide for recovery of 0.7% of the additional costs incurred by Price Cap LECs. Other macroeconomic factors, principally an eventual adjustment of the national wage rate, account for recovery of an additional 14.5% of the additional costs incurred by Price Cap LECs, leaving 84.8% of these additional costs unrecovered.

This study is presented in two stages: an Actuarial Analysis followed by a Macroeconomic Analysis. The Actuarial Analysis uses demographic, economic and benefit program data collected from each Price Cap LEC to construct a composite company (hereinafter referred to as "TELCO") which reflects the characteristics of the industry as a whole. This analysis finds that the impact of SFAS 106 on the costs of the average employer in the economy is only 28.3% of the corresponding impact on TELCO. The Macroeconomic Analysis which analyzes the impact of SFAS 106 on the economy as a whole finds that only 2.3% of the average employer's additional costs resulting from SFAS 106 is passed through to the GNP-PI.

The table on the following page summarizes how the key results of the study are combined to derive the unrecovered proportion of the Price Cap LECs' SFAS 106 costs.

Effects of SFAS 106 on TELCO's Costs

(A)	Impact on national average costs relative to TELCO's costs (from the Actuarial Analysis)	28.3%
(B)	Proportion of increase in national average costs passed through to GNP-PI (from the Macroeconomic Analysis)	2.3%
(C)	Proportion of TELCO's SFAS 106 cost increase reflected in GNP-PI (item (A) x item (B))	0.7%
(D)	Proportion of TELCO's SFAS 106 cost increase offset by other macroeconomic adjustments, including the reduction of the wage rate (from the Macroeconomic Analysis)	14.5%
(E)	Proportion of TELCO's SFAS 106 cost increase unrecovered (100% - item (C) - item (D))	84.8%

Actuarial Analysis

Even if one were to take a conservative approach and assume that all SFAS 106 costs were passed through directly and completely to price increases and thus into the GNP-PI, 100% of each Price Cap LEC's SFAS 106 costs would be reflected in the GNP-PI, only if the following were true:

- The benefits provided by the Price Cap LEC to its employees were at the same level as those provided to all other employees in the economy.

- The benefits provided by the Price Cap LEC gave rise to the same relative increase in total costs as for other employers when SFAS 106 is applied.

Because neither of the above statements is true, the percentage of each Price Cap LEC's SFAS 106 costs that will be reflected in the GNP-PI is far less than 100%. Indeed, we have determined that ignoring macroeconomic effects, only 28.3% of the additional costs incurred by the average Price Cap LEC due to SFAS 106 would be reflected in the GNP-PI. This result was derived by the following steps:

- By utilizing demographic, economic, and benefit program data collected from each Price Cap LEC we constructed a composite company (hereinafter referred to as "TELCO") which reflects the characteristics of the industry as a whole.

- By utilizing a data base of plan provisions for retiree medical plans sponsored by 830 private sector employers (covering 19 million employees) and our Benefit Level Indicator ("BLI") methodology, we determined how TELCO's program compared to a "national average" benefit program.

- We adjusted this comparative benefit analysis to reflect specific factors that would cause similar benefit programs to generate different levels of SFAS 106 cost. In particular, we adjusted for:

  - differences in demography (average age, service, etc.)
  - differences in withdrawal and retirement patterns
  - differences in the number and impact of current retirees
  - differences in the extent of current pre-funding of benefits conducted by TELCO and that of others.

- We then took account of the very large group of workers in the national economy who are not covered by any post-retirement program or are covered by a program that is not affected by the FASB's rules. Their employers will, by definition, incur no SFAS 106 cost for them.

- We made two final adjustments to the comparative analysis due to economic factors. In particular, we:

  - made an adjustment for differences between per unit labor costs for TELCO and for other employers, and

  - made an adjustment for differences in the percentage of total output represented by labor costs for TELCO and for other employers.

Putting together all of these factors, we find that the impact of SFAS 106 on the costs of the average employer in the economy (including employers that do not offer post-retirement health benefits and/or are not affected by FASB's rules) is only 28.3% of the corresponding impact on TELCO. In addition, the Actuarial Analysis finds that SFAS 106 directly increases labor costs by 3% for the average employer offering post-retirement health benefits covered by SFAS 106. This 3% figure is an important input to the Macroeconomic Analysis.

Macroeconomic Analysis

The purpose of the Macroeconomic Analysis is to determine the extent to which the additional costs resulting from SFAS 106 would be passed through to an increase in GNP-PI. The Macroeconomic Analysis utilizes a macroeconomic model developed for Godwins by Professor Andrew Abel of the Wharton School of the University of Pennsylvania to address this question. The Macroeconomic Analysis finds that only 2.3% of direct SFAS 106 costs of the average employer in the economy are passed through to the GNP-PI. In addition, as a result of SFAS 106 the average wage rate in the economy would be 0.93% lower than it would have been in the absence of SFAS 106.

Effects of SFAS 106 on TELCO's Costs

As noted, the ultimate purpose of the study is to determine the extent to which GNP-PI reflects the additional costs incurred by the average Price Cap LEC (i.e. TELCO) as a result of SFAS 106. The table shown on page 2 summarizes our findings. Item (A) summarizes the Actuarial Analysis which finds that costs of

the average company in the economy increase by only 28.3% as much as TELCO's costs increase as a result of SFAS 106. Because only 2.3% of the average increase in costs is passed through to the GNP-PI (item (B)), only 0.7% (item (C), 2.3% x 28.3%) of TELCO's additional costs resulting from SFAS 106 are reflected in GNP-PI. Thus, it would appear that 99.3% of TELCO's additional costs are left unrecovered. However, the Macroeconomic Analysis finds that the national wage rate would eventually be 0.93% lower than it would have been in the absence of SFAS 106. If TELCO were able to benefit from a similar reduction in its wage rate, such a reduction would recover an additional 14.5% of TELCO's direct SFAS 106 costs (item (D)). Taking account of the 0.7% recovery due to GNP-PI and the eventual 14.5% recovery due to the adjustment of the wage rate leaves 84.8% of TELCO's direct SFAS 106 costs unrecovered (item (E)).

II. DEVELOPMENT AND SUMMARY OF RESULTS

We wish to establish what percentage of the average Price Cap LEC's SFAS 106 costs will be reflected in the GNP-PI and hence what percentage will not be so reflected.

We begin with an actuarial analysis which proceeds in two steps. The first step in the actuarial analysis is to construct a composite company which accurately reflects the characteristics and benefit plans of the average Price Cap LEC. The second step is to determine the impact of SFAS 106 on this composite company relative to the impact of SFAS 106 on other employers in the GNP on the assumption that all additional costs are passed on completely into the GNP-PI. Following the actuarial analysis is a macroeconomic analysis to determine the extent to which the additional costs will, in fact, translate into higher prices and, therefore, affect the GNP-PI.

Construction of Composite Company ("TELCO")

Actuarial, benefit, economic and demographic data were collected on eleven Price Cap LECs. Data included was for total Telephone Operations consistent with amounts included on the 1990 ARMIS 43-02 for each Company. These data were then combined, treating each Price Cap LEC as if it were a division of the larger combined company. The characteristics of this composite company ("TELCO") are as follows:

Number of Active employees	613,193
Number of Retired employees:	294,482
1990 Average compensation per employee:	$38,533
1990 Total Revenue (in millions):	$82,512.9
1990 Total Value Added (in millions):	$61,338.4
Average Per Capita Claims Cost:	$3,075
Average Age of Actives:	41.6
Average Service of Actives:	16.6