

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of )  
)  
Implementation of Sections of )  
the Cable Television Consumer )  
Protection and Competition Act )  
of 1992: Rate Regulation )  
)  
and )  
)  
Adoption of a Uniform Accounting )  
System for Provision of Regulated )  
Cable Service )

MM Docket No. 93-215

DOCKET FILE COPY ORIGINAL

CS Docket No. 94-28

To: The Commission

**COMMENTS OF**  
**THE NATIONAL CABLE TELEVISION ASSOCIATION, INC.**

The National Cable Television Association, Inc. ("NCTA"), by its attorneys, hereby submits its comments in response to the Commission's Further Notice of Proposed Rulemaking in the above-captioned proceeding.<sup>1</sup> NCTA is the principal trade association of the cable television industry in the United States. Its members include owners and operators of cable television systems serving over 80% of the nation's approximately 60 million cable television households, as well as cable television program networks, cable equipment suppliers, and others interested in or affiliated with the cable television industry.

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<sup>1</sup> Second Report and Order, First Order on Reconsideration, and Further Notice of Proposed Rulemaking in MM Docket No. 93-215 and CS Docket No. 94-28, FCC 95-502, released January 26, 1996 ("Further Notice").

In the Second Report and Order in this proceeding, the Commission adopted final cost of service rules for use by cable operators to justify their rates for regulated cable service. The Commission also rejected a Uniform System of Accounts for cable operators. As part of its decision, the Commission retained the presumptive 11.25% rate of return it had previously adopted for use in cable operator cost of service showings, but also recognized that there is a range of risk diversity within the cable industry that may make it appropriate to establish an alternative method for calculating an appropriate rate of return. Therefore, the Commission issued the Further Notice seeking comment on whether it should adopt an alternative method for calculating the allowed rate of return in particular cases if operators do not wish to apply the presumptive (11.25%) rate of return figure.

As we discuss herein, we support use of an alternative methodology based on a weighted average cost of capital approach for calculating a cable operator's rate of return for cost of service filings. However, the proposed methodology requires some revision to reflect marketplace realities as well as a modification of the presumptive rate of return which operators may use in lieu of the proposed new methodology.

## **I. BACKGROUND**

NCTA supports the Commission's decision to revisit the rate of return question. As NCTA stated in prior comments in this proceeding, not only does the 11.25% figure fail to reflect the higher risks associated with cable systems, but also imposition of a single industry-wide rate of return on the disparate cable industry makes no sense.

In NCTA's earlier comments in this proceeding, we demonstrated that the risks associated with cable systems differed significantly from, and in general exceed, the risks attendant to telephone companies or the S&P 400, upon which the "cable" 11.25% figure was

based. In this regard, we submitted two studies by Economists Incorporated ("EI") which demonstrated that the market risk of cable operators examined therein exceeded the risk in the market as a whole by 30 to 50%, and that telephone companies face a risk much different from - and lower than -- cable operators.<sup>2</sup> We incorporate by reference herein those comments and the EI Report.

Our comments also showed that similar problems existed with respect to the Commission's choice of 8.5% as the cost of debt for cable. Finally, we observed that imposition of a uniform rate of return is inappropriate for the diverse cable industry. We noted that there are more than 11,000 cable systems in this country. They differ in size, channel capacity, subscriber density, age, and the level of competition they face. Some are publicly-held and some are privately-held. They are in urban, suburban and rural areas; there are large and small systems, independently-owned systems as well as systems part of an MSO. Given these differences, we argued that the prescription of a uniform rate of return for all systems' cost of service showings was untenable.

Accordingly, we urged the Commission to permit each cable system to demonstrate the rate of return appropriate for its circumstances based on its financial condition. Rather than imposing a "heavy burden" on an operator to show as-yet-undefined "exceptional facts and circumstances" -- the showing required to permit use of an individualized rate of return -- we proposed that the Commission should allow a cable operator to present its own cost of debt and equity for its own particular system. Under these circumstances, we said a generic rate of return

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<sup>2</sup> Comments of the National Cable Television Association, Inc. in MM Docket No. 93-215, filed August 25, 1993 at Appendix B ("The Equity Cost of Capital for Cable Operators is High and Variable"); Comments of the National Cable Television Association, Inc. in MM Docket No. 93-215 and CS Docket No. 94-28, filed July 1, 1994 at Attachment E ("Revisiting the Issue of Rate Base and Rate of Return in Cable Regulation").

(although higher than 11.25%) could be preserved as a default rate for those systems which do not wish to present the data necessary to determine their individual cost of capital.

In the Second Report and Order (at ¶82) the Commission reaffirmed its use of a unitary 11.25% rate of return, although it did so with much hesitancy, observing that "reliance on a unitary rate of return does not offer a precise estimation of capital costs for every operator making a cost of service filing." For this reason, the Commission adopted the Further Notice proposing an alternative methodology for setting an operator's rate of return.

In the Further Notice, the Commission proposed an alternative to the presumptive unitary rate of return for cost of service filings. At the same time, it said it would retain the presumptive 11.25% rate of return alternative -- and the existing procedures for overcoming that presumption -- to permit cable operators to opt for as simple a cost of service proceeding as possible.<sup>3</sup>

As described by the Commission, the alternative proposal "would provide an equity cost estimate that recognizes the historic growth orientation of cable investors ... [and] would also allow actual debt cost, and use capital structures based on actual debt and the market value of cable equity."<sup>4</sup> In particular, the Commission's proposal would employ the capital asset pricing model ("CAPM") as an alternative to the discounted cash flow ("DCF") approach to estimating the cost of equity. In proposing this alternative, the Commission recognized that cable operators, unlike traditional utilities like electric power companies or telephone companies, are not traditional dividend paying entities. The Commission correctly observed that investors in the cable industry are generally seeking growth through stock appreciation and therefore may

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<sup>3</sup> Further Notice at ¶194.

<sup>4</sup> Id. at ¶196.

incur higher risks and forgo dividend income. Because the DCF is highly dependent on income and measures anticipated growth in dividends rather than value appreciation through the reinvestment of cash flow in a company's growth, the Further Notice tentatively concluded that the growth-oriented CAPM may be an appropriate method for measuring the cost of cable equity.

The Further Notice also proposes use of an operator's actual debt cost and capital structure to determine the final cost of capital (rate of return). It asks for comment regarding how to determine the value of equity and debt, including whether the Commission's use of a market valuation of equity to establish the proportion of equity in an operator's capital structure is appropriate.

**II. THE COMMISSION'S PROPOSAL TO PROVIDE AN ALTERNATIVE TO THE CURRENT UNITARY RATE ON RETURN SHOULD BE ADOPTED WITH SOME MODIFICATIONS**

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As a general matter, NCTA supports the alternative proposal advanced in the Further Notice. We believe it better reflects the diversity of the cable industry than requiring use of a unitary 11.25% presumptive rate of return. In particular we applaud the Commission's willingness to use the capital asset pricing model ("CAPM") to calculate the cost of equity rather than the discounted cash flow ("DCP") methodology which we have criticized in earlier stages of the proceeding.

Similarly we support the conclusion that a cable operator may use its actual debt costs to determine the overall estimation of capital costs.<sup>5</sup> Finally, we agree with the proposal to use "actual, i.e., individualized, capital structures" for the estimation of the overall cost of capital."<sup>6</sup>

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<sup>5</sup> Id. at ¶219.

We do, however, have a few reservations with respect to the current proposals. We detail these concerns in the attached report from EI.<sup>7</sup> In that report, EI observes that the Commission should further refine its proposal. In particular, as described in the EI report, the Commission's presumptive level for the cost of equity is substantially below an economically sound level. One consequence of setting the presumptive cost of equity too low is that both the Commission and cable operators will be unduly burdened with administrative proceedings -- proceedings unlikely to benefit subscribers.

**A. Cost of Equity**

The Commission concludes that, using the CAPM formula, the equity cost of providing regulated cable service is 16.2%.<sup>8</sup> As the EI Report demonstrates, however, the Commission's approach fails to account adequately for the risk premium and the size premium associated with cable companies. Small company stocks have a higher risk (and therefore a higher return and cost of equity) than is accounted for in a one-factor CAPM model. Moreover, the average cost of equity for non-publicly traded cable companies is substantially higher than 16.2%.

For this reason, EI proposes a size and risk-based methodology after determining the equity value of the company in question, placing the company in one of the size classifications (mid-capitalization (17.15%), low-capitalization (18.73%), and micro-capitalization (21.75%)) discussed in the report. We urge the Commission to adopt this approach for determining the cost of equity under the CAPM formula.

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<sup>6</sup> Id. at ¶223.

<sup>7</sup> "Further Cost of Capital Considerations Relating to Cable Cost of Service Regulation," Paul E. Godek and Bruce M. Owen, Economists Incorporated, May, 1996.

<sup>8</sup> Further Notice at ¶215.

As we discuss below, the Commission should also establish a presumptive rate of return higher than the current 11.25% for use by cable operators who wish to forgo use of the alternative methodology. For that purpose, as EI suggests, the cost of equity should be the average of the results of the three classifications discussed in the report. Computed at the end of 1994, that number would be 19.21%.

**B. Cost of Debt**

The Commission proposes that operators submit an “independent evaluation of [their] debt cost and incorporate the resulting figure into [the] rate of return calculation.”<sup>9</sup> With respect to this proposal, EI observes that “interest payments on debt will not in general equal the yield on debt at the time the Commission is attempting to determine a going-forward cost of debt. Interest rate changes, as well as changes in default risk, imply that a current cost of acquiring debt would be different than the cost of debt incurred in the past.”<sup>10</sup> For this reason, EI proposes that current interest costs should be adjusted into market-based yields. We urge the Commission to modify its proposal for determining the cost of debt in the manner suggested in the EI Report.

Once again, we argue below that the Commission should change its presumptive rate of return and, in this regard, it should establish a presumptive lower bound on the cost of debt (e.g., the average level of B-rated industrial bonds). Use of such a figure would be conservative since most cable companies filing cost of service showings are likely to have higher debt costs than the average of companies with sufficient liquidity and size to be able to sell B-rated bonds on the open market. Using this approach, at the end of 1994, the yield on B-rated industrial bonds

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<sup>9</sup> Further Notice at ¶220.

<sup>10</sup> EI Report at 5.

was 11.70% which the Commission could adopt as the presumptive cost of debt for cable cost of service showings.

**C. Capital Structure**

In the Further Notice the Commission tentatively concludes that “actual, i.e., individualized, capital structures should be applied to the estimation of the overall cost of capital.”<sup>11</sup> At the same time, the Commission recognizes that “estimating the amount of outstanding equity is a complex proposition,” and seeks guidance on a number of specific questions.

The EI Report addresses these issues. It concludes that, as a general matter, the Commission should attempt to find the market value of the debt and equity facing the company, the sum of which would be the market value of the firm. The EI Report discusses in detail the principles which must be considered in making this calculation, and concludes that, if the Commission is going to attempt to determine the market value of a cable company’s operations, it should use cash-flow multiples as the most economically sound and workable approach. We urge the Commission to adopt the EI approaches in determining the appropriate capital structures for cable operators to use in making cost of service showings.

If the Commission is inclined to modify its current presumptive rate of return, the Commission should adopt a presumptive debt to equity ratio that is heavily weighted toward debt. For example, a two-to-one ratio, which is the approximate ratio of the publicly-traded companies analyzed by EI in its earlier report, would be appropriate for those purposes.<sup>12</sup>

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<sup>11</sup> Further Notice at ¶223.

<sup>12</sup> Of course, the use of a debt-rich presumed capital structure only makes sense if the higher, market-based debt cost (estimated above at 11.70%) is used. This is because the high proportion of debt in the typical cable capital structure itself contributes heavily to the relatively high cost of debt.

### **III. THE COMMISSION SHOULD ADOPT A DIFFERENT PRESUMPTIVE RATE OF RETURN**

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The Commission proposes that an operator who chooses not to calculate its rate of return under the proposed new formula could still use the 11.25% presumptive rate of return. For the reasons discussed in these comments and in our earlier pleadings, an 11.25% presumptive rate of return is inappropriate. Accordingly, building upon the EI analysis, we believe a more accurate, yet conservative, presumptive rate of return should be recognized.

Under this approach:

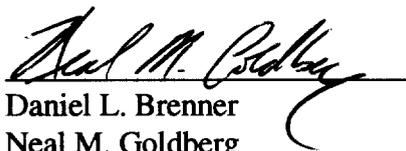
- The cost of equity would be the average of the micro-cap, low-cap and mid-cap costs of equity as discussed in the EI report (which, computed at the end of 1994 would be 19.21%);
- The cost of debt would be the yield on B-rate industrial bonds (which, computed at the end of 1994 would be 11.70%); and
- The debt to equity ratio would be assumed to be 2/1 (debt is assumed to be 2/3 of the value of the company).

Using these assumptions, the presumptive cost of capital -- for those operations not applying the CAPM formula -- at the end of 1994 would be 14.20%, not 11.25%. Even if the Commission does not accept these conservative assumptions, because the Further Notice recognizes that the methodology upon which the presumptive 11.25% is based is flawed, the Commission, using the analysis in the Further Notice, must adopt a presumptive cost of capital higher than 11.25%.

**CONCLUSION**

For the reasons stated above, with the modifications proposed herein, the Commission should adopt its proposed alternative methodology for determining an appropriate rate of return in cable cost of service cases and revise its presumptive rate of return as discussed herein.

Respectfully submitted,



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May 6, 1996

# **ATTACHMENT A**

# **Further Cost of Capital Considerations Relating to Cable Cost of Service Regulation**

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Economists Incorporated**

**May 1996**

## *Introduction*

This paper discusses the Federal Communication Commission's Second Report and Order, First Order on Reconsideration, and Further Notice of Proposed Rulemaking, released January 26, 1996 ("FCC Report") as it relates to the appropriate cost of capital for cost of service regulation. The Commission has determined that its originally proposed 11.25% cost of capital is an inappropriate benchmark for most cable operators. The Commission has further determined that a weighted average cost of capital calculation – with a CAPM approach to determining the cost of equity – is an appropriate methodology. We concur with those overall determinations as consistent with our earlier report on the issue and with a submission by The Brattle Group. (See Revisiting the Issues of Rate Base and Rate of Return in Cable Regulation, Economists Incorporated, June 29, 1994; and Rate of Return Recommendations in Cable Television Cost-of-Service Regulation, The Brattle Group, July 1994.) The Commission should still refine its approach. The Commission's presumptive level for the cost of equity is substantially below an economically sound level. One consequence of setting the presumptive cost of equity too low is that both the Commission and cable operators will be unduly burdened with administrative proceedings – proceedings unlikely to benefit subscribers. Along with analyzing the cost of equity, we also respond to the Commission's request for comments on determining cable operators' cost of debt and capital structure.

### *Cost of Equity*

The Commission discusses the issues relating to cost of equity in some detail before concluding, “We propose that the average cost of equity for investment in cable operators providing regulated cable services is 16.16%.” (See FCC Report at ¶214.) Applying yields and market returns from 1987 through 1995, the Commission derives a risk-free rate of 7.27%, an equity premium of 6.26% and a beta of 1.42, which generate the 16.16% cost of equity.<sup>1</sup> As demonstrated below, the Commission’s approach fails to account adequately for the risk premium and the size premium associated with cable companies. The average cost of equity for non-publicly traded cable companies is substantially higher than the number suggested by the Commission.

The previous Economists Incorporated report and the report submitted by The Brattle Group both estimated the cost of equity for pure-play publicly traded cable companies at approximately 20%. (See Economists Incorporated report at Table 3 and The Brattle Group report at Table B-7.) It was also pointed out that privately-held cable companies are likely to have a higher cost of equity than an average publicly traded company, because they are a) smaller, b) riskier, and c) have non-marketable equity. Rather than review the analysis presented before, we can re-visit the cost-of-equity issue using a more general approach, which will both validate the earlier findings and suggest a methodology that should be acceptable to the Commission.

Ibbotson Associates, in their most recent statistical annual, *Stocks, Bonds, Bills, and Inflation 1995 Yearbook* (abbreviated SBBI), discusses the equity premium issue:

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<sup>1</sup>  $16.16 = 7.27 + (1.42 \times 6.26)$ . While the Commission uses 1987-1995 data on yields and market returns, it ignores evidence that cable betas are rising over this period and instead uses betas from the period 1987-1992. See The Brattle Group report at Table 9 and the FCC Report at ¶211.

One of the most remarkable discoveries of modern finance is the finding of a relation between firm size and return. On average, small companies have higher returns than large ones...

The firm size phenomenon is remarkable in several ways. First, the greater risk of small stocks does not, in the context of the Capital Asset Pricing Model, fully account for their higher returns over the long term. In the CAPM, only systematic or beta risk is rewarded. Small company stocks have had returns in excess of those implied by the betas of small stocks...

The need for this [size] premium when using the CAPM arises due to the fact that even after adjusting for the systematic (beta) risk of small stocks, small stocks outperform large stocks. The betas for small companies tend to be larger than those for larger companies.<sup>2</sup>

That is, small company stocks have a higher risk (and therefore higher return and higher cost of equity) than is accounted for in a one-factor CAPM model. While that has been known for some time, SBBI now publishes risk and size premia figures that more accurately account for those factors.

SBBI figures allow the size premium to be incorporated directly into the traditional cost of capital approach using the following formula:

$$\text{equity cost} = \text{risk-free rate} + (\text{beta} \times \text{equity risk premium}) + \text{size premium}.$$

This formula can be used to derive a more valid range for the cost of equity to be used by the Commission in its cost of service analysis. SBBI contains risk and size premia by deciles of equity capitalization, and aggregates the lower deciles into three size groups: mid-capitalization, low-capitalization, and micro-capitalization. The relevant figures are contained in Table One. These premia quantify the “firm-size” effect that was discussed in the Economists Incorporated report and The Brattle Group report, and that has been acknowledged in the FCC Report. The average pure-play publicly traded cable company had, at the end of 1994, approximately \$1 billion in equity value, which would put it at the low end of the mid-cap equity range. The analysis at hand will likely be applied to companies with substantially lower equity value.

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<sup>2</sup> See *Stocks, Bonds, Bills, and Inflation 1995 Yearbook*, Ibbotson Associates, chapters 7 and 8.

Table Two displays the other components necessary for computing the cost of equity for the various size classes. The micro-cap cost of equity is 21.75%, the low-cap cost of equity is 18.73%, and the mid-cap cost of equity is 17.15%. The average of the three equity costs is 19.21%. We suggest that the Commission should either adopt a size- and risk-based methodology after determining the equity value of the firm in question – placing the firm in one of the appropriate size classifications discussed here – or adopt a presumptive cost of equity of 19.21%.

There are several reasons why the presumptive cost of equity as determined above should be considered conservative. First, as shown in the previous reports submitted by Economists Incorporated and The Brattle Group, publicly traded cable companies have higher costs of equity (in excess of 20%) than this approach would estimate. Thus, publicly traded firms in the cable industry appear to be riskier than average for their respective size class. Second, even after controlling for size, a non-publicly traded cable company is likely to be riskier than a publicly traded company. That is, the non-marketability of the equity is likely to be reflected in a higher cost of equity. Finally, in addition to the regulation of cable rates that are the subject of this analysis, there are likely to be substantial changes to the competitive structure of the industry. As a result of new competition, the cable industry faces a highly uncertain future. All of these factors would justify setting a presumptive 19.21% cost of equity as a conservative alternative to case-by-case analysis.

In sum, we suggest that the Commission should either adopt a size- and risk-based methodology after determining the equity value of the firm in question – by placing the firm in one of the appropriate size classifications discussed here – or adopt a presumptive cost of equity of at least 19.21%.

### *Cost of Debt*

The Commission also acknowledges the need to take account of actual debt costs facing cable companies. The Economists Incorporated report found that the cost of debt for publicly traded cable companies averaged 11.24% at the end of 1992. The Brattle Group found it to be 10.00% in April 1994. Both of these figures are substantially higher than the Commission's original proposal of 8.25%.

With regards to the cost of debt, the Commission states:

We believe the task of estimating the debt cost from actual interest costs borne by operators can be conducted without imposing significant administrative burdens. The cost of debt, or interest payments on debt by cable operators, is readily verifiable by the operators themselves. We propose to require simply that operators submit an independent evaluation of debt cost and incorporate the resulting interest figure into our rate of return calculation. (FCC Report at ¶220.)

One factor to keep in mind is that interest payments on debt will not in general equal the yield on debt at the time the Commission is attempting to determine a going-forward cost of debt. Interest rate changes, as well as changes in default risk, imply that the current cost of acquiring debt would differ from the cost of debt incurred in the past.

It is fairly straightforward to adjust current interest costs into market-based yields. A simpler approach, however, would be for the Commission to establish a presumptive lower bound on the cost of debt at, say, the average level of B-rated industrial bonds (a number which is published monthly by Standard & Poor's). For example, at the end of 1994, the yield on B-rated industrial bonds was 11.70%. As with the cost of equity, this is likely to be a conservative approach. Most of the cable companies at issue in cost-of-service proceedings are likely to have higher debt costs than the average of companies with sufficient liquidity and size to be able to sell B-rated bonds on the open market. (Note that the bonds of the pure-play publicly traded cable companies are typically B-rated.)

## *Capital Structure*

Assuming that the costs of debt and equity have been determined, there remains the more problematic issue of determining the capital structure of a cable operator. The capital structure determines the weights to use in computing the weighted average cost of capital. The Commission recognizes the difficulty inherent in this exercise and asks for assistance in the following areas.

227. Accordingly, we propose, as part of the proposed rate of return alternative, to utilize actual capital structures in setting the rate of return. As we consider this alternative, however, we recognize that several issues must be addressed and resolved to develop this approach. Moreover, we remain committed to an approach that is administratively feasible. To assist the Commission in this endeavor, we request comment on the following issues:

- a. What mechanism or analysis should guide the Commission in estimating the equity proportion of an operator's capital structure that is dedicated to regulated services?
- b. How should the Commission estimate the proportion of equity in an operator's capital structure when that operator is not publicly traded?
- c. Should the Commission rely on the book value of debt or the market value of debt in estimating the proportion of debt in an operator's capital structure?
- d. Can the Commission develop a reasonable estimate of an operator's capital structure by combining the market value of its equity and the book value of its debt?
- e. If market capitalization is used to measure the proportion of equity in an operator's capital structure, will increases in the operator's stock price drive up subscriber rates by increasing the proportion of equity in the operator's capital structure? If so, how can the Commission ensure that reliance on market capitalization measures for equity will not unduly impact subscriber rates?

As a general matter, the Commission should attempt to find the market value of the debt and equity facing the company, the sum of which would be

the market value of the firm. Consistent with that approach, several principles should be kept in mind.<sup>3</sup>

The book value of debt is generally the amount of principal currently due on outstanding debt, whereas the market value of debt is the market value of the outstanding debt obligations of the firm. The market value of debt will be determined by such things as interest (or coupon) payments, maturity, and all other terms and conditions applying to the debt obligations. The market value of these obligations will vary with changes in interest rates and the default risk of the firm. For example, increases in interest rates or default risk will lower the market value of fixed-rate debt, but leave the book value unaffected. Nonetheless, the difference between book value and market value is not likely to diverge so widely for debt as it is for equity.

The Commission has proposed to allow companies to present evidence on their debt costs. Much of that same evidence – such as maturities, interest payments, and current interest rates – will also be relevant to estimating the market value of the outstanding debt. Thus, evidence on both debt costs and debt value can be presented simultaneously and checked for consistency. Information on the yield of publicly traded debt of similar risk will allow for fairly straightforward estimates of the market value of the non-publicly traded debt.

The book value of equity, on the other hand, is in general worthless as a proxy for the market value of equity, in particular with respect to the cable industry. The book value of equity is an accounting concept – defined as the sum of the net asset accounts less the net liability accounts – and it bears

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<sup>3</sup> The following discussion applies to ¶227a through ¶227d. The issue raised in ¶227e should not be seen as a problem. The fact that the market values of both debt and equity change does not invalidate the economically sound approach to determining the cost of capital. To the contrary, the cost of capital should and does reflect changes in any of the factors that go into its determination, such as interest rates, debt values, and equity values. Nonetheless, as suggested below, unless a cable company's equity is publicly traded, its value will have to be estimated. Such estimation procedures are not particularly sensitive to changes in the actual equity value. To the extent that they are sensitive to actual changes in market values, that should be seen as a strength and not a weakness of the approach.

little relationship to the market value of the equity of the firm.<sup>4</sup> As the Commission is well aware, the book value of even a publicly traded cable company's equity may well be negative despite the demonstrably positive market value.

To arrive at the market value of equity it will generally be better to value both the debt and the operations as a whole, and to determine equity as the difference between the two. That is, the Commission could derive a total value for the firm and subtract book or market value of the debt to get the equity value.

In our previous report, we suggested a simple method for determining the competitive market value of a cable system that is based on the Commission's own findings on competitive adjustments. In brief, we suggested adjusting the cash flow to create a "competitive" cash flow and then applying a cash-flow-to-market-value multiple to determine the competitive market value of the system. For example, the Commission could compute the cash-flow-market-value multiples for publicly traded cable companies and apply those multiples to the cash flow of non-publicly traded companies to arrive at their total value. Regardless of the details decided upon by the Commission, we still advocate the use of a cash-flow multiples as the most economically sound and workable approach available to the Commission, if it attempts to determine the market value of a cable company's operation.

A far simpler approach is available to the Commission. Along with adopting the presumptive levels of the cost of debt and the cost of equity described above, the Commission could adopt a presumptive debt-to-equity ratio that is heavily weighted toward debt, say, at a ratio of two-to-one. (Two-to-one is the approximate ratio of the publicly traded cable companies analyzed in our previous report.)

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<sup>4</sup> See Bradford Cornell, *Corporate Valuation*, 1993, chapter 2; Shannon P. Pratt, *Valuing a Business*, 2nd Edition, 1989, chapter 1; and Gordon J. Alexander, et al., *Fundamentals of Investments*, 2nd Edition, 1993, chapter 16. See also FCC Report at ¶224.

### *Administrative Efficiency*

Sound regulatory policy requires not merely a fair balance between the interests of cable operators and the interests of subscribers, but also conservation of scarce administrative resources. It is clear that the greater the difference between the true cost of equity, for example, and the Commission's presumptive cost of equity, the greater will be the number of fully litigated cost of service proceedings. These proceedings are expensive and time consuming, both for the Commission and the operator. Thus, it is not costless for the Commission to set an unduly low presumptive rate. Further, when the presumptive rate has been set unduly low, the outcome of the proceedings is not likely to benefit subscribers, precisely because the actual cost of capital will be found to be higher than the presumptive rate.

### *Conclusion*

In sum, the Commission would be well justified in choosing a presumptive level for the cost of capital based on the following assumptions:

- The cost of equity is the average of the micro-cap, low-cap, and mid-cap costs of equity, as explained above. Computed at the end of 1994, that number would be 19.21%.
- The cost of debt is the yield on B-rated industrial bonds. Computed at the end of 1994, that number would be 11.70%.
- The debt-to-equity ratio is assumed to be 2:1 (debt is assumed to be two-thirds of the value of the company).

Using these assumptions, the presumptive cost of capital at the end of 1994 would be 14.20%. That number would be a reasonable and conservative presumptive level for the overall weighted average cost of capital for non-publicly traded cable companies. Such a determination would be consistent with the laudable progress made by the Commission towards a market-based cost of capital.

**Table One**

**Market Capitalization, Beta, and Size Premium  
(December 1994 )**

Decile/Group	Number of Companies	Decile Market Capitalization (thousands)	Average Capitalization (thousands)	Beta	Size Premium (Return in Excess of CAPM)
1-Largest	168	\$2,384,444,683	\$14,193,123	0.90	-0.44
2	167	\$585,938,436	\$3,508,613	1.04	0.63
3	168	\$306,811,948	\$1,826,262	1.09	1.01
4	168	\$187,218,791	\$1,114,398	1.13	1.33
5	167	\$121,844,654	\$729,609	1.17	2.16
6	168	\$81,362,005	\$484,298	1.19	1.95
7	168	\$49,092,923	\$292,220	1.24	2.05
8	167	\$32,431,847	\$194,203	1.29	2.67
9	168	\$17,552,595	\$104,480	1.36	3.14
10-Smallest	168	\$6,970,879	\$41,493	1.47	6.53
Mid-Cap 3-5	503	\$615,875,394	\$1,224,404	1.12	1.31
Low-Cap 6-8	503	\$162,886,775	\$323,831	1.23	2.12
Micro-Cap 9-10	336	\$24,523,475	\$72,987	1.39	4.02

Source: Stocks, Bonds, Bills, and Inflation 1995 Yearbook.

Note: Betas are estimated from monthly returns in excess of the 20-year government bond return, 1926-1994.

**Table Two**

**The Cost of Equity for Micro-Cap, Low-Cap, and Mid-Cap Securities  
(December 1994)**

1	2	3	4	5	6
Size Classification	Risk-Free Rate	Beta	Equity Risk Premium	Equity Size Premium	Cost of Equity
	Rf	B	Rp	Sp	Re
Micro Cap	8.00	1.39	7.00	4.02	21.75
Low-Cap	8.00	1.23	7.00	2.12	18.73
Mid-Cap	8.00	1.12	7.00	1.31	17.15
Average	8.00	1.25	7.00	2.48	19.21

Source: Stocks, Bonds, Bills, and Inflation 1995 Yearbook, (SBBI).

Notes:

- 2) Risk-free rate: Long term government bond yields, December 1994. (SBBI, 157).
- 3) Beta: See Table One.
- 4) Risk premium: Long horizon, stocks vs. government bonds. (SBBI, 157).
- 5) Size premium: See Table One.
- 6) Cost of Equity:  $Re = Rf + (B \times Rp) + Sp$ . (SBBI, chapters 7, 8).