cost-of-service proceedings.[271] BellSouth recommends that the Commission prescribe basic depreciation practices for all cable operators except those subject to effective competition.[272]

132. Comments on our tentative conclusion that depreciation rates should be designed to reflect and recover the cost of an asset over its useful life were mixed. Some cable interests agree with this conclusion but suggest that operators be allowed to challenge it on a case-by-case basis.[273] Cablevision Industries argues that we should require the use of straight line depreciation over the useful life of the assets on a system-wide basis and with assets broken into general categories.[274] Small Systems suggests that depreciation for cable operators be uniformly restated based on an average 12-year useful life.[275] State governments favor the useful life standard.[276] Arthur

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[271] GTE Comments at 22.

[272] BellSouth Comments at 12-13.

[273] See, e.g., BC Comments at 10.

[274] Cablevision Industries Comments at 44-46. Cablevision Industries suggests as categories: plant, buildings, vehicles and maintenance equipment, and home equipment. See also Cablevision Systems Comments at n.77; COA Comments at 74; Continental Comments at 83; Viacom Comments at 47-50 (establish broad categories of assets on a system-wide basis and permit depreciation over the economic lives of assets on a straight line basis). But see Small Cities Comments at 19-24 (useful life is a not a reliable depreciation standard in an industry experiencing rapid technological and competitive change; encourages the Commission to consider technological life as a factor in setting depreciation rates).

[275] Small Systems Comments at 11. But see TCI Comments at n.23 (depreciation computed on straight line basis using estimated useful lives of 5 to 15 years for distribution systems and 3 to 40 years for support equipment); BC Comments at 10 (straight line method for depreciation of all assets with several asset categories but only 3 lives (10, 7, and 5 years)).

[276] Michigan Committee Comments at 10-11 and Utah Comments at 10-11 (favoring establishment of an industry-wide depreciation rate using book value of an asset calculated on a straight line remaining life approach); New Jersey Comments at 6 and A4 (straight line depreciation over useful life with useful life determined by industry standards); Municipals Reply at 5-6 and Seaford Reply at 5-6 (Commission should develop service life-

Andersen suggests that the Commission could prescribe a range of approved lives.[277] Aerie states that cable operators should not be permitted accelerated depreciation on existing plant or valuation above original cost of service.[278] BellSouth suggests that cable operators be permitted to estimate remaining life, with those estimates subject to comparison by the Commission against similar estimates offered by the cable operator for other purposes, such as SEC financial statements.[279]

iii. Discussion

133. After a careful review of the comments herein, we conclude that we need not adopt our tentative conclusion that we should prescribe depreciation rates.[280] We believe prescription of depreciation rates to be unnecessary, at least pending completion of the cost study and analysis that we are directing the Cable Bureau to undertake.[281] Further, we believe a depreciation prescription requirement would impose unjustified burdens without providing a balancing benefit to subscribers.[282] Instead, regulators will closely monitor industry depreciation practices and carefully review depreciation showings in individual cost proceedings to assure that these depreciation practices are reasonable. In addition, we will examine

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based depreciation schedules).

[277] Arthur Andersen Comments at 21 and Arthur Andersen Reply at 5 (economic lives of fixed assets should be used to establish prescribed lives). See also ETC Comments at 7.

[278] Aerie Comments at 12 (any allowance of accelerated depreciation expense should be targeted for new plant).

[279] BellSouth Comments at 12. See also Bell Atlantic Comments, Vander Weide Affidavit at 20-21 (prescription of depreciation rates based on original cost and expected useful life would be correct from accounting and economic policy perspective).

[280] The Commission must prescribe depreciation rates for common carriers under Title II of the Communications Act. See 47 U.S.C. § 220(b). The Cable Act of 1992 includes no such requirement.

[281] See part XIII., infra.

[282] We note that nothing in the record indicates that operators' use of depreciation methodologies or rates has been abusive or even questionable.

depreciation practices of operators in individual cases to assure that resulting rates are reasonable.

134. We recognize, as stated in the Notice, that depreciation expense may significantly influence development of rates for cable service.[283] Allowing rapid depreciation could increase a system's cash flow and provide additional funds to invest in infrastructure, though the system is not obligated to use such funds for infrastructure improvements. Rapid depreciation can also increase subscriber rates. Depreciation practices will play an important role in our balancing of goals for cost-based rates of cable service.[284] Therefore, we may in the future revisit the issue of whether we should prescribe depreciation practices for development of rates for regulated cable service.

3. Taxes

i. Notice

135. In the Notice, we proposed to allow, in determining a cable operator's annual expenses, taxes incurred in the provision of regulated cable services.[285] We proposed that these taxes would include all state and federal taxes on the provision of cable service, and income taxes attributable to the provision of regulated cable service. We tentatively concluded that income taxes payable on income from cable operations by individual owners, partners or Subchapter S Corporation shareholders would not be recoverable in rates for regulated cable service.[286]

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[283] Notice at ¶ 26.

[284] Regulators will review cost-based rates to ensure that an operator's depreciation methodologies have not produced unreasonably high rates for subscribers.

[285] Notice at ¶ 30.

[286] Id. at n.32. In the First Rates Reconsideration, we explained this distinction in the context of the actual cost methodology for equipment rates within the benchmark. We stated that

> The provision for income taxes is made to compensate the business entity for a cost of doing business and to allow it to earn a fair after-tax return on investment. Any business with a statutory income tax obligation thus may include the cost of such obligation in

ii. Comments

136. Cable operators generally agree with our proposal to treat taxes incurred in providing regulated cable service as an allowable annual expense; however, they object to limiting this tax treatment to Chapter C corporations.[287] They contend that the cable industry is comprised of all types of business entities, unlike a traditional public utility industry, which most often is comprised of Chapter C corporations.[288] In addition, cable operators contend that legal precedent supports the treatment of income taxes as an allowable annual expense for non-C corporation entities.[289] Cable operators argue that distinguishing between

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> its rate calculations. However, because Subchapter S corporations, partnerships, and sole proprietorships do not have an income tax obligation as business entities, this provision is not applicable to them.

First Rates Reconsideration at ¶ 59.

[287] See, e.g., BC Comments at 15-16; Cablevision Industries Comments at 62-4 and Reply at 8-10; Cablevision Systems Comments at 38-40; Georgia Cable Comments at 15-17; NCTA Comments at 39-41 and KPMG, Peat Marwick Attachment at 1-4 and Reply at 15-17; Medium Operators Comments at 24-25 and Reply at 9 and E&Y Attachment at 34-41; SCBA Reply at 27-28; TCI Comments at 36-37; Time Warner Comments at 26-27; TMC Comments at 11; ParCable I and ParCable II ex partes. See also Arthur Andersen Comments at 22-24; ETC Comments at 7.

[288] SCBA states that two-thirds of its members responding to a survey did not pay a business level tax. SCBA Reply at 27, and Exhibit A. See also Medium Operators Reply, E&Y Attachment at 34.

[289] See, e.g., Cablevision Industries Comments at 62-64; NCTA Reply at 15-16 (citing Suburban Utility Corp. v. The Public Utility Comm'n of Texas, 652 S.W.2d 358 (Texas 1983)(Suburban); Moyston v. New Mexico Public Services Comm'n, 76 N.M. 146, 412 P.2d 840 (N.M. 1966) (Moyston); Greeley Gas Co. v. State Corp. Comm'n, 15 Kan. App. 2d 285, 807 P.2d 167 (Kan. App. 1991) (Greeley)). In Suburban, the Supreme Court of Texas held that a water utility organized as a Subchapter S corporation was entitled to a reasonable cost of service allowance for federal income taxes actually paid by shareholders or for the taxes the utility would be required to pay as a conventional corporation, whichever was less. 652 S.W.2d at 364. In Moyston, the Supreme Court of New Mexico found that rates which fail entirely to take

ownership forms for tax treatment will create artificial incentives for operators to alter their corporate status, which may be difficult for many operators, particularly smaller systems.[290] Cable operators believe that our proposal will punish certain operators because of their business form, which in most cases was chosen in an unregulated environment and for reasons unrelated to cable service rates or tax consequences.[291] Cable operators thus urge the Commission to reconsider our proposal and to design an income tax allowance that provides equal tax treatment of systems, for ratemaking purposes, regardless of ownership form.

137. Local authorities generally agree that inclusion of taxes incurred in providing regulated cable service is appropriate.[292] However, Michigan Committee and Utah oppose permitting operators to recoup federal income taxes,[293] and Austin

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federal and state income taxes into account as operating expenses of a sole proprietorship utility are unfair, unjust, unreasonable, and discriminatory; the Court held that an amount equal to the tax the utility would pay if incorporated, is a reasonable and realistic amount to deduct from the utility's taxable income for ratemaking purposes. 76 N.M. at 161, 412 P.2d at 851. In Greeley, the Court of Appeals of Kansas, while apparently agreeing with the holdings in Suburban and Moyston, affirmed the Kansas Corporation Commission's disallowance of the recovery of state and federal income taxes by a Subchapter S utility, because it failed to provide competent evidence of the income taxes paid. 15 Kan. App. 2d at 287-8, 807 P.2d at 169-70.

[290] See, e.g., Cablevision Industries Comments at 62-64; Cablevision Systems Comments at 39-40.

[291] Cablevision Systems Comments at 39-40; BC Comments at 15-16.

[292] Seaford Comments at 10; Municipals Comments at 18; Utah Comments at 11-12; Michigan Committee Comments at 11-12.

[293] These authorities argue that it is unfair to permit cable systems to recover federal income taxes in rates because other types of businesses are not allowed to include such expenses as an annual expense on their books. In addition, they note that tax rates will vary according to an individual operator's tax breaks, an outcome they believe is inconsistent with public policy. Michigan Committee Comments at 11-12; Utah Comments at 11-12. Both state that cable operators should recover real estate, gross receipts, and state and local income taxes.

contends that only taxes actually paid, and not an amount based on the statutory tax rate, should be included as an annual expense.[294] Austin argues that, to the extent a cable operator realizes tax benefits, a matching principle should require the operator to pass through such benefits in subscriber rates.

iii. Discussion

138. Regulators have generally permitted rate-regulated companies to recover income taxes in order to compensate the utility for taxes imposed directly on the utility, but not for taxes imposed on individual investors in the utility. Regulated public utilities generally operate in the traditional corporate form. This has meant that corporate taxes may be recovered from subscribers whereas taxes on dividends paid to owners of the corporation may not be recovered from subscribers. As indicated, however, cable operators operate under diverse ownership forms including corporations, Subchapter S corporations, partnerships (including partnerships of other ownership forms), and sole proprietorships. Based on the record in this proceeding, we are persuaded that we should design an income tax treatment that permits recovery of income taxes regardless of the form of ownership of the regulated cable service enterprise.

139. We affirm our tentative conclusion that Chapter C corporations will be allowed to include in annual expense calculations all taxes on the provision of regulated cable service. For other ownership forms of cable operators -- subchapter S corporations, partnerships, sole proprietors -- the income tax allowance we adopt will be determined as follows: the permitted rate of return on the ratebase is first calculated in accordance with the requirements we adopt in this Report and Order.[295] This amount is then adjusted to remove any portion of the previous year's distributions after adjustment for capital contributions and interest paid.[296] The resulting sum, the amount retained in cable operations, will constitute the cable

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[294] Austin Reply at 23-24. Austin notes than many operators actually pay taxes at a rate much lower than the statutory rate due to allowances permitted under the tax code.

[295] See sections III.A. (Ratebase), supra, and IV (Rate of Return), infra.

[296] This maintains the principle that taxes related to the provision of regulated service may be recovered from subscribers, but taxes on dividends paid to owners may not be recovered from subscribers.

operator's earnings subject to the income tax calculation.[297] The allowed income tax will be calculated by applying the grossed-up federal and state statutory corporate tax rates to the amount calculated as subject to the income tax calculation, regardless of the actual business form.[298] The calculated tax amount may then be included in calculating the total revenue requirement.

140. Traditional cost-of-service regulation allows for recovery of allowable tax expense on an annual basis. Here, however, it is possible that a rate set by cost-of-service will not be reviewed, nor any further cost support submitted, for a substantial period of time. Retained earnings depend closely upon the cable system's current financial requirements. Because this is a showing we do not intend to revisit, proposed tax expense in a cable cost-of-service showing should incorporate an adjustment of retained earnings to reflect likely changes. For example, the following illustration of the tax calculation methodology adjusts retained earnings over a three-year period:

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[297] As stated in the Notice, operators should be compensated only for those taxes attributable to the provision of regulated cable service. Notice at ¶ 30.

[298] We note that the maximum current tax rate for individuals is higher than that for corporations. Thus, some owners of noncorporate cable systems may contend that application of the individual tax rate may be more appropriate where a cable system's ultimate owners are individuals. See, e.g., Medium Operators Comments at 25. However, we believe that the regulatory ease provided by application of a uniform income tax rate outweighs this concern. We reject Austin's suggestion that operators be allowed to include only taxes actually paid, not an amount based on the statutory tax rate, because that approach would not be consistent with principles of tax normalization as traditionally applied to regulated industries.

	Year 1	Year 2	Year 3
1 Ratebase	1000000	1000000	1000000
2 Allowed Return (@ 11%)	110000	110000	110000
3 Less Interest Expense	(10000)	(10000)	(10000)
4 Tax Gross-up:			
5 Allowed Taxable Return	100000	100000	100000
6 Distributions	50000	25000	160000
7 Capital Contributions	0	25000	10000
8 Amount Subject to Tax calc.	50000	100000	(50000)
9 Tax allowed at corp. rate (@ estimate 34% grossed up)	25758	51515	(25758)
10 Revenue Requirement:			
11 Allowed Return	110000	110000	110000
12 Tax Allowed	25758	51515	(25758)
13 Expenses	500000	500000	500000
14 Total Revenue Requirement	635758	662515	584242
15 Cumulative Tax Allowed:			
16 Beginning Balance	0	25758	77273
17 Current Provision	25758	51515	(25758)
18 Ending Balance[299]	25758	77273	51515

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[299] Explanation of terms and calculations:

1. Line 3: An eleven percent rate of return is used only for purposes of illustration.

Line 6: A portion of distributions made must be associated with the provision of regulated cable services.

Line 7: A portion of contributions made must be associated with the provision of regulated cable services.

Line 8: Tax allowed is determined by subtracting distributions from allowed return and adding the amount of capital contributions. The amount of contributions added shall be no more than the amount of distributions for the period, however.

Line 9: The rate used in this illustration is a federal tax rate grossed up as follows: (.34/(1-.34)) = .51515)

2. Lines 8-9 of Year 3 demonstrate that, where distributions offset the total of allowed return and capital contributions, the amount subject to the tax calculation may be negative. In effect, this calculation would require operators to pay back to subscribers the tax benefits associated with earnings that had been achieved previously but were distributed in the current period. Since no annual adjustment will be made, this offset should be reflected in an operator's one-time showing.

141. We do not require the three-year calculation shown above. We do require, however, that cost-of-service showings that include a tax allowance show some calculation of likely changes in retained earnings. Our overall approach will establish a tax treatment that is equitable for all ownership forms.[300] This is fair to subscribers, as cable operators that are other than Chapter C corporations are compensated by subscribers only for those taxes attributable to earnings retained in the business and that can be used to provide service to subscribers, while taxes on profits and earnings paid to and potentially used by the owners for purposes unrelated to provision of regulated cable activities will be paid by those owners.

C. Test Year Methodology

i. Notice

142. In the Notice, we solicited comment on the appropriate methodology for selecting a test year.[301] The test year is used by the regulator as a basis for estimating future revenue requirements. This estimate is one of the most difficult problems in a rate case because while a regulator sets rates for the future, only historic data (expenses, revenues, demand conditions) is available as a guide. To the extent that relationship between these variables changes, the actual rate of return earned by the company may be quite different from the rate authorized by the regulator. For many years, regulators have adjusted test year data for "known changes." Known changes are generally defined as changes that actually took place during or before the test year (e.g., a new wage agreement that occurred toward the end of the year). More recently, due primarily to inflation, some regulators have modified the traditional test year approach by using a projected test year (either partial or full) or by permitting pro forma expense and revenue adjustments. Use of a projected test year is most often justified as a more accurate methodology for calculating future revenue requirement

ii. Comments

143. Arthur Andersen asserts that while the test year may

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[300] We also adopt our tentative conclusion that cable operators shall be allowed to include state and federal taxes, such as property and sales taxes, incurred on the provision of regulated cable service as an operating expense regardless of business form.

[301] Notice at ¶ 55.

conceptually be any twelve month period, as a practical matter, the historic test year is probably most convenient for most cable service providers.[302] Arthur Andersen further asserts that the Commission should use the most recently completed accounting period available at the time of the rate filing, since this would reflect appropriate period-ending adjustments and has usually been subject to an independent audit.[303] Finally, Arthur Andersen maintains that the historic test year should be adjusted for "known and measurable" changes and that the Commission should specify the time frame for such adjustments.[304]

144. Cablevision Systems asserts that the Commission should permit the use of any test year at the discretion of the cable operator.[305] Eagle contends that the Commission should use an historic test year and recommends either the latest twelve month period or the latest complete fiscal year at the discretion of the cable operator.[306] ETS advocates an historic test year for three reasons: the actual data are known and not speculative; the use of projected test year data potentially results in more challenges to the assumptions used in the projections; and a projected test year is unfair to investors if the projected costs and expenses are underestimated, and unfair to ratepayers if costs and expenses are overestimated.[307]

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[302] Arthur Andersen Comments at 33.

[303] Id. In most cases, Arthur Andersen notes, this period would be a calendar year, although some cable operators utilize a fiscal year.

[304] Id. For example, we could specify that the historic test year should be adjusted for changes through the date of filing, the date rates are expected to go into effect, or some point during the period in which the rates will be in effect.

[305] Cablevision Systems Comments at 41. If the Commission does prescribe a test year methodology, Cablevision Systems recommends a projected test year because ratemaking necessarily requires forecasting.

[306] Eagle Comments at 4. Eagle further recommends that new systems be permitted to use forecasted data if historic data are unavailable.

[307] ETS Comments at 2. ETS does maintain that a projected test year may be appropriate if it is certain that the cable operator will experience drastic change and historic data will not accurately reflect that change.

145. NCTA argues against establishing any specific test year methodology at this time, asserting that the Commission has insufficient experience with cable rate regulation to prescribe a methodology. Instead, NCTA proposes to require that whatever test year methodology is used is a reliable indicator of expected revenue requirements during the effective period of the rates being set.[308]

iii. Discussion

146. Based on careful consideration of the record before us, we are persuaded that use of an adjusted historic test year is the most appropriate methodology. The test year may be adjusted for "known and measurable" changes that have occurred by the time the rates take effect. We further find that the historic test year should be the operator's fiscal year. Thus, cost-of-service showings must be based upon the operator's most recently completed fiscal year.[309] In the case of new systems, for which no historic data are available, projected data may be used, but careful scrutiny shall be paid to the assumptions used.

IV. Rate of Return

147. A major component of our ratemaking methodology for cable operators that elect cost-of-service regulation is the rate of return those operators will be given an opportunity to earn on their allowed ratebase. In this section, we prescribe an interim, overall rate of return of 11.25% for use in cable cost-of-service proceedings.

A. Uniform Rate of Return

i. Notice

148. In the Notice, we proposed to include a reasonable return on allowed investment in the cost of service for regulated cable operations. We also proposed to establish that rate of return in this proceeding by prescribing a single, overall rate of return for use in all cable cost-of-service showings. We indicated that this approach would be preferable to establishing separate rates of return for each franchise area or cable company, an approach that we tentatively concluded would be impracticable. We sought comment on our proposals and analysis,

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[308] NCTA Comments at 25.

[309] In the case of a cost-of-service showing arising in response to a complaint, the fiscal year should be the one most recently completed at the time of the filing of the complaint.

and on the alternative of establishing different rates of return for appropriate groups or types of cable operators.[310]

ii. Comments

149. Some cable operators agree with the Commission that it is not practical to establish a separate rate of return for each franchise area. Cablevision Industries and Viacom maintain that the Commission should prescribe a uniform national rate of return applicable to all cable systems.[311] Continental agrees in principle with the Commission's assessment that establishing an industry-wide rate of return would be highly preferable for the efficient administration of the cost-of-service rules by all stakeholders.[312]

150. Many telephone companies, state commenters, and municipalities also support an industry-wide rate of return. Telephone companies argue that a single rate of return for all cable operators is the only practical approach, and that setting separate rates of return for each cable operator or franchise area would be costly.[313] Most state and local governmental commenters support a single rate of return for regulated cable service, rather than setting a separate rate of return for each cable company or franchise area.[314]

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[310] Notice at ¶ 46.

[311] Cablevision Industries Comments at 38-39; Viacom Comments at 44. These operators argue that the Commission should not create incentives for investors to favor cable operators in some regions over others. Cablevision Industries also asserts that the Commission in effect has already established a single uniform rate of return for the cable industry by setting a reasonable rate of return for developing equipment basket rates; it argues that there is no reason to apply a different approach to cable service rates. Cablevision Industries Comments at 39.

[312] Continental Comments at 58.

[313] Bell Atlantic Comments, Vander Weide Affidavit at 15; BellSouth Comments at 19; GTE Comments at 27-28.

[314] See, e.g., Michigan Committee Comments at 16; Municipals Comments at 25; New Jersey Comments at 4, 8-9; Seaford Comments at 12; Utah Comments at 16. Municipals and Seaford request that the Commission set a single rate of return for cable service, just as it has for the interstate access services provided by LECs.

151. Some cable operators argue that a cable firm's cost of capital varies to a large degree with location and size.[315] These commenters maintain that, as a result, small cable firms are inherently more financially risky than large operators, and thus should be allowed a higher rate of return.[316] Comcast claims that application of a single rate of return to an industry as diverse as cable would result in confiscatory rates.[317] TMC recommends that each cable operator be permitted to submit its own rate of return based on its capital structure;[318] Time Warner believes each cable system should be allowed to show the rate of return appropriate for the operations for which prices are being reviewed.[319]

152. Some commenters assert that, while a unitary rate of return may be appropriate for telephone company regulation, the cable industry is very different from the telephone industry, and merits different rate of return treatment.[320] Commenters describe the cable industry as inherently risky: California Cable contends that the Commission must ensure that investors are fully compensated for the risks they have assumed, and should thus require different rates of return for differently situated firms.[321] Others argue that the Commission should consider

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[315] See, e.g., Avenue TV Comments at 5; BC Comments at 11; Comcast Comments, Report by AUS Consultants at 1; Georgia Cable Comments at 27; NCTA Comments at 20-22; Small Cities Comments at 32; TCI Comments at 37-50; TMC Comments at 16-17; Time Warner Comments at 13, 33-36.

[316] See, e.g., Avenue TV Comments at 5; BC Comments at 11.

[317] Comcast Comments at 37-38.

[318] TMC Comments at 16-17.

[319] Time Warner Comments at 13, 33-36.

[320] Time Warner and TCI contend that, unlike LECs, cable operators have different subscriber densities, penetration rates, churn rates, and collection levels. Time Warner Comments at 13, 33-36; TCI Comments at 37-50. TCI adds that, in contrast to LECs, cable firms are not close to being the same size, do not have the same credit ratings, and do not share a common management heritage. TCI Comments at 37-50 & Attachment A, Charles River Study, at 4-5.

[321] California Cable Comments at 10. See also Connecticut Comments at 3; NCTA Comments at 20-22; Time Warner Comments at 13, 33-36 (arguing generally that the risks that each cable

setting a range of permitted rates of return to help compensate operators for the risks present in their systems.[322] New York maintains that the Commission should set two separate rates of return, one for publicly-traded and the other for privately-held firms, rather than separate rates of return for each franchise area.[323] Small Cities contends that firm or ownership unit size, rather than individual system size, should be the operative measure for rate of return calculations, since it is on the former basis that financing is obtained.[324]

iii. Discussion

153. In proposing to establish a single, overall rate of return for cable cost-of-service proceedings, we stated that individualized rates of return might permit the most precise balancing of subscriber and operator interests. We indicated, however, that the burdens on franchising authorities, cable operators, and the Commission of establishing individualized rates of return would outweigh any possible increase in precision from individualized treatment.[325]

154. The record confirms that the burdens of establishing an individualized rate of return for each cable operator that elects cost-of-service regulation would be substantial. Such an undertaking would require cable operators to present, and franchising authorities or the Commission to review, analyses of matters such as the risks individual cable systems encounter in providing regulated cable service and the sources of capital available to finance those risks. We are not persuaded that it is necessary for cable operators and regulators to undertake such analyses to ensure that cable operators can attract the capital needed to provide regulated cable service.[326]

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operator faces are impossible to equalize using a unitary rate of return).

[322] See, e.g., Cablevision Systems Comments at 38-39; COA Comments, Report by AUS Consultants, at 60.

[323] New York Comments at 10.

[324] Small Cities Comments at 27-29.

[325] Notice at ¶ 46.

[326] We note that the parties to this proceeding have presented only conclusory statements regarding the risks cable operators face, and have not attempted to distinguish between the risks of regulated cable operations and other enterprises in

155. Although some commenters argue that we should prescribe a range of permitted returns, or separate rates of return for publicly-traded and privately-held firms, to help compensate cable operators for the particular risks they encounter, these commenters do not provide any concrete information that we could use to distinguish among different cable operators or cable systems. In particular, the parties have not proposed a specific mechanism for identifying, nor does the record reveal, a discernible relationship between the cost of capital for regulated cable service and the cable system's size or location, or the cable operator's method of financing. Therefore, we reject these commenters' arguments. Further, we believe that a carefully determined single, overall rate of return for regulated cable service will enable cable companies to earn a reasonable return on their allowed investment, while protecting consumers from unreasonable rates. We reject the assertion that we must ensure that investors are fully compensated for risks unrelated to the provision of regulated cable service. We prescribe a rate of return to ensure that companies have the opportunity to earn a reasonable recovery on their prudent investment in property that is used and useful for that service.

156. Some cable operators may believe that the overall rate of return we establish is inadequate to compensate them for the risks they encounter in providing regulated cable service. Similarly, consumers may find this overall rate excessive, given the individual operator's specific circumstances. To ensure the reasonableness of all rates set in cable cost-of-service proceedings, we will not foreclose parties to such proceedings from attempting to justify different rates of return.[327]

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which cable operators engage.

[327] Parties that seek rates of return different from the prescribed interim rate of return, or any subsequently prescribed rate of return, bear a heavy burden. In particular, each cable operator seeking a higher rate of return is required to show exceptional facts and circumstances that make the cost of capital for the regulated cable services of the system whose rates are at issue exceed the prescribed rate of return, and that those facts and circumstances will persist. All necessary supporting information shall be included in the challenging cable operator's initial cost-of-service showing. Similarly, local franchising authorities may collect and consider evidence that the operator's cost of capital for the individual system is lower than the prescribed rate. The Commission will review all evidence relied upon by local franchising authorities in setting rates of return different from the prescribed rate. In part X., <u>infra</u>, we

Accordingly, we establish an overall rate of return for application to cable operators in individual cost-of-service proceedings.

B. General Methodology

i. Notice

157. In the Notice, we invited comment on the method we should employ to establish a single overall rate of return. We proposed to identify one or more surrogates having risks comparable to those cable operators encounter. We tentatively concluded that the Standard and Poors 400 Industrials (S&P 400) offers a broad range of investors' expectations regarding the trade-off between risk and return, and that investors in the S&P 400 experience risks that are roughly equivalent to those experienced in the provision of regulated cable service. We also tentatively concluded that either the S&P 400 as a whole, or a subgroup within it, would constitute a reasonable surrogate for regulated cable service, and that the cost of capital of the S&P 400 should be our primary guide in determining the rate of return for regulated cable service.[328]

158. We also proposed in the Notice to determine the cost of capital by estimating the surrogate's cost of equity and cost of debt, and then deriving a composite, weighted average cost of capital reflecting the surrogate's capital structure. While we stated that this average would weigh heavily in our determination of an overall rate of return for cable cost-of-service proceedings, we recognized that the cable industry may differ from mature regulated industries that earn steady returns on investment. We also recognized that the cable industry is a relatively new industry, characterized by growth and earnings reinvestment as well as a heavy reliance on private and semi-public sources of capital, and that cable investors' expectations may differ from those of other investors. We invited commenters to submit detailed economic analysis on the extent to which these differences should affect our development of a rate of return for cable. We also invited expert economic analysis regarding the models we should employ to ensure that we establish a reasonable rate of return.[329]

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address hardship relief for cable operators that believe the end result of our methods threaten their financial health and continued ability to provide regulated cable service.

[328] Notice at ¶¶ 48, 50.

[329] Id. at ¶¶ 48-49.

ii. Comments

159. While many parties proposed cable surrogates, none provided a detailed analysis that attempted to quantify the risks of regulated cable service. Some commenters accept the use of the S&P 400 as a suitable surrogate as a starting point for estimating the cost of capital.[330] These commenters, however, suggest varying approaches to adapting the S&P 400 to what they perceive to be the unique risk characteristics inherent in the cable industry. Several commenters suggest a rate of return at least two percent above the S&P 400 average to adjust for the added risk of cable investments.[331] Bell Atlantic urges a capital structure composed of 86% debt and 14% equity, and suggests that, given this capital structure, the third quartile of the S&P 400 would represent an overall risk level comparable to cable industry investments.[332]

160. NCTA opposes using the S&P 400 as a surrogate, contending that the average risk characteristics of companies within that group are too removed from cable company risks to offer a meaningful comparison.[333] TCI contends that S&P 400 data are an inappropriate substitute for specific data unique to the cable industry.[334] Georgia Cable argues that cable companies, unlike the companies in the S&P 400, are small entities that

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[330] See, e.g., Bell Atlantic Comments at 28; BellSouth Comments at 20; CFA Comments at 7; Cablevision Industries Comments at 41; Continental Comments at 59; GTE Comments at 28.

[331] See, e.g., Cablevision Industries Comments at 41; Continental Comments at 61, 72.

[332] Bell Atlantic Comments at 28. Bell Atlantic's consultant, Vander Weide, followed the methodology we employed in Represcribing the Authorized Rate of Return for Interstate Service of Local Exchange Carriers, 5 FCC Rcd 7507, 7513, paras. 57-60 (1990) (1990 Telco Represcription Order), recon. denied, 6 FCC Rcd 7193 (1993), aff'd sub nom. Illinois Bell v. FCC, 988 F.2d at 1266. In that proceeding, DCF estimates for all the companies in the S&P 400 for which sufficient data were available were ranked in order of their DCF cost of equity estimates, and then grouped into quartiles (the first quartile containing the companies with the lowest estimated costs of equity).

[333] NTCA Comments at 22-23.

[334] TCI Comments at 44-45.

depend heavily on private and semi-public sources of capital.[335]

161. Other commenters suggest the LEC industry as an appropriate surrogate. Municipals argues that telephone companies are comparable to cable companies because both are local distributors with "virtual monopolies" in their traditional business areas.[336] Michigan Committee claims that the competitive pressures placed on the cable industry by direct broadcast satellite services and multichannel microwave distribution services are comparable to those telephone companies face from cellular services and competitive access providers.[337] Seaford and Municipals contend that the maximum allowed rate of return for cable companies should be set no higher than the rate of return prescribed for telephone companies because the cable and telephone industries face comparable risks. Indeed, these commenters suggest that an overall rate below the prevailing rate for LECs might be appropriate for both industries, given the recent general trend toward lower interest rates.[338]

162. Other commenters oppose the use of the telephone industry as a surrogate. NCTA, for example, argues that telephone, unlike cable television, is an essential service and therefore carries an investment risk below that of cable.[339] Other commenters would support reliance on the telephone industry as a partial surrogate only, incorporating other telecommunications companies, broadcast companies, leisure and recreation concerns, and selected companies from the S&P Industrials Index as a composite comparable group from which expected earnings and returns for cable companies can be estimated.[340]

163. Commenters generally do not oppose the proposed weighted average cost of capital methodology. That method assumes a post-tax return on equity. Comcast's and COA's expert, AUS Consultants (AUS), suggests that, as an alternative, we could estimate a pre-tax overall cost of capital, thus avoiding the

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[335] Georgia Cable Comments at 28.

[336] Municipals Comments at 26.

[337] Michigan Committee Comments at 17-18.

[338] Seaford Comments at 12-13; Municipals Comments at 27.

[339] NTCA Comments at 24.

[340] See, e.g., Comcast Comments, Attachment at 6.

need to combine equity and debt cost estimates.[341]

iii. Discussion

164. We conclude that we should use the weighted average cost of capital method, with its cost of equity, cost of debt, and capital structure components. Although Comcast's and COA's consultant, AUS, proposes a pre-tax overall cost of capital, that proposal is based on AUS's comparable earnings methodology. Since we reject that approach, infra, we will apply the more traditional, weighted average cost of capital approach.

165. In order to apply that method, we must estimate the cost of the capital contributing to the provision of regulated cable service. Most cable companies have diverse operations. Even those described as "pure play" cable operators provide a mixture of regulated and unregulated services.[342] No company for which the parties presented data engages only in provision of regulated cable service, and surrogate firms must thus be chosen to represent the risks of regulated cable in any cost of capital analysis.

166. The surrogate firms must operate at levels of risks comparable to those of regulated cable service, because our fundamental goal is to determine the return required to compensate investors for the perceived risks of regulated cable service and to attract capital to that service. In choosing surrogate firms, we must also recognize the limitations imposed by the available information. Because we have different kinds of information available with regard to cost of equity, cost of debt, and capital structure, we address each of these components of the overall cost of capital separately. Sections IV.C. through IV.E., infra, provide our analyses.

C. Cost of Equity

i. Introduction

167. The ideal cost of equity estimate should accurately reflect investor expectations as to the returns, both in terms of capital gains and in terms of dividends, investors will earn. Since investor expectations are not directly measurable, a variety of indirect methods are used. Generally the methods used by commenters in this proceeding fall into three categories:

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[341] Comcast Comments, AUS Consultants at 3.

[342] A "pure play" cable operator would engage in no business other than the provision of regulated cable service.

risk premium, discounted cash flow (DCF), and comparable earnings. Commenters submitted four studies.[343] Two studies use the capital asset pricing model (CAPM) version of the risk premium method to analyze cable surrogates and cable companies.[344] One study relies upon the DCF method to analyze the S&P 400. The final study applies the comparable earnings methodology to surrogate groups and cable companies. In Attachment D, we describe these three methods of estimating the cost of equity and our analysis of the studies submitted by commenters advocating them.

168. In the Notice we proposed to apply the DCF method to the companies composing the S&P 400.[345] We indicated that companies in the S&P 400 as a whole, or a subgroup within it, encounter risks comparable to those encountered by companies that provide regulated cable service, and that an average of DCF cost of equity estimates for the S&P 400 could therefore serve as an estimate for the regulated cable industry's cost of equity. We thus tentatively concluded that S&P 400 data should be our primary guide for our cost of capital determination.

ii. Comments

169. As previously stated, the record contains four studies addressing cost of equity issues. CATA presents a CAPM study performed by Peter K. Pitsch (Pitsch) that estimates a cost of equity for cable of 18%. Based on this study, CATA recommends an overall rate of return in the 15% to 17% range in recognition of the cable industry's asserted lack of access to public debt and stock markets.[346] Cablevision Industries, relying on a CAPM study conducted by the Brattle Group (Brattle), recommends a 16% overall rate of return for the cable industry.[347] Bell Atlantic relies on the results of the DCF analysis by James H. Vander Weide (Vander Weide), and recommends a cost of equity between

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[343] These submissions were made in August 1993 and appear to be based on data from 1992 and early 1993.

[344] The CAPM approach relies on betas, a measure of the unavoidable risk that investors bear in holding a security, as the primary measure of the risks for which investors expect compensation.

[345] Notice at ¶ 52 and Appendix C.

[346] CATA Comments at 12.

[347] Cablevision Industries Comments at 42.

11.85 and 15.11% depending upon the capital structure adopted.[348] Comcast and COA propose a pre-tax cost of equity of 18.9% based on the results of a comparable earnings study performed by AUS.[349]

170. BellSouth maintains that there are no publicly traded "pure play" cable operators that provide only regulated cable service. It notes that by definition regulated cable services remain monopoly services and thus, it argues, the risks associated with regulated cable are something less than that associated with the S&P 400 as a whole. BellSouth recommends the average return of companies making up the lower range of the S&P 400 be used as a surrogate to develop the equity element of the cost of capital for regulated cable service.[350]

171. GTE submits that the risks of cable and telephone are similar and recommends using the S&P 400, concentrating on those companies with returns on equity in the upper quartile.[351] CFA maintains that cable has a degree of market power enjoyed by few S&P 400 companies and that cable faces no real competition. It asserts that this lower risk makes the bottom quartile of the S&P 400 an appropriate surrogate for cable.[352]

172. Small Cities states that it was recently told "that a 20% cash-on-cash return would be required to attract equity in today's market for small companies."[353] Avenue states that a typical return on equity for cable companies is 12%-15%.[354] NCTA's consultant, Economist, Inc., concludes that cable is 30%

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[348] Bell Atlantic Comments at 26-29.

[349] Comcast Comments at 39; COA Comments at iii, 85. Comcast states that this pre-tax 18.9% overall cost of capital is the equivalent of 12.9% after-tax overall cost of capital. Comcast Reply, Schink Affidavit at 5, n.2. The after-tax cost of equity appears to be 16%. See Comcast Comments, AUS Consultants, Exhibit 6, at 30.

[350] BellSouth Comments at 20.

[351] GTE Comments at 28.

[352] CFA Comments at 7.

[353] Small Cities Comments at 32. Small Cities does not explain the meaning of "cash-on-cash return."

[354] Avenue Comments at 5.

to 50% riskier than the overall market.[355] Time Warner's consultant, NERA, provides for illustrative purposes cost of equity estimates for three cable companies. Using an 8.6% risk premium, NERA's average estimate (weighted by company size) is 18.4%. NERA notes that betas of the three companies have risen from previous results, and ascribes this increase to anticipation of regulation-depressed earnings.[356]

iii. Discussion

173. We find arguments against the DCF methodology and against the use of the S&P 400 as a surrogate unpersuasive. For the reasons stated in Attachment D, we are also unpersuaded that other approaches suggested in the cost of equity studies by commenters are superior. Accordingly, we apply the DCF methodology to the S&P 400 to develop the cost of equity for companies providing regulated cable service.[357]

174. The S&P 400 includes companies spanning a very wide range of total risks, and a wide variety of combinations of financial and business risks. A primary reason for our choice of the S&P 400 as a surrogate is that the information relied upon by investors to assess the risks of S&P 400 companies is widely available. In contrast, cable equity is generally closely held, and information on its risks and expected returns is not a matter of public record.[358] We also believe, as explained below, that the DCF methodology is the best, most appropriate methodology for determining the cost of capital in this case.

175. In opposing the S&P 400 as a source of surrogates for estimating the cost of equity for cable, the parties make two basic assertions. The first is that neither the S&P 400 nor any subgroup of the S&P 400 combines financial and business risks in the same proportions as cable.[359] We believe that investors care

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[355] NCTA Comments, Appendix B at 5.

[356] Time Warner Comments, NERA Proposal at 11-13.

[357] The D. C. Circuit has affirmed the use of the DCF method to prescribe interstate rates of return. See, e.g., Illinois Bell Telephone Co. v. FCC, 988 F.2d at 1266.

[358] Notice at ¶¶ 48-50; Bell Atlantic Comments, Vander Weide Affidavit at 11.

[359] Business risk stems from the inherent variability in the pre-tax return of a company's operations. Financial risk is the additional risk to equity investors created by the use of

about (and therefore an investment's required return reflects) the composite (financial and business) risk of a potential investment. Therefore, we find the parties' objection unpersuasive.

176. The second assertion is that the cost of equity for regulated cable service exceeds that found for the S&P 400, or for any subgroup thereof. The parties rely on two sources for this assertion: the cable stock betas and cable capital structures. As we note in Attachment D, the high betas of some cable equity issues reflect the closely-held nature of the stock. We believe that the historic pattern of fluctuations in cable stock prices is not purely the outcome of the changing risk-and-return assessments of market investors, but instead reflects in large measure insider decisions regarding cable stocks. Even if cable betas were purely a reflection of the changes in investor evaluations of the risks and return from cable services, we would still have to adjust for the monopoly-profit component of investor expectations. We believe that the monopoly profit component was by far the most variable element in investor expectations. We, therefore, give no weight to this source of evidence about the risks of the cable industry.

177. The parties also identify the capital structure of the cable industry as a source of financial risk, and we agree that this is so. Investors assess all sources of risk, and will consider that one element of risk, relatively high financial risk, may be offset by another element, relatively low business risk. We believe the cable industry attained its current high levels of debt financing largely on the basis of its low business risk. None of the parties has demonstrated that the overall risks of regulated cable service exceed that of the S&P 400 companies, and we find assertions to that effect not credible.

178. The objections parties raise to use of the DCF method center on its application to specific cable companies. Cablevision Industries and others reiterate our caution in the Notice that analysts' estimates for pure growth companies must be carefully scrutinized.[360] We generally agree that DCF, like CAPM,

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financial leverage (debt) to fund those operations.

[360] Cablevision Industries, Brattle Return at 7. Brattle raises a more general objection to DCF by arguing that it does not separately value stock option rights associated with a stock. The DCF method relies in part upon the consensus estimates of analysts of the long-term earnings growth of a company. The implicit assumption is that the long-term growth in value of a company is fundamentally linked to increases in the company's

is difficult to apply to specific cable companies. The DCF method requires dividend, stock price, and estimated growth data regarding each company to which it is applied. The cable companies for which such data are available are closely held and subject to insider decisions. Further, we note that even if we were to apply the DCF method to data regarding the few "pure play" cable companies, we would have to adjust the estimates to obtain a reasonable surrogate for the cost of equity for regulated cable service.

179. These problems, however, do not affect the usefulness of the DCF method as a tool for estimating the cost of equity for companies within the S&P 400 and using those estimates to determine the cost of capital for regulated cable service. With regard to the studies submitted in this proceeding, we find the Vander Weide study more appropriate to the task at hand than any of the other submissions. The Commission's "classic DCF" methodology, as employed by Vander Weide in estimating the cost of equity for the S&P 400, incorporates the risk-return assessments of virtually all stockmarket investors.[361] The long-term growth estimates relied upon by the DCF method represent the consensus estimates of a large number of widely-followed stock analysts.[362]

180. Although a number of cable operators suggest using cable companies as surrogates for determining the cost of equity for the provision of regulated cable service, the record does not support their use. As we previously stated, determining cost of equity requires indirect analysis, usually through models such as the DCF model and the CAPM model. We have been presented with

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business and not to the company's financing. Brattle offers no examples of analyst estimates failing to incorporate the impact of known potential changes in the stockholder's claim on the company's future earnings.

[361] This reference is to the Vander Weide study Bell Atlantic submitted with comments. See Attachment D.

[362] In contrast, the CAPM estimates are based on statistics that are fatally flawed for estimating the cost of equity for regulated cable service. The beta estimates, as discussed above, are based on the history of price fluctuations in the shares of a few, closely-held cable companies and do not represent a valid measure of the future risks of capital devoted to the provision of regulated cable service. Although AUS's comparable earnings estimates rely on statistics regarding widely-held companies, the screens AUS employed to select these companies are invalid. See Attachment D.

essentially three methods for estimating the cost of equity for regulated cable service. In Attachment D, we explain why two of these methods, the CAPM and comparable earnings methods, cannot be applied to cable at this time, even though the methods' proponents use cable companies as surrogates for the provision of regulated cable service.

181. The remaining method, the DCF method, requires dividend, stock price, and estimated growth data. The cable companies for which this information is available are closely-held and subject to insider decisions. Thus, the data may reflect a bias for which we are unable to adjust. For these reasons, we reject, at this time, the use of cable companies as surrogates for the provision of regulated cable service. Given that we do not find cable companies to be useful surrogates and we reject other potential surrogates as set forth in Attachment D, we believe that the S&P 400 firms for which sufficient data are available to make DCF calculations provide a large group of publicly-traded firms that is roughly representative of the universe of nonregulated firms and, thus, provide the most appropriate source of surrogates for regulated cable service available in the record.

182. The DCF method, like the other methods the parties advocate, requires an assessment of the risks of regulated cable service in comparison to those of the chosen surrogate. The record provides little definitive analysis of the risks of regulated cable service and thus does not make clear which specific subgroup of the S&P 400 regulated cable most resembles in terms of risks. Given the paucity of the record, we believe that we should look at the S&P 400 broadly and define a broad zone of reasonableness for the cost of equity. Based on his DCF analysis, Vander Weide estimates the cost of equity for regulated cable service to be between 11.80% (the midpoint of the DCF cost of equity estimates for the first quartile of the S&P 400) and 15.11% (the midpoint of the DCF cost of equity estimates for the third quartile). We believe that these estimates provide reasonable outside bounds for the cost of equity for regulated cable service, approximately 12% and 15%. Because of the thinness of the record, we are unable to establish with certainty any specific number within this range as the cost of equity, nor do we believe there is a need to do so. Instead, we use this range, in combination with other elements of the weighted average cost of capital, to develop a zone of reasonable rates of return for regulated cable service.