

**REGIONAL TELEPHONE HOLDING COMPANIES:
STRUCTURES, AFFILIATE TRANSACTIONS, AND REGULATORY OPTIONS**

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March 1993

This report was prepared by The National Regulatory Research Institute (NRRI) with funding provided by participating member commissions of The National Association of Regulatory Utility Commissioners (NARUC). The views and opinions of the authors do not necessarily state or reflect the views, opinions, or policies of the NRRI, NARUC, or their contributors.

EXECUTIVE SUMMARY

This report focuses on the seven regional holding companies (RHCs) created as a result of the breakup of the former Bell System. Relationships between the Bell Operating Companies (BOCs), the RHCs, and unregulated affiliates are examined in order to determine behaviors that should concern state regulators either because the behaviors directly increase costs to local ratepayers or because the behaviors lessen competition. These behaviors include cross-subsidization, cost shifting, and anticompetitive practices. An additional concern is the effect of RHC diversification on the cost of capital to the BOCs. If RHC investments in risky ventures raise the cost of capital to local exchange services, ratepayers will suffer.

The report presents a review of the literature regarding holding companies, affiliate transactions, and regulatory options, including structural and nonstructural separations as means of detecting and limiting abusive behavior on the part of the RHCs. During 1992, the National Regulatory Research Institute surveyed state commissions to determine their concerns about RHC structure and behavior, and their actions to limit abuses. The responses to that survey were used to develop examples of abusive behavior, examples of attempts to correct such behavior, and recommendations for regulatory policy.

The report also examines the implications for regulators, consumers, competitors, and the BOCs, of structural and nonstructural (or accounting) separations because these are the principal methods of limiting abuses. Under nonstructural separations regulated local services and unregulated enhanced services may be allowed to share personnel and facilities. Nonstructural separations rely on accounting rules and cost allocation procedures to protect ratepayers and competitors.

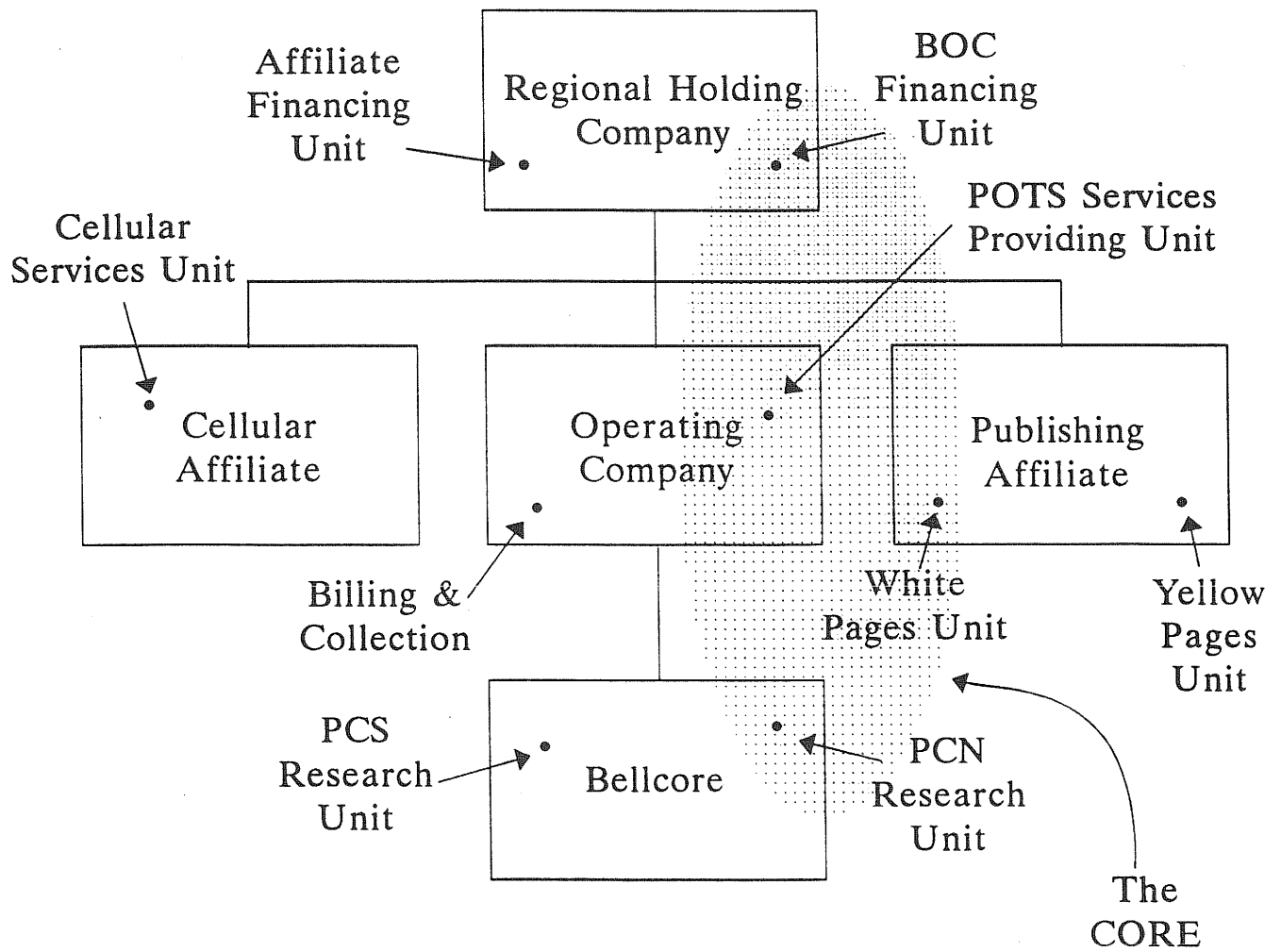
Structural separations require that certain services be provided by separate subsidiaries of the RHC or the BOC. Moreover, structurally separated subsidiaries cannot share personnel or facilities with the BOC's local exchange operations. Structural separations are better able to limit cross-subsidization of competitive services by monopoly services but they create several additional problems. First, regulators must

examine affiliate transactions to determine whether the BOCs are being overcharged when they buy from affiliates. Such overcharges would shift profits from the BOC to unregulated affiliates. Second, regulators must examine transactions between the BOCs and affiliates to determine whether the BOCs are being undercompensated when they provide services to affiliates. Such undercompensation could harm both ratepayers and competitors of unregulated affiliates. Third, regulators find it more difficult to access and audit the books of unregulated affiliates, especially those that are located outside their jurisdiction. Finally, structural separations limit the ability of the RHCs and BOCs to capture economies of scale and scope. This is inefficient and raises the total cost all telecommunications services.

Regulators find it difficult to strike the appropriate balance between structural and nonstructural separations because the desire to limit cross-subsidization, cost shifting, and anticompetitive behaviors conflicts with the desire to capture the benefits of economies of scale and scope. Although structural and nonstructural separations each has advantages for both regulators and RHCs, each also has disadvantages. Moreover, neither provides a perfect method for simultaneously controlling abuses and promoting efficient organization and operation of the RHCs and BOCs. If potential economies of scope are large, structural separations are less advisable. However, the particular separations rule probably matters less than regulators' willingness and ability to commit resources to detecting and controlling abuses.

Figure ES-1 illustrates a regional holding company, its operating companies, and various unregulated subsidiaries. The shaded ellipse in the figure identifies the core of activities that are of concern to state regulators. Figure ES-1 is presented to underscore the concept that core activities may be located in the BOC, in the RHC, or in various other subsidiaries. Moreover, Figure ES-1 also underscores the idea that not all BOC activities are in the core. This concept is expanded in Chapter 7 of the report.

The increasing diversification of the RHCs and the growth of enhanced services provided through the telephone network make it necessary for changes to occur in both regulation and in the structures of the RHCs. Recommendations include allowing the RHCs to structure themselves to capture economies of scale and scope provided that: (1)



Source: Authors' construct.

Fig. ES-1. Core telecommunication activities.

regulators have oversight, and (2) ratepayers share in the economies that are thus created. It is imperative, therefore, that commissions have the ability to obtain all information necessary to ensure that abuses are not taking place. It is also concluded that commissions need authority over major restructurings and asset transfers between the RHCs' regulated and unregulated affiliates.

It is further recommended that management audits focused on affiliate transactions and structural issues be used to monitor behavior and detect abuses. Implementation of management audits requires adequate staff resources and regulatory processes consistent with regulatory goals. Whether management audits are performed in-house or by outside consultants, it would be useful for commissions to have staff capable of performing, supervising, and analyzing management audits. Increasingly, management audits have focused on structural issues, affiliate transactions, cost shifting, cross-subsidization. Recently, management audits have focused on the RHCs' unregulated subsidiaries' access to and use of BOC customer information, since information subsidies and privacy issues are increasingly important. It is recommended that regulators ensure that the RHCs' unregulated affiliates not obtain competitive advantages as a result of superior or less costly access to information.

Because the RHCs are large and complex organizations which overlap state boundaries, increased use of regional or multi-state oversight or regulation is recommended. Since individual commission's resources are limited, regional or multi-state cooperation in regulating and auditing the RHCs would allow sharing of staff resources necessary to perform the audits and would help capture economies of scale and scope in regulation. In addition, regional oversight can be beneficial to the RHCs by providing greater consistency across regulatory jurisdictions.

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FOREWORD

Regulatory interest in regional telephone holding companies has increased significantly in recent years. Previously, state commissions' concerns over holding companies focused largely on determining the appropriate regulatory treatment of the prices charged to the local operating companies for the services they received from the regional holding company. With deregulation and the emergence of competition, the regional holding company has now also become an organizational structure that encompasses new competitive business ventures, e.g., cellular, real estate, financial, and international activities. State commissions do not intend to regulate these activities but do have an interest in exercising enough oversight so that their regulatory goals and state ratepayers are not harmed by the holding company's new business ventures. By reviewing holding company actions and corporate structures from a regulatory perspective and analyzing available standards and policy options for state commissions, this report is dedicated to those ends.

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April 1993
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ACKNOWLEDGEMENTS

This report has benefited from the contributions of many individuals. Dr. Douglas N. Jones, NRRI's Director, and Dr. Raymond W. Lawton, NRRI's Associate Director for Telecommunications and Water, provided overall guidance and offered many useful suggestions. Dr. Phyllis Bernt of Ohio University's School of Communications Systems Management and Mr. Douglas C. W. Kirk of the Utah Public Service Commission, a member of NRRI's Research Advisory Committee, reviewed a draft of the report and made a number of thoughtful and helpful comments. The authors also express their appreciation to the state regulatory commission staff members who responded to the survey regarding affiliate transaction regulation. Their responses provided invaluable insights.

Several individuals at the NRRI made contributions that merit acknowledgement. Cary Wasden, an NRRI graduate research associate, gathered the information for Chapter 5 and the Appendix and provided other valuable research support. Dr. Francine Sevel's patient and thorough editing greatly improved the report. Ms. Wendy Windle produced several of the figures and facilitated the production process. Ms. Linda Schmidt and Ms. Marilyn Reiss produced the final draft. Although these individuals' names do not appear on the title page, and they should be held blameless for any remaining errors, they each contributed significantly to the report.

CHAPTER 1

INTRODUCTION AND OVERVIEW

Introduction

State regulatory commissions' concerns with and analysis of transactions and relations among telephone holding companies' affiliates have a long and important history. Regulators repeatedly examined affiliate relations among predivestiture American Telephone and Telegraph Company (AT&T) and its subsidiaries the Bell Operating Companies (BOCs). State regulators were particularly concerned with prices charged to the BOCs by AT&T's manufacturing subsidiary, Western Electric, payments of service fees and royalties by the BOCs to AT&T, and cost allocations or separations between AT&T's Long Lines Division and the BOCs.

The purpose of this report is to examine the implications of holding company structure and alternative oversight mechanisms for regulating affiliate transactions. This report does not portray holding company structures per se as being bad or prejudicial to public policy goals. From both the firms' and the regulators' perspectives, holding companies are a legitimate and useful form of organization. There are positive effects of holding company structures that can be mentioned. For the firm, the holding company structure provides for decentralized decision making and responsibility and can improve incentives by focusing attention on individual units of large firms through the use of the strategic business unit concept. Among other things, this can promote better performance both by individual units and the whole firm. For regulators, the holding company structure can be used to create a clear demarcation between regulated and unregulated operations or between regulatory jurisdictions.

After divestiture of the BOCs by AT&T in 1984, twenty-two BOCs were organized under seven regional holding companies (RHCs)¹. Each RHC controls regulated operating subsidiaries, service subsidiaries, unregulated communications subsidiaries, and other unregulated subsidiaries. In addition, the seven RHCs share ownership of Bell Communications Research (Bellcore) which provides some of the services Bell Laboratories provided before divestiture. As a result of the Modification of Final Judgement (MFJ), the RHCs were prohibited from manufacturing telecommunications products and customer premises equipment (CPE), providing interLATA telephone service, or providing information services. Subject to these restrictions, the RHCs were able to enter many lines of business, in addition to providing local and intraLATA telephone services.

The RHCs' existing corporate structures are the result of interaction of choices by the RHCs for their perceived economic benefit and regulatory decisions such as that in the Federal Communication Commission's Computer II Docket. The RHCs' corporate structures, with a mix of regulated and unregulated or quasi-regulated subsidiaries, seem to be mixed blessings: the RHCs generally desire to obtain relief from structural separation, and the regulators view the spread of unregulated subsidiaries with apprehension. For state regulators the establishment of regional holding companies having both regulated and unregulated subsidiaries and the concomitant transactions among various affiliates has created new concerns and exacerbated old ones. Transactions between the regulated BOCs and their unregulated affiliates are numerous: some unregulated subsidiaries provide services to regulated subsidiaries, some use the BOC's facilities and or services as intermediate inputs in producing and delivering their own services, some compete with regulated operations in certain market segments, and some benefit from customer goodwill and acceptance because they are affiliated with the

¹ The regional holding companies are: Ameritech, Bell Atlantic, Bell South, NYNEX, Pacific Telesis, Southwestern Bell, and U S WEST. This study does not substantively address the independent holding companies (GTE, Contel, Rochester, etc.) or Cincinnati Bell and Southern New England Telephone Company.

RHC (and thus the BOC) even though their business is not related to telecommunications.²

When some subsidiaries are regulated utilities and other subsidiaries are unregulated, incentives may be created that lead to behaviors that harm ratepayers protected by state regulators. On the part of the regulators, there may be attempts at more extensive regulatory oversight; on the part of the companies, there may be attempts to stonewall and obfuscate regulation. This pattern of adversarial wariness on both sides of regulation imposes avoidable costs for all concerned.

State Regulators' Concerns

State regulators' interest in the effects of holding company structures and affiliate transactions include the following concerns:³

- (1) The BOC's ratepayers might pay for activities that do not benefit them or payment might be disproportionate to benefits received. That is, excessive portions common and joint costs of the RHCs might be allocated to the BOCs.
- (2) Holding company structures might allow profits to be shifted from regulated to unregulated subsidiaries either by shifting costs to the BOCs or by keeping the BOCs out of potentially profitable market segments.
- (3) Transactions between the BOCs and the RHCs or affiliates might be harmful to the BOCs (and their ratepayers) either because the BOCs pay excessive charges for services received or because the BOCs are insufficiently compensated for services provided.

² Approximately 90 percent of the RHCs' total revenues and nearly 100 percent of RHC profits still flow from the BOCs. This is true even though the RHCs have created numerous subsidiaries engaged in business activities related and unrelated to providing local access, switching, and intraLATA toll service. Although some of these lines of business are profitable, they have contributed relatively little to the RHCs' overall profits.

³ These concerns are not merely hypothetical. Allegations have been made of a number of these practices and some improprieties have been found. See the examples discussed in Chapters 3, 4, 6, and 7.

- (4) As a result of being part of a RHC, BOCs may make investment and technology choices that are not clearly designed to benefit ratepayers.
- (5) The BOCs' position astride the local switch might be exploited to inhibit competition in the enhanced communications services market.

State regulators are concerned that profit (or long-run value) maximizing behavior on the part of the RHC might lead it to make decisions that conflict with regulatory objectives for BOC ratepayers including accessibility, affordability, and quality of universal telephone service. Regulators have an obligation to protect the interests of the BOC ratepayers; and relations between the BOC, its affiliated siblings, and the RHC provide numerous possibilities for ratepayers to be disadvantaged. Specifically regulators are concerned that the RHCs might choose corporate structures and manage subsidiaries so as to avoid regulatory oversight when possible and make oversight difficult when avoidance is not possible.

Holding Companies: Rationale and Oversight

An historical rationale for holding company structures is their ability to capture economies of scale and specialization. Certain functions can be performed more efficiently if centralized at the holding company level, as compared with independent provision by each operating company. The movement towards deregulation and the development of competition in some segments of the telecommunications markets may have increased incentives to maximize RHC profits by transferring a disproportionate share of total costs to regulated operating companies, by providing potentially profitable services through unregulated affiliates, or by using control of the regulated operating company to lower the costs of unregulated affiliates, and/or increase the costs of competitors.

Attempts to eliminate cost shifting, cross-subsidization, and anticompetitive behavior are not new, and regulators have given great consideration to the issue of how to protect ratepayers. There are two basic methods, structural separations and

nonstructural separations. Structural separations requires that specified activities be carried out by fully separate subsidiaries that do not share facilities, assets, or personnel with the regulated operating company.⁴ Nonstructural separations allows multiple services to be provided by a unified and integrated organization and relies on accounting rules to assign costs and revenues to nonoverlapping components including: regulated and nonregulated, interstate and intrastate, access and nonaccess elements.

Critics of nonstructural separations view it as a process that is unable to eliminate cost shifting and cross-subsidization of competitive services by monopoly services. They also argue that cost accounting rules are complicated, arbitrary, and costly to administer. Structural separations somewhat ameliorates the concern regarding certain types of cost shifting and cross-subsidization. However, it cannot eliminate the concerns. Structural separations results in growth of the holding company structure and tends to increase the volume of transactions between regulated and unregulated subsidiaries. This makes the regulators' jobs more difficult because the accounting records of unregulated affiliates are often difficult to obtain or audit.

Additionally, structural separations might not be optimal public policy since it reduces the ability of the BOC to capture economies of scope that may exist in the joint provision of local access, switching, and enhanced services. To the extent that ratepayers benefit from economies of scope, they would thus be harmed by structural separation. Optimal policy strikes a balance between controlling undesirable behavior and capturing the benefits of economically efficient organizations. If the efficiencies foregone as a result outweigh the negative impact of cost shifting, cross-subsidization, or other anticompetitive behaviors that result from integrated production, overly strict separations rules can reduce total economic welfare.

Determining the most appropriate policy is not easy. Moreover, the correct policy may change over time depending on evaluations of welfare losses from cost shifting, cross-subsidization, and anticompetitive behavior, and the extent of potential economies

⁴ Structural separation creates a regulation-mandated holding company structure at either the BOC or RHC level.

of scope.⁵ For instance, the Federal Communications Commission (FCC) in its Second and Third Computer Inquiries (Computer II and III) investigated these issues. Computer II led to the imposition of structural separations to safeguard against cost shifting, cross-subsidization, and anticompetitive behavior. Computer III led to a relaxation of structural safeguards in favor of accounting safeguards when open network architecture (ONA) requirements were met.

Ambivalent Views

Unfortunately, both the RHCs and the state regulators exhibit some ambivalence with regard to holding company structures and various forms of separation. Regulators sometimes prefer structural separations because it may make cost shifting and cross-subsidization less likely or at least easier to detect. Yet they are alarmed by the explosion of unregulated subsidiaries which they fear will create new ways of harming the consumer. RHCs, on the other hand, work diligently to eliminate structural separations requirements for some services while simultaneously creating multiple unregulated subsidiaries for others. It appears, then, that neither the RHCs nor regulators view the current situation as optimal.

⁵ If regulators had complete faith in the ability of accounting safeguards to detect such problems, the choice would be easy. Unfortunately, accounting safeguards are not perfect. Although it is generally felt that structural safeguards have greater efficacy with respect to their ability to limit some of these abuses, they are not perfect, and imposition of structural safeguards will likely raise total costs of providing the range of services. Therefore, the choice of the optimum regime requires balancing of costs and benefits.

Objectives and Methodology

Objectives

This report addresses several concerns that state regulators have regarding the effect of holding company structures and affiliate relations on monopoly customers and competition. The questions addressed include:

- What authority do the states have over and how do they control affiliate relations?
- What kinds of abuses should regulators be particularly concerned about?
- How do structural and nonstructural separations compare as means of controlling abuses?
- What can be inferred about the regional holding companies' strategies from their corporate structures?
- Are there significant variations in the structures and strategies of the regional holding companies?

Methodology

The literature relating to the effect of holding companies was reviewed. In 1992, state regulatory commissions were surveyed to determine their powers, concerns, and activities relating to holding companies and affiliate transactions. The structures of the seven RHCs were studied. In addition, examples of RHC behavior that were alleged or found to be not in ratepayers' interest were collected.

Chapter 2 explains basic concepts of affiliate relations, holding company advantages and disadvantages, and structural and nonstructural separations. Chapter 3 presents various ways an RHC can use its structure and control of the BOC to create business advantages for itself or its subsidiaries. Chapter 4 discusses several tests for the existence of cross-subsidization. Chapter 5 presents a discussion of RHC structures and

possible reorganizations. The Appendix illustrates the recent organizations and structures of the RHCs. Chapter 6 raises some issues that arise because of holding company structures. Chapter 7 illustrates various regulatory policy options. Chapter 8 returns to the report's basic questions and offers policy suggestions and recommendations.

CHAPTER 2

HOLDING COMPANIES AND REGULATORY CONCEPTS

The purpose of this report is to consider: the effect of telecommunications holding company structures with specific reference to the regional holding companies formed as a result of the divestiture and restructuring of the former Bell System, and to discuss the efficacy and efficiency of structural and nonstructural separations as a means of curbing potential abuses of competitors and monopoly ratepayers. This chapter begins with brief explanations of basic concepts relating to holding companies, affiliate transactions, and regulatory concepts.

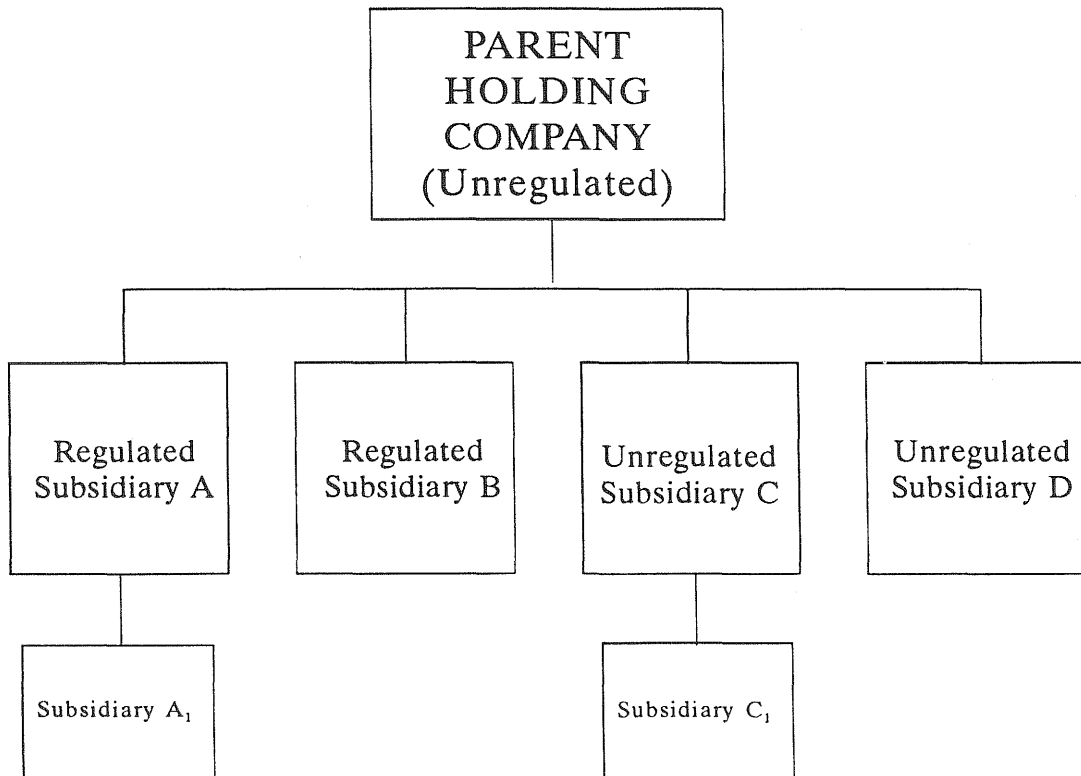
A holding company or parent company is a firm that is able to control or direct the policies and operations of one or more subsidiary firms by virtue of owning the equity of the controlled firms. Under the holding company structure, each subsidiary retains its own legal identity and may have its own legal liabilities. The wishes of the parent company's managers determine the actual extent to which subsidiaries are independent of each other and of the parent company; individual subsidiaries may have great or little autonomy.¹

A pure holding company does not produce goods or services for sale to the public; it derives its entire income from its subsidiaries by providing them with intermediate goods and services, and/or simply collecting their profits. A mixed holding company produces products or services in addition to owning the equity of its

¹ Although the subsidiary is a corporation with a separate legal identity, as opposed to an administrative department or division of the parent company, it exists and operates under the control of the parent. The parent can control the subsidiary's activities through various means: (i) it can control the subsidiary's board, and thus the subsidiary's management; (ii) the parent's executives can sit on subsidiaries' boards, or the subsidiaries' executives sit on each others' boards; (iii) the parent can impose contractual arrangements or restrictive agreements between it and its subsidiaries or between subsidiaries; (iv) the parent can dictate the subsidiaries' financial policies; and (v) the parent can promote constant business dealings among subsidiaries.

subsidiaries. A subsidiary may itself be structured as a holding company. In this case, the subsidiary is a subholding company, and the entire structure is a multilevel holding company.

All firms related to or controlled by the parent holding company are affiliates, regardless if they are on the same or different levels or branches of the corporate tree. This means that subsidiaries of different subholding companies that are themselves subsidiaries of a holding company are considered to be affiliates. An affiliate transaction is any exchange or transfer of goods or services, assets or liabilities, equipment, personnel, or information between affiliated firms (whether compensated or uncompensated). Figure 2-1 depicts an illustrative holding company structure.



Source: Authors' construct.

Fig. 2-1. Illustrative holding company structure.

In Figure 2-1, the Parent Holding Company has two regulated operating subsidiaries, A and B, and Subsidiary A has its own subsidiary, A₁. Also, the Parent Holding Company has two unregulated subsidiaries, C and D. Subsidiary C might be a service or finance subsidiary, serving Subsidiaries A and B. Subsidiary C has its own subsidiary, C₁, which deals with other affiliates and/or unaffiliated entities. Unregulated subsidiary D is a structurally separated provider of telecommunications services which, in conducting its business, purchases services from A and B. All of the various corporations, the Parent Holding Company and Subsidiaries A, B, C, D, A₁, and C₁ are affiliates of one another, and any transaction between any of them is an affiliate transaction.

Although their structures are considerably more complicated, each of the RHCs is a holding company with BOC and nonBOC subsidiaries. BOCs that have their own subsidiaries also qualify as holding companies. Some of the RHCs have numerous subsidiaries, each of which are affiliates of each other.² The volume and regularity of affiliate transactions is extensive.

Separations Concepts

In telecommunications one purpose of separations is to divide the total cost of operating the network among the all the services produced. This is because although there is only one physical telephone network, it is used simultaneously to provide many services. These include regulated and unregulated services, local and toll services (both interstate and intrastate), each with its own revenue stream. The network's total operating cost is divided or separated in order that each service be assigned an appropriate cost share and no service or class is unduly favored or discriminated against. Direct costs are separated and assigned to various services. Common and joint costs are allocated based on predetermined formulas or rules contained in cost-allocation manuals. This use of separations is depicted in Figure 2-2. Identifiable fixed and variable costs

² The structures of the individual RHCs are illustrated in the Appendix.

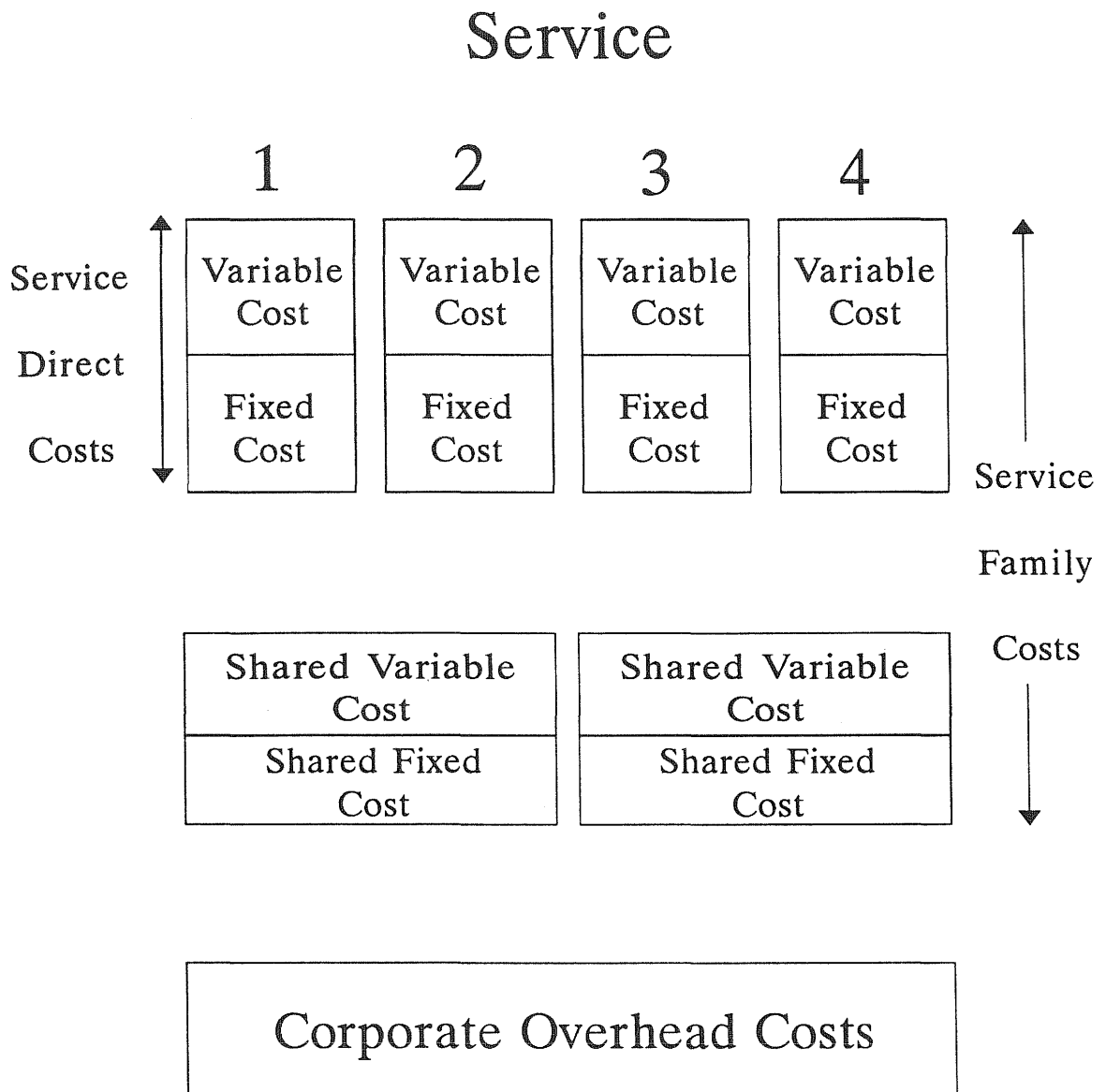


Fig. 2-2. Separations or cost allocation among services.

are directly assigned to services. Identifiable costs common to families of services are allocated within families in conformance with cost-allocation manuals. Similarly, cost-allocation manuals prescribe the means of allocating corporate overhead costs among families of services.

Another purpose of separations is to provide safeguards so that unregulated or competitive services are not subsidized by regulated services and, thereby, regulated ratepayers and competitors are not harmed. In this sense, separations function not to divide costs among various services but, rather, to insulate the regulated monopoly ratepayer from exploitation. This also helps protect competition. Nonstructural separations and structural separations are two methods that can provide such safeguards.

Nonstructural separations or safeguards depend on accounting rules and procedures to accomplish the task. For instance, Part 32 of FCC rules sets forth the Uniform System of Accounts (USOA) for telephone utilities. The USOA and other FCC Rules detail how costs will be divided between various services. Under nonstructural separations regulated and unregulated services may be provided through one unified organization, and individuals and capital equipment may be utilized to produce multiple services.

Structural separations or safeguards are a method of segregating the costs of producing certain services by requiring that they be produced in fully separate subsidiaries, each with its own corporate structure, capital, physical facilities and personnel. Structurally separated affiliates may share a common parent RHC with the BOC or they may be subsidiaries of the BOC itself. However, under this system, there are no shared inputs except to the extent that structurally separated affiliates purchase services from or sell services to regulated affiliates. For example, a cellular service provider affiliated with an RHC may be structurally separate from the BOC's local exchange operations yet purchase network access from the BOC. An RHC also might have a real estate subsidiary that rents space to a BOC.

Although most structural separations envision separate subsidiaries of the RHC or the BOC as producing certain separable services, the ultimate form of structural separations or safeguard is divestiture or spinoff separations under which ownership is

separated from the BOC so that former affiliates become completely independent. Two examples of this are the breakup of the former Bell System and the recent proposal by Pacific Telesis to spin-off its cellular, paging, and international operations to a new and completely separate firm.³

Pros and Cons of Structural and Nonstructural Separations

In general, structural separations were imposed on the BOCs because nonstructural separations was believed to be too weak to ensure that some of the costs of unregulated services would not be borne by regulated ratepayers⁴ and that unaffiliated providers of unregulated services would not be disadvantaged relative to affiliated providers. This does not necessarily mean that conscious or overt attempts would be made to do so but, rather, that nonstructural separations might lead to such effects often through subtle means and unplanned or unanticipated actions.⁵

Imagine a holding company as an office building. Nonstructural separations allow various functions to be handled in the same offices, often by the same people. Structural separations requires that some activities be done in different offices by different people, possibly on different floors or with a fire wall between offices. Divestiture or spin-off

³ See *Telecommunications Reports*, (April 20, 1992): 1-4 and Charles F. Mason, "Pacific Telesis Split Prompted by 'Revolution' in the Industry," *Telephony*, (December 21, 1992): 6 et seq.

⁴ The California Commission implemented procedures for tracking and allocating product development costs so ratepayers do not subsidize new programs and products, unless they also get a return on their investment. This action resulted from an audit of Pacific Bell's joint ventures, strategic alliances, and research and development programs that concluded that cross-subsidies had taken place in certain programs. See California Public Utilities Commission Decision 92-07-076 (July 22, 1992).

⁵ For instance, cost-allocation rules imposed under nonstructural separations might, unknowingly and unexpectedly, put unregulated services in a favorable position. This could be occur if excessive corporate overhead was allocated to regulated services, giving unregulated services somewhat of a free ride.

separations requires that the functions be handled in different buildings. In effect, structural separations is a form of regulatory firebreak designed to afford greater protection than provided by nonstructural separations.

This is not to imply that structural separations is always to be preferred. Although structural separations can eliminate some of the problems, they also create problems. Under structural separations the focus of regulatory concern shifts to consideration of transfer prices between regulated and unregulated affiliates and the question of whether such transactions are in the interest of the regulated affiliate. Another concern is whether transactions unduly benefit the unregulated affiliate at the expense of the regulated affiliate. This could occur if the regulated affiliate pays too much for services, if it is paid too little for its services, or if it takes actions that are not in its own best interest but provide benefits to an affiliate.⁶ In addition, the overhead costs of the parent organization might be unfairly allocated to the regulated affiliate.

A second problem is that under structural separations regulators may find it difficult to obtain information on the operations of unregulated subsidiaries that have affiliate transactions with the BOCs.⁷ For regulators the problem is that the holding

⁶ Regulators have traditionally focused on the fairness of transfer prices. A longstanding concern is whether unregulated affiliates are profiting at the expense of regulated affiliates. For example, the Wisconsin Commission found a violation of a 1989 order which limited affiliates' profits on sales to a LEC to no more than LEC's authorized rate of return at the time contract was entered. Between February 1989 and February 1991, the LEC was paying a service affiliate prices that resulted in returns to the affiliate of 23 to 25 percent, nearly twice the 13.5 percent return allowed the LEC. See *Telecommunications Reports*, (November 23, 1992): 3.

⁷ When NARUC attempted to investigate several of the RHCs the investigators found that access was denied or impeded to information that they considered vital to their assignments. See Rodney Blythe, *Summary Report on the Regional Holding Company Investigations*, (Washington, D.C.: National Association of Regulatory Utility Commissioners, September 18, 1986).

It is not clear that the situation has improved. More recent attempts to audit the RHCs have not moved as quickly as hoped, and much of the delay seems to be caused by concerns over access to confidential and proprietary information. One regulator,
(continued...)

company structure and structural separations may be used to evade or frustrate regulation. Regulators fear that the RHC can shift profits from the BOC to unregulated subsidiaries. Not only can such behavior harm ratepayers directly but, if such profits are used to benefit the RHC's subsidiaries facing competition, it harms them indirectly

A third problem is that structural separations may lead to inefficient production patterns. If regulators require that certain services be produced by separate subsidiaries, the RHC and BOCs may not be able to take advantage of economies of scope. These economies arise when the cost of a single firm producing several services jointly is less than the cost of several firms producing them independently. There are several reasons for the existence of economies of scope including economies of coordination and control, and economies of vertical or horizontal integration.⁸ Setting up separate subsidiaries to produce and market each product and service would inhibit the RHC's ability to capture economies and would raise total costs and, ultimately, rates.

It is not useful to compare fully integrated (nonstructurally separated) firms with nonintegrated (fully structurally separated) firms. Neither regulators nor the RHCs have any real reason to choose either strawman model. Structural separations reduces but does not eliminate some potential problems and it creates problems of its own. It is possible to improve nonstructural separations methods but there will always be some concern about potential abuses such as cross-subsidization and cost shifting. Multiproduct telecommunications firms exhibit a combination of structural and

⁷ (...continued)

Commissioner Stephen O. Hewlett of Tennessee, noted that "I understand that some of the [RHCs] are being very cooperative, and some others are being, if I may, very evasive in trying either to prevent, or disturb, or delay [the audits]." See *Telecommunications Reports* (November 23, 1992): 19.

⁸ These various types of economies may be considered separately or in combination. An example of economies of coordination and control is a case in which total costs are lower when one decision maker coordinates the various stages of production and marketing. Such economies arise when the cost of the firm's internal transaction mechanism is lower than the cost of using the external market. Ronald H. Coase considered the firm as a coordinating device in his classic article, "The Nature of the Firm," *Economica*, n.s., 4, no. 4 (November 1937): 386-405.

nonstructural separations. The choice facing regulators is the correct mix of the two. Perceived benefits of stronger safeguards provided by structural separations must be weighed against the resulting loss of efficiency, and the increased complexity and difficulty encountered in auditing affiliate transactions. Similarly, the increased efficiency of nonstructural separations must be weighed against the loss from a lower safeguard against cross-subsidization and anticompetitive behavior.

Advantages of Holding Companies⁹

Legal

The creation of separate subsidiaries may insulate the parent and/or other subsidiaries from the effect of legal liability and operating losses. Though such insulation and limits on liability are real, the advantage may not be large because a parent company that abandoned one of its subsidiaries would undoubtedly damage its own and its other subsidiaries' reputations. Subsidiaries operate under the umbrella of the parent's "full faith and credit." However, setting up separate subsidiaries may still be appropriate for startups in fairly risky markets.

Managerial

The ability to monitor the performance of managers and reward them based on individual performance may provide both a control device and an incentive system that leads to better overall profitability. Since holding company structures are one way to implement decentralized, profit-centered management, (in which lower level managers are allowed both greater autonomy and greater responsibility), the ability to monitor and

⁹ These advantages are from the firm's viewpoint. In some cases, factors that create advantages for the firm create difficulties for regulators.

reward managers based on performance may be enhanced by setting up separate subsidiaries with narrower missions.

Narrower missions created by separate subsidiaries may help capture economies of specialization so that a smaller group with a narrower focus performs better by itself than if it were a minor part of a larger, less-focused company. The team spirit useful in more competitive or entrepreneurial businesses may also be better fostered in separate subsidiaries. Also, if subsidiaries are in very different businesses, the necessary managerial, marketing, and technical skills may be specialized for each segment, or different corporate cultures and reward systems may be needed. Such differences in culture and reward systems are more easily handled in separate organizational units.¹⁰

Tax and Financial

There may be a tax advantage to having separate subsidiaries since the rate of tax on the first increments of corporate income is lower. However, if the parent owns at least 80 percent of the subsidiary it will most likely file consolidated tax returns.

Bonbright and Means also considered the ability of a holding company to engage in stock pyramiding.¹¹ In multilevel holding companies, stock pyramiding allowed In multilevel holding companies, a few investors in the ultimate parent company could control vast holdings with relatively little actual equity investment. A more modern

¹⁰ Although this discussion might seem to contradict the prior discussion of economies of scope, this is not the case. The two forces tend to operate simultaneously, acting in somewhat opposite directions. Senior managers, in choosing the optimal organizational design, should attempt to strike a balance between the two forces. Groups of operations with significant economies of scope should be closely integrated; those with minimal economies of scope should be separated.

¹¹ Stock pyramiding exists when a holding company issues debt and invests the proceeds in the equity of their subsidiaries. See James C. Bonbright and Gardiner C. Means, *The Holding Company: Its Public Significance and Its Regulation*, (New York: McGraw-Hill, 1932).

problem, especially under rate-of-return regulation, is the double leverage created when both the parent and the subsidiary have debt in their capital structures. Some analysts have argued that the use of debt at both levels of the firm reduces the cost of equity to the subsidiary, or equivalently, that some of the equity shown on the subsidiary books should really be treated as debt when determining the cost of capital and setting a fair rate of return. To do otherwise, they argue, would allow the parent to earn an equity return on funds for which it pays a debt rate.¹²

When setting rates for regulated subsidiaries, one way of resolving the double leverage problem is to use the consolidated capital structure and cost rates for the total company. However, as holding company structures becomes more diversified, with a greater proportion of unregulated and noncommunications subsidiaries, the use of a consolidated capital structure and cost rate becomes less advisable. Diversification into risky ventures may raise the holding company's consolidated cost of capital above the cost of capital for independent regulated telephone operations. If this occurs, the cost of capital to regulated telephone operations should be determined by the risk of regulated telephone operations and should be insulated from the risk of more competitive unregulated subsidiaries.

Regulatory

As noted above, the creation of unregulated subsidiaries may provide certain advantages to the firm, one of which is to hinder effective regulatory oversight. The records of the unregulated subsidiaries of the RHCs are not as accessible to regulators as those of the BOCs because the RHCs can make them difficult to obtain and because accounting systems may differ from those familiar to regulators (e.g., they need not

¹² For discussion of double leverage, see James C. Bonbright, Albert L. Danielson, and David R. Kamerschen, *Principles of Public Utility Rates* (Arlington, Virginia: Public Utilities Reports, Inc., 1988), 306-317; and Robert E. Burns, et al., *Regulating Electric Utilities with Subsidiaries* (Columbus, Ohio: The National Regulatory Research Institute, 1986), 127-158.

conform to the Uniform System of Accounts). Thus, a holding company may be able to shift profits from regulated to unregulated segments by inflating and/or shifting costs.

The holding company structure may also be used to shift potentially profitable business segments from the regulated subsidiary to an unregulated subsidiary, or to keep regulated subsidiaries from entering profitable markets, reserving such segments for unregulated subsidiaries. In addition, the RHC may indulge in anticompetitive behavior by inflating costs to rivals. This could be accomplished by creating barriers to entry, including information barriers. Another means of accomplishing this is by engaging in subsidization of unregulated and/or competitive services by regulated, monopoly services. This could happen if an excessive proportion of total overhead was allocated to the regulated BOC. Because it would not be allocated sufficient overhead costs, the costs of the unregulated subsidiary would be lowered. Also, the stable profits of the local exchange operations can be used to fund unprofitable competitive services until competitors drop out.

Disadvantages of Holding Companies

Cost

Holding companies are not necessarily cost minimizing structures. Under a holding company structure it should not be possible to produce a given mix of output at lower cost than under an integrated structure. This is because there are costs of setting up and administering subsidiaries and some economies of scale and scope may be lost. The net effect is uncertain because this disadvantage tends to be offset by the advantage resulting from being able to give individual units more focus and autonomy. Operations exhibiting strong economies of scope are likely to benefit from integration and operations without such economies of scope can be more independent. Moreover, the costs of coordinating and administering multiple independent subsidiaries may become significant.

Administrative

Agency problems are created in holding companies because managers of individual subsidiaries can become more interested in their own subsidiary's performance than in that of the total company. This can lead to noncooperative behavior and a lack of congruent goals. The problem escalates when the subsidiary's managers have considerable autonomy and are rewarded on their operation's performance rather than on total firm results. The job of the holding company management is to balance the positive incentive effects flowing from decentralization against the negative effects of a loss of common perspective.

A Paradox

In regulated firms, production under structural separations will usually cost more than under nonstructural separations, except when the expense of internally separating costs among services is greater than the expense of maintaining physical and corporate separations. This could happen if unrelated outputs create no economies of scope and joint production creates coordination and control problems. Structural separations should be imposed only if the advantages outweigh the costs. Advantages of structural separations include: easier identification and assignment of costs, revenues, and investment to various services, easier monitoring for anticompetitive behavior, easier enforcement of arms-length transactions rules, and easier control of information flows.

Structural separations will tend to increase total costs although there may be situations in which the incremental cost of specific services is greater than the stand-alone cost. This could result from congestion effects and/or coordination diseconomies. This depends on the relation between various operations and the core business, and the adaptability of human and organizational resources to various tasks. The history of the formation, performance, and breakup of some conglomerate firms may shed some light

on this. Firms that once touted the benefits of size and conglomeration are now streamlining their operations to concentrate on their core businesses.¹³

Regulators' Views

Regulators often believe that the only reason utilities want to establish subsidiaries is to avoid regulation so that they can extract and use monopoly rents.¹⁴ However, nonregulated firms also establish subsidiaries and affiliates. There, thus, must exist sound business reasons for establishing subsidiaries. Among these reasons are the positive effects of decentralization. Regulators may be afflicted by a kind of ambivalence concerning holding companies and/or structural separations. On one hand, they favor structural separations in order to reduce the likelihood of cross-subsidization and/or anticompetitive behavior; on the other hand, they are concerned because structural separations may allow siphoning off of profits from the regulated segment and may limit regulatory access to needed information. Both fears may be justified and the crucial question is what activities are best performed under structural and under nonstructural separations? The following is an example of regulators' concern:

D.C. PSC Chairman Howard C. Davenport said it is 'evident that C&P [Chesapeake & Potomac Telephone Co.], under Bell Atlantic's ownership, is losing touch with its basic mission ... The PSC is concerned that Bell Atlantic's ownership adversely affects C&P's responsiveness to the District

¹³ Many firms that diversified into businesses that were dissimilar to their core business have attempted to regain their focus. These include Sears, Roebuck & Co., Merrill Lynch, and IBM, each of which has retrenched to focus on core operations. Sears and Merrill Lynch each disposed of real estate operations. IBM restructured a personal computer division as a separated subsidiary and sold its printer manufacturing business. Other firms are still experimenting with diversification. For instance, Ford Motor Company, General Electric, and General Motors have ventured into the credit card business.

¹⁴ In a declining-cost industry, a holding company structure may facilitate the extraction of monopoly rents and increase the profitability of established services. The structure may keep regulators from detecting these behaviors.

of Columbia community.' ... company officials have denied requests to examine Bell Atlantic's books to determine if it is overcharging its affiliated company for a range of services, and whether D.C. telephone users are paying for activities unrelated to local phone service. ... the PSC is 'concerned' that Bell Atlantic 'does not allow C&P to resist costs imposed on it by Bell Atlantic and inhibits C&P from making business judgments that are in the best interests of District ratepayers.'¹⁵

¹⁵ See *NARUC Bulletin*, (February 3, 1992): 7.

CHAPTER 3

STRATEGIC BEHAVIOR AND AFFILIATE TRANSACTIONS

Introduction

This chapter discusses several aspects of strategic behavior with which utility holding companies can manipulate markets to their advantage. The purpose of the discussion is to illustrate behaviors that can harm ratepayers or competitors. Examples of behaviors are drawn from utilities and other industries. The topic of cross-subsidization is specifically addressed in the next chapter.

Certain behavioral concepts provide insights into the decisions of firms, whether regulated or unregulated. Under the assumption of profit maximization, decisions regarding price and production quantities are relatively simple for the single product firm, but are much more complex for a vertically and horizontally integrated multiproduct firm.¹ A rational multiproduct firm will maximize total profits across product lines even though that might imply that profits are not maximized for individual products or operations. Myopic profit maximization for individual products or operations may lead to suboptimal outcomes for the firm as a whole. Therefore, management will make decisions for the good of the total organization and will manage individual operations to contribute to overall performance, and corporate strategy will focus on making the whole of the organization add up to more than the sum of its individual parts.²

¹ See Jack Hirshleifer, *Price Theory and Applications* (Englewood Cliffs, New Jersey: Prentice-Hall, 1976), 225-248.

² This behavior may be likened to that of a baseball team. Sometimes players are instructed to try for a sacrifice bunt. The player making a successful sacrifice may not get on base, and his batting average is lowered, but the team's overall situation is improved.

This behavior will occur regardless of structure; a firm organized as a holding company with separate subsidiaries will operate to benefit the total organization as will an integrated firm organized into departments or divisions. Although regulated utilities operate under different constraints than unregulated firms, they will make decisions that benefit the overall organization. The results of this behavior may be somewhat different for a regulated firm than for an unregulated firm. However, the behavioral assumptions and analyses apply to both.

Strategic Behavior: Output and Pricing Decisions

A multiproduct firm, whether regulated or unregulated, has a number of tools and business practices available to manage individual units for the benefit of the total organization. Strategic pricing which has two basic determinants, cost or supply conditions and demand conditions, is one of the available tools.³ Choosing the quantity to produce and/or prices for its outputs are two of the most important decisions a firm makes. To determine the correct (profit maximizing) output or prices, the firm must know its costs since, without such information, it cannot know whether revenues cover costs. Sunk or fixed costs are not relevant to strategic pricing decisions when the purpose is to maximize profits, market share, and market power.⁴ This is true for regulated and unregulated firms and for holding companies or integrated firms; the specific methods vary with circumstance, however the goals are the same.

³ See Thomas T. Nagle, *The Strategy and Tactics of Pricing* (Englewood Cliffs, New Jersey: Prentice-Hall, 1987) and Kent B. Monroe, *Pricing: Making Profitable Decisions* (New York: McGraw-Hill, 1990).

⁴ Economists often consider the incompatibility of simultaneously maximizing profits and market share. See William J. Baumol, *Economic Theory and Operations Analysis*, 4th edition (Englewood Cliffs, New Jersey: Prentice Hall, 1977), 377-386. Simultaneous maximization of profits and market share is incompatible in a static world. However, for a multiproduct firm operating in a dynamic environment, these goals may be simultaneously compatible. For instance, a firm may give up some profits in the short run to gain market share and market power that will result in greater long-run profits.

Correct pricing decisions must reflect forward-looking costs, those that the firm will incur in the future as the result of the decision under consideration. To achieve long-term viability, a firm must cover total costs including both fixed cost and variable or incremental cost. In strategic pricing, fixed or sunk costs are not ignored. However, for many pricing decisions they are not relevant.⁵ Incremental costs are more appropriate for strategic pricing decisions because they are forward looking and measure changes in total cost due to changes in the quantity produced or some other decision variable such as product quality.⁶

Determining incremental cost is one of the first steps in strategic pricing. Since it considers only supply conditions, knowledge of incremental cost does not, by itself, give sufficient information to set price. It does, however, indicate the margin between price and incremental cost, and this price-cost margin indicates the product's ability to contribute to fixed costs and profits. The process of determining incremental cost also forces decision makers to consider which costs are avoidable and which are not.⁷

When setting profit-maximizing prices, the firm also needs to know the demand conditions for its products, particularly elasticity of demand. Elasticity of demand measures consumer response to a change in the price of a product. Several factors affect the elasticity of demand including: the closeness and availability of substitutes, the extent

⁵ Nagle, *Strategy and Tactics*, 37.

⁶ This discussion uses incremental cost synonymously with marginal cost.

⁷ Strategic pricing is distinguished in this discussion from the view of price setting presented in microeconomic theory (see Monroe, *Pricing*, 24-29). The difference is subtle but important. Microeconomic theory is concerned primarily with the behavior of markets and the movement of prices and quantities toward their equilibrium values in those markets. In microeconomic theory, a comparison of market price and marginal or incremental cost allows the firm to choose its profit-maximizing output, and, if there are no entry barriers, market forces should prevent prices from deviating far from marginal costs. Microeconomic theory views deviations of price from marginal cost as being inefficient. Conversely, the goal of strategic pricing is to maximize profits by creating positive deviations of price from marginal or incremental costs, taking into account all of the products of the firm.

to which the product is a necessity, the importance of the product to achieving other ends, and the dollar value of expenditures on the product relative to total income.⁸

Demand for the firm's products may be elastic or inelastic. If demand is elastic, consumers' response to a change in price is relatively large; if demand is inelastic, consumers' response to a change in price is relatively small.⁹ Elasticity of demand has important revenue effects when prices are changed: if demand is elastic an increase in price will lead to an decrease in the total revenue; conversely, if demand is inelastic, total revenue will increase as price increases. If demand is unit elastic, revenues will not change when price varies.

Knowledge of both the elasticity of demand and incremental cost provide the firm with a powerful pricing tool, the inverse-elasticity rule. The inverse-elasticity rule states that in order to maximize profits, products with inelastic demand should be priced further above incremental costs than products with elastic demand.¹⁰ This ensures maximum contribution to fixed costs and profits. It also provides the multiproduct firm

⁸ See Nagle, *Strategy and Tactics*, 58-72 for a more complete discussion.

⁹ If the product's own price elasticity exceeds 1.0 in absolute value, demand is described as elastic, and a 1-percent increase (decrease) in price leads to more than a 1-percent decrease (increase) in quantity demanded (other things remaining equal). If the own price elasticity of demand is less than one in absolute value, demand is inelastic, and a 1-percent increase (decrease) in price will result in less than a 1-percent decrease (increase) in quantity demanded. If own-price elasticity of demand equals 1.0 in absolute value, demand has unit elasticity, and a 1-percent increase (decrease) in price will result in a 1-percent decrease (increase) in quantity demanded.

¹⁰ The inverse-elasticity rule can help price-discriminating monopolists maximize profits by raising prices where demand elasticity is low. In regulation, the rule is used in developing Ramsey prices which are viewed favorably by some economists. See William J. Baumol and David F. Bradford, "Optimal Departures from Marginal Cost Pricing," *American Economic Review* 60, no. 1 (March 1970): 265-83. Others view Ramsey pricing less favorably. See Michael Sheehan, "Why Ramsey Pricing is Wrong," *Journal of Economic Issues* 25, no. 1 (March 1991): 21-32.

with a cushion to face challenges in any of its markets.¹¹ If a firm is challenged in a market, it can lower the price in that market toward incremental cost. To maintain its profits, it can raise prices in markets in which it is not seriously challenged and where demand is inelastic.

Public Policy Toward Monopoly

In general, market mechanisms prevent firms that use strategic pricing principles from monopolizing markets. However, if strategic pricing and other strategic plans are successful, market failures can occur, and markets may be dominated by a single firm or by small groups of firms.¹² When there is extreme market failure federal laws may be applied to remedy the situation.¹³ One consequence is to bring the force of law to bear when strategic behavior, including strategic pricing, results in monopolization of a market or inhibits competition. Federal laws may be applied whether the firm is a holding company or an integrated firm. However, the courts view the behavior of small and large firms differently. Actions and activities that are acceptable for small firms may not be acceptable for dominant firms or monopolists.¹⁴ A small firm employing strategic pricing principles will not be subject to the same legal remedies as a large firm that successfully employs those same principles.

¹¹ This is often referred to as "deep pockets," a concept that will be discussed in more detail later.

¹² If a market is not reasonably competitive, the price will not approach marginal cost and the resulting allocation of resources will not be efficient (too little will be produced and the price will be too high). Such an outcome can be considered to be a form of market failure.

¹³ The most commonly applied laws are the Sherman Antitrust Act of 1890, the Clayton Act of 1914, the Federal Trade Commission Act of 1914 as amended by the Wheeler-Lea Act of 1938, the Robinson-Patman Act of 1936, and the Celler-Kefauver Act of 1950.

¹⁴ H. Craig Peterson, *Business and Government*, 3rd edition (New York: Harper & Row, 1989), 104.

Public utility regulation deals with essentially the same issues as federal antitrust laws; the difference is that systemic market failure is assumed in utility markets. Although public utility regulation may serve other public policy goals, it can serve as a surrogate for competition and as an alternative to antitrust enforcement. Although antitrust enforcement views monopoly as being inherently bad, public utility regulation views monopoly as being good when subject to social control.

Strategic Pricing by Telephone Utilities

Telephone utilities will not behave differently than unregulated firms unless constrained by regulation, and they will attempt to apply strategic pricing when allowed to do so.¹⁵ Two regulatory actions enhance the ability of telephone utilities to apply strategic pricing: (1) adoption of long-run incremental-cost (LRIC) pricing and (2) approval of price flexibility. Rate-of-return sharing is an added bonus for the company. Regulators could take these actions and telephone utilities still would not have as much latitude as unregulated firms with similar market power. However, the utilities should be able to successfully implement strategic pricing.

Incremental-cost pricing, price flexibility and rate-of-return sharing allow telephone utilities to achieve most strategic business objectives.¹⁶ These options give utilities the ability to earn a higher rate of return. A higher rate of return makes the regulated businesses more attractive than the unregulated businesses. This reduces incentives for the holding companies to set up separate subsidiaries within their core business. Also, when economies of scale and scope are present, the telephone utility's

¹⁵ See Robert G. Harris, *Principles of Telephone Pricing*, presented to Pacific Telephone Company, July 12, 1982 and U S WEST's Strategic Pricing Plan presented to the Colorado Public Utilities Commission in Docket No. 92M-039T.

¹⁶ Commissioners and staff will find that obtaining copies of telephone utilities' strategic business plans is enlightening. The business plan's discussion of telephone markets and utility positions in those markets will generally be more frank than in other forums.

production process will be more efficient as an integrated company than as a holding company with fully separated subsidiaries. This provides the utility with a competitive advantage and it makes it easier to earn the revenue requirement.

Price Caps as a Strategic Pricing Tool

Because they allow the utility some pricing flexibility, price caps can be viewed as strategic pricing tools.¹⁷ If telephony is a declining cost industry, price caps allow sufficient latitude for the utility to execute much of its pricing strategy. Price-cap regulation reduces incentives to form separate subsidiaries because the utility can approximate its strategic goals and increase the earnings from its core businesses.

Under price caps, one reason utilities can approximate their strategic-pricing goals is that in a declining cost industry a closer approximation of the inverse-elasticity rule can be applied over time. As an example, assume that a utility chooses not to change any prices in a market basket over a period of three years and costs are declining. Each year the price gets further away from incremental costs. If the utility exercises its option to change prices plus or minus 5 percent each year, a 35 percent price differential between any two services can be achieved over a three-year period.¹⁸

¹⁷ The term "price cap" covers a wide variety of plans each of which has certain common features. The FCC's price-cap plan is an example. Telephone services are divided into market baskets of relatively homogeneous services. Prices within a basket can be increased or decreased 5 percent relative to the cap. The price cap for each group is adjusted for inflation, productivity gains, and certain exogenous changes. Additionally, the utility is allowed to earn more than its authorized return on a shared basis with its customers. A pure price cap mechanism would allow unlimited price flexibility within a market basket so long as the basket average did not exceed the cap. Due to concern about strategic pricing, the FCC did not adopt a pure price cap plan. See Federal Communication Commission, *In the Matter of Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket No. 87-313 (October 4, 1990): 8.

¹⁸ Suppose that two prices are initially equal. If one price is increased by 5 percent per year and the other decreased by 5 percent per year, one price will be 35 percent above the other after three years.

If one service faces elastic demand and the other faces inelastic demand, strategic pricing would call for the price of the service with elastic demand to move toward marginal or incremental cost. Meanwhile, the price of the service with inelastic demand would be further removed from marginal or incremental cost. Thus, price caps are not a deterrent to strategic pricing. This is particularly true because price caps may provide mechanisms for automatic annual rate increases for monopoly services (within the cap) without specific commission approval.¹⁹

Regulatory Response to Strategic Pricing

Why should regulators be concerned with strategic pricing? They should be concerned with strategic pricing for essentially the same reasons that federal laws are concerned with strategic pricing. Broadly speaking, strategic pricing behavior reduces social welfare, restricts competition, and redistributes income from consumers to producers. This happens regardless of whether the utility is structured as a holding company or is structurally integrated.

Regulators should be attuned to strategic pricing considerations since systemic market failure is assumed for most telephony markets. If they were not operating under regulation, many telephony markets would meet the requirements for antitrust actions.²⁰ Strategic pricing works against the following goals and objectives of regulation:²¹

¹⁹ The usefulness of price caps is discussed in Ingo Vogelsang, "Price Cap Regulation of Telecommunications Services: A Long-Run Approach," in Michael A. Crew, editor, *Deregulation and Diversification of Utilities* (Boston, Massachusetts: Kluwer Academic Publishers, 1989), 21-42. See also Ingo Vogelsang and Jörg Finsinger, "A Regulatory Adjustment Process for Optimal Pricing by Multiproduct Monopoly Firms," *Bell of Economics* 10, no. 1 (Spring 1979): 157-171.

²⁰ Historically, the broad criteria for initiating antitrust enforcement are collusive or monopoly behavior that substantially lessens competition. For examples of criteria, see Peterson, *Business and Government*, 192-208; and William G. Shepherd, *Public Policies Toward Business*, 7th edition, (Homewood, Illinois: Richard D. Irwin, 1985), 122-132.

²¹ This is a list compiled by the authors. It is compatible with other lists such as in James C. Bonbright, *Principles of Public Utility Rates* (New York: Columbia University Press, 1961).

- (1) Regulation ensures that utilities have the opportunity to be financially viable.
- (2) Regulation prevents the utility from earning monopoly profits.
- (3) Regulation keeps the utility from exercising its monopoly power.
- (4) Regulation controls undue price discrimination, especially for the most vulnerable consumers.
- (5) Regulation prevents cross-subsidization.
- (6) Regulation requires adequate quality of service.
- (7) Regulation can encourage innovation.
- (8) Regulation encourages the transition to competition.

These goals are essentially the same as those reflected in federal and state policies toward businesses. The difference is that regulation of telephony begins with the assumption of market failure and is considered to be in the public interest. Moreover, because of systemic market failure, a utility has a greater probability of achieving its ultimate strategic goals than does nonutility businesses.

Strategic pricing and other activities place the utility at odds with at least five of the above regulatory goals. Strategic pricing is helpful, or at least neutral, in ensuring that the utility has an opportunity to earn its revenue requirement, encourage innovation, and require adequate quality of service. However, strategic pricing places the utility at odds with the goals of: preventing monopoly profits or keeping the utility from exercising its monopoly power, controlling undue price discrimination and/or cross-subsidization, and encouraging the transition to competition. Strategic pricing can allow the utility to earn monopoly profits, particularly if unregulated separate subsidiaries are involved and the utility is allowed earnings above a normal return. Indeed, one of the goals of strategic pricing is to gain monopoly power.²²

²² There are various ways of enhancing monopoly power. One is to limit regulation. Strategic pricing can be used to promote policies that would increase the firm's market power. For instance, it is alleged that a BOC's attorney told the president of a cable television company that if the cable company did not support the BOC's deregulation

(continued...)

Strategic pricing will lead to price discrimination. An example of this tendency was AT&T's TELPAK tariff. TELPAK was a bulk private-line service offering substantial discounts to large users. In Docket 79-246, the FCC found that AT&T's intention was to segment markets and offer substantial discounts to users with high demand elasticities. AT&T offered essentially the same services and facilities under different rate structures. However, it disguised the offerings so that they could not easily be recognized and compared. The action by AT&T was characterized as the efforts of a dominant carrier discouraging users from constructing their own private communications systems and discouraging market entry of competing common carriers through strategic rate and rate structure adjustments.²³

Strategic pricing does not necessarily lead to cross-subsidization but it is a likely outcome.²⁴ Prices for the least elastic services will be increased and prices for the most elastic services will be decreased. This penalizes those consumers with the fewest options. Therefore, the inverse-elasticity rule places the greatest burden on those classes of consumers who have the fewest options and the greatest need. This is precisely one of the situations that regulation is designed to prevent. In addition, strategic pricing is specifically designed to discourage competition and it has the greatest probability of success when instituted by an already dominant firm.

²² (...continued)

efforts, the BOC would put it out of business. Thus, the threat of strategic pricing is alleged to have been used to build support for policies that would enhance the BOC's market power. See the testimony of Stephen G. Kniffin, in Case No. 6093, before the Colorado Public Utilities Commission.

²³ See Walter G. Bolter, *Telecommunications Policy for the 1980s: The Transition to Competition* (Englewood Cliffs, New Jersey: Prentice-Hall, 1984), 480. Price discrimination itself is not necessarily bad. The problems occur when cross-subsidies exist, when rates for some services are increased to support lower rates for other services, or when competition is stifled.

²⁴ Whether cross-subsidization occurs depends upon the definition of costs. Cross-subsidies are discussed in Chapter 4.

Applied Business Strategy

The vertically and horizontally integrated firm, whether structured as a holding company or not, has other means of controlling or monopolizing markets. Means of control commonly discussed in industrial organization texts include: bottleneck facilities, reciprocity, forbearance, deep pockets (particularly when coupled with strategic pricing), and tied contracts and/or exclusive dealing.²⁵

Bottleneck Facilities

Bottleneck facilities occur when one firm controls an essential input required by its rivals. The firm controlling the bottleneck can put a price squeeze on downstream rivals. The Alcoa case is an example. Alcoa produced and sold both aluminum ingots and rolled aluminum sheets. Its position as the dominant producer of ingots meant that other aluminum sheet rollers had to purchase its ingots. Alcoa took advantage of its bottleneck position by charging high prices for ingots and low prices for rolling ingots into sheets. Thus, Alcoa was able to profit from sales to competitors who bought their raw materials from Alcoa. This made it difficult for Alcoa's competitors to compete. Another example of a bottleneck facility comes from the airline industry. American Airlines owns Sabre, a computerized reservations system used by many independent travel agents. Other airlines have complained that this gives American an unfair advantage.

In telephony, the local switch is a classic example of a bottleneck facility. BOCs provide local exchange service, as well as intraLATA long distance service. Other

²⁵ This is not a complete list of federal antitrust and merger policy issues. Other areas of concern include boycotts, bribing employees of vendors and customers, business espionage, disseminating derogatory information regarding rivals, harassing competitors through protracted litigation, selling products below cost with predatory intent, and inducing employees of rivals to break their employment contracts. Although such issues may arise, they are not commonly faced by regulators.

intraLATA long distance providers require access to the local exchange to serve their customers. AT&T's predivestiture use of bottleneck facilities to thwart competition from MCI is well documented. AT&T first refused interconnection with MCI. When the FCC ordered AT&T to interconnect, AT&T charged MCI such high prices that MCI's services were excluded from the market.²⁶ More recently, the Ohio Supreme Court ruled that Ohio Bell charged Allnet Communications Services unjustly discriminatory access rates while providing inferior access services, as compared to those provided to an Ohio Bell affiliate.²⁷

Bottleneck facilities may be one of the greatest obstacles to the transition to competition in telecommunications. Most firms competing with BOC affiliates must, at some point, interconnect with the public switched network. Low-quality interconnection or a high-priced interconnection can place the rival at a competitive disadvantage. Providing an affiliate with a favorable price or a better interconnection arrangement can create an overwhelming advantage.

The Texas Commission initiated an investigation into allegations that a BOC engaged in anticompetitive and discriminatory conduct favoring the voice messaging affiliate. An unaffiliated voice messaging firm claimed that services it obtained from the BOC began acting sporadically. The unaffiliated firm claimed that it had lost a significant number of customers as a result. It also claimed that BOC customer service representatives disparaged its voice mail services. The unaffiliated firm also argued that it is inequitable for the BOC to locate the equipment of an affiliated voice mail provider in its central offices while denying competing firms the right to do likewise. The Commission's General Counsel's office expressed concern that technical difficulties were not corrected in a timely manner in order to provide a competitive advantage to an affiliated entity. The General Counsel's office also noted that the BOC provided

²⁶ See Steve Coll, *The Deal of the Century: The Breakup of AT&T* (New York: Atheneum, 1986).

²⁷ *Allnet Communications Services, Inc., vs. Pub. Util. Comm.*, 38 Ohio St. 3d 195; 527 N.E. 2d 840; (1980).

services to the affiliate that it did not provide to others and had not asked to provide. In addition, the affiliate received some preferential pricing which might have given it a cost advantage over its competitors.²⁸

Technology can also present a bottleneck. A former Bellcore employee alleged that Bellcore and the RHCs conspired to put unnecessary technical standards on ISDN. Standards were supposedly protective but were in fact intended to prevent competition.²⁹

After divestiture, the stress placed on equal access for interexchange carriers (IXCs) is one example of the importance of bottleneck facilities. MCI continues to bring this issue before regulatory commissions examining the pricing of intraLATA toll service. Pay telephone owners, answering services, information providers also are affected by the competitive implications of bottleneck facilities.

Pricing of bottleneck facilities is a major cost of service issue. Many telephone services are characterized by economies of scale thus an increase in output causes a decrease in unit costs. This creates the issue of how the benefits of declining costs should be divided among various services and customer groups.

Reciprocity

Reciprocity occurs when a firm favors its customers when selecting suppliers for other phases of its operation. An interesting example of reciprocity arose when two officials of the Armour Company invested in a firm that manufactured gears for the railroad industry. In routing Armour's meat shipments the officials gave preference to railroads that purchased gears from the gear manufacturer in which they had an interest. Within a six-year period, the gear manufacturer's market share increased from 1 percent to 35 percent.

²⁸ See *Telecommunications Reports*, October 19, 1992, 6.

²⁹ See *Telecommunications Reports*, November 30, 1992, 21-22.

The Japanese zaibatsu or keiretsu is an example of reciprocity. These are groups of firms that operate in different markets. One of the firms may be in electronics, another in automobiles, another in heavy machinery, usually with a major bank as the coordinator. Although technically independent, the firms within a group often participate in cross-ownership of one another's stock so that a community of interest is formed.³⁰ It is to be expected in such situations that members of a group will prefer to do business with one another, look after one another's interest, and tend to exclude nonmember firms from business dealings. Nonmember firms may also be reluctant to deal with members of a group. In addition to providing Pepsi products, Pepsico owns Pizza Hut, Taco Bell, and Kentucky Fried Chicken. Other fast food organizations (Wendy's, MacDonalds, etc.) may be reluctant to serve Pepsi products because purchases of Pepsi products may benefit Pepsico's fast food operations.³¹ The adage, "the friend of my enemy is my enemy," may be at work in these situations.

It does not take a strong imagination to envision an RHC as a form of keiretsu, arranging its operations to benefit the group and to disadvantage or exclude outsiders. Not only is there a natural tendency to take actions that benefit the RHC or its affiliates, but, during their careers, managers may move back and forth between regulated and unregulated operations. Ultimately, all the RHC's operations whether regulated or unregulated are on the same team. This may create relations among various operations that cannot be duplicated by unaffiliated firms. If managers of an unregulated affiliate have worked with and know the managers of the BOC, they may have an access advantage that is simply not available to others.

³⁰ The term zaibatsu usually refers to preWorld War II trading groups that were disbanded after 1945. Keiretsu are more modern and less formal versions of zaibatsu. See Yusaku Futatsugi, *Japanese Enterprise Groups*, Anthony Kaufman, translator, (Kobe, Japan: Kobe University School of Business Administration, 1986) and Hesna Genay, "Japan's Corporate Groups," Federal Reserve Bank of Chicago *Economic Perspectives* 15, no. 1 (January/February 1991): 20-30.

³¹ Pepsi arranged to be the sole supplier of soft drinks at the 1992 Ohio State Fair. Wendy's and White Castle refused to serve Pepsi products and withdrew from the fair. Pepsico's own fast food marketers then took over.

Another type of behavior of concern to regulators occurs when a regulated utility provides an advantage to an unregulated affiliate. An example is described in a California Public Utilities Commission audit of Pacific Telesis. The BOC, Pacific Bell, was found to have referred customer inquiries regarding purchasing telephones to its unregulated telephone sales affiliate. Furthermore, Pacific Bell had not made customers aware of other available telephone sellers.³² In another instance, a BOC sold inside wiring as a part of a basic service package, but it did not clearly explain to customers that inside wiring was an optional service that could be purchased from other vendors.³³

Forbearance

Forbearance is refraining from active competition in certain markets. Horizontally and vertically integrated multiproduct firms may face each other as rivals in a tangled web of markets and they may also interact as customers or suppliers. Forbearance is difficult to detect and it is even more difficult to conclusively prove because unambiguous empirical evidence will seldom be available. However, when forbearance does exist in regulated industries, it will decrease competition and increase rates.

Some controversy exists regarding the extent of forbearance in U.S. markets. F. M. Scherer considers forbearance possible but does not consider it a widespread problem.³⁴ Does forbearance exist in telephony? There is not any conclusive evidence that it does. However, given the multiple relationships between AT&T, the RHCs, and the BOCs, there could be. In its role as an IXC, AT&T is the largest single customer for

³² California Public Utilities Commission, *Audit Report on Pacific Telesis* (July 11, 1986): 12-19.

³³ This occurred in Pennsylvania. See *Wall Street Journal*, April 12, 1990, A4.

³⁴ F. M. Scherer, *Industrial Market Structure and Economic Performance* (Chicago: Rand McNally, 1970), 280.

most BOCs, and the BOCs are large purchasers of equipment from AT&T's subsidiary, Western Electric.³⁵

Deep Pockets

Deep pockets refers to a general advantage accruing to relatively large diversified firms compared to other market participants.³⁶ The very size of large, diversified enterprises may create a superior resource base to draw upon (the resource base could include managerial talent, engineering expertise, and name recognition) and may provide better access to capital markets (when compared with smaller, less-established rivals). Such advantages may be difficult to overcome. Sievers and Albery claim that in 1989 AT&T's advertising expenses were \$592 million, an increase of \$29.8 million over 1988 advertising expenditures. Sievers and Albery also claim that AT&T's advertising expenditures were approximately equal to the combined total earnings of its two largest

³⁵ In addition to customer/supplier relationships, AT&T and the RHCs probably have a large percentage of common stockholders. At divestiture, AT&T's stockholders retained their shares in AT&T and received shares in each of the RHCs so that all eight firms initially had exactly the same owners. Since then, some individuals and institutions have undoubtedly shifted their holdings, but the eight firms continue to be the most widely held of all common stocks. Although there is not any direct evidence of common ownership, there is likely to be considerable overlap. Whether this creates a community of interest that figures in management decisions is uncertain.

Evidence against forbearance includes AT&T's recent alignment with McCaw Cellular. This alliance is viewed by some analysts (and by the RHCs) as a move against its former progeny. Also, the RHCs would like to have the line-of-business restrictions that prohibit them from manufacturing telephone equipment and providing interLATA toll service lifted. If such restrictions were lifted, the RHCs would have greater freedom to compete with AT&T and with each other.

³⁶ Deep pockets is analogous to the "gambler's ruin" problem in which two gamblers play a fair (even odds) game until one runs out of chips. The player with the largest initial stock of chips is favored to win because he is better able to withstand an unfavorable sequence of outcomes.

interexchange market rivals, MCI and US Sprint.³⁷ Diversification also means that the firm's survival does not depend on always earning a profit from each product or operation. Deep pockets can cover a variety of corporate behaviors. It can include such behavior as cross-subsidization, selective price cutting, and costly advertising and marketing campaigns. A large, diversified firm may also create better opportunities for cost shifting because it has more places to shift costs.

The existence of deep pockets may also make predatory pricing more feasible. Predatory pricing occurs when a firm holds its price below the cost of a rival until the rival is driven out of business or purchased on favorable terms. Predatory pricing is illegal and it is not thought to be widespread. More complex and sophisticated strategic pricing is more common. Nonetheless, predatory pricing does occur.

The most famous example of predatory behavior involved the old Standard Oil Company.³⁸ Standard Oil engaged in a number of business practices designed to monopolize the oil industry. It secured discriminatory rail freight rates and rebates, and it manipulated the supply of crude oil through the control of pipelines. It engaged in business espionage and price warfare waged both overtly and secretly through bogus independent distributors. When necessary, Standard Oil resorted to predatory pricing to drive competitors from business or force them to merge on terms favorable to Standard Oil.³⁹

³⁷ Mark Sievers and Brooks Albery, "Strategic Allocation of Overhead: The Application of Traditional Predation Tests to Multiproduct Firms," presented to Rutgers University Advanced Workshop in Regulation and Public Utility Economics, 10th Annual Eastern Conference, (May 29-31, 1991), 26. It is noted without comment that Sievers and Albery were employed by US Sprint when the paper was written. A version of the Sievers and Albery paper may be found in *Antitrust Law Journal* 60 no. 3 (1992): 757-784. A critique of Sievers and Albery is William L. Taylor, "Predation and Multiproduct Firms: An Economic Appraisal of the Sievers-Albery Results," *Antitrust Law Journal*, 60 no. 3 (1992): 785-795.

³⁸ The saga of Standard Oil has been widely covered. A recent discussion is found in Daniel Yeargin, *The Prize* (New York: Simon & Schuster, 1991), 35-113.

³⁹ See Scherer, *Industrial Market Structure*, 274-275.

The Utah Pie case is another example of predatory pricing. Utah Pie was a small single-product firm that sold frozen pies in Utah. In 1958, Utah Pie opened a local plant and entered the Salt Lake City frozen-pie market. It soon captured two-thirds of the market. Three large firms, Carnation Milk, Pet Milk, and Continental Baking, also served the Salt Lake City market. In response to Utah Pie's success, they lowered prices drastically until the prices they charged in Salt Lake City were lower than their prices in markets near their points of production. When Utah Pie's market share fell to one-third in 1959, it filed an antitrust suit. The suit was eventually settled but Utah Pie was forced into bankruptcy within five years.⁴⁰

Tied Contracts and Exclusive Dealing

Tied contracts are an arrangement where the sale of one product requires, as a condition of that sale, the purchase of a second product. Section Three of the Clayton Act forbids tied contracts when they lessen competition or tend to create monopoly. One famous case of tying involved IBM. In the 1930s, IBM had over 90 percent of the mechanical data-processing equipment market. IBM leased equipment rather than selling it and required lessees to use exclusively IBM tabulating cards. Since other manufacturers were able to produce equivalent tabulating cards, the courts required IBM to eliminate its tying requirements..

An example of tied contracts in telephony was AT&T's leasing of terminal equipment. Prior to the Hush-A-Phone and Carterfone decisions, customer provided equipment was not allowed; if customers wanted access to the telephone network, they

⁴⁰ For a discussion of the Utah Pie case see K. G. Elzinga and T. F. Hogarty, "Utah Pie and the Consequences of Robinson-Patman," *Journal of Law and Economics* 21, no. 2 (October, 1978): 427-434.

also had to lease an AT&T phone. In the Carterfone decision, the FCC found that prohibitions against customer-provided equipment were unlawful.⁴¹

Today, in regulated industries, variants of tied sales may be more prevalent and problematic than tied contracts. Utilities may use the price of a regulated service to entice a customer to purchase an unregulated service, rather than using a tied contract. As an example, U S WEST offered local access to the federal government's General Services Administration (GSA) at reduced rates provided GSA also purchased switching services from it rather than from AT&T. U S WEST was tying rates for monopoly services to the purchase of unregulated services.⁴²

Tying could occur in telephony if unaffiliated competitors are required to purchase unwanted and/or unneeded services in bundles in order to obtain access to bottleneck facilities. Tying could also occur if regulated and unregulated services are bundled together so that the purchaser of the package implicitly obtains the regulated service at a discount from tariff rates. Such bundling could make the affiliated unregulated service more attractive, especially if an equivalent discount is not made available to purchasers of unaffiliated services.

One form of exclusive dealing is the requirements contract that obligates the buyer to purchase from a single supplier. Whether exclusive dealings or requirements contracts are legal depends upon their impact on competition. The automobile industry provides an example. In 1936, the Supreme Court upheld a lower court decision to allow General Motors (GM) to require its dealers to use only GM-made or GM-approved

⁴¹ See *Hush-A-Phone Corporation et al. v. United States of America and Federal Communications Commission et al.*, 238 F. 2d 266, 269 (1956); and *In the Matter of Use of the Carterfone Device in Message Toll Telephone Service*, 13 FCC 2d. 420, 427 (1968). These decisions are discussed in Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions, Volume II: Institutional Issues* (New York: John Wiley & Sons, 1971), 127-152 and in Charles F. Phillips, Jr., *The Regulation of Public Utilities*, second edition (Arlington, Virginia: Public Utilities Reports, 1988), 699-700.

⁴² Memorandum of the United States in Support of Motion and Stipulation for Entry of an Enforcement Order, *United States v. Western Electric Co.*, Enforcement Order, February 15, 1991.

parts as replacements for original equipment. Five years later the Federal Trade Commission ordered GM to stop insisting that dealers stock only GM supplies and accessories; it did, however, permit exclusive dealing for necessary mechanical parts. In 1959, the Sixth Circuit Court of Appeals ruled that attempts by Ford Motor Company to force dealers to sell exclusively Ford-made or approved parts might be illegal if such action substantially lessened competition.⁴³

Exclusive dealing was also observed in telephony. Prior to divestiture, BOCs dealt almost exclusively with Western Electric, an AT&T subsidiary and the world's largest manufacturer of telephone equipment. Western Electric supplied almost every item of communication equipment used by the BOCs; it produced 87 percent of the BOCs' requirements and Bell affiliates purchased 97 percent of its output. There is more than casual evidence that these transactions were not characterized by arms-length bargaining. For instance, a 1981 Congressional Report estimated that Western Electric charged more than 2 1/2 times the competitive price for some equipment.⁴⁴ Since the costs of equipment purchased from Western Electric were included in operating expenses for the BOCs, any overcharges allowed AT&T to shift profits to its unregulated subsidiary.

Price Discrimination as a Business Practice

Price discrimination is a third business practice that can be used to monopolize or control a market. Price discrimination is not easy to define.⁴⁵ Roughly, it is the sale of a product to customers at different prices without there being a corresponding difference

⁴³ Scherer, *Industrial Market Structure*, 511.

⁴⁴ Majority Staff of the Subcommittee on Telecommunications, Consumer Protection, and Finance of the Committee on Energy and Commerce U.S. House of Representatives, *Telecommunications In Transition: The Status of Competition in the Telecommunications Industry* (Washington, D.C.: U.S. Government Printing Office, November 3, 1981), 159-204.

⁴⁵ Price discrimination is a complex and subtle topic. For an in-depth discussion see Scherer, *Industrial Market Structure*, 253-272.

in costs. The Clayton Act prohibited price discrimination when the effect was to substantially lessen competition. However, the Clayton Act did not apply to price differences that result from legitimate quantity discounts and differences in product quality. The Robinson-Patman Act amended the Clayton Act to remove the exemption for some quantity discounts, particularly those that lessened competition. Price discrimination may be practiced by an integrated firm or by one organized into fully separated subsidiaries. In addition to potentially lessening competition, price discrimination may be used to redistribute income from consumers to producers.

Although market power is a prerequisite for practicing price discrimination, a firm with market power does not have to discriminate, but it will do so if discrimination increases profits. Whether price discrimination is harmful is, of course, a difficult judgement to make. Historically, one of the major functions of regulation was to prevent firms with monopoly power from imposing undue price discrimination. However, regulators, themselves, have fostered price discrimination in order to promote regulatory and/or social policy.⁴⁶

The judicial system has categorized price discrimination in terms of primary- and secondary-line discrimination. Primary-line discrimination involves a firm discriminating against its competitors, as in the example of AT&T's TELPAK offering. Secondary-line discrimination occurs when a buyer or group of buyers pay a preferential price relative to other buyers. An example of secondary-line discrimination is *FTC v. Morton Salt Co.* Morton, a major seller of salt, established for high-grade salt, a price schedule that decreased both with quantity and with cumulative volume of purchases. Morton argued that the discounts were available to all buyers on the same terms and that the competitive impact was negligible because salt constituted a small portion of grocery-store sales.

⁴⁶ Lifeline rates and the historic use of interexchange revenues to subsidize local access (especially residential access) are examples of regulator-induced price discrimination. See J. Stephen Henderson and Robert E. Burns, *An Economic and Legal Analysis of Undue Price Discrimination* (Columbus, Ohio: The National Regulatory Research Institute, 1990).

The Supreme Court disagreed. Morton's discounts were theoretically available to all customers. However, as a practical matter, only five major grocery chains purchased sufficient quantities of salt to take advantage of the discounts. Morton's quantity discount policy made it difficult for small chains and independent retailers to compete with the large chains in the sale of salt. The Court also reasoned that because a grocery store sells many small items, the only way to protect a grocer is to ensure that fair pricing practices are used for all items.⁴⁷

Regulation provides the regulated utility with an effective mechanism for implementing price discrimination. Tariffs can be written to segment the market, with services targeted to specific user groups. Moreover, services can be bundled and packaged under different names, allowing the utility to offer "separate services." An example of primary-line price discrimination is AT&T's creating various bundles of interstate private-line services. By creating different bundles of services, AT&T was essentially offering the same thing to different customers at different prices.⁴⁸

Regulated firms may use a slightly different twist: a utility may practice secondary-line price discrimination against itself. A subsidiary selling a product in an unregulated market may sell the product to an affiliate at a higher price than it offers it to other customers. For example, U S WEST entered the real estate market shortly after divestiture with a separate subsidiary, BetaWest. Among other things, BetaWest leased office space to its regulated affiliate. After losing hundreds of millions of dollars in the real estate market, U S WEST decided to curtail its real estate operations, and it was able to reduce its losses somewhat by selling the building occupied by the regulated affiliate. Interestingly, the rents that were charged the regulated subsidiary were considerably higher than market rates. Based on those rents, U S WEST was able to

⁴⁷ Petersen, *Business and Government*, 175-176.

⁴⁸ Bolter, *Telecommunications Policy*, 80-81.

obtain a higher market price for the building and reduce its unregulated subsidiary's losses.⁴⁹

Price differences per se do not prove price discrimination because differences can be justified by a number of ways. Regulators should be concerned, however, about undue price discrimination.⁵⁰ Furthermore, regulators should be concerned about the distributional effects and competitive implications of price discrimination.

Regulators oversee highly concentrated markets that are likely to be vulnerable to price discrimination.⁵¹ Indeed, commissions regularly practice price discrimination in pursuit of certain goals. One example in telephony is the price difference between residential and business service. Price discrimination can bring customers into a market from which they otherwise would be excluded. In declining-cost industries, price discrimination may allow all customers to be better-off than if a single, uniform price is charged. Unfortunately, price discrimination, like many other issues in regulation, is not a clear-cut issue. It requires analysis and judgement. Joan Robinson's observations are relevant:

...we may have some reason to prefer the interests of one group above those of the other. For instance, members of the more elastic markets (for whom price is reduced) may be poorer than members of the less elastic markets, and we may consider a gain to poorer buyers more important than a loss to richer buyers. In this case price discrimination must always be considered beneficial. On the other hand, the less elastic market may be at home and the more elastic market abroad, so that the interests of members of the stronger market are considered more important than the interests of the weaker market.⁵²

⁴⁹ Christopher Wood and Tom Locke, "U S WEST Real Estate Sales: Who wins?- Who loses?" *Denver Business Journal*, (December 20-26, 1991): 3.

⁵⁰ See Henderson and Burns, *Undue Price Discrimination*.

⁵¹ The courts determined that a market share of 40 percent is necessary for price discrimination to be an effective strategy. This test is met in virtually every market over which regulatory commissions have jurisdiction. See Sievers and Albery, *Strategic Allocation*, 4.

⁵² Joan Robinson, *The Economics of Imperfect Competition* (London: MacMillan, 1933), 204.

Regulatory Trade-Offs: Structural vs. Accounting Safeguards

The discussion so far places corporate behavior into static categories; actual corporate behavior is much more dynamic and fluid. Firms seldom engage in only one of these business practices. They will devise a program to achieve their strategic objectives and the programs will change as the firm's environment changes. The behaviors discussed can occur whether the firm is integrated or separated into subsidiaries. However, some behaviors are more likely to occur with integrated operations and others are more likely to occur with separate subsidiaries. The approach taken by regulators also influences the strategy and behavior of utilities. In some cases, regulators may not be consistent about their own objectives or may have competing or changing objectives.⁵³

Per Se and Rule of Reason Offenses

Antitrust cases often involve per se offenses and the rule of reason. Per se offenses are activities judged to be illegal without the requirement that antisocial or harmful effects be shown. These activities are presumed to have pernicious effects without redeeming virtue. If per se offenses can be demonstrated, they are deemed unreasonable and illegal. Inquiry into the injury done to competitors or consumers is not needed. An example is price fixing by the two largest firms in an industry. The rule of reason requires demonstration that an act was committed and that society will be better off by prohibiting it. In other words, the harmful effects of the activity must be shown and prohibition must be less harmful than the act. The rule of reason recognizes that an activity simultaneously may restrain trade and be necessary for achieving other worthwhile objectives. Requirements contracts may be judged under a rule of reason standard with courts weighing anticompetitive losses against efficiency gains.

⁵³ The FCC's Computer I, II and III decisions illustrate conflicting and shifting objectives.

This is essentially the dilemma the FCC faced in its Computer Inquiries. The FCC was trying to decide whether to require fully separated subsidiaries or to rely on accounting safeguards. It was attempting to minimize regulation of data processing services while preventing firms with communications bottlenecks from using their market power to stifle competition. The First Computer Inquiry, Computer I, which divided services into regulated communications services and unregulated data processing services, was completed in 1973. However, rapid advances in computer and communications technology quickly rendered it obsolete, and in 1976, the FCC launched Computer II which divided services into basic, enhanced, and data processing categories. Both Computer I and II required AT&T to offer unregulated data processing services through a fully separated subsidiary. Computer I and II are examples of attempts to create a demarcation between utility services that should be regulated and nonutility services for which regulation could be foregone. They represent genuine efforts to address the melding of communications and computers.

In 1981, shortly after Computer II was completed, the FCC launched Computer III. The FCC's intention was to develop regulatory tools that would allow dominant carriers to offer both basic and enhanced services through one company, protect against cross-subsidization of competitive services by basic services, and promote competition in the enhanced services market. In Computer III, the FCC faced its dilemma squarely and applied the rule of reason; it did not want to regulate enhanced services because it believed public policy was best served by deregulated competitive markets. Fear of cross-subsidization, strategic pricing, and other anticompetitive activities led to fully-separated subsidiaries in Computer I and II. However, fully separated subsidiaries would not allow AT&T to take advantage of technical and economic efficiencies, thus increasing total cost. More services at lower prices could be offered through an integrated organization but the FCC was concerned about cross-subsidization and competitive abuses. Ultimately it applied the rule of reason: potential efficiency gains were felt to more than offset losses from potential abuses that might occur with accounting safeguards.

Regulators face the paradox of the rule of reason as they open more markets to entry and competition. Many services offered by BOCs are characterized by joint costs. This means that integrated production of several services costs less than independent production of the same services on a stand-alone basis. Unfortunately, most LECs control bottleneck facilities and have a dominant position in the markets in which they operate. These factors grant the LECs a competitive advantage. In addition, the utility is in an excellent position to engage in anticompetitive strategic pricing, price squeezes, tied contracts, reciprocity arrangements, and other anticompetitive behaviors.

When joint costs and bottleneck facilities are present, one method of reducing (but not eliminating) potential anticompetitive behavior is to require the creation of fully separated subsidiaries. The separated affiliate would be required to obtain services from the BOC on the same basis (price, quality, and terms) as any other provider in that market. This puts other providers on an equal footing with the affiliate. The BOC and an affiliate can still engage in anticompetitive practices, such as U S WEST's marketing of unregulated services to the GSA. However, if regulators can audit the records of unregulated affiliates such practices should be easier to detect and control.

As previously noted, a disadvantage of separate subsidiaries is that the utility cannot fully take advantage of economies of scale or scope. Separation may help create a more competitive environment. Consumers will pay higher short-term prices but competition may reduce long-term prices. Integrated firms can take advantage of economies of scale and scope but they will find it easier to control the market through strategic pricing and other business practices.⁵⁴ In markets closely related to the core business, utilities will prefer integration since it allows capture of economies of scale and scope, enhances natural competitive advantages, and allows easier implementation of strategic pricing.

⁵⁴ If utilities act rationally, they will control the market but not drive all competitors out since that would draw attention to them, possibly leading to regulatory or antitrust actions. As Sir John Hicks observed, "The best of all monopoly profits is a quiet life." See "The Theory of Monopoly," *Econometrica* 3, no. 1 (January 1935): 8.

A prerequisite for implementation of strategic pricing by an integrated utility is adoption of long-run incremental-cost (LRIC) pricing and flexible pricing or, as an alternative, price-cap regulation. If neither of these is allowed, the utility may prefer separate subsidiaries. Whether the utility prefers separation or integration will depend on its ability to implement strategic pricing under each structure. The utility will prefer the structure under which it can best shift costs among subsidiaries, and bundle and package services for maximum profit.

The less closely related an activity is to the core business, the greater the incentive to form separate subsidiaries, especially if joint costs with the core business are not present and there are not any efficiency gains from integrated production. Thus, a natural competitive advantage cannot be obtained. Economies of scope may still be present, however most scope economies can be gained with separate subsidiaries.

A general rule can be stated. The closer the nexus to the core business (the greater the potential economies of scope), the greater the incentive to perform the activity within an integrated structure. The further the nexus from the core business (the smaller the potential economies of scope), the greater the advantages of establishing a subsidiary. Real estate is an example. Office space is not jointly produced with telephone services, and efficiencies in the purchase or leasing of office space cannot be gained through increased production of telephone services.⁵⁵ The utility can profit by creating a fully separated real-estate subsidiary.

If a utility owns its building as an integrated firm, the cost of the building, less depreciation, is included in the ratebase and affects the revenue requirement since the utility can earn its allowed return on investment, and recover depreciation and maintenance expenses. If a separate affiliate owns the building, it can lease the building to the regulated utility. The rent charge will include the cost of the building,

⁵⁵ Although there are no true economies of scope involved, there might be some pecuniary economies created. Larger utilities might be able to obtain better rental rates for office space because their size allows them to rent entire buildings and their stability provides security to building owners. This is an economy of scale that can be obtained without structural integration.

depreciation, maintenance, management, and other expenses. The problem is that negotiations between affiliates are not likely to be arms-length transactions and above-market rents can result. Rents 5 to 10 percent above the market will be difficult to detect. Even rents 20 to 30 percent above the market can be rationalized in a number of ways including: special location, unique features, and extra services. Because rents are an allowable expense, higher rents are passed on to regulated ratepayers and the unregulated real estate affiliate can earn a greater than normal rate of return. Moreover, high rents may enhance the value of the building which will help justify higher rents.⁵⁶

Diversification as a Business Strategy

Under either structure, regulators should be concerned about cross-subsidies and behaviors that disadvantage the ratepayer or competition. Michael Porter observes that successful diversification usually requires interconnection among diverse parts.⁵⁷ He lists the following seven principles for translating corporate strategy into successful diversification: (1) identifying the interrelationships among already existing business units, (2) selecting the core businesses that will be the foundation of the corporate strategy, (3) creating horizontal organizational mechanisms to facilitate interrelationships among the core businesses and lay the groundwork for future related diversification, (4) pursuing diversification opportunities that allow shared activities, (5) pursuing diversification through the transfer of skills if opportunities for sharing activities are limited or exhausted, (6) pursuing a strategy of restructuring if the skills of management

⁵⁶ The notion that higher rents become self-justifying because they are capitalized into the value of the property brings to mind arguments against determining the value of utility plant based on its profitability, which depends on regulation. Generous regulation would increase profits and plant value leading to yet higher rates. Stingy regulation would decrease profits and plant value leading to lower rates.

⁵⁷ Michael E. Porter, "From Competitive Advantage to Corporate Strategy," *Harvard Business Review*, 65 no. 3 (May-June 1987): 58-59.

are suitable or good opportunities do not exist for forging corporate interrelationships, and (7) paying dividends so that shareholders are the portfolio managers.

Porter found that diversification was not a successful corporate strategy. Based on examination of diversification by U.S. corporations between 1950 and 1986, Porter concluded that such strategies reduced rather than increased shareholder value. The decrease in shareholder value does not give a complete picture because it may mask cases in which profitable core businesses subsidize poor diversification.⁵⁸ Most of Porter's points stress the interrelationship of diversified units. Given the history of diversification in telephony, the requirement of interrelationships for successful diversification should alert regulators.

In 1986 and 1987, NARUC conducted an investigation into the effects of utility diversification. The resulting report touched on many of the same topics covered in this section. For that reason, a brief discussion of the NARUC report is presented in the next section.

The NARUC Diversification Report⁵⁹

Among the conclusions of the diversification report was that an integrated structure provides regulators with more control than a separated structure. However, opportunities for cross-subsidies are greater, and concern was raised that the use of reciprocity, tied contracts, and exclusive dealings might increase in separated structures. Conversely, although control is reduced, regulators view separated structures as cleaner with less probability of cross-subsidy. Also touched on were regulators' attempts to promote competition and the dilemma faced by the FCC in Computer I, II, and III. A major question was whether it was more important to enhance the potential for

⁵⁸ Porter, "From Competitive Advantage to Corporate Strategy," 43-46.

⁵⁹ See Terri Carlock and Debra Flannagan, *Report of the Ad Hoc Committee on Utility Diversification* (Washington, D.C.: National Association of Regulatory Utility Commissioners, March 30, 1988). This is referred to here as the diversification report.

competition or to create a structure that can take full advantage of economies of scale and scope.

Although it used somewhat different language, the diversification report echoed many of the concerns discussed by Porter. Utility diversification issues were divided into in four areas: regulatory, legal, economic, and financial. A major issue was the impact of diversification on ratepayers. Concern also focused on the possibility of an adverse impact through higher prices or lower quality service. The standard established at the time was that diversification should not harm the ratepayer. A more stringent standard is to require the utility to show that diversification will benefit the ratepayer.

The diversification report emphasized that regulators need legislative authority to protect ratepayers against risks associated with diversification. However, when the report was prepared, only 31 percent of state commissions had such authority. This is an important legal issue because full access to the books and records of affiliates often requires confidential treatment of affiliate records. The issue of requiring divestiture when abuses occur or preventing it when divestiture is not in the public interest was also raised.

The authors of the diversification report considered accounting procedures (nonstructural separation) to be inadequate for tracing cross-subsidies and determining the benefits and costs of diversification. Although this is a reasonable concern, it can be mitigated if commissions take actions such as requiring specific information relating to diversification. Commissions can also train their staff in the art and science of management audits and detection of cross-subsidization. In addition, regional oversight and cooperation among state regulators is essential in evaluating diversification.

Several economic issues were raised including transfer pricing.⁶⁰ Another economic issue was that book value cannot always be accurately determined or allocated. Moreover, book value may have no relation to market value. Another issue was the

⁶⁰ An example of concerns about the appropriate transfer prices is seen in the rent charged by Beta West, an unregulated U S WEST subsidiary, to regulated U S WEST subsidiaries, as noted above.

transfer of employees among the various diversified companies, particularly from regulated to unregulated subsidiaries. This issue was brought into focus by discussion of an investigation by the California Public Utilities Commission that documented such transfers by Pacific Bell.

In support of the Porter hypothesis, it was noted that the closer the diversified activity is to the regulated business, the greater the opportunity for synergy and economies of scale and scope. This leads to both increased probability of success and increased opportunity for cross-subsidization. The further the diversified venture is from the regulated business, the lower the likelihood of both cross-subsidization and the venture's success.

One reason utilities offer in support of diversification is that it will increase their overall rate of return. Utilities believe that they can achieve greater profits in unregulated areas in which profits are not capped. Again, in support of the Porter hypothesis, the diversification report points out that diversification failed to achieve greater profits and earnings growth.⁶¹ Concern was raised about potential anticompetitive abuses of regulated and unregulated subsidiaries. Of particular concern was the unregulated affiliate's ability to use utility resources. Royalty payments were suggested both to compensate the utility and to reduce any competitive advantage the unregulated affiliate might enjoy.

Considerable emphasis was given the financial impact of diversification. Diversification can affect ratepayers positively or negatively. Although ratepayers might benefit as a result of diversification, their interests may require that they be insulated from negative impacts. Reducing the variability of earnings and, thus, reducing risk is often cited as an advantage of utility diversification. However, few unregulated industries were found to have less variable earnings patterns than utilities. Moreover, diversification into more competitive and riskier areas almost invariably increases

⁶¹ This also is a conclusion reached by some in the investment community. See Ronald Altman, "Telco Diversification: A Comedy of Errors," Presented at *Telecom Affiliate Transactions*, a conference sponsored by *Telecommunications Reports*, Washington D.C., April 7, 1992.

earnings variability and risk. Furthermore, diversification by utilities may deplete funds available to invest in regulated operations. Porter points out that retained earnings used for diversification could be used to pay dividends.⁶² Also, in line with Porter, the diversification report noted that individual investors can diversify their own portfolios more effectively than utilities.⁶³ An implication of this is that utilities should stick to their core business especially when diversification causes decreases in stock prices due to increased risk.

Some commissions have expressed concern regarding the extent and financing of diversification. To safeguard ratepayer interests, Wisconsin restricts the level of retained earnings that can be used to finance diversified activities. Regulated utilities that find themselves cash rich might consider other alternatives to diversification including rebates to ratepayers, dividends to stockholders, or investment in modernizing the network rather than diversification.

⁶² Porter, *From Competitive Advantage to Corporate Strategy*, 59.

⁶³ Diversification is sometimes advocated by utility executives as reducing risk and enhancing shareholder value, but the net effect is not always clear. When Pacific Telesis announced plans to split itself into two independent parts (one part a regulated LEC, the other a wireless and international company), the possibility was raised that the sum of the parts might be more than the whole. Analysts believed that each of the new companies could focus on one aspect of the business, and investors could choose a stable company or an entrepreneurial company rather than a mix. See *Telecommunications Reports*, (April 20, 1992): 1-4.

CHAPTER 4

ANALYZING CROSS-SUBSIDIES AND ANTI-COMPETITIVE PRICING

Introduction

The idea that cross-subsidies are undesirable and that regulators attempt to eliminate them (especially when cross-subsidies flow from regulated services to unregulated services) was a recurring theme in previous chapters. Moreover, many policy decisions depend upon the presence or extent of cross-subsidies. As noted in Chapter 3, cross-subsidies are believed to be more likely in integrated firms, they can also exist in holding companies. Unfortunately, whether or not a cross-subsidy exists may be in the eye of the beholder. There is not a universally accepted definition of cross-subsidies, although some definitions have gained limited acceptance for specific purposes. This chapter discusses several tests for the presence of cross-subsidies. The tests are drawn from the economics literature and from cases in which the cross-subsidy concept was applied.

Cross-subsidies may exist with or without payments between services or affiliates. Some transactions involve nonmonetary transfers. Employees can be transferred from the BOC to an affiliate or customer information may be made available to affiliates in a way that gives them a competitive advantage. Nonmonetary transactions are often difficult to audit since a journal entry is not made. Although transactions such as these do not affect the BOC's balance sheet, they may be considered in monetary terms. The BOC incurs costs when training employees and collecting information. If it is not fairly compensated by the affiliate, a form of subsidy exists. Nonmonetary transactions can create subsidies. However, all payments are not subsidies, and the Oregon Commission observed the distinction between payments and subsidies. In reference to a directory publication agreement which referred to payments by the publishing affiliate to the BOC as "subsidies," the Commission said that the publisher received the valuable and

profitable right to have its products identified with the BOC and that payments for those rights are not subsidies.¹

Cross-subsidies, price discrimination, and predatory pricing are related; essentially the same analysis is used in analyzing each of these issues. Proof of their existence depends on the relationship between price and cost. The question is which costs? In the early days of antitrust enforcement, cost was not an issue in predatory pricing cases. Under the per se rule, pricing below a competitor with the intent to drive the rival from the market was sufficient for antitrust action and remedies. The Robinson-Patman Amendments to the Clayton Act brought with them an affirmative antitrust defense based on a cost justification.² Average total cost became the generally accepted standard and courts compared the relationship of price to average total cost. In order to show lack of predation or price discrimination, price needed to be equal to or above average total cost.³ The rise of the Chicago School of Economics in the 1960s and 1970s introduced marginal cost into the analysis of price discrimination and predatory pricing. Areeda and Turner used static neoclassical economic models to prescribe rules of thumb for courts to follow in predation cases; this formulation became known as the "Areeda-Turner" test.⁴

¹ See Oregon Public Utilities Commission Case No. 88-488.

² William A. Lovett, "Theory and Practice of Antitrust," in Robert L. Wills, et al., editors, *Issues after a Century of Federal Competition Policy* (Lexington, Massachusetts: Lexington Books, 1987), 53.

³ Some early decisions used profits rather than price-cost relationships as an indication of price discrimination. The use of profits as an indication can be rationalized because price discrimination can be used to maximize a firm's profits. Price discrimination may, thus, result in supranormal profits. However, a profit standard makes no sense for indicating predatory pricing in the short run since firms may trade short-run for long-run profits.

⁴ See Phillip P. Areeda, and Donald F. Turner, "Predatory Pricing and Related Practices Under Section 2 of the Sherman Act," *Harvard Law Review*, 88 (1975): 697-733.

The Areeda-Turner Test

Areeda and Turner argued that pricing below marginal cost was both a necessary and sufficient condition for predation. In other words, if price was greater than or equal to marginal cost, then predation did not occur. Sufficient evidence for predation was a showing that a firm had set its price below marginal cost. Instead of advocating a marginal cost standard, Areeda and Turner suggested using average variable cost for practical reasons. Although marginal cost is theoretically preferable, accurate marginal cost data often are impossible to obtain. Furthermore, Areeda and Turner argued that for many industries average variable cost is a reasonable approximation of marginal cost and that average variable cost represents the short-run shut-down threshold. If price is below average variable cost, the firm cannot meet its day-to-day cash operating requirements and the firm can cut its losses by shutting down. If price is above average variable cost, the firm can meet its day-to-day cash requirements and it can make some contribution to fixed cost. Thus, a firm that continues to produce when price is below average variable cost must have other motives such as the exclusion of rivals.⁵

In 1978, Areeda and Turner altered their rule of thumb. They relaxed their conditions for predation to provide that a price below marginal cost but above average total cost was lawful. They also tackled an additional problem: average variable cost often is substantially below marginal cost. Since they intended for average variable cost to be a proxy for marginal cost, average variable cost could be used only when the

⁵ A firm that continues production when unable to cover average variable cost must have some motive other than profit maximization (or loss minimization) in mind. In a dynamic context, if inability to cover average variable cost is considered temporary, a firm might continue production to avoid costs associated with shutting down then restarting operations. Such a situation would only be temporary, however. Another possible case for pricing below average variable cost is when a multiproduct firm willingly takes a loss on one product in order to maximize its profits from another. Both of these cases are considered in Marcus Weinkopf and Werner Neu, *Regulatory Issues Concerning Relations Between Monopoly and Competitive Services of DBP Telekom*, (Bad Honnef, Germany: Wissenschaftliches Institut für Kommunikationsdienste, Discussion Paper No. 71, September 1991).

defendant could demonstrate that it was not substantially below marginal cost.⁶ The Areeda-Turner rule of thumb, average variable cost as the legal price floor, held with some exceptions. When marginal cost rises significantly above average variable cost the legal price floor is the lower of marginal or average total cost. Marginal cost becomes the legal floor when it is significantly above both average variable cost and average total cost.

Criticisms of Areeda-Turner

A number of prominent economists have criticized the Areeda-Turner test. The criticisms focus on the narrow world view of Areeda-Turner and the simplifying assumptions of the perfectly competitive model that are required if the test is to have theoretical relevance. Critics argue that Areeda-Turner ignores many crucial factors in markets characterized by a dominant firm or an oligopolistic market structure. They also believe that situations to which Areeda-Turner does not apply are the very situations in which predation is most likely to occur.⁷

It is possible to agree with much of the criticism of Areeda-Turner, yet regard price-cost relationships as being crucial in the analysis of price discrimination, predation, and cross-subsidies. The test reflects an academic ivory tower approach more than an understanding of actual business behavior. A major objection to the Areeda-Turner test is its use of average variable cost. Average variable cost is always less than average total cost and is usually less than marginal cost. This makes the test very weak; it will rarely confirm the existence of cross-subsidies.

The shortcomings of the Areeda-Turner test can be understood if microeconomic theory is applied to it. In the economist's world average total cost includes a normal return on investment. Thus, a price below average total cost means earnings below a normal return. This indicates an economic loss, though not necessarily an accounting

⁶ See Phillip Areeda, and Donald F. Turner, *Antitrust Law*, (Boston, Massachusetts: Little, Brown and Company, 1978), 711-715.

⁷ See Kevin O'Connor, "Law and Economics: Collision or Synergy (The Case of Predation)," in Wills, et al., *Federal Competition Policy*.

loss. Second, since average variable cost is always below average total cost, a price equal to average variable cost would imply below normal returns or an economic loss. This is a nonsustainable situation. Rational investors will not continue to invest capital where they earn below normal returns, and lenders will not loan money for investments with a poor or negative return. Therefore, a price equal to average variable cost will eventually force the firm to cease production.

Without average variable cost as a standard, the Areeda-Turner test is acceptable for certain applications. Marginal cost is the price floor unless it is significantly above average total cost. In that case average total cost is the price floor. Acceptable uses of the revised Areeda-Turner test include cases for which cost curves are u-shaped and behave normally in that both marginal and average total cost are rising and marginal cost is above average total cost. This is not the situation typically encountered in regulated telecommunications markets. Thus, even the revised Areeda-Turner test may not be applicable.

In most BOC markets marginal cost is below average total cost and it is falling. A price equal to marginal cost would not be sustainable because the BOC will earn less than its authorized return, and a rational firm will exit markets in which it cannot earn at least a normal profit.⁸ Thus, where marginal cost is below average total cost, a cross-subsidy exists if price is below average total costs.

An International Trade Analogy

In international trade, dumping is defined broadly as selling a product in a foreign market at a lower price than in the domestic market. Arguments over dumping in international markets provides another view of price discrimination, predation and cross-subsidy. Dumping usually is determined by price comparisons, but technicalities sometimes require analysts to review the price-cost relationship. Comparing price to production cost or full cost is the standard used. The constructed value or full cost

⁸ In some instances, a firm may continue to produce in a market in which it earns less than a normal profit. One reason may be that the activities in one market contribute to profits in another market. The contribution could be through cross-subsidies, tax breaks, or production leading to economies of scale or scope.

includes: (1) the cost of materials, labor, and fabrication, (2) general expenses such as factory and administrative overhead and a usual profit earned in the manufacture of the product, and (3) the cost of packing and other expenses incident to preparing the product for shipping. Full cost is the operational definition of average total cost, and calculating full cost to test for dumping follows very closely the concept of determining fully distributed cost for regulatory purposes. Thus, when a cost standard is used, a price below average total cost is the test for dumping. Only if price is equal to or above average total cost is it sustainable.

A Modified Test⁹

One possible test for the absence of cross-subsidies in regulated industries, and therefore an indication of cross-subsidies or anti-competitive pricing, is the following:

- (1) Marginal cost should be the price floor if marginal cost and average total cost are both increasing so that marginal cost is above average total cost.
- (2) Average total cost should be the price floor if marginal cost is significantly above average total cost or if marginal cost is decreasing and below average total cost.

Applying Theory to Practice

The issue of cross-subsidies in telephone rates arose in the late 1950s. The FCC in its *890 and Above Decision*¹⁰ introduced competition into telephony by allowing construction of private systems. AT&T responded to competition with its TELPAK

⁹ Suggested by Carl E. Hunt.

¹⁰ Federal Communications Commission, In the Matter of Allocation of Frequencies in the Bands Above 890 Mc., Docket No. 11866, Washington, D.C. (Adopted September 28, 1960).

rates. The hearings surrounding the TELPAK rates sparked a continuing debate regarding the proper method to evaluate the existence of cross-subsidies.¹¹

On one side are economists who advocate comparing prices to incremental costs and to stand-alone costs to test for subsidy-free prices. On the other side are advocates of fully-distributed-cost (FDC) studies that assign and allocate the revenue requirement to services and evaluate the rate of return earned by each service or set of services. A rate-of-return study may be used to evaluate the existence of cross-subsidies, but its use for this purpose is not without controversy. Such a study was used by the FCC in the TELPAK case and its use sparked debate between FDC advocates and economists.

The central question is whether a cross-subsidy can be deemed to exist when two or more service categories do not earn the allowed rate of return. In the TELPAK case the FCC used a seven-way cost study which found that in 1964 the rates proposed by AT&T for TELPAK earned a return of 0.3 percent while the overall rate of return for the seven categories of interstate services was 7.5 percent. The FCC concluded that TELPAK rates were unduly discriminatory and were set to thwart competition.

Regulatory Analysis

Regulators focus on behaviors that are observable and/or auditable. One method used to test for cross-subsidies is to examine market transactions for similar services. When an affiliate sells a service to a regulated utility, the commission can determine the reasonableness of the price by finding a comparable market transaction. If the price charged is comparable, there is evidence of reasonableness. The key word is comparable.

Examining prices paid by a BOC and by a nonaffiliate for services obtained from an unregulated affiliate does not necessarily meet the comparability test. The comparability test is best applied when there is reason to believe that markets are reasonably competitive. If either a buyer or a seller has control of the market, the comparability test is of questionable value. As the Utah Commission observed, when the

¹¹ Peter Temins, "Cross-Subsidies in the Telephone Network after Divestiture," *Journal of Regulatory Economics* 2 (1990): 362-394.

BOC's business accounts for 90 percent of the market, the "market" test is not reliable.¹²

Analysis of transactions in which the utility sells services to an affiliate is more complex. The analysis first requires an estimate of the long-run marginal cost of the service. If the price charged is above marginal cost, it cannot be conclusively argued that the utility is subsidizing the affiliate. A price above marginal cost is necessary but not sufficient for the absence of a subsidy. A second step is to determine whether a reasonable contribution is being made to the utility's overhead.¹³ One method relies on FDC analysis. Another requires finding a comparable market transaction for a similar service and comparing prices for reasonableness. As noted above, markets must be reasonably competitive.

If comparable transactions are examined, regulators must consider whether economies of scope and scale are properly weighed in the analysis. When production is characterized by economies of scale or scope, the marginal cost to the utility or its affiliate may differ from that to an outside supplier. It is possible, however, that an outside supplier can capture economies of scope or scale as well. Consequently, a market price which is higher than the price the utility charges an affiliate is not conclusive evidence that it is subsidizing the affiliate. Such a situation could, however, serve to stimulate further investigation. One type of further investigation, management audits focused on affiliate transactions, may be particularly useful in uncovering problems with affiliate transactions.

Fairness and Efficiency Considerations

In reviewing economic theory and cost-accounting practices used in evaluating cross-subsidies, it is important to review the differences in focus between economic

¹² See Utah Public Service Commission Case No. 88-049-07.

¹³ In essence, this is the test the FCC applied in the TELPAK case. Although TELPAK services covered their costs, they were not making a sufficient contribution to overhead (including capital costs). Therefore, they were being implicitly subsidized by other services which were contributing toward overhead at a substantially higher rate.

theory and regulation. Economics focuses on efficiency in the use of scarce resources. To an economist, prices can best provide signals to consumers and producers regarding the relative scarcity of resources if they reflect marginal costs. Economists focus on the benefits of competition because it promotes efficiency. For economists, equity (or fairness) considerations are usually secondary. Once efficiency is attained, other means can be used to create an equitable distribution of goods and services.¹⁴ The tension between efficiency and fairness lies at the heart of the debate regarding cross-subsidies.

Regulation is more concerned with fairness than is economics. Public utility commissions, enabling statutes charge them to set rates that are just and reasonable and not unduly discriminatory. However, commissions are not charged to seek economic efficiency. Traditionally, regulators relied on ratebase regulation. Regulators' reaction to emerging competition is to attempt to enforce fair competition. Their emphasis is fair rates. Franchised telephone companies continue to have competitive services regulated while other providers remain largely unregulated because the utilities are believed to be dominant in their markets. For the utility, regulators have clung to analyzing accounting costs, setting an allowed rate of return and an overall revenue requirement, and allocating the revenue requirement to services. This is one issue where the economics literature is critical of regulatory practices.

Economic Analysis of Cross-Subsidies

This section discusses the economic theory of cross-subsidies. Both traditional neoclassical microeconomic theory and a more recent extension, contestability theory, can provide insights into cross-subsidization. Neoclassical theory normally focuses on single-product firms operating in a single competitive, oligopoly, or monopoly market. Contestability theory extends neoclassical theory to consider explicitly the cost functions

¹⁴ One attempt to consider both equity and efficiency in public utility regulation is found in Edward E. Zajac, *Fairness or Efficiency: An Introduction to Public Utility Pricing* (Cambridge, Massachusetts: Ballinger, 1978). The tradeoff is also discussed in James C. Bonbright, Albert L. Danielson, and David R. Kamerschen, *Principles of Public Utility Rates* (Arlington, Virginia: Public Utilities Reports, Inc., 1988), 179-192.

and decisions of multiproduct firms operating in several markets. For this reason, contestability theory may be more applicable for analyzing affiliate transactions.

Neoclassical Analysis

Cross-subsidies arise in neoclassical economic theory because the utility is assumed to have market power which gives it undue influence on prices. The regulated telephone company is treated as having a deep pocket to finance competitive ventures by itself or an affiliate. In this context, a subsidy results from setting some price(s) below marginal cost. In essence, revenues do not cover the added costs of production and losses are incurred on each unit sold. These losses are borne by the stockholders unless they can be recouped from some other service or set of services.

These circumstances raise the following question: If prices are raised elsewhere to finance the subsidy, was the firm failing to maximize profits in the market financing the subsidy? If the firm does not have a regulated sub, the answer must be yes, otherwise this pricing behavior is not rational. Raising prices for some services to create a subsidy must lower profits if the company was initially maximizing profits. If stockholders fund the subsidy through reduced earnings, they will be disadvantaged.¹⁵ An unregulated firm may use one of its operations as a cash cow, using the cash cow's profits to offset losses in other markets, but it will not be able to raise prices to do so.¹⁶ When one part of a firm is regulated, the situation changes markedly.

For local telephone services, regulation is intended to keep the prices below the profit-maximizing level. Regulated services may be used to cross-subsidize competitive

¹⁵ Such a situation is rational only if it is considered to be temporary and the expected future profit stream from the subsidized venture more than offsets the value of the subsidies.

¹⁶ The term "cash cow" is used to describe a business unit that is able to generate significant net positive cash flows and which does not require large ongoing reinvestment of funds. The cash flows from such units can be used to support investment in units that are not currently profitable. The term was popularized by the Boston Consulting Group. See Robert J. Allio and Malcom W. Pennington, *Corporate Planning: Techniques and Applications* (New York: AMACOM, 1979), 1-25.

services while protecting stockholders. The methods are subtle. One method relies on inflating regulated expenses and ratebases. This could happen if the parent allocates an excessive share of common costs and/or investment to the regulated services. Another method is inflating the prices the regulated subsidiary pays for its affiliates for services. or, equivalently, lowering the prices affiliates pay the regulated subsidiary. If either of these is accomplished, competition in the unregulated market may be harmed and basic service rates will be increased.

Neoclassical theory does not have an explicit concept of cross-subsidy. It may be argued that, when prices are raised for some services, this constitutes a cross-subsidy. If the firm does not have a regulated segment, stockholders do the funding and the strategy is irrational unless it is used as a temporary device to drive rivals from the market or develop an unproven market. When there is a regulated market, cross-subsidies may be rational and it is possible to identify a potential source for funding them. Moreover, neoclassical theory does not provide an explicit measure of cross-subsidies except in perfectly competitive markets. Since the competitive model is inappropriate for services offered by a utility and its affiliates, this shortcoming is both substantive and profound.

Contestability Theory¹⁷

The situation addressed by contestability theory assumes a regulated multiproduct utility. There is not any assumption of perfect competition. Rather, the utility is assumed to provide one or more services in the presence of rivals who may provide single or multiple services in competition with the utility. The seeds of contestability theory were sown during the FCC's TELPAK investigation. William Baumol used neoclassical economic theory to devise the burden test which stated that no service could

¹⁷ See William J. Baumol, John C. Panzar, and Robert D. Willig, *Contestable Markets and the Theory of Industry Structure*, revised edition (New York: Harcourt Brace Jovanovich, 1988).

be considered the source of a cross-subsidy if all prices charged by a profit-constrained regulated utility covered incremental costs.¹⁸

In contestability theory, justification for the existence of a monopoly utility relies on both economies of scale and economies of scope. Traditional arguments for regulated monopolies relied on the concept of natural monopoly. Natural monopolies are created by economies of scale. If economies of scale exist, a single firm can meet market demand for a service at a lower average cost than two or more firms. Competition for this service would only increase the average cost and, consequently, price. However, regulated utilities provide multiple services to various customer groups. Therefore, analysis should focus on economies of scope which are cost savings that result from having a single firm produce multiple services rather than having separate firms produce individual services independently.

The Faulhaber Test

Gerald Faulhaber, previously employed by Bell Laboratories, recognized the inherent weakness of the neoclassical theory when identifying the source and extent of an alleged cross-subsidy, and expanded this idea into a test for subsidy-free prices.¹⁹ The Faulhaber test requires comparing the revenues from various services with the services' incremental cost and with the services' stand-alone cost.²⁰ If the revenues collected

¹⁸ See Elizabeth E. Bailey, "Foreword" to Baumol, Panzar, and Willig, *Contestable Markets*, revised edition, vi-xv.

¹⁹ Gerald R. Faulhaber, "Cross-Subsidization: Pricing in Public Enterprises," *American Economic Review* 65, no. 5 (December 1975): 966-977.

²⁰ The incremental cost of a service is the total cost of adding the service to existing services. It includes the total direct variable and direct fixed costs for the added service, as well as any increases in common fixed and variable costs. Common costs arise because the new service may use some of the same facilities, equipment, and variable inputs as existing product lines.

This incremental cost of a service should not be confused with the notion arising from neoclassical microeconomic theory in which incremental cost is defined as the cost of producing one additional unit or lot of output over a specific time period. See
(continued...)

from the service are at least equal to the service's incremental cost and do not exceed the service's stand-alone cost, then prices are said to be subsidy-free.

Contestable market theory provides many theoretical advances and insights into behavior, and the incremental cost test is an improvement over the Areeda-Turner test. However, although contestability theory provides a relatively straightforward test for subsidy-free pricing, there are several questions as to its usefulness in a regulatory setting. First, a comprehensive test for cross-subsidies requires examination of the relationship between incremental costs, revenues, and stand-alone costs for all possible combinations of services. This is not a trivial task. Second, although incremental and stand-alone costs seem relatively easy to define, they are, in practice, difficult to measure. Third, contestability theory also assumes that the incumbent firm will not retaliate against entrants. Finally, subsidy-free prices may not be consistent with the utility's total revenue requirement. Subsidy-free prices may produce revenues that are either less than or greater than the total revenue requirement.

²⁰ (...continued)

William Pollard, *Marginal Costs of Telephone Services: Symposium Proceedings* (Columbus, Ohio: The National Regulatory Research Institute, 1990).

CHAPTER 5

REGIONAL HOLDING COMPANY STRUCTURES AND STRATEGIES

Introduction

This chapter is the first of two chapters that discuss the strategic behavior of the regional holding companies as related to their corporate structures and organizational designs.¹ The focus is on structural strategies, as opposed to conduct strategies. Structural strategies include entering new lines of business, expansion through mergers and acquisitions, selling business units, entering joint ventures, and choosing the organizational design for the corporation. The results of structural strategies are manifested in 10-K statements to the Securities and Exchange Commission (SEC), mergers and acquisition reports, and other financial market-oriented documents. Conduct strategies include choosing pricing policies and marketing plans, and determining the extent of emphasis on customer satisfaction, quality assurance, research and development. Structural strategies are of interest here because conduct strategies are difficult to analyze (in part because information on conduct strategies is often proprietary).

In this chapter some theoretical concepts are developed that are useful in analyzing RHC strategy and structure. These concepts are applied to a general organizational chart of an RHC. This chart is based on structural features of the seven RHCs (provided in the Appendix) as they existed in mid-1992. The Appendix also includes a descriptive narrative of the structural strategies stated and implemented by the RHCs and the resultant organizational designs.

¹ This analysis takes as being generally valid Alfred Chandler's dictum that "structure follows strategy." See Alfred D. Chandler, *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, (Cambridge, Massachusetts: M.I.T. Press, 1962), 14.

Selected issues pertaining to RHC structural strategies that may be of particular interest to regulators are discussed in greater detail in Chapter 6. These issues include: (1) corporate structure and the cost of capital; (2) corporate structure and information flows, cross-subsidization, and access issues; (3) corporate structure and experimentation in the nonregulated market; and (4) corporate structure and preparation for the lifting of line-of-business restrictions.

General Overview

In market economies large differences exist in both the results that are achieved by firms and the way firms are organized and operate to achieve the results. Some differences in outcomes result from chance or serendipity. An example is a new product or service that is providentially provided for a firm to exploit. Similarly, personalities often determine corporate behavior. An example is when a dynamic entrepreneur or CEO is able to shape the firm's strategy. Increasingly, however, a substantial portion of firm behavior is consciously planned in advance. This reduces the amount of ambiguity and ad hoc decision making. Deliberate strategic planning² results in a "commitment to undertake one set of actions rather than another."³

The strategic planning process is influenced by several forces, both internal and external, that act on the firm. At the start of the planning process there is a set of given

² Strategic planning can be defined as a process through which the firm chooses its long-range goals and plots an overall course for achieving its goals. The degree to which the strategic planning process or function is formalized will vary across firms. Strategic planning is a conscious attempt to choose the future of the firm and is normally a senior management function. Day-to-day or operational planning is concerned with managing the firm so as to meet the long-range objectives. The decisions that determine the structure of the corporation are strategic rather than operational. For more on this see George A. Steiner, *Strategic Planning: What Every Manager Must Know*, (New York: The Free Press, 1979), 3-34.

³ Sharon M. Oster, *Modern Competitive Analysis*, (New York: Oxford University Press, 1990), 4.

or existing conditions. These include the firm's assets and liabilities, productive facilities, brand reputation, distribution network, and the firm's existing management and hierarchy. Analysis of the firm's internal organization and environment is useful in understanding the goals of the organization. The firm's goals may include short-term profits, long-term growth, or market dominance.

The firm does not operate in a vacuum. The laws and customs of society also contribute to the organization's strategic directions. These external factors include the general economic climate of the region or country, social or political preferences for ideals, and the rules and predispositions of the regulatory agencies. Another important component of the external environment entails the particular demographics of the firm's service area.

Existing and potential competitors also exert a considerable effect on the firm's strategies. The firm develops, articulates, and implements its strategies after considering three factors: the internal environment, the external environment, and existing or potential competitors. This strategic planning process varies across firms. However, evidence bears out that firms with vulnerable core technologies rely most heavily on effective strategic planning.⁴

The objectives of the planning process are typically two-fold. First, to improve organizational response time, and second, to integrate the myriad functions of a complex organization. Implementation of the strategy developed through the planning process will impact the external environment and the behavior of existing and potential rivals. However, the most pronounced impact of the strategic plan is on the firm. Though important and necessary, strategic planning is not free. Planning requires commitment of corporate resources and may create conflict between supporting the existing operations and structures, and changing the organization to support future operations and structures. Since overemphasis on either current operations or future directions is unwise, it is necessary to strike a balance between the present and the future.

⁴ P. H. Grinyer, S. Al-Bazazz, and M. Yasai, "Toward a Contingency Theory of Corporate Planning," *Strategic Management Journal* (January-February 1986): 3-28. Cited in Oster, *Modern Competitive Analysis*, 6.

Analytical Concepts

Firms may organize themselves as multiproduct firms or as single-product firms. In actual fact, there is a continuum between: (1) the integrated firm, (2) the multi-divisional or M-form firms,⁵ (3) the legally integrated but organizationally fragmented (e.g., the current reorganization of IBM) firms, (4) the legally distinct firms controlled to greater or lesser degree by a holding company, (5) the "quasi-autonomous" firms where affiliates are spun-off but kept in the orbit of the parent,⁶ and (6) the autonomous stand-alone firms.

The balance between capturing the benefits of economies of scope and avoiding the costs associated with complex hierarchical organizations determines the position of a firm on this continuum.⁷ If the former are dominant, there is a tendency toward integration. Transactions move out of the market and into the administrative or bureaucratic domain. If the latter are dominant, the tendency is toward stand-alone, autonomous organizations and market transactions dominate.

Economies (diseconomies) of scope exist when the total cost of producing multiple services by a single firm is less than (more than) the total cost of specialized

⁵ See O. Williamson, "Managerial Discretion, Organizational Form, and the Multidivision Hypothesis," in *The Corporate Economy*, R. Marris & A. Wood editors (London: MacMillan, 1971), 343-386 and A. Chandler, "The M-Form: Industrial Groups American Style," *European Economic Review*, 19 (1982): 3-23.

⁶ M. Aoki, "Innovative Adaptation Through the Quasi-Tree Structure: An Emerging Aspect of Japanese Entrepreneurship," *Zeitschrift für Nationalökonomie*, 4 (1984): 25-35.

⁷ See H. Leibenstein, *Inside the Firm*. Chapter 11, "The Power of Hierarchy," provides a good summary of the benefits of complex, hierarchical organizations, and Chapter 12, "Specialization, Hierarchy, and Internal Inefficiency," provides a good summary of the costs. The analysis is developed for a single firm, but may be extended to a holding company, or a conglomerate firm.

firms separately producing the same services.⁸ Economies of scope may exist in any or all of the various functions of the firm, production, marketing, finance, research and development, and administration.

Specialization is another source of economies or diseconomies. Specialization can create beneficial economies.⁹ However, specialization may cause significant inefficiencies. Although specialization may increase efficiency for particular activities, the managerial hierarchy required to coordinate and control specialized, and separate, activities may create inefficiencies. In addition, there may be motivational losses derived from the hierarchical organization.¹⁰

Economies of scope are not identical to the rationales for conglomeration. Economies of scope are production-based. Conglomeration is exemplified as:

[A] company which has by deliberate strategy of external growth, often away from declining sectors, developed a highly diversified product range which cannot easily be characterized in terms of a single, or well defined, group of technologies, a single set of major competitors, or a stable place in a well defined industry group.¹¹

⁸ William J. Baumol, John C. Panzar, and Robert D. Willig, *Contestable Markets and the Theory of Industrial Structure*, revised edition (New York: Harcourt Brace Jovanovich, 1988).

⁹ See the classic discussion of the division of labor in Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Edwin Cannan, editor (New York: The Modern Library, 1937), 3-10.

¹⁰ Leibenstein, *Inside the Firm*, chapter 12.

¹¹ *The New Palgrave: A Dictionary of Economics*, John Eatwell, Murray Milgate, and Peter Newman, editors (London: Macmillan, 1987), 574.

From a social perspective,¹² the negative effects of conglomeration are claimed to include the possible use of predatory pricing to enhance the market power of firms operating in multiple markets and carving up of spheres of influence.¹³ On the positive side, claims are made that conglomerates may allocate more resources to research and development,¹⁴ realize economies of scope,¹⁵ and lower their cost of capital through the positive effects of diversification. Broader questions pertaining to conglomerates include:

- (1) What are the comparative advantages of organizing economic activity on the basis of an interfirm market processes versus intrafirm bureaucratic processes?
- (2) What is the impact of conglomeration upon the flow of economic resources between alternative uses?
- (3) How does conglomeration affect the flow of information vital for the functioning of the market economy (and regulation)?¹⁶

The interplay between forces favoring integration and stand-alone production is further complicated by partial regulation. Depending on incentives under regulation, the organization of the firm may be skewed.

¹² From a firm's perspective, conglomeration can have a number of benefits, some that run counter to and some that mesh with overall social welfare. The present analysis, being from a public-interest perspective and written for a regulatory audience, focuses on the social benefits and costs.

¹³ C. D. Edwards, "Conglomerate Bigness as a Source of Power," in *Business Concentration and Price Policy*, George J. Stigler, editor (New York: National Bureau of Economic Research, 1955).

¹⁴ R. Nelson, "The Simple Economics of Basic Scientific Research," *Journal of Political Economy*, 67 (1959): 297-306.

¹⁵ John C. Panzar and Robert D. Willig, "Economies of Scope," *American Economic Review* 71, no. 2 (May 1981): 268-72.

¹⁶ The discussion is adapted from A. Hughes, "Conglomerates," in John Eatwell, Murray Milgate, and Peter Newman, editors *The New Palgrave: A Dictionary of Economics*, (London: Macmillan, 1987), 574.

Regional Holding Company Structures: Overview

Regulation affects organizational structure but does not mandate a particular structure,¹⁷ Figure 5-1 presents an illustration of an RHC structure. It is abstracted from actual structures of the RHCs (see Figures A-1 through A-7). The BOC is shown in the lower left-hand corner of the Figure 5-1.¹⁸ The bulk (over 80 percent) of RHC assets and revenues is concentrated in the BOC. The BOC is a multiproduct firm with products ranging from the most obvious, such as voice telephone service to other more esoteric enhanced services, such as three-way calling, caller ID, fax store and forward, and voice mail. The complexity and the highly interdependent nature of the product lines deriving from reliance on joint and common usage of resources in the BOC would seem to lead to adoption of the M-form organization or a variant.¹⁹ The classification of telephone services into plain old telephone services (POTS) and pretty amazing new stuff (PANS), which includes enhanced services such as voice mail, for regulatory purposes tends to reinforce the divisional structure within the BOC.

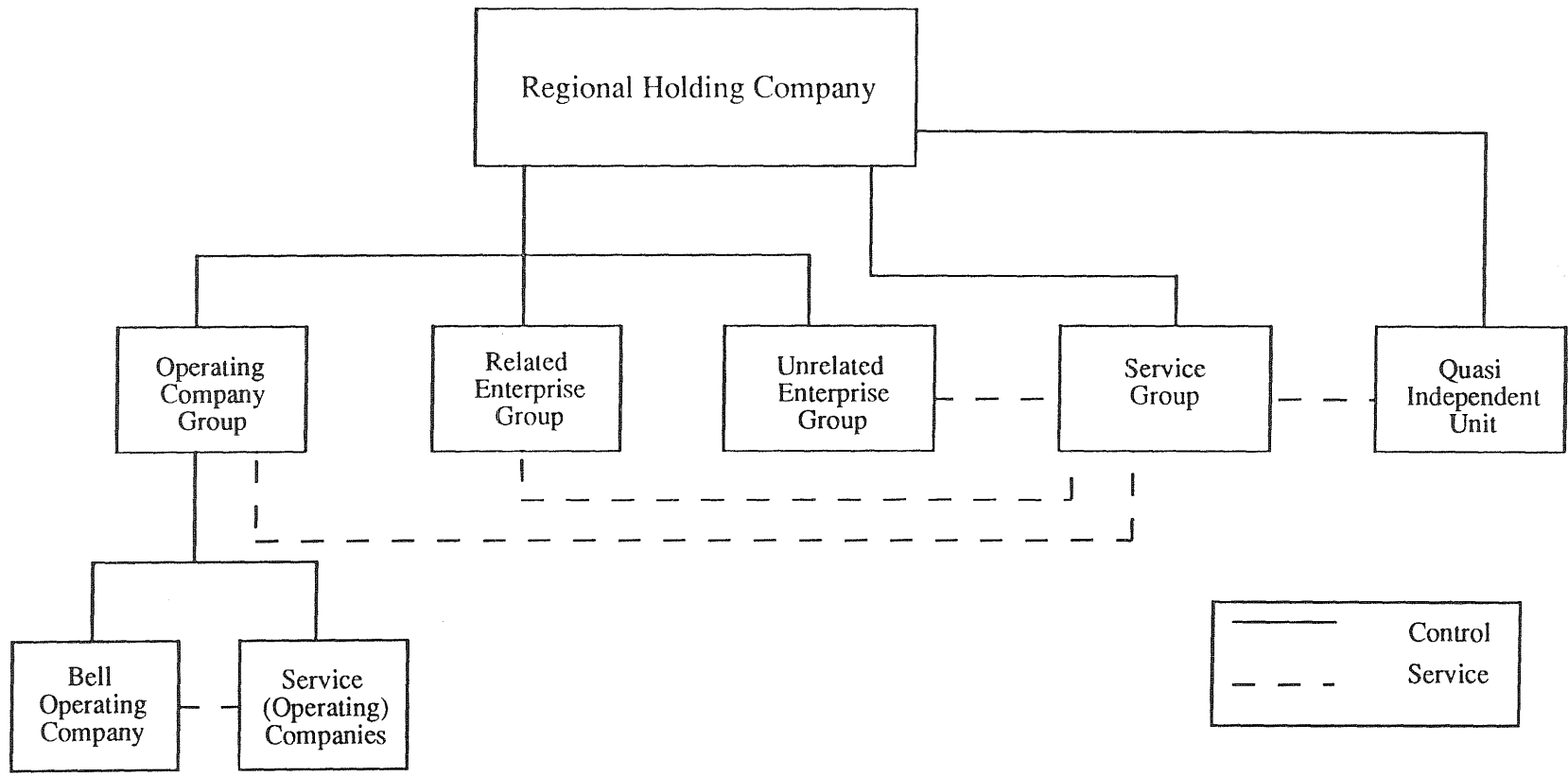
¹⁷ The New York Public Service Commission approved a reorganization plan submitted by the company as a result of allegations of abuses but it did not require a specific form or organization. The influence of regulation is clearly seen in the following statement by the Vice President of Regulatory Relations for New York Telephone:

We would prefer not to have this wall between our businesses. But if we can make the state regulators happy, then there's a big value in that.

See "Regulators Approve NYNEX Reorganization," *The New York Times*, National Edition, February 21, 1992, C3.

¹⁸ Although a number of RHCs have multiple BOCs, for the purpose of this analysis each RHC is modeled as having one BOC.

¹⁹ The M-form or multi-division organization is based on the use of more-or-less self-contained units. Divisions (which may be subsidiary corporations or administrative units) can be organized to focus on a product line, a customer base, or a geographic area. Each division is assigned the physical and human resources necessary to perform standard business functions such as manufacturing, purchasing, human resource management, and marketing. Individual divisions have as much autonomy as allowed by corporate headquarters, and certain common functions, such as financing and overall planning are retained at corporate headquarters. The M-form is often contrasted with the U-form, or unitary organization, in which the central headquarters performs a greater proportion of functions.



Ability to regulate decreases →
Source: Author's construct.

Fig. 5-1. General schematic of regional holding company structure.

Even though the BOC structure is located closer to the integrated end of the organizational continuum, one cannot necessarily draw the conclusion that it is marked by strong economies of scope. The existence of a divisional structure within the BOC indicates the existence of inefficiencies deriving from specialization and possibly diseconomies of scope. In addition, the organizational structure is strongly affected by regulatory incentives.

The Operating Company Group

In Figure 5-1, the BOC is located in a cluster of subsidiaries that may be described as the operating company group (OCG). Generally this group includes the BOC, the services or material resources unit and other related subsidiaries. One services unit, Ameritech Services, Inc. is described as providing the BOCs with "human resources, technical marketing and regulatory planning services, as well as purchasing and material management support."²⁰

Other subsidiaries within the OCG may include the directory publishing unit or a unit that sells, installs, and maintains business customer-premises equipment (CPE) and central office-based services. The OCG may have its own management staff and OCG companies may report to a group president or an equivalent officer of the RHC management.

The companies in the OCG are legally distinct. However, because the chain of command extends through the OCG president to the CEO of the holding company, it is unlikely that the constituent units behave as truly autonomous entities. It is likely that the profit, revenue, or market share interests of the constituent units are subordinate to those of the OCG or the RHC as a whole.

Though the companies are legally distinct, there is not an incentive to report financial data in a manner that is easily accessible to outsiders. However, this may be ameliorated by formal reporting requirements imposed by the regulator or the need for disclosure if the OCG or the BOC raises capital on its own.

Each RHC has some form of an OCG. There is not uniformity in the OCGs, other than the inclusion of the BOCs. Ameritech's OCG includes the CPE marketing unit. Southwestern Bell placed that unit outside the OCG. Pacific Telesis's directory publishing unit is a subsidiary of the BOC. However, directory publishing is outside the

²⁰ American Information Technologies Corporation, 10-K Statement (1990), 3.

OCG in the other RHCs. The grouping of the companies suggests that there may be economies of scope or strategic benefits.

The structurally separate form avoids the existence of hierarchy-related inefficiencies and diseconomies of scope. If a regulatory effect is not assumed, the organization of the OCGs suggests that the inefficiencies and diseconomies of integration play a larger role at the level of the OCG than at the level of the BOC's product lines.

The Related Enterprise Group

Figure 5-1 illustrates another cluster of subsidiaries that may be described as the related enterprise group (REG). Generally, this group comprises start-up companies in competitive markets that are related to the core telecommunication business. These companies typically have distinct legal and organizational forms but report to RHC management either through an REG president or more directly as a division. In some cases, an intermediate holding company actually owns the REG subsidiaries (for example, PacTel Corporation). In this case, the lines of accountability are separate and distinct from the OCG companies.

When the chain of command extends through the REG president or holding company, or directly to the CEO of the holding company, even though the various subsidiaries are legally distinct, they will not be truly autonomous. Consequently, profit, revenue, or market share interests of the subsidiaries are very likely to be subordinated to those of the REG to the RHC as a whole. Also, though the subsidiaries are legally distinct, financial data is not reported in a manner that is easily accessible to outsiders. Regulators and market analysts, therefore, must use somewhat creative means to ascertain the financial situation of the holding company and its subsidiaries. Caution is advised, however, when numbers are derived by backing out or other means. Numbers so derived are often skewed or noncomparable with commonly accepted norms. Analysis of common equity and common debt is an example of this problem.

It is difficult to construe the clustering of the REG companies as being indicative of or predictive of significant economies of scope. One reason for this is the disparate nature of REG product lines.²¹ Another reason is the continuous reorganizations that

²¹ For example, Southwestern Bell's REG includes directory publishing, cellular telephony, and CPE sales.

seem to characterize REGs.²² The wide separation from the OCGs and the REGs suggests that economies of scope across their respective product lines are negligible. An alternate explanation is that the separation indicates a desire to escape the attentions of the regulators.

The Unrelated Enterprise Group

A third cluster of subsidiaries is described as the unrelated enterprise group (UEG). Here, the product lines are largely unrelated to the telecommunications operations.²³ UEG companies are not service units of the RHCs, though they may provide some services to the BOC or to REG subsidiaries. As with REG companies, individual companies have distinct legal and organizational forms, but the UEG's lines of accountability are separate and distinct from the OCG and REG companies. They report to the holding company either directly or through a UEG president. Because the chain of command extends indirectly through the UEG president or directly to the CEO of the holding company, it is unlikely that UEG units will be truly autonomous. As noted in the discussion of the OCG and REG, the profit, revenue, or market share interests of the UEG's units likely to be subordinated to those of the REG or those of the RHC as a whole. Also, though the UEG subsidiaries are legally distinct, their financial data is not reported in a manner easily accessible to outsiders.

At the level of production, there is little in common between the core telecommunication business conducted through the BOC and the UEG operations. Therefore, the concept of economies of scope does not have immediate relevance. Conglomeration appears to provide a better framework than economies of scope for explaining the presence of the BOC and UEG companies under the same holding company. It is possible that economies of scope may exist across the UEG companies. However, it is difficult to envisage economies of scope between a reinsurance company and a real estate company unless the units are sharing information.

²² For example, Ameritech's REG underwent at least three reorganizations between 1987 and 1990.

²³ The insurance and real estate activities of U S WEST and Pacific Telesis are examples.

The Service Group

The service group (SG) is a fourth cluster of subsidiaries. This group provides RHC-wide services. This group is an extension of RHC management. Capital funding for the RHC is usually undertaken through a structurally separate entity belonging to this group. When the real estate subsidiary is providing services only to, or primarily to, other RHC units (as was the case with real estate subsidiaries before Judge Greene granted a waiver in December 1984),²⁴ it belongs to this cluster. When its mission is defined as real estate services for outside customers (as was the case with the U S WEST and Pacific Telesis real estate units after December 1984), it belongs to the UEG cluster.

A special case is the REG or UEG company that is constituted as a quasi-independent entity. Here the unit raises its own equity and makes its own SEC filings. However, the RHC holds the majority of the shares and retains the ability to appoint and dismiss managers.²⁵ One reason for the quasi-independent status is that the two companies may be valued differently by the stock market. Another reason is that a quasi-independent unit is relatively well insulated from regulatory attention.

All the subsidiaries discussed above are under the effective control of the RHC management. Even though the actual levels of ownership may vary, the essential features are: (1) the ability of the RHC management to appoint and dismiss managers of the constituent units (this may derive from equity ownership or from contractual commitments), (2) the ability to reorganize units and move individual operations from one subsidiary to another, and (3) the consolidation of financial results.

²⁴ Dick MacKnight, "U S WEST Calls for Business/Education Partners," Lexis/Nexis Information Service, Business Wire, December 14, 1988.

²⁵ U S WEST's New Vector Group is an example. For some time U S WEST held 81 percent of the shares (just enough to consolidate taxes).

BOC Divestiture

Until recently, divestiture of the BOCs by RHCs was an issue raised only by frustrated regulators and consumer advocates.²⁶ However, recently the issue was put on the table by one of the RHCs, Pacific Telesis.²⁷ Sam Ginn, the Chairman and Chief Executive Officer, stated that:

A structural reexamination is important now, given several concerns that confront the present organization. These concerns include the sources of new capital available to take advantage of global opportunities; the challenge of managing regulated and unregulated businesses that are operating in competitive environments; the regulatory barriers to integrating operations; the fundamental burdens of the 1982 AT&T Consent Decree; and the evolving view that financial markets tend to respond more favorably to relatively single focused organizations. Moreover...the stock markets have [not] fully reflected the value of the Pacific Telesis enterprises.²⁸

In light of this statement, it may be appropriate for regulators to take a fresh look at the issue. RHC structure deserves regulatory attention not only to limit cross-subsidization and abuses of affiliate transactions, but also to safeguard the public interest in the face of RHC-initiated divestiture. In addition to the reasons outlined by Chairman Ginn, it may be necessary to consider factors such as the maturation of cellular telephony and other product lines. It is possible that the RHC management, having nurtured these start-up operations in the shade of the BOC are now attempting to restructure the company to preclude the flow of benefits back to the BOC and to the BOC's customers.²⁹

²⁶ S. H. Verhovek, "New York Step Asked on NYNEX: A Phone Divestiture Will Be Considered," *New York Times*, National Edition, October 4, 1990, C1.

²⁷ A. Ramirez, "If PacTel Split, It Might Offer Big Stakes," *New York Times*, National Edition, May 23, 1992, 29.

²⁸ Jeffrey Heyser, "Pacific Telesis Group - Statement of Proposed Separation," Extel Regulatory News Service, Lexis/Nexis Information Service, April 16, 1992.

²⁹ A parallel case of a corporate restructuring to insulate earnings of subsidiaries from incorporation into the rate base calculation occurred in Canada in 1982. For more on this see R. E. Babe, *Telecommunications in Canada: Technology, Industry and Government* (Toronto: University of Toronto Press, 1990), 190-95. See also, David
(continued...)

BOC divestiture can take a number of forms. The principal ones are depicted in Figure 5-2 which generally shows the type of divestiture Pacific Bell seems to be contemplating. The regulated OCG is spun-off from the holding company which continues with its communication-related and communication-unrelated enterprise groups. This is somewhat similar to the divestiture recommended by William J. Cowan, General Counsel of the New York Public Service Commission in 1990, except that Cowan recommended divestiture of one of the BOCs rather than the cluster around the BOCs.³⁰

In the same way that divestiture of the RHCs from AT&T resulted in companies that were truly independent of each other, the OCG and the residual RHC should have managements that will not collude with each other. Given the enormous proportion of assets and revenues still concentrated in the OCG (generally around 90 percent), the terms and conditions of BOC divestitures will have to be carefully analyzed to prevent harm to the OCG and its captive ratepayers.

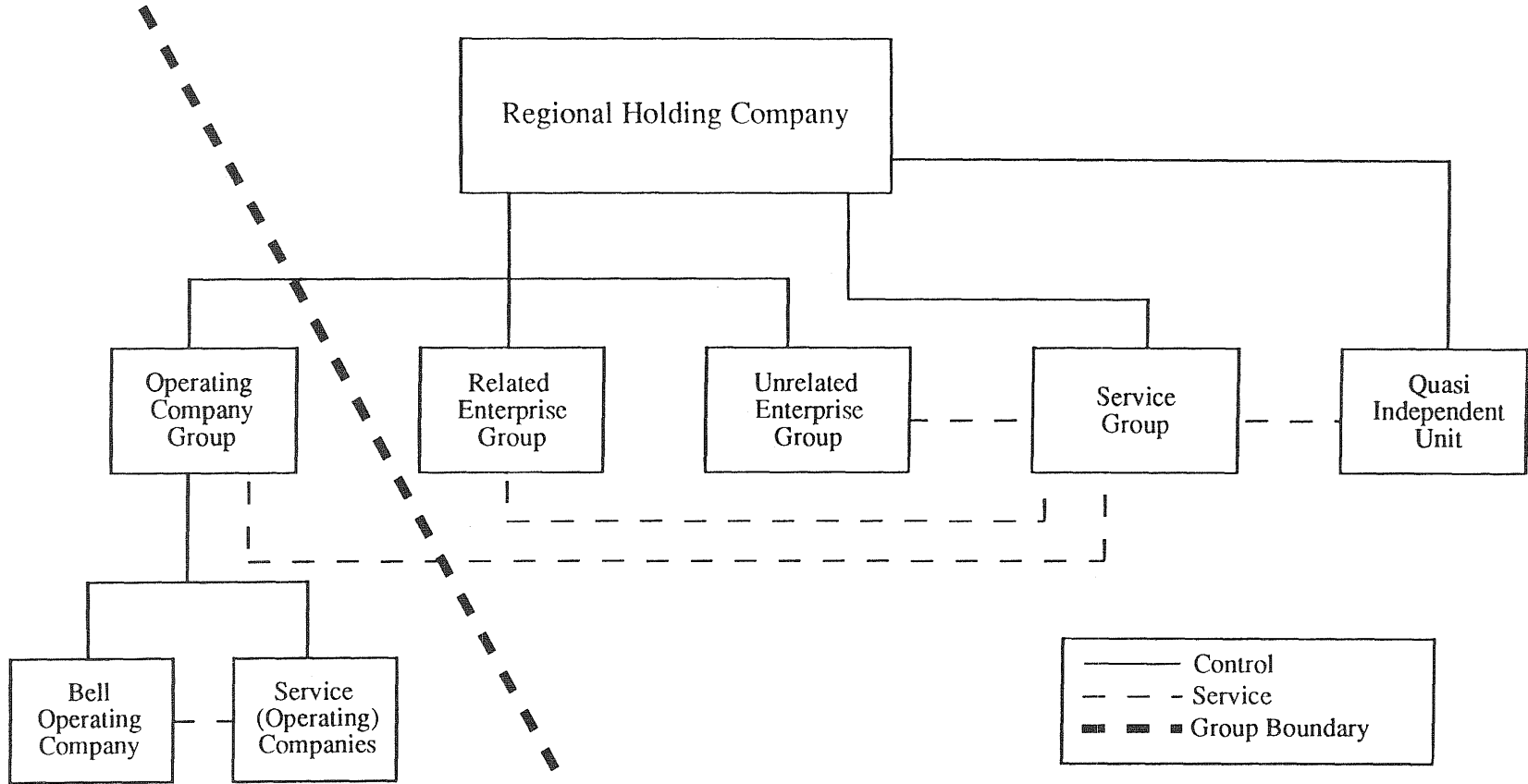
The location of directory operations upon such a divestiture will be particularly problematic in this regard. Compensation for the incubation services provided by the OCG for the start-up companies in the REG and UEG may also have to be addressed. In addition, rules for equitable access to OCG facilities by REG units and their competitors will need to be clarified. Analysis of these issues can be augmented by drawing on the experience of providing access to interexchange carriers following the AT&T Divestiture, as well as on the ongoing work on ONA. It must be noted that this form of divestiture does not affect the present provision of monopoly and competitive services within the BOC.

Figure 5-3, illustrates a possible split of the RHC between communication-related and communication-unrelated businesses, more or less corresponding to the way the Bell Atlantic and U S WEST categorize their subsidiaries. Here, divestiture protects the economies of scope between the OCG and the REG and addresses concerns pertaining to conglomeration. The problem of lack of focus in the present RHCs, identified by the Pacific Telesis Chairman, would be alleviated to some extent by this type of divestiture.

²⁹ (...continued)

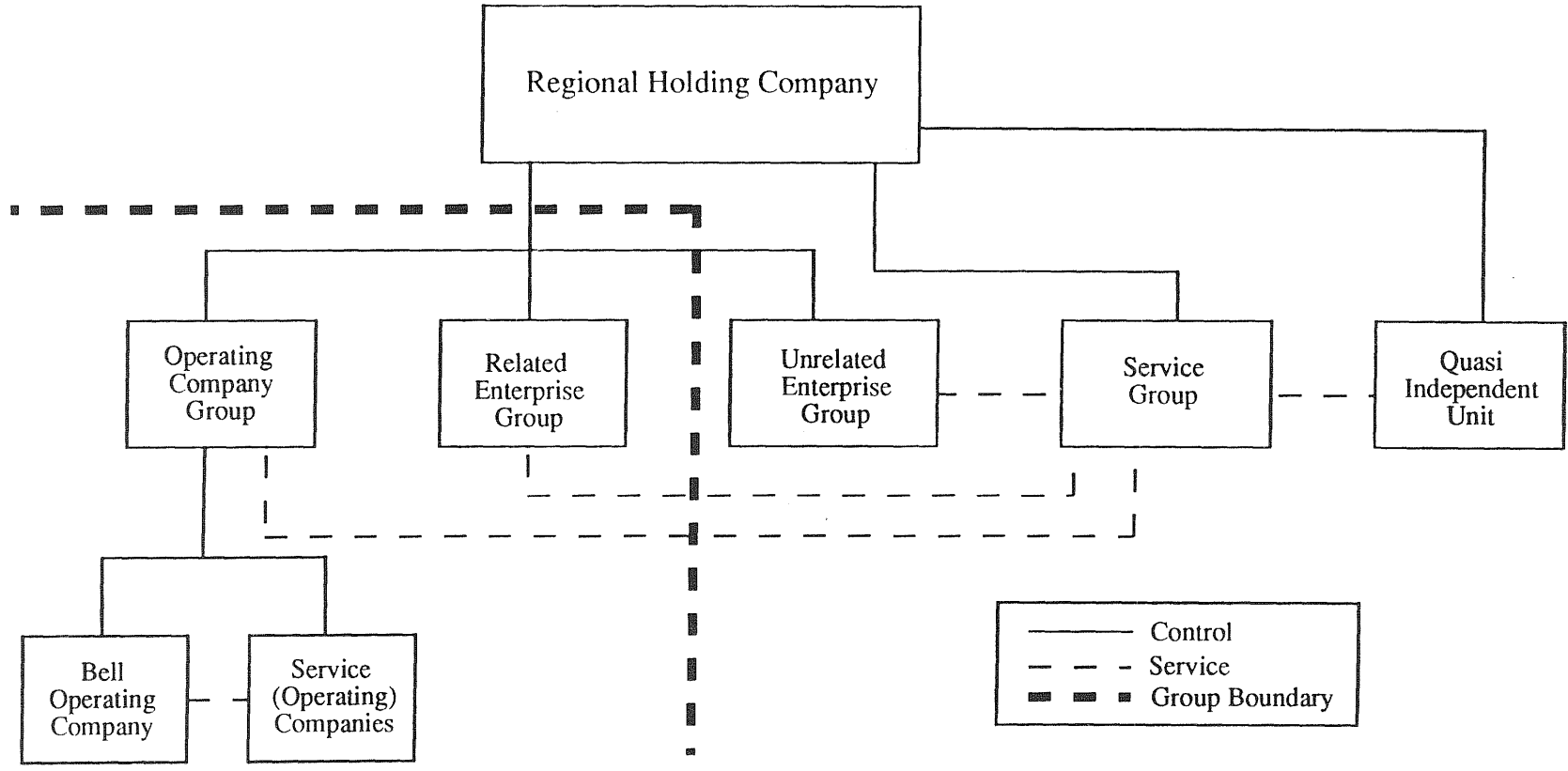
Chessler, *Appropriate Strategies for Regulating the Bell Regional Holding Companies and Bell Communications Research, Inc.*, (Columbus, Ohio: The National Regulatory Research Institute, 1984), Section 4.

³⁰ Verhovek, "New York Step Asked On NYNEX," C1.



Source: Author's construct.

Fig. 5-2. Illustrative divestiture of operating company group from enterprise groups.



Source: Author's construct.

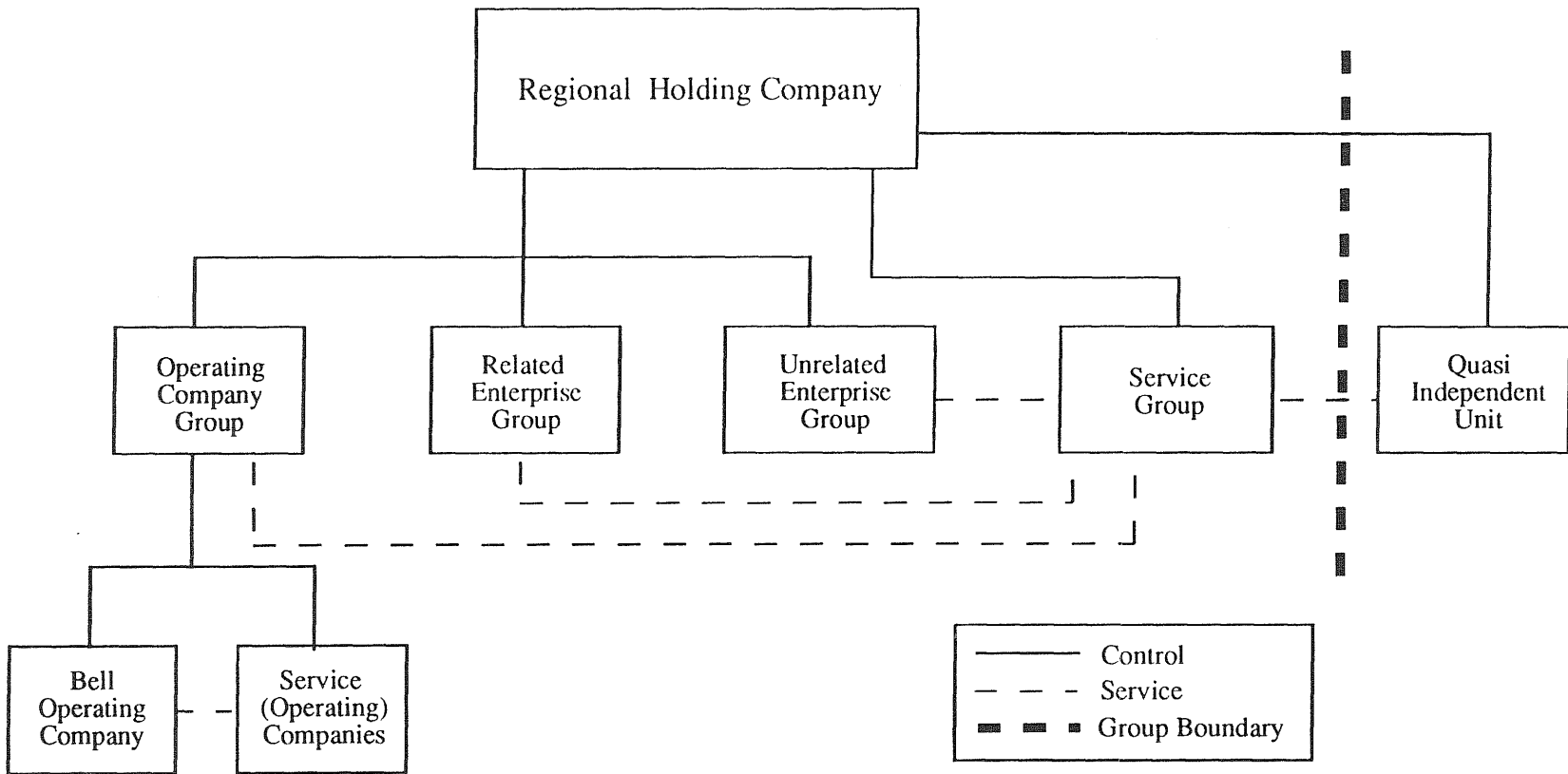
Fig. 5-3. Illustrative divestiture of communication-related and communication-unrelated groups.

However, the resulting OCG/REG entity with multiple foci on wireline network-based services, wireless services, and CPE sales, may still be too unfocused from the perspective of the financial markets. This form of divestiture will not be applicable to all the RHCs, since some do not have a significant cluster of communication unrelated enterprises.

Figure 5-4 depicts the spin-off of one or more individual units from either the REG or the UEG, rather than from entire groups as discussed above. For example, U S WEST could spin off its quasi-independent cellular subsidiary, U S WEST NewVector. Given the general perception of the opportunities available to cellular firms, this would probably be considered an attractive spin-off.

Financial markets seem to be interested in pure plays.³¹ Spin-offs of successful pure plays could garner significant increases in value for both parties (i.e., the total value of the two independent companies would be greater than the total value of the integrated company).

³¹ A pure play is an investment in a single or very narrow segment of the market. If one could choose the most profitable segments, such a strategy would be preferable to investing in a more diversified conglomerate firm. One must note that the interest in pure plays seems to run counter to the interest in synergy and conglomeration that was evidenced in the 1960s, 1970s, and 1980s.



Source: Author's construct.

Fig. 5-4. Illustrative divestiture of selected communication-related or unrelated enterprise groups.

CHAPTER 6

REGIONAL HOLDING COMPANY STRUCTURES AND STRATEGIES: SELECTED ISSUES

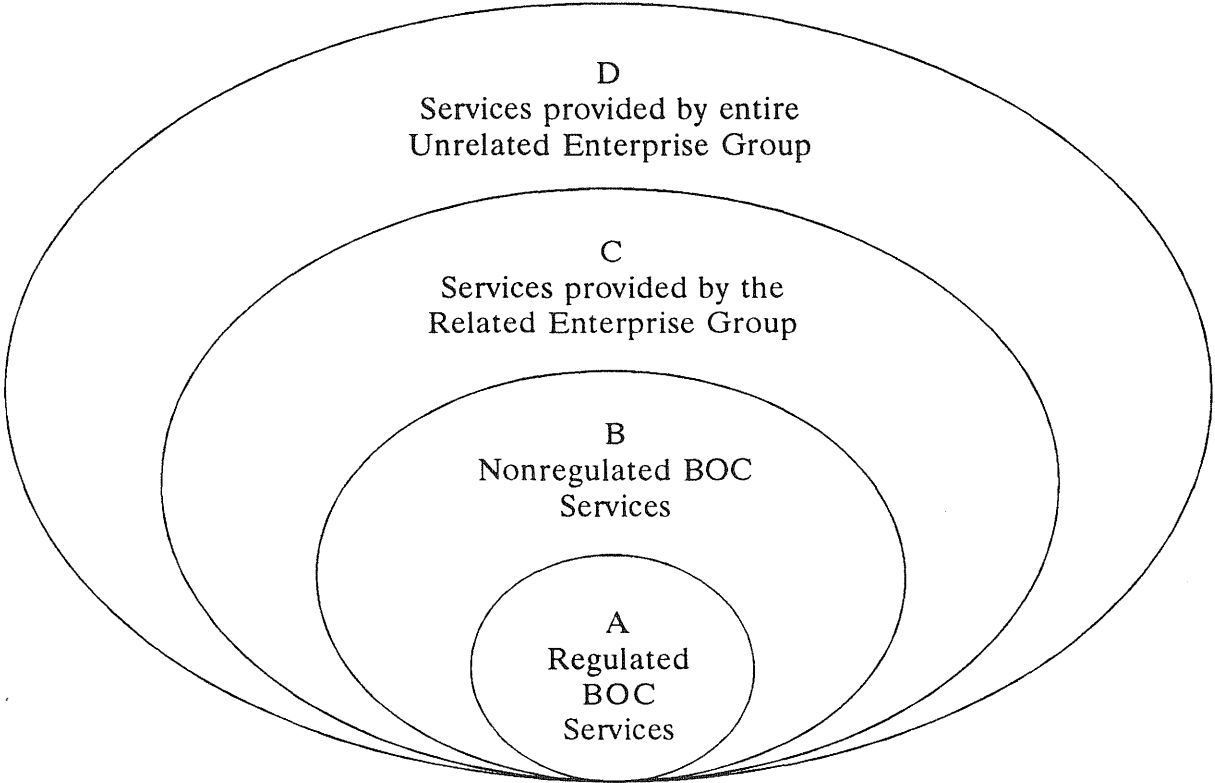
Introduction

This chapter identifies several issues that pose problems for regulators as they attempt to develop and implement appropriate policies for dealing with the RHCs and the BOCs. These issues include: the effect of the holding company's unregulated operations on its own cost of capital and that of the regulated operating company, information issues, such as the use of customer proprietary network information, and the effect on the BOC of marketing new and experimental services.

A Regulatory Paradigm

One way to view holding companies and their various affiliates and operations is shown in Figure 6-1. Area A represents the regulated services produced by the BOC. Area B represents nonstructurally separated unregulated services produced by the BOC. Areas A and B, combined, represent the OCG discussed in Chapter 5. Area C represents structurally separated services produced outside the BOC but which are related to the provision of telephone service (the REG discussed in Chapter 5). These may include various service companies, cellular operations of the RHCs, CPE sales and service, etc. Area D represents nontelecommunications related operations, such as real estate, financial services, computer hardware and software sales and service, etc (the UEG and SG discussed in Chapter 5). International activities may fall into either Area C or Area D depending on the analyst's preference.

Although they may allow the BOC some flexibility, regulators have control over prices charged for services in Area A. However, regulators generally do not control prices for services in the other areas. Services in Area B, though not regulated, fall under the purview of regulators because they are performed within the BOC, and the presumption must be that there are fairly strong economies of scope between these



Source: Authors' construct.

Fig. 6-1. Generic holding company service categories.

services and core services. Operations in Area C are structurally separated voluntarily, at least since elimination of Computer II restrictions. The implication is either that economies of scope between these operations and core services are not great or that the RHC believes profits would be decreased if these operations were under the BOC and thus, subject to greater regulatory purview.

Regulators' concerns regarding the RHCs' diversification results from the effects of diversification on the BOCs. Some effects may be easily seen, others are hidden. Analyses of all the effects is quite difficult. However, some trends do emerge, and several effects of RHC diversification are discussed below..

Cost of Capital Issues

Quantitative measures of the effect of diversification on the cost of capital to the RHCs are difficult to construct. In a sense, a firm's cost of capital reflects its health just as body temperature indicates a person's physical condition. Although neither the cost of capital for a firm nor body temperature for an individual gives a complete picture of condition, they are useful indicators. Inferences may also be drawn as to possible subsidization of the nonregulated enterprise by the regulated operating company and hence the captive ratepayer. This section addresses the issues of capital costs incurred by the holding companies in general and their nonregulated entities in specific.

Because of their regulated monopoly status and the relative stability of demand for their services, public utilities have a history of excellent credit ratings and, consequently, low capital costs. In granting a rating to a company's debt securities, firms, such as Moody's Investors Services and Standard and Poor's Corporation, consider factors including the riskiness of current business operations, cash-flow projections, growth potential, the capital structure (relative proportions of debt and equity capital), and the effect of growth plans on the organization's ability to meet its obligations.

Historically, local telephone service was considered to be a fairly conservative, low-risk operation. In the telecommunications industry, technological advancement has created significant efficiencies resulting in decreased cost and increased revenues due to increased use of telecommunications services. This combination provided local operating companies with a favorable cost of capital afforded to those few companies whose debt is

rated double- or triple-A. As the RHCs become more aggressive in pursuing opportunities outside traditional telephone services, there is the distinct possibility that entry into new markets will increase the cost of capital both for the RHC and for the BOC. There are two cost-of-capital issues. The first issue is financing new ventures based on the RHC's credit rating. The second issue is the effect of risky ventures on the RHC's cost of capital.

Operating under the RHC's umbrella, unregulated affiliates benefit from being able to raise capital on favorable terms. Raising capital is one of the obstacles a new firm encounters. To obtain financing a new firm must have access to capital markets and/or lending institutions; the cost of financing is directly related to the riskiness of the venture and the stability of the firm. Established firms can access the capital markets through investment banking houses. New enterprises, operating independently, may have to obtain capital through venture capital firms at a somewhat higher cost.¹ Likewise, lending institutions may be reluctant to make loans to new and untested firms.

One concern is whether the RHC's enterprise unit's ability to obtain capital is implicitly subsidized by the BOC. Although a complete analysis is beyond the scope of this report, it is important to note that enterprise subsidiaries obtain capital at a rate similar to that of the BOC because RHC guarantees repayment of its subsidiaries' principal and interest obligations, including those relating to funds raised to support risky ventures. This may allow the enterprise unit to obtain terms that are more favorable than those obtained by independent competitors.

In a market economy enterprises engaged in the same line of business should incur similar capital costs. For instance, other things being equal, firms providing cellular services would have similar costs of capital. Table 6-1 presents estimates of the cost of equity and a weighted cost of capital for each of the RHCs and for McCaw Cellular and MCI Corporation. McCaw Cellular is an aggressive cellular provider and has an estimated weighted cost of capital of approximately 13 percent. MCI is an IXC

¹ Investment banking houses assist a firm in marketing its securities, and they charge a fee for their services. Venture capital firms assist in finding private investors for a firm's securities and also assume an ownership role in the firm. The role of venture capital firms is especially crucial in the start-up phase of high-tech enterprises.

TABLE 6-1
REGIONAL HOLDING COMPANY COST OF CAPITAL COMPARISONS

Regional Holding Company	Beta	Cost of Debt %	Long Term Debt (Millions of Dollars)	Share Price \$	Total Equity (Millions of Dollars)	Cost of Equity %	Total Capital (Millions of Dollars)	Weighted Cost of Capital %
Ameritech	.80	8.8	4,964	58	15,465	8.3	20,429	8.4
Bell Atlantic	.85	7.0	7,960	41	16,238	8.8	24,198	8.2
BellSouth	.85	7.4	7,745	44	21,345	8.8	29,089	8.4
NYNEX	.80	8.8	6,833	69	14,057	8.3	20,890	8.5
Pacific Telesis	.85	9.1	5,504	37	14,838	8.8	20,341	8.9
Southwestern Bell	.90	9.2	5,675	57	17,109	9.3	22,784	9.3
U S West	.90	8.0	7,629	33	13,528	9.3	21,157	8.9
MCI	1.20	8.8	3,104	30	7,780	12.4	10,883	11.4
McCaw	1.75	8.1	5,198	27	4,922	18.1	10,121	13.0

Source: Value Line Investment Survey, April 17, 1992.

Note: In the above calculations, weighted average cost of capital (WACC) was calculated according to the formula below. Taxes were not considered in these calculations. The risk-free rate is the 30-year U.S. Treasury Bill rate (6.38%). This rate is adjusted by subtracting 1.0. The market risk premium is 5.0 percent. This method for calculation of WACC is used by many investment banks. This method was provided by J.P. Morgan Securities.

$$WACC = \left[\left(\begin{array}{l} \text{marginal current cost of} \\ \text{borrowing long-term} \\ \text{(ten-year cost of debt)} \end{array} \right) \times \left(\frac{\text{total debt}}{\text{total capital}} \right) \right] + \left[\left(\begin{array}{l} \text{risk-free} \\ \text{rate} \end{array} - (1.0) \right) + \beta \left(\begin{array}{l} \text{market} \\ \text{risk} \\ \text{premium} \end{array} \right) \right] \times \left(\frac{\text{total equity}}{\text{total capital}} \right)$$

l has an estimated cost of capital of 11.4 percent. The estimated cost of capital for seven RHCs range from 8.2 to 9.3 percent.

In Table 6-1, the relative risk of investments can be judged by examining the Betas. A stock of average risk has a Beta of one. Betas above one indicate above average risk and Betas below one indicate less than average risk. Each RHC has a Beta below one, indicating below average risk. MCI and McCaw both have Betas above one, indicating above-average risk. If the RHCs apply their overall weighted cost of capital to investments in cellular or other ventures, those operations will obtain capital on very favorable terms relative to their competitors.

Another concern for regulators is that although the RHC's other subsidiaries benefit from the RHCs' good credit, there is a potential drawback for the BOCs. Each RHC has a unit that obtains capital for the RHC and its subsidiaries. Investment bankers and rating agencies indicate that the debt issued through the funding unit is rated as if it were the obligation of the parent company. The negative aspect for ratepayers is that the cost of capital to the BOC may increase as the relative size of the risky ventures increases. If the RHC's risky ventures raise its overall cost of capital, and the BOC's cost of capital is based on the RHC's cost of capital, ratepayers will be harmed.

This is not idle speculation, some concern has been expressed that international and other unregulated investments by the RHCs might put pressure on their bond ratings. Investments that lower the RHCs' bond ratings will also be likely to have negative impacts on the BOCs' bond ratings.² Increased capital costs resulting from the risk of unregulated ventures are another area of concern for regulators. In setting rates for the BOCs, regulators should use an independent cost of capital for the BOC if this becomes a significant factor.

² See *Telecommunications Reports*, (October 5, 1992): 6-9.

Information

Strategic and competitive aspects of information flows within companies and conglomerates have been neglected in the economics and policy analysis literature.³ The increasing importance of information and information technology in modern economies may end this neglect.⁴ The issue of customer information has been extensively studied by the FCC in relation to customer proprietary network information (CPNI) and in consideration of open network architecture (ONA).⁵ Information issues have also been considered by various state public utility commissions.⁶ For example, the FCC's partial reversal of its position regarding the need for BOC personnel marketing enhanced services to have prior written permission before obtaining CPNI was based on the following rationale:

In this proceeding, most commenters argue for greater restrictions on BOC access to CPNI, and the record indicates that their unrestricted access to CPNI does give the BOCs an advantage over competing ESPs in marketing enhanced service to BOC customers. This advantage is of particular importance with respect to large business customers, as their CPNI is most involved. The CPNI of large business customers raises competitive issues not only for the ESPs [enhanced service providers] competing with the BOCs, but also for the customers themselves. Some large business customers have expressed concern about the competitive implications for them of unrestricted BOC access to their CPNI, suggesting that CPNI records can reveal sensitive marketing strategies, expansion plans,

³ For example, George J. Stigler, "The Economics of Information," *Journal of Political Economy*, 69 no. 3, (June 1961): 213-25; D. M. Lamberton editor, *The Economics of Information and Knowledge* (Harmondsworth, Middlesex, England: Penguin, 1971).

⁴ See Robert. E. Burns, Rohan Samarajiva, and Roopali Mukherjee, *Utility Customer Information: Privacy and Competitive Implications*, (Columbus, Ohio: The National Regulatory Research Institute, 1992).

⁵ For details see Burns, et al. *Utility Customer Information*, Chapter 3.

⁶ See Federal Communications Commission, Report and Order in the matter of Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards, CC Docket No. 90-623 (December 20, 1991): 35-44.

innovative uses of telecommunications, customer lists, costs, and other confidential business information and therefore should not be revealed to anyone, including the BOC's enhanced services operations, without the customer's consent.⁷

The discussion of the sensitivity of large business enterprises' CPNI indicates that customer information is of potential value to many RHC subsidiaries. What is needed is a different way of thinking about the aggregation of information created in the course of the BOCs' routine provision of a communication capability.

The FCC's CPNI decision views customer information as being of value to the RHC only in marketing CPE and enhanced services. Thus, it restricts access to that information. A logical next step would be to examine the use of CPNI by all subsidiaries, including those unrelated to telecommunications, and charge nonBOC entities for information transferred from the BOC.

For example, early and costless access to information regarding a business customer's calling volumes and patterns would provide the RHC's cellular unit with a significant competitive advantage. The competitive issue can be resolved by giving all providers CPNI on equal terms.

Another question is whether and how to compensate the producers of the information, the customer, and the BOC. If the BOC is compensated, a policy issue is whether part of such compensation should be used to reduce ratepayers' burden.

A property rights solution allows the entity which created the information to grant exclusive or nonexclusive access to it for a fee.⁸ This solution differs from the FCC's

⁷ Federal Communications Commission, Report and Order in the matter of Computer III Remand Proceedings: Bell Operating Company Safeguards and Tier 1 Local Exchange Company Safeguards, CC Docket No. 90-623 (December 20, 1991): 41 [Footnotes in original omitted.]

⁸ The general "property rights" solution was first proposed in J. B. Rule, "Data Wars: Privacy Protection in Federal Policy," in *New Directions in Telecommunications Policy*, ed. P. R. Newberg (Durham, North Carolina: Duke University Press, 1989). A specific form, applicable to telecommunications transactions, was proposed by Eli Noam in the discussion paper written as the basis for the New York Public Service Commission, *Proceeding on Motion of Commission to Review Issues Concerning Privacy in Telecommunications*, Case No. 90-C-0075 (122 PUR 4th 10 [1991]).

CPNI solution mandating equal access, or none. However, it does not actually establish a basis for market exchanges. Assigning property rights and/or monetary value to customer information would be a first step in promoting such exchanges.

The use of BOC mailing lists, and credit records, for direct-mail solicitation for Ameritech's combined calling/credit card, is an example of an un- or under-compensated transfer of valuable information from customers and/or BOCs to an unregulated RHC subsidiary. Such un- or under-compensated transfer deprives customers of revenues due to them and limits their control of CPNI.

Although this discussion is limited to customer information, other information and intangibles such as brand-name capital or goodwill associated with the BOC name, training given employees, etc. can be similarly considered. If any of these assets are transferred from the BOC to other RHC subsidiaries at below market value, policy questions arise including:

- (1) Do un- or under-compensated transfers constitute cross-subsidization?
- (2) Does cross-subsidization frustrate policy objectives such as ensuring the existence and equal position of competitors?

The possibility that BOCs may provide information to unregulated affiliates at prices below incremental cost or market price enables the Yellow Pages question to be reframed in an interesting way. In 1982, Judge Harold Greene altered the original Consent Decree agreement to place the Yellow Pages business within the RHCs and BOCs rather than with AT&T. He stated that Yellow Pages were to subsidize basic service, thereby serving the public policy objective of keeping basic rates low.⁹ Since then, the RHCs have sought, with increasing success, to avoid cross-subsidizing basic service with Yellow Pages profits and to ensure that unregulated operations and

⁹ United States v. AT&T, 552 F. Supp. 131, at 193-194. See discussion in Timothy J. Brennan, "Why Regulated Firms Should Be Kept Out of Unregulated Markets: Understanding the Divestiture in U. S. v. AT&T," *Antitrust Bulletin*, 32 (1987): 741-93; Gerald Faulhaber, *Telecommunications in Turmoil: Technology and Public Policy* (Cambridge: Ballinger, 1987), 98-100.

shareholders enjoy the supranormal profits of Yellow Pages operations.¹⁰ Typical information flows between the BOC and Yellow Pages operations are shown in Figure 6-2.

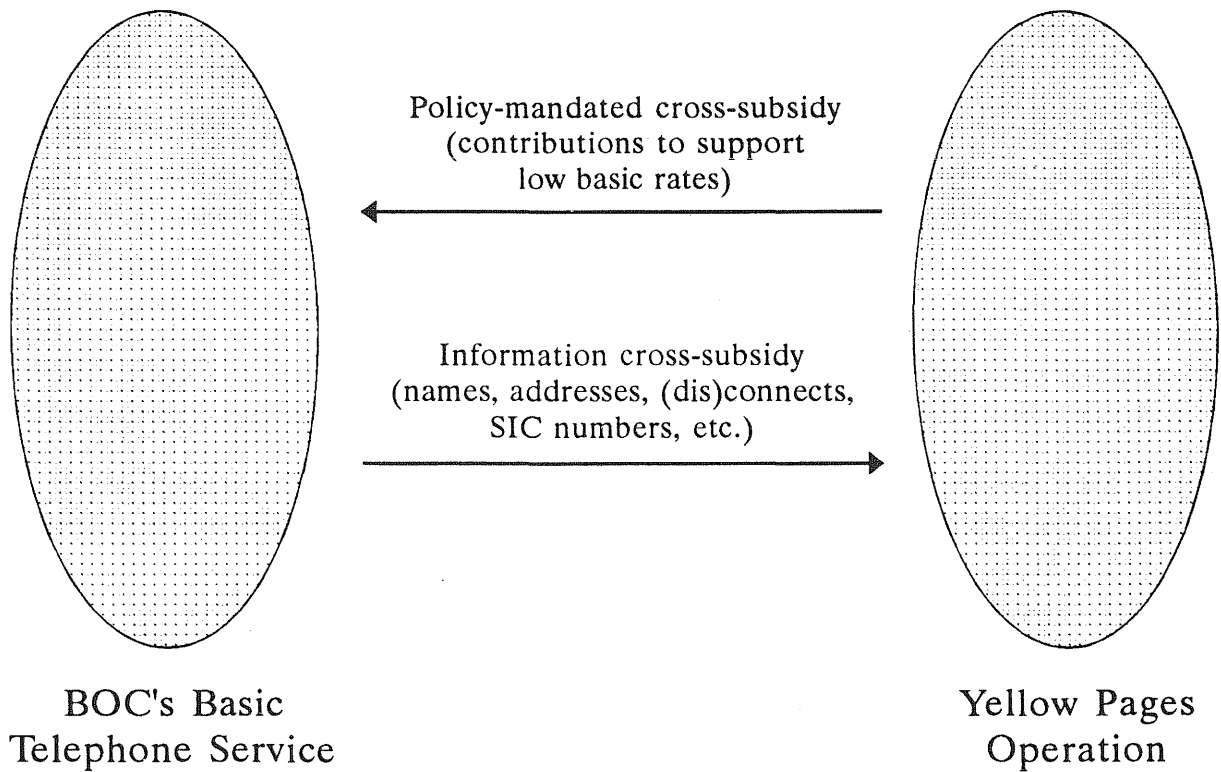
Market Experiments and Diversification

The vitality of capitalist economies depends on the willingness of entrepreneurs to take risks and their ability to reap the rewards of success. The dynamism of capitalism requires that there be freedom to fail, as well as freedom to succeed. A society that eliminates either dooms itself to stasis. As Schumpeter wrote, "Economic progress, in capitalist society, means turmoil."¹¹

This section presents cases of some RHC market experiments that failed and some that succeeded. Some failures result from management not knowing the market or entering the market at a bad time. Other failures result from the RHCs not being able to survive in highly competitive markets. Although there is some element of luck in both successes and failures, the notion that good managers can succeed in any business has taken a severe beating.

¹⁰ U.S. v. Western Electric, et al. memorandum, CA No. 82-0192, filed February 6, 1989, at 7. See also the case study reported in Evan D. White and Michael F. Sheehan, "Monopoly, the Holding Company, and Asset Stripping: The Case of Yellow Pages," *Journal of Economic Issues* 26, no. 1 (March 1992): 159-82.

¹¹ See Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper & Row, 1942), 38.



Source: Authors' construct.

Fig. 6-2. Yellow Pages cross-subsidization issues.

Since divestiture, the RHCs have had their share of failures and successes, both of which are to be expected in a market economy. The relevant question for regulators is whether the risks of entrepreneurship are borne by the BOCs and captive ratepayers, while the rewards flow to shareholders.¹²

Real Estate Activities

Real estate activities were one source of major failures for the RHCs. At divestiture, the RHCs or their affiliates were permitted to provide real estate services to their subsidiaries and affiliates only. In December 1984, Judge Greene approved a waiver of this restriction, and U S WEST and Pacific Telesis were among the first RHCs to enter the commercial real estate business on a large scale. They were also among the heaviest losers.¹³ For purposes of brevity, only U S WEST's real estate experience will be described.

Immediately following waiver of the restriction, U S WEST announced that BetaWest, its real estate subsidiary, would offer commercial property development, property management, lease administration, commercial and residential brokerage, and relocation services for transferring employees. BetaWest President, David L. Sletta, said that his company's capabilities spanned virtually all the states west of the Mississippi and

¹² Although a healthy capitalist economy allows risk-taking, whenever possible, individuals will attempt to avoid the costs of failure while retaining the rewards of success. The debacle in the savings and loan industry and, to a lesser extent, in banking is an example of this. Freed of restrictions on lending, some institutions made risky loans and investments using federally insured, depositor-supplied funds. If the loans and investments had proved profitable, the institutions and their managers stood to profit significantly. However, when loans and investments proved unprofitable and threatened the stability of the institutions, the Federal Savings and Loan Insurance Corporation, the Federal Deposit Insurance Corporation, and, ultimately, taxpayers were saddled with much of the loss.

¹³ All the RHC real estate subsidiaries have other units of their holding company as significant customers. For example, U S WEST or affiliates of U S WEST occupied 35 percent of the space leased by U S WEST Real Estate. See U S WEST, Inc., Form 10-K for the fiscal year ending December 31, 1990, 9.

that an aggressive nationwide marketing campaign would be launched.¹⁴ By September 1988, U S WEST's news releases claimed that BetaWest had accumulated assets of \$920 million, including thirty-six operating properties and sixteen projects under development. BetaWest was claimed to be the twenty-fifth most active commercial real estate developer in North America.¹⁵

In its 10-K filing for the financial year ending December 31, 1989, U S WEST stated that BetaWest's assets totalled \$1.4 billion, it operated fifty properties, it had eleven projects under development, and its 7.3 million square feet of net rentable space was 90-percent leased. The 10-K filing went on to state that the portfolio would be liquidated over the subsequent five to seven years and that certain properties would be sold to a new entity called BetaWest Properties, Ltd. (a company organized by the former management of the U S WEST subsidiary and not owned by U S WEST). Although the 10-K did not mention negative financial results or problems leading to this major direction change, the liquidation was said to be motivated by U S WEST's desire to refocus its investment toward other areas of financial services .

In December 1991, U S WEST announced a \$590 million write-off for the fourth quarter of 1991 and stated that the losses and the costs of disposing of real estate properties had been greater than anticipated.¹⁶ The 1990 10-K recounted unanticipated problems in phasing out the real estate subsidiary. Furthermore, BetaWest Properties Ltd. had not acquired all the development projects as expected. Until the properties could be sold, U S WEST Real Estate retained possession of the development projects. The build-out and operation of these projects (with an estimated completion cost of \$363 million) resulting in additional depreciation and other carrying costs.

¹⁴ Dick MacKnight, "U S WEST Calls for Business/Education Partners," Business Wire, Lexis/Nexis Information Service, December 14, 1988.

¹⁵ Stephen Holder, "U S WEST Breaks Ground on New Boulder, Colorado Research Facility," Business Wire, Lexis/Nexis Information Service, September 7, 1988.

¹⁶ Reuters, "U S WEST to Take 590 Million Dollar Fourth-Quarter Charge," Lexis/Nexis Information Service, December 9, 1991.

Computer Software and CPE

Several RHCs ventured into computer software and/or CPE ventures. These markets seemed to be extensions of existing markets and were said to provide economies of scope or synergy with the core market. Unfortunately, a number of RHCs retreated after suffering severe losses. Several such ventures have not had successful endings; two are briefly considered.

Ameritech

From December 1985 to January 1986, Ameritech acquired a 100-percent interest in Applied Data Research (ADR), a successful concern that designed, developed, and marketed proprietary computer software products, at a cost of approximately \$217.5 million. On May 7, 1987, Robert L. Barnett, President of the Ameritech Enterprise Group, detailed his commitment to help ADR go head-to-head with IBM in the systems software arena. Approximately one year later, ADR announced that revenues had increased by 32 percent over 1987 figures and business seemed to be booming. In the first half of 1988, ADR delivered twelve product releases and two completely new products. Both of the new products received strong reviews and each was expected to contribute to future profits. Ameritech's acquisition and diversification strategy seemed to be working.

In October 1988, Ameritech sold the outstanding stock of ADR to Computer Associates International for \$170.0 million. According to Barnett, "Ameritech is selling ADR because synergies between systems software and communications have not developed to the extent we had anticipated." Ameritech had not given up on software. In September 1990, it became a major investor in Aristacom International, a developer and marketer of desktop and mainframe software for enhancing the power of integrated telephone and computer resources.

Pacific Telesis

At divestiture, there was a belief that the RHCs would succeed in the CPE market. In the early post-divestiture period, the RHCs established separate subsidiaries to market CPE under Computer II requirements.¹⁷ Those requirements were removed beginning in 1986.¹⁸ Despite this, many RHCs fared poorly in this highly competitive market. Pacific Telesis more or less threw in the towel in 1991, when it took a twenty-percent minority interest in PacTel Meridien Systems, a joint venture controlled by Northern Telecom, Inc.

This failure occurred despite major initiatives by Pacific Telesis including the 1988 acquisition of Comprehensive Communications, Inc. and ABI American Business Phones, Inc. In 1989, these were consolidated into PacTel Business Systems as a subsidiary of PacTel Corporation. The new entity's mission was to provide CPE sales and service to small and medium sized businesses and to branch offices of large companies.¹⁹ In 1991,

¹⁷ *Policy and Rules Concerning the Furnishing of Customer Premises Equipment, Enhanced Services and Cellular Communications Equipment by the Bell Operating Companies*, CC Docket No. 83-115, Report and Order, 95 FCC 2d 1117, 1120, para. 3 (1984) (BOC separation order), affirmed sub nom., *Illinois Bell Telephone Co. v. FCC*, 740 F. 2d 465 (1984), affirmed on reconsideration, FCC 84-252, 49 Fed Reg 26056 (1984) (BOC separation reconsideration order), affirmed sub nom., *North American Telecommunications Association v. FCC*, 772 F. 2d 1282 (7th Cir. 1985).

¹⁸ *Amendment of Sections 64.702 of the Commissions's Rules and Regulations, (Computer III)*, CC Docket No. 85-229, Phase I, Report and Order, 104 FCC 2d 958 (1986) (Phase I Order), recon., 2 FCC Rcd 3035 (1987), (Phase I Reconsideration Order), second further recon., 4 FCC Rcd 5927 (1989) (Phase I Second Further Reconsideration Order), Phase I Order and Phase I Reconsideration Order vacated sub nom., *California v. FCC*, 905 F. 2d 1217 (9th Cir. 1990) (California); Phase II, CC Docket No. 85-229, 2 FCC Rcd 3072 (1987) (Phase II Order), recon., 3 FCC Rcd 1150 (1988) (Phase II Reconsideration Order), Phase II Order vacated sub nom., *California v. FCC*, 905 F. 2d 1217 (9th Cir. 1990), pet. for rev. pending, *BellSouth Corporation v. FCC* (9th Cir. No. 88-7190, filed April 20, 1988).

¹⁹ Pacific Telesis Group, Form 10-K for fiscal year ending December 31, 1989.

most of the assets of PacTel Business Systems were sold to PacTel Meridien Systems.²⁰ NYNEX also retreated from the CPE market in 1991.²¹

Cellular Services and Paging

The RHCs have achieved their greatest successes from diversification in nonwireline communications such as cellular and paging. Starting with a familiar market structure (a government-created duopoly) and an advantage (automatic license in franchise area), the RHCs grew their cellular businesses both internally and through acquisitions. Cellular acquisitions have included the purchase or swapping of territories adjacent to RHC franchises and forays into the territories of other RHCs. Acquisitions were accomplished by purchasing other cellular providers or by creating joint ventures with nonRHC cellular providers.

In the second wave of consolidation, cellular subsidiaries were entering alliances to provide seamless cellular capability and to market their products under common service names. Each RHC claims that cellular operations have become profitable. Indeed, the profitability of its cellular operations appears to be a factor in Pacific Telesis's plan to spinoff its cellular and international operations.

International Activities

Nonwireline service has also been a success outside the United States. Almost every RHC engages in foreign cellular or paging operations. Indeed, Pacific Telesis has announced that it will focus its efforts in this area and has begun to withdraw from

²⁰ Pacific Telesis Group, Form 10-K for fiscal years ending December 31, 1990 and for 1991.

²¹ NYNEX Corporation, Form 10-K for fiscal year ending December 31, 1991.

foreign cable activities by selling its interest in East London Telecommunications to BCE Telecommunications International.²²

Demand for cellular is strong in some foreign markets due to congestion in the wireline networks. In many foreign markets there are waiting lists for wireline service, reliability of service is low, and busy signals are the norm. As a result, usage tends to be relatively high (for example, cellular usage in Argentina averages 400 minutes per month, compared with 160 minutes in the United States).²³ The RHCs were able to use their experience in U.S. cellular markets and their access to capital markets to take advantage of the trend toward privatization and the opening of telecommunications markets in many countries.

The RHCs' other major area of international activity has been in telecommunication common carrier markets that were opened as a result of the trend toward privatization of formerly government-owned telecommunication companies. Here, the RHCs are in a familiar business. Most of the purchases have been too recent for final judgements to be made.

Economies of Scope and Successful Diversification

The performance of the RHCs in cellular telephony illustrates the fact that success need not depend on being able to capture economies of scope. Originally because of Computer II mandates, and later because of business judgement, the RHCs provided cellular service through separate subsidiaries (U S WEST went so far as to create a separate cellular company, U S WEST NewVector, with its own shareholders).

²² Amy Daminakes, "PacTel Sharpens Wireless Focus; Restructures U K Cable," Business Wire, Lexis/Nexis Research Service, June 12, 1992; and Press Release "BCE Buys Pacific Telesis, Jones Intercable Stakes in East London Telecom," Extel AFX News, Lexis/Nexis Information Service, April 23, 1992.

²³ BellSouth, Annual Report 1991, 21.

In each of the RHCs, cellular subsidiaries report to holding company management through channels separate from the reporting lines of the BOCs.

Due to structural separation, many early post-divestiture discussions, especially those pertaining to the merits of Computer II, led to assertions that economies of scope between BOC operations and CPE activities were being lost. Thus, it is surprising that Computer III's relaxation of structural separation rules resulted not in the capture of asserted economies of scope but, rather, in the exit of many of the RHCs from the CPE market. Perhaps more surprising is that the best performing RHC in this area, Southwestern Bell, managed its CPE operations through a stable, separate subsidiary, Southwestern Bell Telecommunications. These experiences of the RHCs in the CPE market show that assumed economies of scope may be insufficient to ensure success in competitive markets.²⁴

Human Capital Subsidies

Regulators might consider the impact on the BOCs if start-ups acquire their management and technical expertise from the BOCs through transfers of trained employees. In the proposed Pacific Telesis spin-off, PacTel's Chief Executive Officer (CEO) and Chief Financial Officer will both move to the unregulated firm. Presuming these individuals have genuine value to the firm, their loss will be felt. Another possible form of human capital subsidy arises when unregulated subsidiaries are able to borrow BOC employees whenever and for as long as they wish. Even if they pay for the borrowed employees, they are taking advantage of a stock of human capital that would

²⁴ In her review of a draft of this report, Professor Phyllis Bernt of Ohio University provided several interesting insights on the lack of economies of scope in the CPE market. First, unlike cellular operations which started from nothing, the CPE market started from a large embedded base. Second, unlike network services, CPE profits are not usage-based. Thus, CPE profits do not increase with increased utilization of the network. Third, under MFJ restrictions on equipment manufacture, the RHCs' competitiveness in the CPE market depends, in part, on their ability to strike good deals on equipment purchases.

ordinarily not be available to their competitors. These behaviors may constitute a subsidy to the start-up and harm the BOC if they are not compensated or recognized.

Regulators have various options. The NYNEX restructuring plan, accepted in February 1992 by the New York Public Service Commission, appears to recognize this possibility by requiring any nonBOC NYNEX unit to pay the BOC a bounty of 25 percent of a transferring employee's new salary.²⁵ California has a similar compensation requirement. These plans recognize that human capital, like other business assets, should not be transferred without compensation.

Preparing for Lifting Line-of-Business Restrictions

The RHCs' foreign operations have a bearing on various line-of-business restrictions because the RHCs have engaged in activities prohibited them in their franchise areas. Under MFJ rules, RHCs are barred from entering long-distance or interLATA telecommunications services, manufacturing telecommunication equipment and associated research and development (R&D), providing cable television in their telephone service areas (with some exceptions). In many cases, international operations were justified as preparing the RHC for a post-MFJ world where restrictions on RHC activities would be abolished.

Foreign activities include interexchange telephone service (Ameritech, Bell Atlantic, BellSouth, Southwestern Bell), international telecommunications service (Ameritech, Bell Atlantic, BellSouth, and Pacific Telesis), cable-based home entertainment delivery (Southwestern Bell, and U S WEST), and satellite-based home entertainment delivery (Bell Atlantic, Ameritech and U S WEST).

The rationale for investing in foreign operations to prepare for lifting line-of-business restrictions poses two questions for regulators: Can the foreign investment be justified on normal business criteria? If international activities are viewed as learning

²⁵ "Regulators Approve NYNEX Reorganization," *New York Times*, National Edition, February 21, 1992, C3.

experiences, who pays for and who benefits from such education? The first question is unlikely to be answered in an unequivocal fashion. The second question may be folded into the general question of whether or not resources flow from the BOC to unregulated activities of the RHCs. If the answer to the former question is affirmative, regulators should consider whether and how the BOCs and their ratepayers will participate in any returns. Upon divestiture from AT&T, the new CEO of U S WEST, Jack MacAllister, said:

What percentage of [our] net income will come from our unregulated subsidiaries? Eventually, I hope all of it will. We intend to move more of our operation out from under regulation, as every aspect of our business is increasingly subject to competition.²⁶

As the RHC becomes more and more diversified, regulators may need to exercise great care in assessing the strategic, as well as the structural implications of their decisions. The next chapter discusses some options for regulators for dealing with RHC structural issues.

²⁶ Staff Author, "How Some Key Players See the New Era," *Telephony*, (January 26, 1984).

CHAPTER 7

REGULATORY POLICY AND ISSUES

Introduction

This report addresses effects of the structural relationships created by the RHCs. This chapter focuses on some of the regulatory issues arising from those relationships. Specifically, the focus is on relationships between various business activities and lines of business,¹ how the RHC is organized to pursue selected lines of business, how it is organized to carry out the activities that support those lines of business, and how the resultant organization affects ratepayers, competitors, and regulators.

Regulation is multi-faceted. The role, scope, process, equity/efficiency tradeoff, and concerns of regulation all must be considered to provide a framework for discussing the interplay between RHC organizational issues and the regulator. Regulation affects and, in turn, is affected by RHC organization.

Regardless of the organizational structure, there will be relationships or interactions among the various activity centers and business lines within the corporation. These relationships may be analyzed in terms of the transactions they create. Transactions considered should not be not limited to traditional notions of the exchange of goods and services. Relationships such as sharing the financial integrity, using the total firm's knowledge base, and transferring employees among affiliates should be included. Several types of transaction are discussed below. Also discussed are specific variables such as whether the business is a start-up or a going concern, its revenue source, and whether the business is conducted by a BOC or by a nonBOC entity. Examples of various types of transactions are explored and the significance of the

¹ Business activities are mainly functional in nature and include such actions as production, marketing, financing, planning, managing, research and development, and real estate management. A line of business includes all the actions necessary to produce and market specific types of goods or services or to participate in a specific market.

transaction in relation to the regulatory dimensions is identified. Furthermore, the efficacy of various regulatory procedures for achieving desired outcomes is assessed.

Structural Separation and Affiliate Relations

As noted in previous chapters, structural separation is an organizational arrangement in which some lines of business are undertaken by separate business units rather than by the BOC itself. It is believed to be an effective means of avoiding or detecting subsidization of separated activities by basic regulated services. Structural separation is also suggested as a means of preventing the use of BOC resources to advantage separated affiliates to the detriment of their competitors. Such advantages might result from an unfair marketing strategy by the BOCs or from undercompensated BOC support of the activities. Structural separation is favored by some states for some activities. For example, regulators in several states require structural separation of information services.

Although structural separation is normally associated with regulator-initiated or imposed requirements, it may also be used to impede appropriate compensation to basic BOC operations. In such a case, an RHC might initiate the organizational separation. Profitable lines of business that benefit from association with basic services have traditionally contributed to the utilities' total cost of operation. If such lines of business are transferred to unregulated affiliates, determining appropriate contributions to the BOC's costs becomes more difficult.

Another regulatory issue surrounding structural separation relates to the provision of goods and services to the BOC by an affiliate. Although prices paid for such goods and services are the regulators' normal focus, the affiliate's cost of providing the services to the BOCs (or its rate of return on BOC transactions) is understandably of interest. Structural separation makes it more difficult to address such issues, particularly if access to information regarding the affiliate's cost and/or return is denied or impeded. Regulators may also be interested in prudence issues in regard to the way that the

affiliate conducts its business. Moreover, these questions may be difficult to address when the affiliate is not directly regulated.

The RHC's organizational structure may also hinder the regulators' ability to pursue some regulatory objectives. For example, on a total company basis the concept of "fair compensation" to the utility is relatively straightforward. Furthermore, reasonableness of rates charged consumers can be tested by examining the company's operations for signs of imprudent investment or expenditures, determining total company operating costs, valuing capital assets, estimating an appropriate rate of return on those assets, determining a total revenue requirement, and, finally, allocating the revenue requirement among services.² Rates thus determined clearly meet the standard of providing fair compensation to investors. However, when the operations are separated and compensation is considered for subparts of the total, confidence that the aggregate result will meet the overall fair compensation standard is eroded.

Structural Relationships

In the provision of local telephone service, state regulation of the BOCs flows from public interest concerns. The scope of state regulation is limited by the FCC's preemption based on its undisputed jurisdiction over interstate communications and the development of the concept of a seamless telecommunications network. State regulation focuses on the BOCs' intrastate operations, and state regulators' interest in the RHCs' is limited to the effects that they have on the BOCs' provision of state-regulated services. To the extent that they affect the BOCs' costs and operations, intraRHC business relationships, affiliate transactions, and resource allocation are of interest to state regulators.

There are two general relationships between the BOCs' core business and other RHC business activities. Other business activities may be pursued by the BOC itself,

² This is of course the traditional rate case approach; as such, it is a straightforward but nontrivial task to carry out these steps.

making them integrated activities. Or they may be pursued by separate corporate entities, creating affiliate relationships and transactions with the BOC. Within the class of integrated relationships there are two subclasses of arrangements. A business activity may be either above the line or below the line. This classification of integrated activities refers to the treatment of the accounting costs and revenues resulting from the activities.³ In above-the-line treatment an activity is included within the regulatory cost of service analyses. In below-the-line treatment, accounting costs and revenues are not considered in regulated cost-of-service considerations.

If any of its regulators require such treatment, a BOC operating under multiple regulatory authorities will normally use below-the-line accounting. For jurisdictions requiring above-the-line treatment for certain activities, the costs and revenues associated with those activities will be added to the above-the-line values. For regulatory purposes, below-the-line treatment of business activities is similar to affiliate relationships. For example, the issue of cost allocation for the below-the-line activity is analogous to the transfer pricing issue of affiliate transactions.

Access to Information

Regulating complicated organizations necessitates that regulators have access to the information necessary for the purpose. However, such access may be denied or inhibited by the organization of the RHC. The dominant effect of organizational structure on state regulators seems to have been to impede their obtaining information from affiliates of the regulated BOCs.⁴ State regulators generally report that, if they can obtain the information, they have the experience and resources to interpret the facts and

³ The use of above-the-line and below-the-line accounting is an example of accounting safeguards or nonstructural separations. Costs and revenues are separated using various allocation rules and formulae. For instance, Part 64 of FCC Rules is used to separate regulated from unregulated costs.

⁴ This statement is based on state responses to the survey on state regulation of affiliate transactions.

render policy judgements to meet their responsibilities. Most states that investigated affiliate transactions reported at least some difficulty obtaining information held by unregulated affiliates.⁵

Information access can be gained in various ways. The North Carolina Commission requires that accounting records be maintained in a manner such that a reasonable audit trail exists with respect to all affiliated company transactions. The North Carolina Commission specifically ordered an affiliate of the BOC to: "... maintain all accounting records for North Carolina operations in a separate manner to provide for a full and accurate examination of the revenues and expenses of these operations in subsequent rate proceedings."⁶

Regulatory Strategy

Regulatory strategy for considering relationships among affiliates can be evaluated by identifying objectives and procedures available to state regulators. Strategy for regulating affiliate transactions should complement the overall strategy of the Commission, and the processes and procedures chosen should be consistent with other regulatory initiatives.

Five aspects of regulation are relevant in determining the strategy for structural oversight. The aspects of regulation include: (1) the role of regulation, (2) the scope of regulation, (3) the posture of regulation relative to equity/efficiency issues, (4) the processes and procedures of regulation, and (5) the perspective of regulation. Because circumstances vary among states, individual states will place different emphasis on the five aspects. Moreover, because commission resources vary and enabling statutes are not uniform, there is not a best regulatory approach. Regulation is conducted under changing circumstances with constantly evolving methods and objectives. The relative

⁵ This statement is based on state responses to the survey on state regulation of affiliate transactions.

⁶ See Docket No. P-55, SUB 834 (North Carolina).

importance of any regulatory issue, including holding company structure, depends on the objectives, perspectives, and procedures chosen by the regulator. What is best for an individual state can be determined only by carefully considering all facets of the circumstances. Table 7-1 shows the five aspects of regulatory strategy. Each aspect is discussed below.

TABLE 7-1
FIVE ASPECTS OF REGULATORY STRATEGY

<u>Aspect</u>	<u>Description</u>
(1) Regulatory Role	A continuum between independent, proactive central planning, and reactive judgements rendered exclusively after the fact.
(2) Regulatory Scope	A continuum of emphasis ranging from concern only with POTS (narrowest scope) through all telecommunications services, to total societal benefit (broadest scope).
(3) Regulatory Tradeoffs: Equity vs. Efficiency	The relative weight given equity, fairness, or distributional objectives compared to the weight given efficiency objectives in policy making.
(4) Regulatory Processes	Choices between rulemaking (generic) and situation-specific (ad hoc) processes, as well as the choice between ex-ante versus ex-post review.
(5) Regulatory Perspective	Choices between a service-by-service orientation and a total-company orientation.

Source: Authors' construct.

Regulatory Role

To address the complex issues of regulatory strategy, it is important to consider possible roles that regulation might assume as a continuum. At one extreme, regulators can develop a vision of the future economic and social structure, and compel utilities' participation in that vision. At the other extreme, regulators can limit their role to retrospective examination of results, leaving all planning to the utilities. Table 7-2 illustrates several roles that regulation might play.

TABLE 7-2

REGULATORY ROLE

-
- (1) Regulators develop independent vision of the utility's participation in the regulator's global vision of telecommunication and impose that strategic vision on the utility.
 - (2) Regulators actively participate in developing the utility's strategic direction.
 - (3) Regulators review and approve utility-initiated strategy unless it is unreasonable.
 - (4) Regulators preapprove utility activities.
 - (5) Regulators review results of utility activities after they occur.

Source: Authors' construct.

Table 7-2 presents a hierarchy. Minimum regulation involves ex-post review of utility operations. This will occur even if regulators do not play any other role, and this role will be used in conjunction with others because regulation almost always involves some ex-post review. Regardless of whether strategic directions are considered or not, regulators may preapprove activities. Where a commission perceives its role along the continuum will affect its choices of procedures and processes and its decisions. A highly

proactive commission must develop processes that influence RHC strategy while it is being formulated. The regulator's role may be constrained by statutory authority: statutes may either limit the commission's effectiveness in implementation of higher level roles, or may require assumption of those roles.⁷

Regulatory Scope

Judgements about whether a given structure or affiliate transaction is reasonable will be influenced by the regulators' primary interests, scope, or focuses. Regulatory scope is hierarchial as is the regulatory role. A narrow scope emphasizes POTS with other services and other BOC activities are viewed in terms of their effect on POTS. A broader scope includes the set of all regulated services as the primary focus. If a broader scope is adopted, issues of RHC structure and affiliate transactions will be initially examined for their impact on regulated services. The impacts on POTS will be considered as an allocation issue after primary consideration is complete.

Broader scopes are possible. Regulators may focus on all BOC services, nonregulated, as well as regulated. One step further is primary consideration of all communications services, including nonBOC service suppliers. The broadest regulatory scope is total societal benefit. If this is of primary concern, the commission may focus, for example, on perfecting communications markets.

No commission consistently maintains a single scope or focus. As with the role of regulation, the appropriate scope depends on the nature of the decision being considered. The issue is one of primary emphasis. Regulators are often asked to make decisions that serve narrow interests to the detriment of broader considerations. When this occurs, parties interested in broad objectives will encourage the commission to take

⁷ A commission may choose different roles at different times and for different types of decisions. It may play a role in the early planning of some projects yet be interested only in ex-post review of other projects. The difference depends on such factors and the irreversibility (and cost of error) of a project and the extent to which a project affects the general public interest.

the broad view. However, the risk of taking the broad view is that it may be detrimental to more narrowly defined objectives.

An example of how scope can influence consideration of RHC structural issues is a circumstance where an activity is more efficiently undertaken on an RHC-wide basis, as opposed to each BOC undertaking it independently. However, there may be some loss of benefit to POTS services from the RHC-wide approach. A commission emphasizing societal benefit would favor the more efficient arrangement. However, a commission concerned primarily with POTS will not favor the more globally efficient arrangement unless there are clear benefits to the POTS customers. Table 7-3 shows the hierarchial character of regulatory scope.

TABLE 7-3

**HIERARCHY OF REGULATORY SCOPE
(NARROW TO BROAD)**

Narrower

POTS

All Regulated
Services

All BOC
Services

All Telecommunications
Services

Societal Benefit

Broader

Source: Authors' construct.

Regulatory Tradeoffs: Equity vs. Efficiency

In developing a regulatory strategy, the relative importance of equity and efficiency considerations must be weighed. Although not always in conflict, economic efficiency frequently is enhanced when equity or fairness is diminished. Conversely, meeting equity objectives may lead to choices that reduce efficiency. How commissions choose to make the tradeoff will be one factor in determining policy.

Equity/efficiency conflicts may occur among customers or between customer classes. Policies aimed at promoting ubiquitous availability of services, such as equal access, may be considered equitable because it is perceived to be "fair" to treat all customers equally. Nevertheless, it may not be efficient to provide equal access in exchanges in which the cost of doing so outweighs economic benefits. Charging all customers the same price for the same service through the use of aggregation and averaging has an intuitively equity appeal. However, charging all customers equally may not be efficient when different customers impose different costs on the system for the same service. In fact, depending on one's definition of equity, aggregation and averaging may not be equitable, especially for low-cost customers, who implicitly subsidize high-cost customers.

The equity/efficiency tradeoff also arises in conflicts between investors and customers. Fairness to both groups is a basic goal of regulation and defining fairness frequently involves efficiency considerations. Proponents of incentive regulation invoke efficiency arguments to support offering the BOCs an opportunity to earn profits in excess of traditional standards of fairness to ratepayers. Choosing an appropriate mechanism for distributing the gains resulting from incentive regulation among investors and customers is both an equity and an efficiency concern.

Who Owns Economies of Scale and Scope?

Scale and scope economies that exist in some business activities is an example of complexities encountered in considering an RHC's organization and affiliate transactions.

Although regulation affects the RHCs' structure, it may be argued that a dominant reason for RHCs to organize as they do is that they can operate more efficiently.

Potential economies of scale in some activities implies that an RHC or an unregulated affiliate can perform a function for several BOCs more efficiently than the BOCs could perform for themselves on a stand-alone basis. In such a circumstance, the BOC is not disadvantaged if it pays its affiliate the stand-alone cost, allowing the affiliate to retain the benefits of the efficiency gain. The BOC may be able to demonstrate that its stand-alone cost would have been at least what it pays its affiliate. A policy that accepts this measure of just compensation for the affiliate may be effective in encouraging efficiency. This is because the policy creates the profit incentives for the RHC to find organizational structures that capture economies of scale. The other policy position, and the one more in conformity with established regulatory practices, is that economies of scale belong to the BOCs' ratepayers because it is their existence that creates them.⁸

This issue is not unique to affiliate relationships: it is at the core of the debate over end-user access charges versus carrier access charges. Production of multiple outputs with the same plant and equipment always leads to debate about the allocation of the joint and common costs among outputs. Affiliates facilitate joint production of products for several BOCs and perhaps for outside users.

If a commission is more interested in efficiency, it will view retention of profits arising from economies of scale as a positive incentive mechanism. A commission emphasizing the equitable sharing of benefits will be more interested in identifying the benefits accruing within the affiliate and allocating those fairly between stockholders and ratepayers. The latter approach requires more information and requires regulatory processes that measure and allocate the benefits.

The directory business once again provides examples of the issues that RHC organizational choices raise. In Indiana, Indiana Bell (the BOC) entered into a contract with its Ameritech affiliate, Ameritech Publishing, Inc. (API), regarding directory publishing. When the Commission sought to review the reasonableness of the

⁸ Further discussion of this topic is found in Chapter 8.

compensation received by the BOC, they were faced with an argument that those revenues were nonjurisdictional. The Commission concluded:

We are most reluctant at this juncture to pass on the ultimate propriety of the Indiana Bell contracts with API which appear to have purposely conveyed certain intangible assets to API so as to create a situation of questionable jurisdiction.⁹

Regulatory Processes

Regulatory oversight of affiliate transactions can be conducted either before or after the transactions. In some cases, processes can be developed that involve oversight both before and after the transaction in which case coordination of methods is needed. A third choice for oversight is establishing guidelines either by setting general standards through rulemaking proceedings or by evolving standards based on precedents established in individual, situation-specific proceedings.

Preapproval

When a commission establishes preapproval practices, it positions itself to have maximum ex-ante influence on the utility's actions. With preapproval, a utility seeks approval prior to taking action. It will not have an irrevocable commitment to the action but it will have a preference. Although the utility has an interest in having its choice approved, its preference will not carry the same presumption of reasonableness as it would have if review occurs after the fact. This facilitates imposition of commission judgement in regard to denying, changing, or approving the proposal. The commission becomes more of a participant in shaping the utility's practices when it applies preapproval as opposed to ex-post review. Whether preapproval becomes obtrusive micromanagement or infringement on management prerogatives depends on the extent and depth of commission interest in decision making. However, an inescapable

⁹ See I.U.R.C. Order 39017 (Indiana).

consequence of increased influence is greater commission responsibility for results. It becomes more difficult for a commission to criticize a preapproved action.

If commissions are to assume such greater responsibility, they require sufficient information to form independent judgements of the expected results of proposed actions. One difficulty with preapproval is that commissions must grapple with problems of uncertainty. Unlike cases for which there are historic data upon which to build a foundation for review, preapproval cases often rely on projections based more on personal and professional judgement than on historic facts. Such judgements are easily biased by prejudices, vested interests, or personal agendas. Therefore, the biases of forecasters, particularly those that are unstated, must be considered in preapproval reviews. Lack of documented factual evidence, the possibility of hidden biases, and the implied commitment attendant to preapproval make this procedure a perilous one for regulators.

Retrospective (or Ex-Post) Review

Many regulators believe that the utility has primary responsibility for choosing the means by which it meets its obligations and that the proper role for regulators is primarily one of ex-post review. This approach is based on the premise that utilities can be induced to act appropriately because of the negative consequences of unfavorable regulatory reviews. Generally, in order for there to be an unfavorable finding, the utility must be found to have taken imprudent actions. However, to make such a finding regulators are required to do more than simply identifying, after the fact, a better alternative. Regulators who criticize the utility simply because the results are suboptimal may be accused of being "Monday Morning Quarterbacks." A finding of imprudent behavior requires conclusive evidence that the utility took, or failed to take, an action that could reasonably have been expected to have a better result given information available at the time of the decision.

Regulation based on ex-post review uses known or established facts. For ex-post review there is little or no need to project an uncertain future. The regulator primarily addresses interpretations of known facts. Although such interpretations do not eliminate

the prejudices or preferences of those sponsoring interpretations, such motivations are generally more easily discerned than when dealing with projections. In ex-post review, the utility will have a strong interest in presenting its choices as having been prudent given information available at the time of the choice. This approach, therefore, may not lead to impartial analysis of the best way the utility could conduct its business. It may lead to challenges of the utility's decisions, answered by vigorous defense of those decisions. Ex-post review can occur in traditional ratemaking proceedings, in dedicated review proceedings such as management audits or complaint cases, or in a program of continuing supervision, such as reviews of periodic reports.

Comparison of Preapproval and Ex-Post Review

In many circumstances the choice between preapproval and ex-post review is crucial to the commission's role in the overall provision of utility services. State policy providing the commission a mandate to create a public-service agenda and implement it through utility regulation can be executed more effectively through preapproval. Under preapproval, a utility will have less discretion in practices and a commission can reject proposals that do not fit the agenda. Furthermore, a commission may be able to induce the utility to fulfill the agenda by making clear that preapproval will be given only those actions consistent with it.

An activist and participatory role is not easily implemented using ex-post review. State policy encouraging the use of accountability to push utilities to be efficient will point toward ex-post review. This gives utilities greater freedom to identify and take actions that fit their own agendas. Unfortunately, when the action taken by a utility is successfully challenged in review, the regulator is faced with the difficulty of taking a punitive action that may neither redress the problem nor point the utility in the right direction.

A Middle Ground: Establishing Standards

The discussion of preapproval versus ex-post review emphasized their differences. In the case of preapproval, the implication is that approval, once granted, is absolute, and that the commission is thereby bound to accept the result no matter what. In the case of ex-post review, the implication is that the utility has no indication as to how the commission will review its actions, and therefore is totally unconstrained. In actual practice, commissions do not choose either extreme. Rather, they choose to combine approaches or establish standards that give prior notice of acceptable ex-post results. These modes of oversight are considered next.

Preapproval with Ex-Post Review

Commissions can combine forms of preapproval and ex-post review. If preapproval is required, the order can provide the commission the opportunity for subsequent reviews. For example, a commission may grant preapproval *conditioned* on attainment of some expected or projected condition. Such conditioning, in effect, binds the utility to achieve that consequence and holds it accountable for any failure to perform. Typically, such an order would spell out the standard for subsequent reviews and specify information that the utility must collect to demonstrate ongoing performance.

One example occurred when the Missouri Commission required that Southwestern Bell stand behind statements made when Southwestern Bell sought approval for corporate restructuring affecting yellow pages. As a result, even though the Company claimed that Yellow Pages net revenues had declined, the Commission imputed a higher contribution to the BOC from yellow pages based on statements made by the Company when it requested approval of restructuring.¹⁰ As an aid in gathering information for ex-post review the Texas Commission has specific statutory authority for obtaining individual contracts between the BOC and its affiliates. The utility is obligated to provide those contracts on request.

¹⁰ See Missouri Public Service Commission, Case No. TC 89-14.

Standard Setting

When preapproval is not practiced, a commission may still exert influence on utility choices. The utility must be made aware of the standards of review that it can expect. Other decisions by a commission may be used as an informal means of standard setting. Commission decisions in other cases can guide utility behavior. If one utility is found deficient in an ex-post review, neither that utility nor another utility is likely to take an action that would create a similar deficiency.

As an example, the New York Commission spoke to the availability of information by stating:

...it would be very difficult to conclude that any corporate structure that insulates a utility company from our investigatory and subpoena powers on matters relevant to the establishment of just a reasonable rates is compatible with the public interest.¹¹

Generic standard-setting procedures are a more direct and formal means of communicating standards to utilities. For example, the FCC has rules governing prices charged for goods and services transferred between affiliates. These standards effectively dissuade utilities from practices that result in transfer prices in conflict with the FCC standard. Furthermore, when practice deviates from the standard, such standards make it easier for the commission to choose an appropriate response.

Comparison of Processes

Implementing preapproval requires appropriate statutory authority. Some states have specific mandates to preapprove either transactions or corporate structures. Other states may implicitly include such authority under general supervision and oversight statutes. In order to implement preapproval, a commission must establish specific requirements for applications by the BOC. Actions that are candidates for preapproval include, creation of affiliates, transactions between affiliates and the BOC, and transfer

¹¹ See Opinion No. 91-4.

of assets from the BOC to affiliates. In addition, an effective preapproval requires commission willingness and ability to commit resources to analyzing various proposed actions. Perhaps the most comprehensive authority and affiliated interest program is Oregon's. Statutes require preapproval of affiliated transactions and staff members specialize in examining affiliate matters.

Preapproval enhances commission influence on RHC operations. When preapproval is required, the RHC can be expected to be more accommodating because it has not fully committed to the action for which preapproval is sought. To give preapproval genuine force, New York and several other states require that contracts with affiliates be filed with the commission in order to be effective. Moreover, the commission can disapprove filed contracts. However, unlike ex-post review, in which there is certain knowledge of what has occurred, preapproval deals with the significant uncertainty. Preapproval must allow for multiple possible outcomes resulting from the action for which preapproval is sought. Moreover, preapproval implies that regulators will accept the consequences of the action, making ex-post corrective actions more difficult.

Ex-post review, on the other hand, has the advantage of limiting oversight to factual occurrences but is less effective in guiding BOC actions. The BOC will not be inclined towards altering practices once established and it will defend the reasonableness of its actions. Without preapproval, the BOC may be inclined to reject an alternative that entails regulatory risk, even if that action appears to be the best.

If a commission establishes comprehensive standards, such standards may be effective in creating regulatory influence prior to commitments by the BOC. When compared with situation-specific preapproval, a drawback of comprehensive standard setting is that generic proceedings may make it difficult to identify all possible consequences of the standards adopted, and unforeseen results will be a major concern. Generic rulemakings are administratively efficient if they settle multiple issues conclusively and eliminate the need for separate consideration of individual activities. However, they are efficient only if issues are drawn clearly, the scope of the proceeding is controlled, and the rules' limits are established.

Regulatory Perspective

A fundamental issue for regulators is the degree to which they focus on individual BOC services rather than on the BOC as an entity. The traditional rate case in which all services and the total operation of the utility are examined is no longer common and there is increasing emphasis on a service-by-service focus with a concomitant decrease in emphasis on total-company results. Recognition that some BOC services are subject to competition encourages a service-specific perspective. This frequently results in decoupling competitive services from traditional profitability standards. New utility/regulator compacts may further distance regulatory perspective from traditional standards of total-company profitability review. These features of current conditions tend to emphasize service-by-service approaches and lessen reliance on total-company analysis as the primary regulatory perspective.

Total-Company Perspective

Traditionally, regulation has relied upon the total-company perspective to provide adequate compensation for investors and fair rates for consumers. In this paradigm, the primary standard for fair rates is that aggregate revenues from all services equal total cost, including an appropriate return on investment. Assignment of revenue responsibilities to customer classes and to individual services is addressed after the appropriate return on investment and the aggregate revenue requirement are determined.

Service-by-Service Perspective

Rates charged for individual service, and terms and conditions under which they are offered are contained in tariffs. Regardless of the practices of the regulatory agency, service offerings and prices are what matter to consumers. Rates and conditions of service must be set. However, they need not be based on total-company considerations;

each service can be examined individually or services may be grouped. As regulation becomes more service-specific, decisions regarding individual services are influenced less by consideration of total-company operations.

Increased emphasis on service-specific regulation is most apparent in the attention directed to considering competition in markets faced by BOC services.¹² When prices and terms of service are set purely by market forces, traditional considerations are not applied. Even when constraints, such as minimum price rules, are imposed to protect competitors from BOC predation, emphasis on the total-company context is reduced by reliance on market forces to control prices and set terms for competitive services.

Combined Perspectives

Traditional regulation is a top-down approach, proceeding from the total-company revenue requirement to develop and implement service-specific rates designed to generate that revenue requirement. Service-by-service regulation is a bottom-up approach, addressing individual services without considering the effect on the company as a whole. Each service is considered separately, and total revenue is whatever results, whether it meets a fairness standard or not.

Either approach may lead to error. The top-down approach implicitly assumes that an acceptable overall result implies that each subresult is also acceptable and, thus, may fall victim to the fallacy of decomposition. The bottom-up approach implicitly assumes that acceptable individual results sum to a total result that is also acceptable and, thus, may commit the fallacy of composition.

Intermediate or combined perspectives are possible. In a regulated/unregulated perspective, services are partitioned. Some services or activities are deregulated and excluded from the regulators' purview. The rest is given traditional treatment. Regulatory supervision continues over activities common to both regulated and

¹² See John S. Horning, et al., *Evaluating Competitiveness of Telecommunications Markets: A Guide for Regulators* (Columbus, Ohio: The National Regulatory Research Institute, 1988).

deregulated segments. Appropriate accounting separations procedures are necessary to allocate common costs. However, there is not any direct oversight of deregulated operations, except to ensure that anticompetitive tactics are not used and that BOC ratepayers are charged only in proportion to their benefit. Corporate strategic planning is an example of an activity that is common to all elements of the corporation but whose focus may dictate the appropriate regulatory treatment. The California Commission disallowed Pacific Telesis' corporate planning expense finding that diversification, with little benefit to the BOC's ratepayers, was the impetus of the RHC's corporate planning.

Another intermediate perspective is to rely on service-by-service analysis as the main perspective with a secondary, total-company standard. In this variation, total-company data are not used to make individual, service-specific decisions but are used to assess the overall reasonableness of results. An earnings cap may be an example of this strategy: service-specific decisions are made without considering the effect on the total company and overall company financial performance is monitored to ensure that it remains within a reasonable range. On a total-company basis, the company may be required to refund all, or a portion of earnings found to be excessive.

Influences of Regulatory Perspective on RHC Organization

Of the four perspectives, only the service-by-service approach and the regulated/deregulated approach allow any BOC activity to proceed without regulatory oversight. In the service-by-service approach, if an activity is not specifically regulated, it falls outside the regulatory review mechanisms. In the regulated/deregulated approach, if the activity falls in the deregulated category, there is not any oversight. In these cases, if the activity is excluded from oversight, a BOC considering its organizational structure would not be influenced by regulatory considerations. However, under the other approaches, the BOC must consider the regulatory implications of its structure.

Figure 7-1 illustrates results that could arise from the RHC engaging in an activity, regardless of whether the activity is located in the BOC or in another part of the RHC. An activity can have a positive, negative, or a neutral effect on regulatory objectives

When the action has an effect on regulatory objectives which is:

		Positive	None	Negative
When the action has an effect on RHC objectives which is:	Positive	No Action Required (will occur)	No Action Required (will occur)	Order Preclusion (will not occur)
	Neutral	Create Incentive (will occur)	No Action Required (may occur)	Create Disincentive (will not occur)
	Negative	Order Action (will occur)	No Action Required (will not occur)	No Action Required (will not occur)

Note: The expected result is in parenthesis.

Source: Authors' construct.

Fig. 7-1. Matrix of appropriate regulatory actions regarding BOC activities.

and/or on the RHC. However, since the RHC chooses its activities, it will choose those with positive RHC effects. Regulatory initiatives are required only to prevent activities that are in the RHC's interest and are contrary to some regulatory or public policy objective.

Line-of-business restrictions imposed by the MFJ are an example of regulatory initiatives to block an activity (upper right block of figure 7-1). Regulators are favorably disposed toward activities that benefit both the RHC and regulatory objectives and do not need regulatory action to induce the RHC to undertake these activities (lower right block of figure 7-1). For example, the pursuit of efficiency in the production of BOC telephone services serves both RHC objectives and regulators' ends. Thus, additional incentives are not required or appropriate for these activities.

Activities contrary to RHC objectives will not be undertaken unless regulators take positive actions. Imposition of "carrier of last resort" requirements on the RHCs may be an example of regulators imposing a requirement that is not in the RHCs' interest. If the RHC does not find an advantage to pursuing an activity, and regulators do not show interest in having it pursued, then regulatory action is obviously not necessary (lower right block of figure 7-1).

Activities that do not effect the RHC (the center row of figure 7-1) are intermediate cases. If the regulator has an interest in the activity, the regulator must provide some incentive to induce the RHC to engage in it. A sufficient incentive can act as a carrot to make the RHC more likely to undertake the activity. When the FCC proposed to let the BOCs offer enhanced services without structural separations requirements if they would also offer ONA services, the FCC was using the incentive approach. Disincentives can also discourage RHCs from engaging in certain activities by reducing the RHC's evaluation from positive to negative. It is sometimes postulated that the stick of regulatory oversight itself, with the accompanying potential for intrusion, dissuades RHCs from some activities.

Interaction Among Aspects of Regulatory Strategy

The choices a commission makes in selecting its regulatory strategy are interdependent. Some choices are more consistent with one another than are others. For instance, a commission's position on the regulatory role continuum can range from having primary responsibility strategy to reviewing results after the fact. Their position on the continuum will affect the regulators' concept of core BOC activities and evaluations of positive and negative effects. Regulators with visions of BOC participation in a global telecommunications strategy will consider activities expected to contribute to that vision as beneficial.

The chosen scope of regulation will help define the BOC's core business for the purpose of analysis. A POTS-oriented commission may judge an activity positively, but a commission with a telecommunications-market orientation may be indifferent or may view that activity negatively.

Regulators' evaluation of an activity will also be affected by the choice of equity-efficiency tradeoff. An activity or structure may improve equity but reduce profit incentives which would generally be judged as reducing efficiency. Regulatory process choices also affect the timing and content of evaluations of RHC business choices.

A commission with a service-by-service perspective will apply the matrix in Figure 7-1 multiple times, once for each service. This perspective, in effect, defines core BOC business on a service-by-service basis and evaluates the merits of activities or organizations individually. An evaluation based on a total-company perspective may lead to different conclusions about the same business activity. Notably, on a service-by-service basis it is likely that many RHC activities would never come into focus because of the minimal effect on services individually. In practical implementation of a service-by-service perspective, it is not possible to examine everything that might affect the service. The cumulative result of this limitation may be that some activities are never evaluated.

When evaluating activities that are not beneficial to the RHC and also detrimental to the BOC, regulators will use prudence tests to protect the core BOC business. The effect is to move the consequence of the activity to the "no effect" column of the array.

However, if the RHC engages in the activity or organizational choice at the direction of the regulator, shifting the consequence from the core business may not be appropriate. In this case regulators must decide how to distribute consequences among core service customers. If there is an activity that is detrimental to both the BOC and the RHC, the RHC may attempt to minimize its adverse consequence by having the BOC's captive customers absorb the effect. The proper regulatory response would be an imprudence disallowance.

Among the interesting cases are those in which the BOC is harmed when the RHC benefits from a choice. The regulator, having discovered this, will attempt to reallocate net RHC benefits so that the harm done the BOC core business is offset. This is an extreme case of choices that benefit the RHC. Whether the BOC is harmed, simply made whole, or shares in some of advantages, regulators will be interested in the allocation of net benefits between the BOC's core customers and the rest of the RHC's organization.

In cases for which the BOC's core business benefits and the RHC is not affected, it was observed above that the regulator might need to provide an incentive to induce the otherwise indifferent RHC to pursue the activity. Regulatory oversight after the activity is undertaken is primarily to monitor the activity to ensure that the incentive is operating as intended.

When an activity ordered by the regulator is advantageous to the BOC core business but has negative consequences for the RHC, the regulator can expect to be required to take some action to compensate the RHC for the negative impact. This compensation will reduce net benefits to the BOC core. For example, imposition of lifeline rate requirements may initially advantage core BOC services, as defined by regulators. However, eventually regulators will be required to make the RHC whole by assigning costs of the program to other BOC core customers.

The remaining possibilities do not require regulatory initiatives. The RHC will be inclined to eliminate activities that harm it and are not required by regulators, and an activity that neither helps nor harms the RHC or the BOC core need not be a matter of concern.

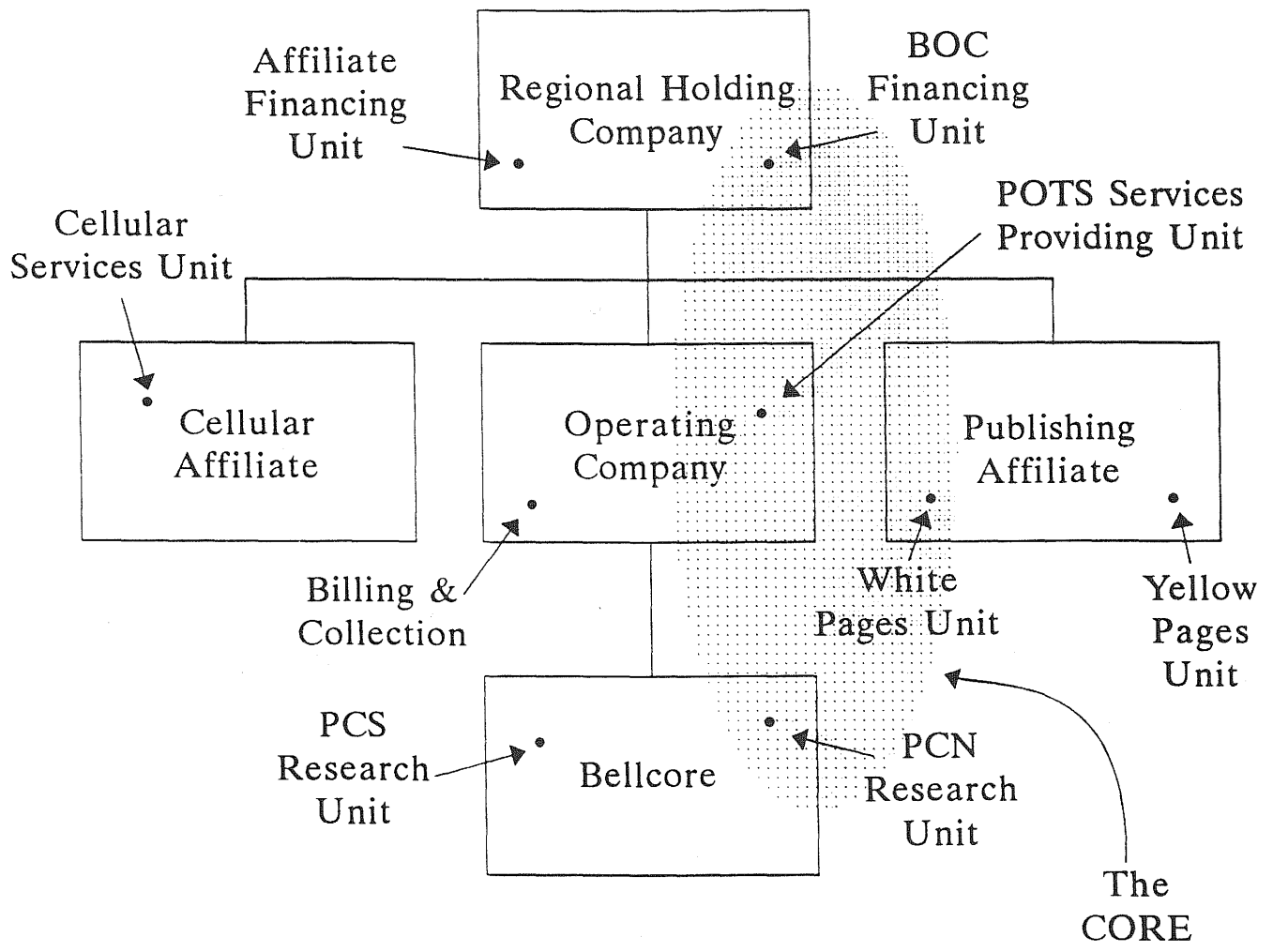
Relationships Between BOC Core Activities and Other RHC Activities.

The core BOC business is defined by the commission. It may be limited to POTS only, or defined broadly to include all regulated services. The concept of a core business is important as a guide to the reviewer of RHC business activities. Reviewers must evaluate other activities in terms of their impact on the core. Therefore, a clear concept of the core is necessary for consistent and meaningful evaluation of the effects of relationships. Figure 7-2 illustrates the concept of core activities. The core may contain activities undertaken by any of RHC's affiliates and may exclude some of the BOC's activities. Moreover, the definition of the core may change depending on context and timing.

Figure 7-2 illustrates some hypothetical business activities of a RHC and its subsidiaries. This example assumes a cellular affiliate, a publishing affiliate, Bellcore, the BOC, and RHC corporate activities. The cellular affiliate is excluded from core activities, but the other affiliates and the BOC itself have both core and noncore activities. For example, the hypothesized structure places all corporate financing within the RHC, and, since core activities of the BOC require financing, a portion of RHC finance operations is in the core. The BOC also engages in noncore activities; financing these noncore activities is not part of the core.

A Procedure for Analyzing Relationships Between Core and Noncore Activities

The investigation requires analyzing impacts of all RHC activities on core activities. Analysis should include those activities of the parent and all subsidiaries. Some investigations entail examination of relationships within the individual companies. For example, the separation and allocation processes for the BOC are intracompany activities. These BOC processes are well supported by established accounting rules and accepted practices. The accessibility of information to the regulator coupled with extensive regulatory experience make examination of the BOC's internal relationships relatively straightforward. Examination of relationships with other affiliates may be



Source: Authors' construct.

Fig. 7-2. Core telecommunication activities.

more difficult for several reasons: they may not be subject to the same accounting rules as common carriers, there is not an extensive history to guide the examinations, nonBOC companies may not collect information to support an allocation methodology preferred by the regulators, and the RHC may be reluctant to provide information about the total operation of a BOC affiliate. Without total affiliate information, regulators may lack confidence in the assignment of affiliate costs to core activities.

Once core activities are identified, the impacts of other activities on the core can be examined. An affiliate with no core activities may have transactions with the BOC that are germane to a particular investigation. For example, if the RHC's cellular affiliate obtains access services from the BOC, regulatory analysis of core activities may require examination of transactions between the BOC and the cellular affiliate, even though the cellular operations are not in the core.

Table 7-4 presents a matrix of contributions that the core may make to other RHC activities and identifies three categories of core asset use. The other dimension on the matrix lists core assets that are candidates for use by other RHC activities. Any RHC activity can be analyzed by considering how it uses core resources.

The first step in using the matrix in Table 7-4 is identification of RHC business activities to be considered. Sufficient information about the activity and how it is conducted must be collected to determine the extent of core asset use. The compensation received by the BOC or allocated to the core businesses by the RHC can be compared to the utilization matrix. The reviewing commission can then focus on un- or under-compensated asset use. Compensation to the core business from other activities is satisfactory if all of uses of core business resources and assets are identified and the compensation for each is satisfactory.

The matrix also provides information useful in evaluating RHC competitive advantages arising from the core BOC business. If the commission is concerned that the RHC is exploiting the BOC's position as the local exchange service provider, a review of relations between core and noncore businesses can provide valuable insights into mechanisms available to the RHC to gain competitive advantage.

TABLE 7-4
RELATIONSHIPS BETWEEN CORE BOC BUSINESS
AND OTHER RHC ACTIVITIES

	None	Used But Separable	Integrated
<u>CORE BOC ASSET:</u>			
Physical Network			
Network Operations			
Network Information			
Patents & Research Rights & Licenses			
Technical Expertise			
Marketing Services			
Marketing Information			
Marketing Expertise			
Name/Reputation			
Financial Contribution			
Financial Integrity			
Administrative Support Management			
Management Expertise			
<u>STRATEGIC CONSIDERATIONS:</u>			
Deployment Advantage			
Foregone Opportunity			
Coordinated Planning			

Source: Authors' construct.

Commission involvement in issues of anticompetitive behavior are partially separable from issues of adequate compensation to the core business. For example, the BOC may be adequately compensated for providing information to an affiliate but the affiliate may use the information to gain a competitive advantage (especially if the affiliate has more complete, easier, or more timely access to information than its competitors).

Physical Assets

The first three BOC assets in Table 7-4 that may be used by the RHC in other business endeavors are related to the physical network. One of these is the network itself because many other RHC activities make use of the network to either transport or produce services that the RHC or its affiliates sell to end-users. When these resources are tariffed by the BOC, compensation for network use is the tariffed rate, so the reasonableness of compensation will depend upon the reasonableness of the tariff.

Patents, Research, and Technical Expertise

A second major type of BOC assets in Table 7-4 that may be assigned to the RHC as a result of its local exchange operations and includes the patents, rights and licenses, and technical expertise that the RHC can use in noncore businesses. As an example, note that cellular affiliates operate under a license granted the RHC because of its BOC-created status as the incumbent wire-line carrier. Whether, how, and to what extent core business should be compensated for such rights or licenses may be a legitimate question for consideration by state regulators.

Patents or research results that have been supported by the core business, and technical expertise that result from core activities are two additional core resources that may be being used by the RHC in noncore activities. For example, if an RHC is engaged in developing telephone networks in foreign countries, it may be using technical

expertise developed in the provision of local exchange service. Again, whether, how, and to what extent the core business should be compensated for the transfer of such expertise is a legitimate question for regulators.

Marketing Assets

The next four BOC assets in Table 7-4 are often used in marketing noncore products or services. The RHC may use the name and reputation of the BOC to enhance the image of other products. The "Bell" name is a valuable asset (brand name capital) which is used by many RHCs to market of all sorts of products and services. The state regulator can consider whether the core activity should be compensated for use of this trademark to market noncore products. This happened in Florida when the commission determined that the LEC affiliate of United Telephone's long-distance operations should be compensated for the use of United's name and logo.¹³

The BOC may also provide actual marketing services to an affiliate. For example, when a new customer signs up for telephone service, the BOC personnel may attempt to sell a noncore service to the customer. If that occurs, some of the costs of handling service orders should be assigned to noncore businesses. Such marketing practices are subject to controls by commissions seeking to limit the RHC's competitive advantage arising from provision of local services.

If marketing services are not provided directly by the BOC, information about specific customers might still be provided to marketers of noncore products and services. For example, the name, address, and telephone number of new customers would be valuable to those marketing voice-mail services. Again, the commission may need to determine appropriate compensation and inhibit unfair competition. As an example, if an affiliated voice-mail service had better information than a competitor, unfair competitive advantage would be created. Finally, the core business might provide marketing expertise to a noncore activity. The reasonableness of compensation received by the core business for that expertise can also be a regulatory issue.

¹³ See Order No. 18939 (Florida).

Financial Assets

The core business may also provide direct financial contributions to other RHC activities. For example, a contribution may occur with a start-up operation that is initially integrated with the BOC and subsequently transferred to a separate entity. The BOC may have borne the start-up costs directly but there may not be a mechanism within the RHC to compensate the BOC from the proceeds of subsequent success by the spinoff. Even if core operations do not contribute directly to the financing of noncore activities, the noncore activities may still obtain some advantage from the financial integrity of the core operations. This advantage may be in the form of favorable access to capital markets through the RHC's financing unit, especially when compared with an unaffiliated start-up venture offering the same services.

The RHC's bond rating is a function of its total operations; this may allow relatively low-cost financing for certain business activities compared with that available on a stand-alone basis. The financial integrity of noncore operations may be further enhanced by their having substantial transactions with the BOC. For example, if the RHCs could engage in the manufacture of switching equipment, the probability of the BOC purchasing the equipment would create a substantially different situation than would be faced by a nonaffiliated start-up switch supplier. The obverse of this benefit to the affiliate is that, as RHCs enter risky lines of business, their overall cost of capital may rise above that required to finance the BOC on a stand-alone basis, thus increasing the cost of capital to the BOC.

Administrative and Managerial Inputs

The final three core assets that may be utilized by the noncore businesses are administrative and managerial inputs. Just as in the case of technical and marketing inputs, core business may provide administrative and managerial expertise, and fair compensation to the core may be an issue of regulatory concern. Additionally, more

direct support of noncore activities can be provided in the area of management services and administrative support services.¹⁴

Strategic Planning Assets

In addition to benefiting from the use of core assets, noncore activities may benefit from certain strategic choices by the RHC. The three categories identified are network deployment, foregone business opportunities, and coordinated business plans.

Deployment of capabilities in the local network is controlled by the RHC (subject to some constraints imposed by minimum service standards). This control can be used to advantage noncore businesses. Furthermore, if there is an enhanced service that requires some network-based feature, the RHC could time the BOC's deployment of the feature to coincide with plans for offering the enhanced service. Alternatively, plans for the enhanced service could be coordinated with the deployment schedule of the BOC, using information that might not be available to competitors. The latter potential has been addressed by the FCC in its ONA proceedings (which are an example of regulatory interest in the potential for RHC control of deployment to be used for strategic advantage in enhanced services). As an example, the District of Columbia Commission disallowed a portion of C&P Telephone's Bellcore expenses because the research was directed to ISDN. The Commission determined that those costs should be recovered from ISDN users, not current basic service ratepayers.¹⁵

The RHC can also determine which of its subsidiaries provides which services. The regulators may be interested in choices made by the RHC that assign lucrative business opportunities to unregulated affiliates rather than to the BOC. Such choices may disadvantage the BOC, as compared to the course it would have taken were it not affiliated with the RHC. Although prospective foregone business opportunities may be difficult to detect, the Oregon Commission disallowed a proposal by its BOC to

¹⁴ Examples of such support activities include: payroll accounting, material acquisition, employee training, and legal services.

¹⁵ See Order No. 9927 (District of Columbia PSC).

discontinue provision of reverse-directory services because the service was not really to be abandoned but transferred from and BOC to an unregulated affiliate.¹⁶

An Example of the Procedure

The procedure outlined above can be applied to any activity or set of related activities of the RHC. The analyst collects sufficient information to fill out the matrix of relationships of the activity to the core BOC. Establishing that an activity does not make use of an asset concludes consideration of that issue. If an asset is used by an activity, the choice must be made whether to integrate the activity into or to separate the activity from the core BOC for analytical purposes. In performing the analysis the question posed is not whether there is any use of an asset but whether there is sufficient use of an asset to require further investigation. When sufficient use is indicated, the analyst must proceed to quantify the value of that use.¹⁷

As an example, consider RHC provision of cellular service. Assume that this is not a BOC activity. The analyst will conclude that the cellular operation does not make use of the BOC's physical network. The next decision is whether to enlarge the definition of the core BOC to include the cellular operation (an unlikely choice in this example). Assuming that separation is to be maintained, the next question is whether the BOC is receiving adequate compensation for the use of its physical network. In this example, the analyst may conclude that network services are provided exclusively under tariff. If the analyst knows how the network service tariffs were developed, it may be concluded that compensation is adequate. A similar consideration of the cellular operation's use of each core BOC asset is conducted to evaluate the effect of the RHC's cellular operation on the core BOC.

¹⁶ See Case No. 90-1457 (Oregon Public Utility Commission).

¹⁷ For an example of the consideration of costing issues that can arise in the analysis, see Phyllis Bernt, Hans Kruse, and David Landsbergen, *The Impact of Alternative Technologies on Universal Service and Competition in the Local Loop*, (Columbus, Ohio: The National Regulatory Research Institute, 1992), 83 et seq.

Summary

This chapter identified strategic and tactical issues a state commission might consider in formulating plans for RHC oversight. Since much of the oversight will occur in proceedings focused on issues other than the RHCs, developing a plan for oversight of affiliate transactions and structural issues will facilitate the coordination of reviews from proceeding to proceeding. Other chapters of this report have identified general issues and motivations of various RHC actions. With this background and resolution of the role, scope, and process issues discussed in this chapter, a commission's overall oversight program should be effective.

State commissions have limited resources. Important issues abound in regard to corporate structure, affiliate transactions, and lines of businesses pursued by the RHCs. The fact that RHCs engage in businesses outside the traditional regulated sector means that some issues will be beyond the commission's experience. A review of an RHC which identifies all issues and effects significant to the BOC may be beyond the capability of most individual state commissions. Even for those commissions that are prepared for such an investigation, problems associated with access to information might frustrate the effort. Some issues can best be understood from the perspective of an analysis of the holding company; that perspective may best be gained through the cooperative effort of several states and may require the use of a management audit approach. Joint state efforts and management audits are discussed in Chapter 8.

CHAPTER 8

CONCLUSIONS

Introduction

Several themes were developed in the preceding chapters, including the following:

- (1) RHCs are complex, diversified organizations with a mix of regulated and unregulated subsidiaries.
- (2) Regulators are concerned that the RHCs can use their complex structures and control of the BOCs to enhance their profits at the ratepayers' expense.
- (3) RHCs can use the BOCs to create advantages for their unregulated subsidiaries.
- (4) Economies of scale and scope are important in producing a mix of regulated and competitive telecommunications services.
- (5) Both structural and nonstructural separations have their uses but neither is capable of simultaneously controlling abuses and promoting efficient production of multiple telecommunications services.

This chapter returns the discussion to focus on cross-subsidies, separations, and economies of scale and scope. This chapter also presents some suggestions for regulators to consider in developing and implementing policies toward the RHCs. The suggestions presented are based on the previous chapters and on responses to the survey of state commissions that was conducted in conjunction with this report.

Cross-Subsidies

One method RHCs have for creating advantages is using monopoly services to cross-subsidize competitive services. The idea that cross-subsidies are harmful is a central theme of this report. Cross-subsidies both harm ratepayers and disadvantage firms in competition with the unregulated subsidiaries. Cross-subsidies are undesirable

for several reasons: (1) monopoly ratepayers almost certainly fund the subsidy, (2) cross-subsidies reduce the apparent marginal cost of the subsidized product so that it will not be produced or priced efficiently, (3) potential competitors may be deterred from entering the market.

The first undesirable consequence of cross-subsidies occurs if the RHC is able to overstate the true cost of producing monopoly services or understate the true cost of competitive services. Means of accomplishing this include overallocating joint and common costs to monopoly services, inflating prices the BOCs pay for affiliate transactions, or undercharging competitive services for monopoly inputs. Under conventional cost-of-service regulation, overallocating costs to the firm's regulated operations will increase the price of the regulated service and reduce welfare in the regulated market.

The second undesirable consequence of cross-subsidies occurs because the true cost of the subsidized service will be understated. It will, therefore, be overproduced and underpriced.

The third undesirable consequence of cross-subsidies occurs as a corollary to the others. Even if the current price of the subsidized service is high enough to attract competitors, the ability and willingness the RHC to engage in cross-subsidization can create a credible threat that deters them. The RHC's ability to cross-subsidize gives it the potential to charge prices below the minimum average cost of potential entrants. If potential competitors believe that the RHC would lower prices when they enter the market, the ability to cross-subsidize may enable the RHC to charge monopoly or near-monopoly prices for unregulated services.¹

¹ This denies the possibility of the hit-and-run entry envisioned in the contestability literature. See Elizabeth E. Bailey and William J. Baumol, "Deregulation and the Theory of Contestable Markets," *Yale Journal on Regulation*, 1 no. 2 (1984): 111-137; and William J. Baumol, John C. Panzar, and Robert D. Willig, *Contestable Markets and the Theory of Industry Structure*, revised edition, (New York: Harcourt Brace Jovanovich, 1988), Chapter 12.

Separations

In choosing policies for regulating BOC/RHC relations, regulators try to balance the conflicting goals of limiting cross-subsidies and other abuses and promoting efficient production. If limiting cross-subsidies is of primary concern, structural separations have advantages because tracking cross-subsidies is made easier. However, there are likely to be genuine economies of scope achieved when basic and enhanced services are produced together. These would be lost or limited under structural separations. If regulators adopt a broad perspective and are concerned with telecommunications generally, they will attempt to strike a balance, recognizing the inherent tradeoff between reducing cross-subsidies and foregoing economies of scope.

In order to make informed policy choices, regulators need objective evidence upon which to judge the costs and benefits of various policies. If cross-subsidies are large and the economies of scope are small, policy can lean toward structural separation. If cross-subsidies are small and the economies of scope are large, policy can lean toward nonstructural separation.

The problem, however, is that measuring cross-subsidies and the size of economies of scope is difficult. To make matters worse, there is a simultaneous dearth of objective evidence and a plethora of studies serving various interests. Analysts concerned about the costs of cross-subsidies tend to neglect or dismiss economies of scope as either being minimal or achievable by other means, such as contracting among separated producers.² Analysts concerned with capturing economies of scope tend to view cross-subsidies as rare or self defeating. Moreover, they have faith that accounting rules and the threat of antitrust litigation will deter cross-subsidization. A problem with this view is that economies of scope are easy to assert but difficult to measure.³

² Formally, if there are other means available that can duplicate the cost saving resulting from integrated production, there are not any economies of scope. Economies of scope refer to those savings that cannot be captured except through integrated production.

³ One study that did attempt to measure economies of scope in producing several broad categories of LEC services is by David Gabel and Mark Kennet. They used an
(continued...)

In a recent study based on a simulation model, Brennan and Palmer concluded that integrated production improves welfare even if there is cross-subsidization provided that economies of scope are large, and that the cross-subsidy and the firm's elasticity of supply for the unregulated product are small.⁴ This would indicate that regulators could consider nonstructural separations as being preferable when economies of scope are large. This would occur when there are many common or joint costs involved in producing multiple services.

Scale and Scope Economies

The existence of economies of scale and scope creates the question of how to allocate them between monopoly ratepayers and the RHC. There are three policies that can be followed in allocating the benefits of economies of scale and scope. The first is to allow the RHC to retain all of the economies of scale and scope. The second is to develop an allocation that gives the RHCs incentives to create efficiencies and allows ratepayers to benefit from those efficiencies. The third is to develop a mechanism for sharing economies of scale and scope.

The Stand-Alone Approach

Suppose that economies of scale or specialization indicate that an affiliate can provide a service to the BOC more efficiently than the BOC on its own. One approach is to apply the no-losers test. In the no-losers test, if the BOC is not worse off than it would be if it produced the services on a stand-alone basis, the affiliate would be

³ (...continued)
engineering process optimization model to simulate the cost of local loop services. However, they did not model the cost of any enhanced services. See David Gabel and Mark Kennet, *Estimating the Cost Structure of the Local Telephone Exchange Network*, (Columbus, Ohio: The National Regulatory Research Institute, 1991).

⁴ See Timothy J. Brennan and Karen Palmer, *Comparing the Costs and Benefits of Diversification by Regulated Firms*, presented at the Telecommunications Policy Research Conference, Solomons Island Maryland, September 1991.

allowed to retain the benefits of the efficiency gain. The no-losers test can be applied to services including: material procurement, marketing, or planning, all of which are often provided to BOCs by affiliates.

A policy that relies on the no-losers test can be effective in encouraging efficiency because it creates the greatest profit incentive for the RHC to find organizational structures that capture economies of scale and scope. However, there are a number of reasons not to adopt this policy:

- (1) The no-losers test is contrary to regulatory practice.
- (2) It is relatively difficult to satisfactorily establish the stand-alone costs.
- (3) When the economies of scale or scope are great, the RHC's profits may be embarrassingly large.
- (4) When historic costs are the standard for comparison, the no-losers test rewards the BOC for past inefficiencies in its practices.
- (5) The no-losers test will create controversy because unaffiliated providers of similar services will claim that the playing field is not level. Unaffiliated providers will argue that affiliated providers are being favored.
- (6) The no-losers test may mask inefficiencies in affiliate relationships that are not easily quantified, such as coordination of the activities of the BOCs and the affiliates (these may show up, undetected, in the higher levels of the RHCs' organizations).
- (7) If the no-losers test is based on the affiliate's production of the service, it may be difficult to detect situations where the affiliate produces the service differently than would the BOC.
- (8) It may be difficult to access information about the affiliate.

The Ratepayer-First Approach

The opposite policy position is that economies of scale and scope belong to the BOC's ratepayers. Without the local franchise and a stable base of ratepayers, there would be many fewer opportunities to exploit economies of scale and scope. This position is in conformity with established regulatory practices. An example of the ratepayer-first approach is the FCC's affiliate transaction pricing rules that require prices

to be based on cost, market price (if a substantial market for equivalent services exists), or fair value.⁵

Sharing Mechanisms

Regulation should create mechanisms for evaluating and sharing economies of scale and scope while inducing efficient organization and production. Neither the stand-alone nor the ratepayers-first approach does this. The no-losers approach does not allow ratepayers to share in efficiency gains relating to innovative structure and organization, and the ratepayer-first approach may stifle incentives.

The issue of providing incentives and sharing benefits is not unique to consideration of economies of scale and scope. For instance, the issue is at the heart of the debate surrounding the desirability of end-user access charges versus carrier access charges. Simultaneous production of multiple products always results in debates about allocating the joint and common costs among products. Affiliate relationships facilitate production for several BOCs and perhaps outside users as well. It is not surprising that there is debate about the allocation of costs and efficiency gains between ratepayers and the RHC.

Regulating with Structural Separations

Regulators are concerned about possible abuses arising from holding company structures. A number of alleged abuses were noted in previous chapters. If structural separations are used, the following safeguards would be useful if regulators are to ensure that abuses can be detected.

- (1) Regulators should have the legal authority to have complete access to the books and records of affiliates, whether regulated or not.

⁵ See FCC Rules, § 32.27 (b) and (d).

- (2) Regulators should require that affiliates' books and records kept in a manner compatible with regulated entities and understandable by commissioners and staff.⁶
- (3) Regulators should establish transfer pricing-rules and arms-length transactions rules that allow for competitive bidding and outsourcing.
- (4) Regulators should adjust allowed rates of return for risk.⁷
- (5) Regulators should require that contracts between regulated and unregulated affiliates be filed with commissions.
- (6) Regulators should require unregulated affiliates to pay royalties for benefits they receive from association with the BOC.
- (7) Regulators should adopt a consistent method for testing for cross-subsidies and predatory pricing.
- (8) Regulators should require nondiscriminatory pricing and access to bottleneck facilities.
- (9) Prior to major restructurings, regulators should require that the utility have the burden to demonstrate the impact of the restructuring to regulated ratepayers and other groups.
- (10) Regulators should develop and enforce rules requiring preapproval for all major asset transfers between the BOCs and unregulated affiliates.
- (11) Regulators should restrict the amount of retained earnings used for diversification as compared with upgrading of the network.
- (12) Commissions should have staff trained in analyzing affiliate transactions and structures.

⁶ Affiliates need not be required to use the Uniform System of Accounts, but their records should be accessible to regulators. To protect the company, rules for receiving proprietary information are needed.

⁷ This adjustment works two ways. First, if unregulated affiliates face real competition and real risks, they would be allowed to earn higher a rate of return than the BOC. However, unregulated affiliates would not be entitled to a higher rate of return if they have nearly exclusive dealings with the BOC. In addition, the BOC's own rate of return would be set based on its own risks, ignoring the effect of the RHC's risky ventures on the total company cost of capital.

- (13) Regulators should consider participating in some form of regional oversight or cooperative regulation.

Three of the above suggestions are crucial to adequate oversight of affiliate transactions. Commissions need the authority and ability to examine the records of unregulated affiliates. Commissions also need the ability to perform audits of affiliate transactions and corporate structures. Finally, commissions should recognize the usefulness of and participating in some form of regional oversight or cooperative regulation. The first of these crucial suggestions is almost self-evident. Regulators simply must have access to information necessary to assess whether ratepayers are being fairly treated. If the RHCs are able to inhibit or impede regulators from obtaining information, the public interest will not be served. The other crucial suggestions are briefly discussed below.

Management Audits

Management audits are needed because they provide the best opportunity to consider organizational and structural issues. The suggested management audits should be specifically focused on affiliate transactions and structural issues. Because neither structural nor nonstructural separations is a perfect means of controlling behavior, management audits can be part of an ex-post review process. A management audit can be used as an adjunct to standard setting proceedings to advise the RHC and the BOC concerning acceptable behavior. Management audits were suggested as one regulatory tool in Burns, et al. and by Glen.⁸ In addition, there has been a recent increase in interest in management audits.

⁸ See Robert E. Burns, et al., *Regulating Electric Utilities with Subsidiaries* (Columbus, Ohio: The National Regulatory Research Institute, 1986). See also, Robert T. Glen, "Improving Utility Regulation: A New Role for Management Audits," *Public Utilities Fortnightly*, 115, no. 3 (February 7, 1985): 34-36.

Recent Examples of Management and Structural Audits

The Illinois Commerce Commission recently ordered a management audit of Illinois Bell's financial transactions with affiliated companies. The audit included billings to Illinois Bell for services, including accounting, engineering and training, finance, information technology, marketing, network planning, purchasing, planning, and software development. Also included in the audit were Illinois Bell's directory arrangements and billings to affiliates. Topics examined include the usefulness and price competitiveness of goods and services provided by affiliates, the reasonableness of affiliate costs and charges to Illinois Bell, and the reasonableness of allocation methodologies used to determine the billings to Illinois Bell by its affiliates.⁹

Management audits are not perfect tools. They often lead to disputes and the audited utilities rarely agree with negative findings. For example, the Louisiana Public Service Commission sponsored a management audit of South Central Bell that questioned the benefit to the BOC of some affiliate transactions and the appropriateness of regulated/nonregulated cost allocations. The audit asserted that: (1) transactions were chained¹⁰ among affiliates to detriment of ratepayers, (2) losses suffered in nonregulated activities resulted in higher required return for the BOC, and (3) some overhead costs might be overallocated to regulated activities. South Central Bell hired its own consultants to conduct a parallel audit to rebut the commission-sponsored audit.¹¹

A NARUC Audit Staff report on Bellcore's research and development spending found that ratepayers were financing costs related to competitive services and recommended major accounting changes. The Audit Staff claimed that expensing all of

⁹ See *NARUC Bulletin*, November 9, 1992, 25-26. The Staff of the Illinois Commerce Commission also performed an audit that considered affiliate relations, among other things. See *Reconnaissance Management Audit of the Illinois Bell Telephone Company*, Illinois Commerce Commission Management Studies Division, November 1992.

¹⁰ A chained transaction is one that involves several unregulated affiliates, each of which marks up the value of some product or services as it passes from affiliate to affiliate. The end result is a higher overall markup than would normally be allowed.

¹¹ See *Telecommunications Reports*, October 5, 1992, 33-35.

Bellcore's costs means that consumers of noncompetitive services are, in effect, paying for the development of future competitive services. The revenues from such services will be below the line (not considered by regulators) so that monopoly ratepayers won't share in the profits from the services, even though they are helping to fund development. Bellcore was critical of the audit and claimed that the recommendations, if implemented, would shift risk excessively to the stockholders, reduce incentives, and slow modernization of the network.¹²

All management audits do not criticize the RHCs and BOCs. And of course, management audits should not be allowed to become witch hunts. Chesapeake and Potomac Telephone Co. of Maryland received generally good grades on an independent audit of its corporate structure. It was able to reduce expenses by sharing costs with several other Bell Atlantic companies, and most cost allocations seemed proper.¹³

Audit Focus

In addition to the traditional focus on financial transactions, cost allocations, and controls, management audits should focus on the potential for the holding company structure to create opportunities for improper uses of customer proprietary network information and strategic control of access to the network. These issues of preferential access by RHC affiliates should be addressed because unequal access frustrates the policy objective of promoting competition. Furthermore, preferential treatment of affiliates relative to their competitors reduces the supply and raises the price of enhanced services, thus allowing unregulated affiliates to earn excessive profits.

Management audits should also focus on the effect of marketing new and experimental services on the regulated operating company. Since divestiture, the RHCs have had both failures and successes in diversification attempts. The relevant question for regulators and management audits is whether the risks of entrepreneurship are borne by the BOCs and captive ratepayers while the rewards flow to shareholders. Moreover,

¹² See *Telecommunications Reports*, November 23, 1992, 4-7.

¹³ See *Telecommunications Reports*, June 29, 1992, 15.

regulators and auditors should also examine the extent to which management effort is diverted from the regulated operations to the start-ups.

Regional Oversight and Regulation

As the telecommunications networks are called upon to deliver a wider range of services to consumers and businesses, the structures of the RHCs will almost certainly become more complex. Regulators might adapt to this new reality by focusing more attention on corporate structures and affiliate relations. Hiring experienced staff personnel who are trained in and adept at analyzing complex organizations is advisable. Given limitations on staff time and budgets, management audits might best be accomplished through some form of regional cooperation.

There is an increasingly strong perception that the mismatch between the utility industries' new configuration and the fragmented organization for regulatory oversight needs innovative concerted approaches. Varieties of regional regulation exist, ranging from compacts and joint boards to megacommissions and regulatory clubs of an ongoing or episodic nature. Regional regulation is particularly useful for oversight of multi-state utilities or regional holding companies. It has a number of positive attributes:¹⁴

- (1) Regional regulation can offset or equal the technical expertise of companies, which often overwhelms individual commissions.
- (2) Regional regulation can capture economies of scale and scope in regulation.
- (3) Regional regulation can benefit the RHCs by creating consistent rules across jurisdictions.
- (4) Regional regulation can limit the ability of the RHCs to play one commission off against another.¹⁵

¹⁴ See Douglas N. Jones, et al., *Regional Regulation of Public Utilities: Opportunities and Obstacles* (Columbus, Ohio: The National Regulatory Research Institute, 1992) and Douglas N. Jones, et al., *Regional Regulation of Public Utilities: Issues and Prospects* (Columbus, Ohio: The National Regulatory Research Institute, 1980).

¹⁵ For a discussion of how one RHC played regulators against one another and
(continued...)

- (5) Regional regulation can create a correspondence between effective regulatory jurisdictions and the RHC's franchise and operational boundaries.

A recent regulator initiative combining management audits and regional oversight is was the multi-state audit of U S WEST.¹⁶ This audit focused on affiliate transactions and was conducted by outside consultants. The audit was managed by regulators from three states. Other examples of multi-state cooperation include the ongoing NARUC audits of the RHCs.¹⁷

Collaborative Regulation

Possibly, some form of cooperative or collaborative incentive regulation can be developed and implemented. Under such a system, rather than viewing each other as adversaries, the RHCs and regulators would agree on a set of common goals and acceptable behavior. This can be interpreted as a form of a social contract. However, collaborative regulation does not let the companies do as they please. Rather, the companies and regulators would agree on what should be done and the companies would explain what they propose to do, why, and how their actions will affect ratepayers.¹⁸ Under such a scheme, the RHCs would be free to exploit technological and managerial economies and some means of sharing achieved economies would be devised. Collaboration would allow the firm to structure itself in such a way as to create profit opportunities in competitive or quasi-competitive markets, provided that some of the

¹⁵ (...continued)

shifted operations around within the holding company, see Paul Eric Teske, *After Divestiture: The Political Economy of State Telecommunications Regulation* (Albany, New York: State University of New York Press, 1990), 113-18.

¹⁶ See Schumaker & Company, *Regulatory Impact Review of U S WEST, Inc.*, Final Report for The Three-State Steering Committee, August 1992.

¹⁷ See Chapter 2.

¹⁸ The interests of competitors and the other stakeholders could be protected by ensuring that anticompetitive behaviors are not tolerated. Behavior under and enforcement of the FCC's ONA rules can be used as an experimental trial.

profits are shared with ratepayers. Such sharing is needed because, ultimately, it is the control of the public switched network that gives rise to many profit opportunities.

The willingness and ability of commissions to consider and deal with affiliate transactions and other issues related to the RHC's structures is probably more important than the particular separations regime imposed. The importance of considering affiliate transactions may be seen in the following statement by the Missouri Public Service Commission when certain charges by a supply affiliate were disallowed on the basis that the affiliate's net margin was higher than that of similar independent businesses.:

This Commission recognizes a clear and present danger that affiliated interests can be used to defeat regulation, that to ignore the impact of these affiliated interests is to shirk the Commission's duty and responsibility to examine and consider all facets of a regulated utility's operation when the Commission engages in the rate-making process.¹⁹

An Acknowledgement

This report is being published over sixty years after James C. Bonbright and Gardiner C. Means published their classic book detailing abuses of the holding company in the utility, railroad, and other sectors.²⁰ Although they recognized the advantages of integration and economies of scale and scope, they were wary of the ability of holding company structures to frustrate regulation. Although some abuses they discussed, especially stock watering and pyramiding, are controlled through other means (Securities and Exchange Commission rules and regulations, for instance), some abuses they chronicled exist today in different guises. Two traditional concerns are still with us: (1) excessive fees charged operating subsidiaries and (2) inappropriate charges for services and equipment transfers between the parent or unregulated subsidiaries to or from regulated subsidiaries.

¹⁹ Missouri Public Service Commission, Order in Case No. 18264 (1975), 214.

²⁰ James C. Bonbright and Gardiner C. Means, *The Holding Company: Its Public Significance and Its Regulation* (New York: McGraw-Hill, 1932).

Although considerable time has passed since it described the negative aspects of holding company structure and behavior, *The Holding Company* is still enlightening and worth reading. Regulators and staff leave, and institutional memory is lost. Each generation of regulators can benefit from observing prior abuses. Vigilance toward abusive behavior must be remembered lest abuses thought eliminated return or new ones develop.

APPENDIX

REGIONAL HOLDING COMPANY STRUCTURES

Introduction

This chapter discusses the structures of the seven RHCs in mid-1992. These structures are presented to illustrate the concepts presented in Chapter 5. The RHCs' corporate structures are evolving and are subject to change at any time; nevertheless, examining recent patterns of structure can provide useful insights. Data for this chapter were obtained from various sources, including 10-K statements filed with the SEC, annual reports to shareholders, news releases, and articles in newspapers and other publications.

Although there is some variation in structure, each of the RHCs contains an operating company group (OCG) or its equivalent, a related enterprise group (REG), and an unrelated enterprise group (UEG). The OCG typically involves one or more BOCs and associated service organizations. The REG, on the other hand, tends to contain subsidiaries that are aggressive in creating and growing business entities whose function is related to the core telecommunications business of the holding company and whose operations are not regulated. The UEG contains the rest of the RHC's operations. The UEGs exhibit considerable diversity, as the RHCs are involved in businesses only tangentially related to telecommunications.

The following sections offer brief discussions of the structures of the RHCs (Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell, and U S WEST) in alphabetical order.

AMERITECH

Ameritech is the holding company for five BOCs: Illinois Bell Telephone Company, Indiana Bell Telephone Company, Michigan Bell Telephone Company, The

Ohio Bell Telephone Company, and Wisconsin Bell.¹ Ameritech's BOCs are part of the Ameritech Bell Group which also includes Ameritech Information Systems and Ameritech Services, both of which provide support to the BOCs. Ameritech's BOCs jointly own Ameritech Services which provides centralized marketing, business development, finance, technology, information management, human resources, training, systems support, legal, and external affairs services for Ameritech's BOCs.

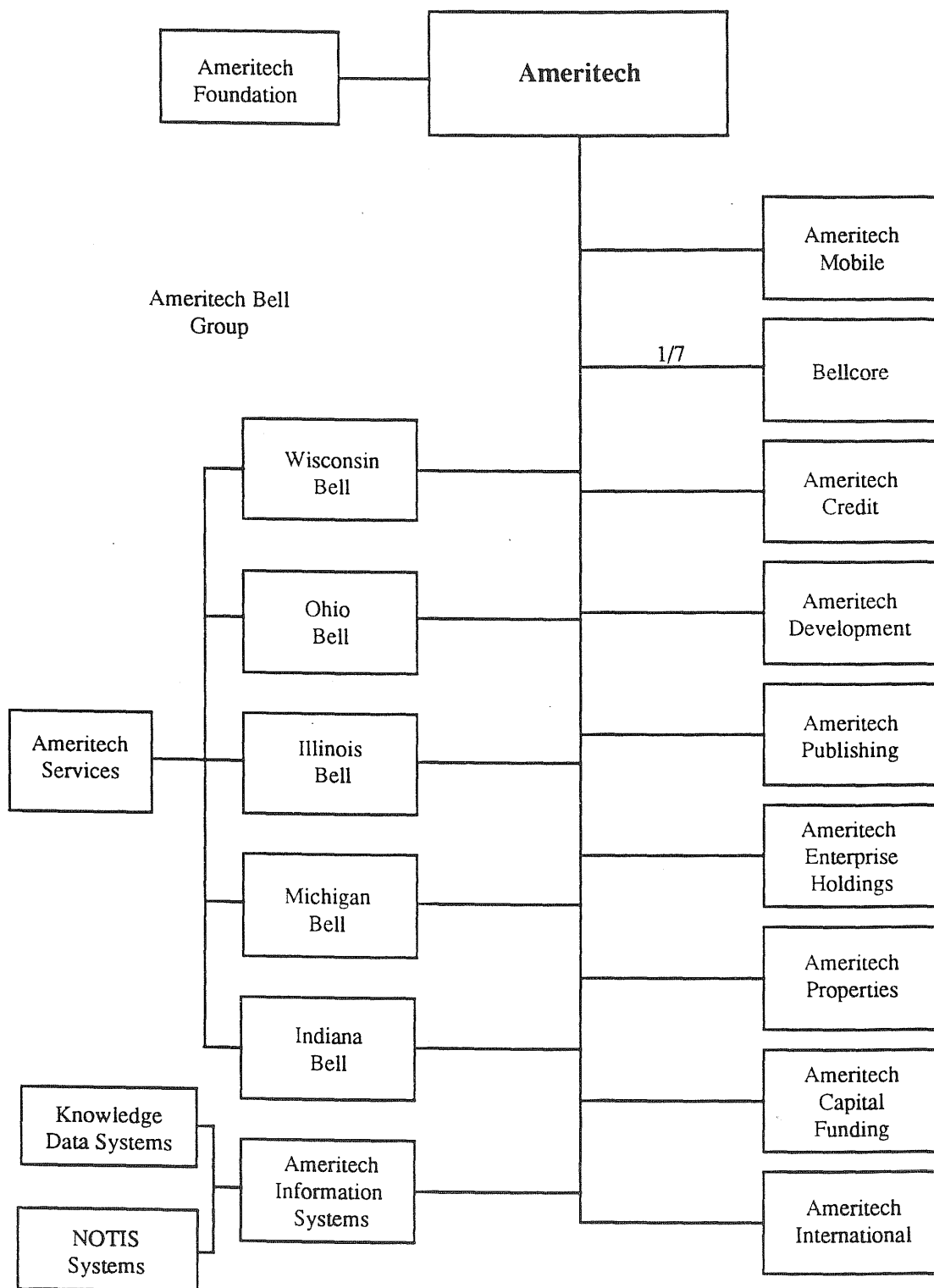
Ameritech also has wholly-owned subsidiaries, including Ameritech Credit Corporation, Ameritech Development Corporation, Ameritech Mobile, Ameritech Publishing, Ameritech Enterprise Holdings, Ameritech Capital Funding Corporation, and Ameritech International. In September 1991, Ameritech and Household International introduced a no-fee, combined credit and calling card, the Ameritech Complete Mastercard. Household owns and finances the credit card receivables. Ameritech funds certain marketing expenses. Cardholders can use the card to charge consumer goods, as well as telephone calls. Figure A-1 illustrates Ameritech's organization.²

BELL ATLANTIC

Bell Atlantic is a holding company that controls seven BOCs: C&P Telephone Company (serving the District of Columbia), C&P of Virginia, C&P of West Virginia, C&P of Maryland, Diamond State, Bell of Pennsylvania, and New Jersey Bell. Bell Atlantic has two main divisions: Communications and Related Services, and Financial and Real Estate Services. NonBOC subsidiaries include: Bell Atlantic Mobile Systems, Bell Atlantic Business Systems, Bell Atlantic International, Bell Atlantic Capital, and Bell Atlantic Properties, Figure A-2 provides an illustration of the Bell Atlantic's organization.

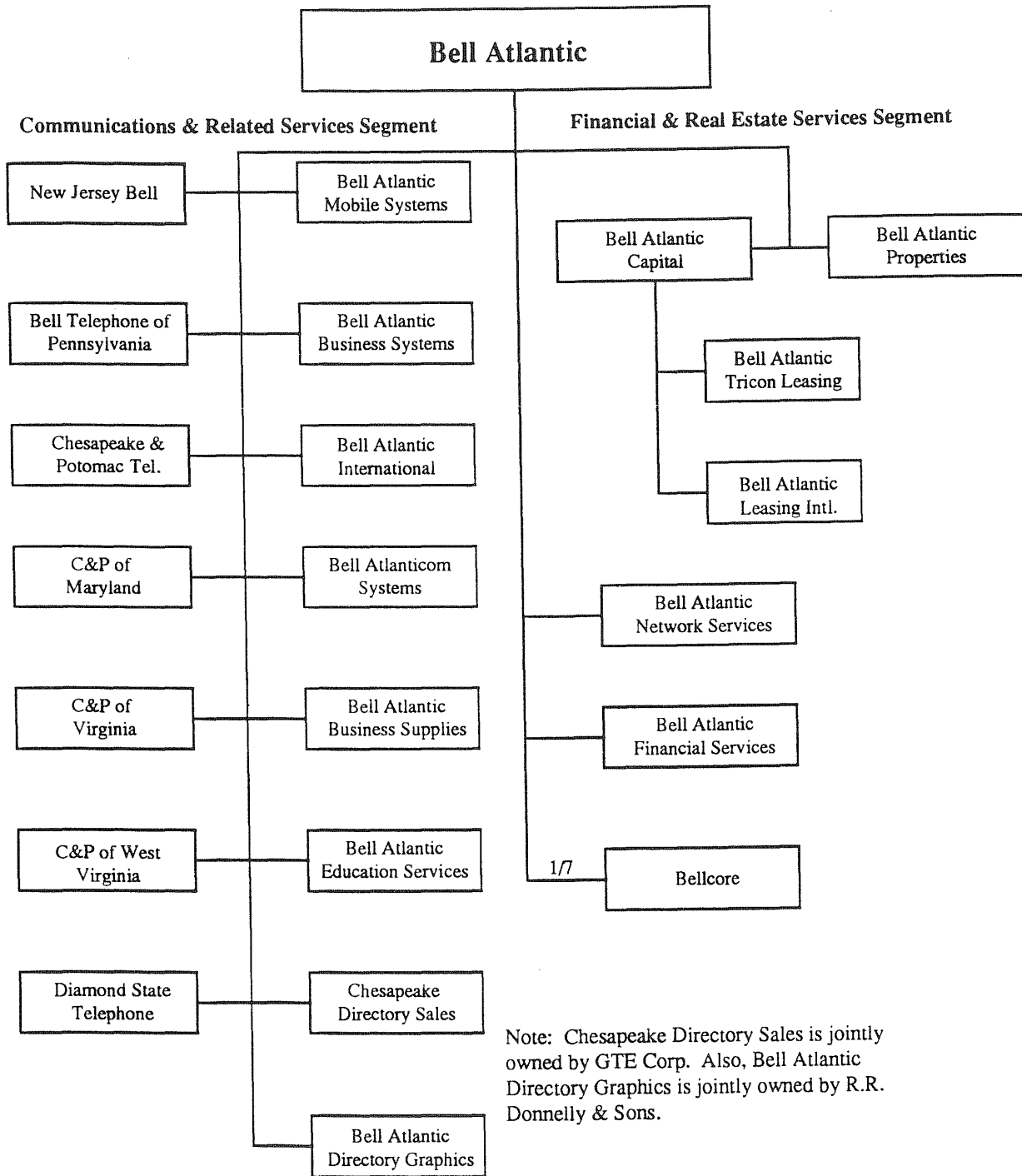
¹ For simplicity's sake, the "Inc." has been omitted from the names of most corporations.

² Ameritech has announced a major restructuring. Although the five BOCs will continue to exist, the RHC will be restructured into twelve new business units. Eleven of the new units will focus on customer groups and the twelfth will provide network services. See *Telecommunications Reports*, (March 1, 1993): 8-12.



Source: Ameritech Corporation's Form 10-K for the year ending December 31, 1991.

Fig. A-1. Ameritech Corporation's organizational structure.



Source: Bell Atlantic Corporation's Form 10-K for the year ending December 31, 1990.

Fig. A-2. Bell Atlantic Corporation's organizational structure.

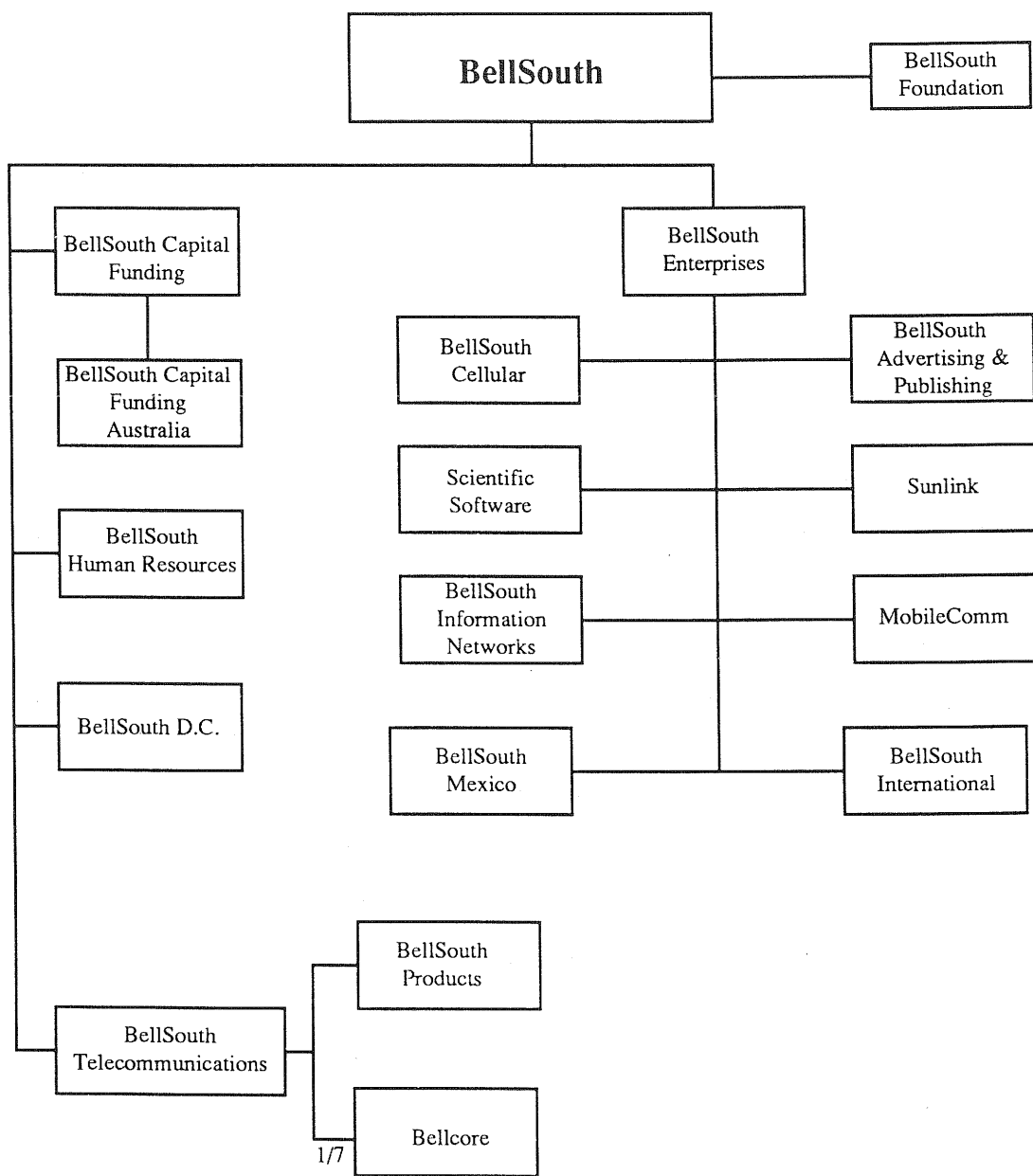
BELLSOUTH

BellSouth has two BOCs, South Central Bell and Southern Bell (which were consolidated into BellSouth Telecommunications in 1992), and conducts business through two principal subsidiary groups: The BellSouth Telephone Operations Group (which includes the BOCs) and BellSouth Enterprises.³ The Telephone Operations Group provides telecommunications services in parts of nine states: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. From 1988 to 1990, almost 80 percent of BellSouth's operating revenues and a larger portion of net income were derived from the Telephone Operations Group. BellSouth's other businesses, which primarily consist of mobile communications, advertising and publishing, and communications systems, are conducted through BellSouth Enterprises. Figure A-3 illustrates the recent table of organization.

NYNEX

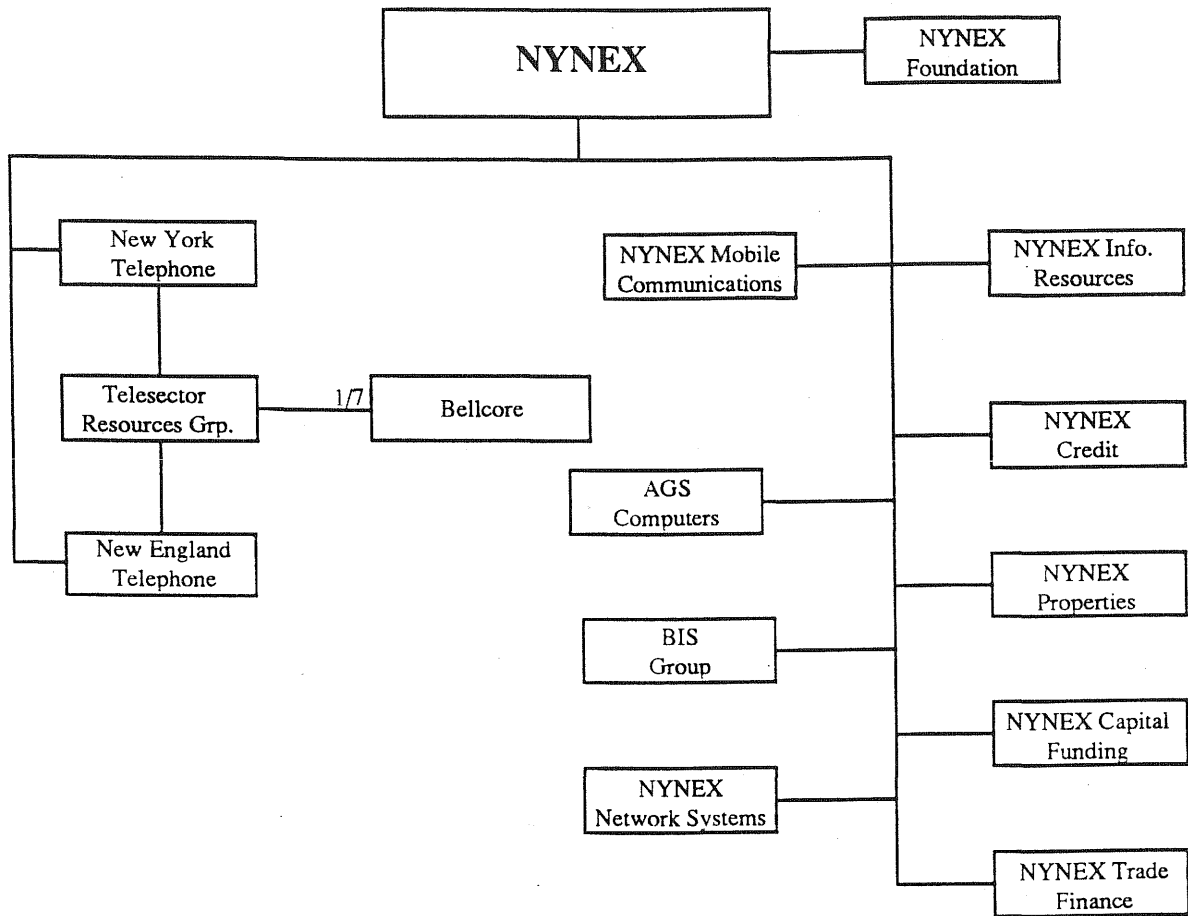
NYNEX's subsidiaries provide telecommunications products and services, information systems, software, directory publishing, and other business services. NYNEX's BOCs, New York Telephone and New England Telephone and Telegraph, serve New York, Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont. The BOCs derive 88 percent of their revenues from New York and Massachusetts, and the BOCs provided approximately 84 percent of the NYNEX's total 1991 operating revenues. Figure A-4 illustrates NYNEX's corporate organization.

³ BellSouth recently announced that it will dissolve BellSouth Enterprises. A layer of management will be eliminated, and staff functions now performed by BellSouth Enterprises will either be centralized at corporate headquarters or shifted to individual business units. See *Telephony* (November 9, 1992): 3.



Source: BellSouth Corporation's Annual Report for 1991 and BellSouth Corporation's Form 10-K for the year ending 12/31/90.

Fig. A-3. BellSouth Corporation's organizational structure.



Source: NYNEX Corporation's Form 10-K for the year ending December 31, 1991.

Fig. A-4. NYNEX Corporation's organizational structure.

In addition to telecommunications services, NYNEX has wholly owned subsidiaries which predominantly provide communications related products. These subsidiaries include: NYNEX Mobile Communications, NYNEX Information Resources Company, NYNEX Credit Company, NYNEX Properties Company, NYNEX Capital Funding Company, and NYNEX Trade Finance Company.

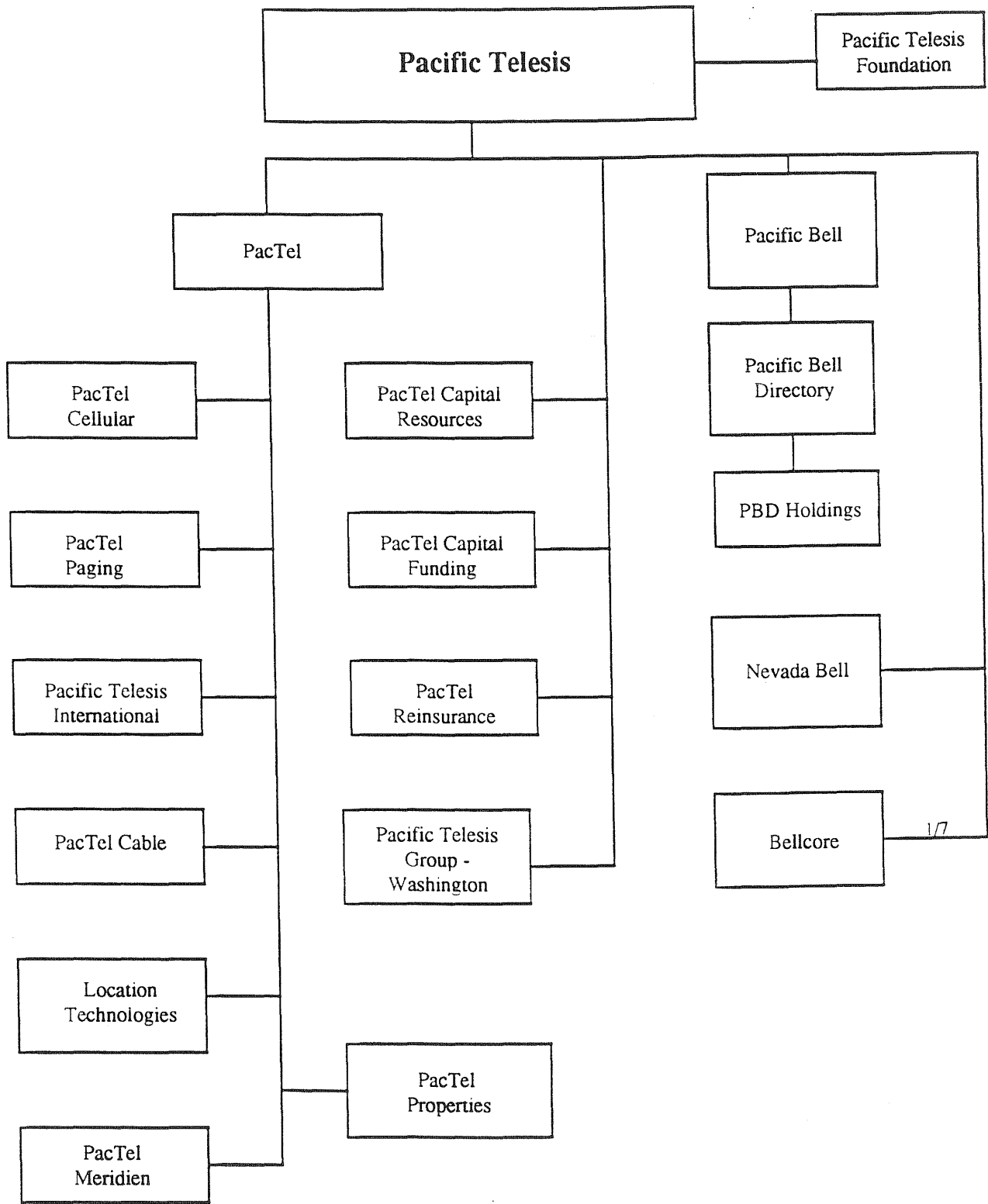
In 1990, ownership of NYNEX Material Enterprises Company (Material Enterprises) was transferred from NYNEX to the BOCs. In September 1990 Material Enterprises was merged into another jointly-owned subsidiary, NYNEX Service Company which was subsequently renamed Telesector Resources Group (Telesector), a wholly owned subsidiary of the BOCs. Telesector provides staff support and procurement services to the BOCs.

PACIFIC TELESIS

Pacific Telesis (PacTel) is the parent holding company for two BOCs (Pacific Bell, serving California, and Nevada Bell, serving Nevada) and other subsidiaries, as illustrated in Figure A-5. Pacific Bell and Nevada Bell combine to account for over 90 percent of PacTel's revenues. PacTel provides financial, strategic planning, legal, and general administrative functions for itself and its subsidiaries. PacTel's nonBOC subsidiaries include Pacific Bell Directory, PacTel Cellular, PacTel Paging, Pacific Telesis International, Location Technologies, PacTel Meridian Systems, PacTel Capital Resources, PacTel Capital Funding, PacTel Re Insurance Company, Pacific Telesis Group-Washington, and Pacific Telesis Foundation.

An important recent development is PacTel's plan to create its own divestiture in which the regulated telephone operations and the unregulated operations would be split into completely separate companies. After several months of consideration,⁴ Pacific announced that it would spinoff its wireless and international operations into a fully-independent company. Under the spinoff plan, PacTel's shareholders would receive

⁴ See the discussion of BOC divestiture in Chapter 4.



Source: Pacific Telesis Group's Form 10-K for the year ending December 31, 1991.

Fig. A-5. Pacific Telesis Group's organizational structure.

shares in the wireless and international company. The rationales given for the spinoff include a desire to free the wireless and international operations from excess state and federal regulation. PacTel would continue to hold Pacific Bell, Nevada Bell, and existing directory operations. An advantage for the BOCs of the spinoff is that they may be able to enter the PCS/PCN market because (after the spinoff) they are no longer in the cellular business.⁵

SOUTHWESTERN BELL

Southwestern Bell has one BOC, Southwestern Bell Telephone Company, and seven other principal subsidiaries: Southwestern Bell Mobile Systems, Southwestern Bell Yellow Pages, Mast Advertising & Publishing, Southwestern Bell International Holdings, and Gulf Printing Company.

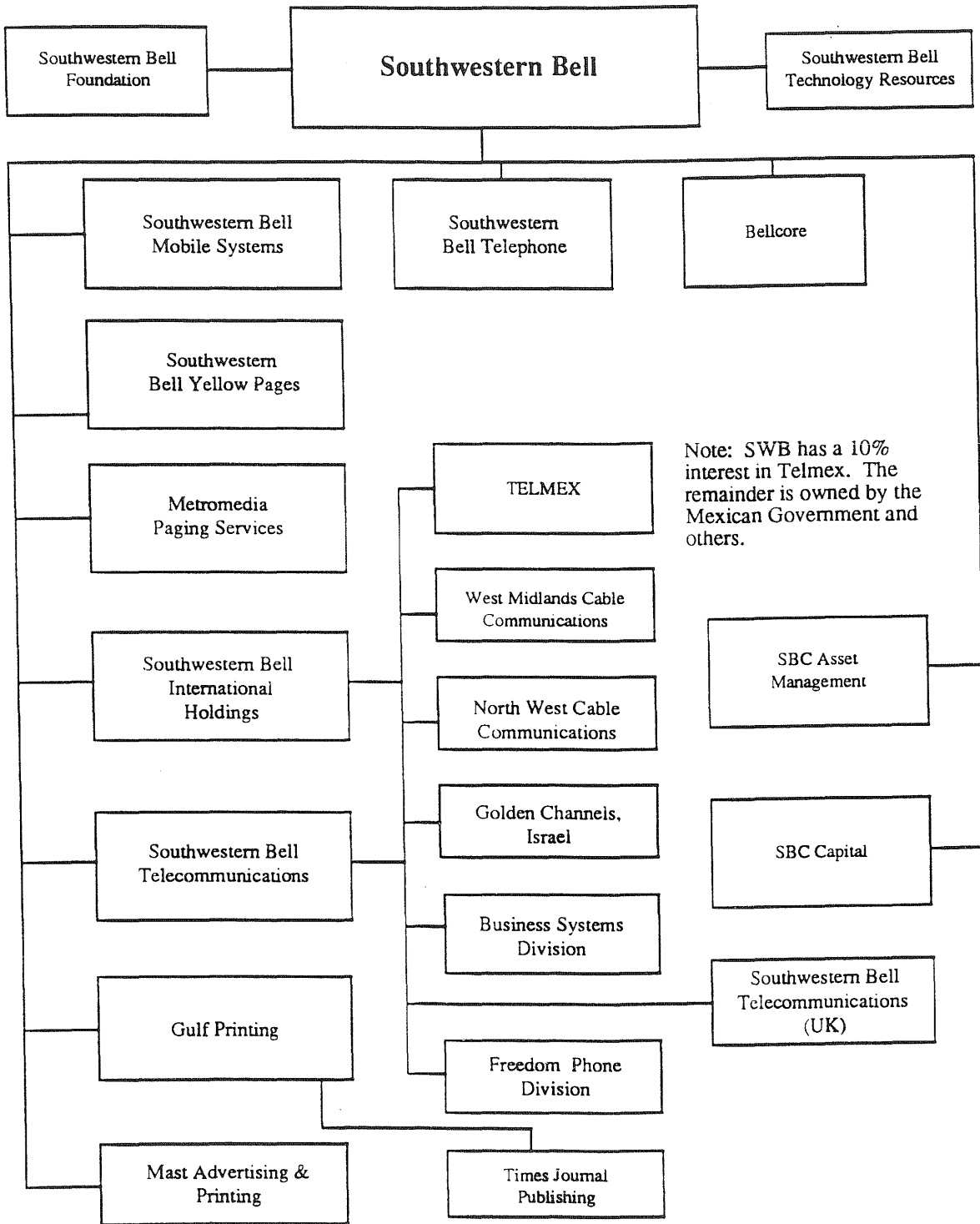
Southwestern Bell Telephone Company is the largest subsidiary, accounting for approximately 80 percent of the holding company's 1991 net income. It provides service in Arkansas, Kansas, Missouri, Oklahoma, and Texas. Figure A-6 illustrates Southwestern Bell's structure.

A plan to move corporate headquarters to from St. Louis, Missouri to San Antonio, Texas was announced in fall of 1992. The reason stated was to be closer to the company's Mexican operations.

U S WEST

U S WEST Corporation (U S WEST) has one BOC, U S WEST Communications. U S WEST Communications provides communications services in fourteen states: Arizona, Colorado, Idaho, Iowa, Montana, Nebraska, New Mexico, North Dakota,

⁵ See *Telephony*, December 21, 1992, 6-12.

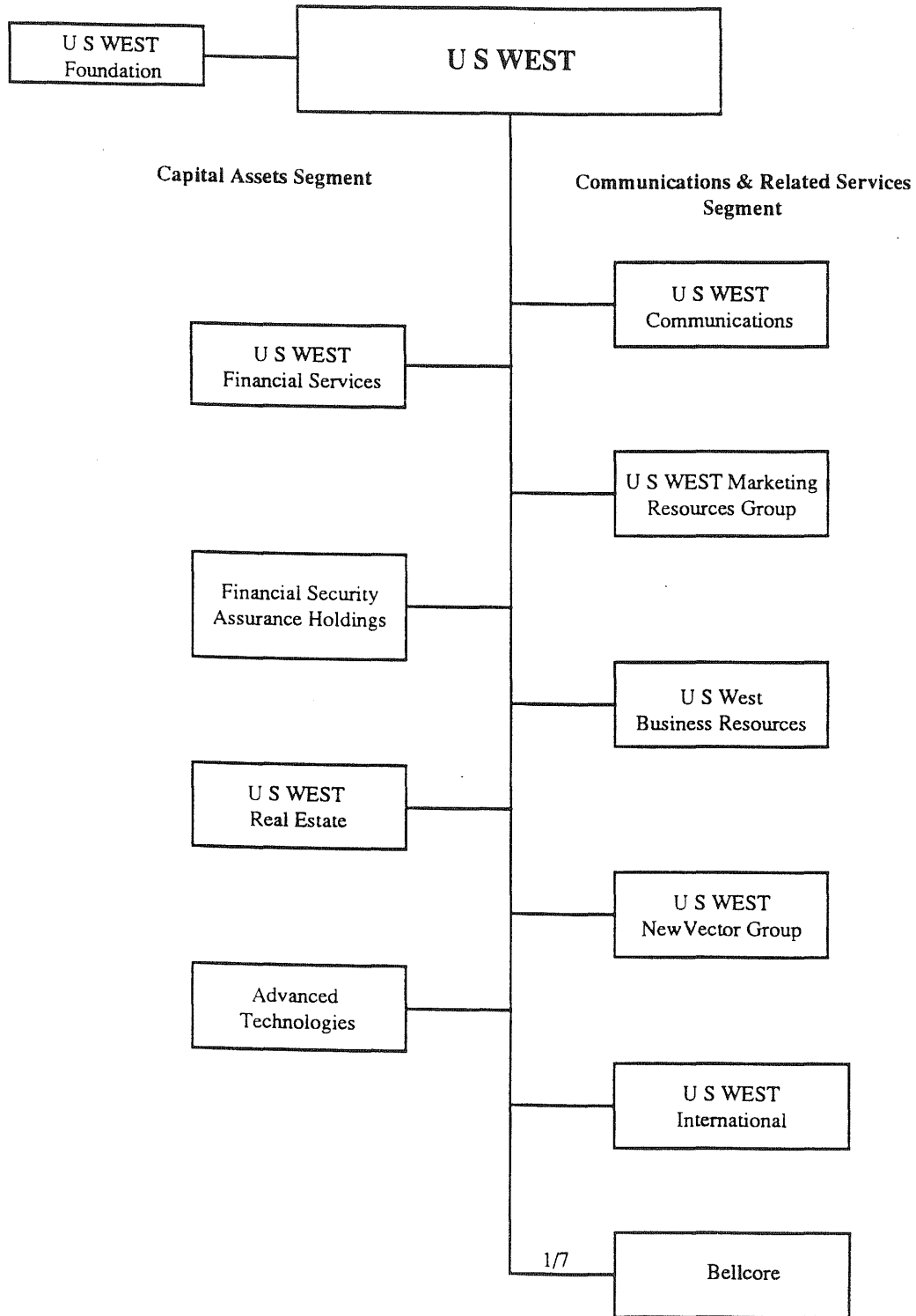


Source: Southwestern Bell Corporation's Annual Report for the year ending December 31, 1991.

Fig. A-6. Southwestern Bell Corporation's organizational structure.

Oregon, South Dakota, Minnesota, Utah, Washington, and Wyoming.⁶ U S WEST is split into a communications group, a diversified group, and financial group. U S WEST's organization is shown in Figure A-7.

⁶ Prior to 1991, U S WEST's communications and related services were conducted through three BOCs: Mountain States Telephone and Telegraph Company, Northwestern Bell Telephone Company, and Pacific Northwest Bell Telephone Company. In 1991, the three BOCs were merged into Mountain States Telephone and Telegraph which was renamed U S WEST Communications.



Source: U S WEST Corporation's Form 10-K for the year ending 12/31/90.

Fig. A-7. U S WEST Corporation's organizational structure.

