PEARSON NEW INTERNATIONAL EDITION

Takeovers, Restructuring, and Corporate Governance

Weston Mitchell Mulherin

Fourth Edition

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APPENDIX A

TELECOMMUNICATIONS INDUSTRY CASE STUDY

The telecommunications sector provides a cogent illustration of the effects that change forces such as technology and deregulation have on corporate strategy and corporate restructuring activity. In this case, we first present the causes and effects of the major regulatory changes impacting the industry including the Bell breakup in 1984 and the Telecommunications Act of 1996. We discuss how deregulation and technology jointly alter the risks faced by the industry and, consequently, affect the strategic process of the telecommunications incumbents and potential entrants. We then study the merger activity during the 1990s, as well as since the year 2000. The specific mergers show the interacting effects of deregulation and technology on restructuring activity.

BACKGROUND ON TELECOMMUNICATIONS DEREGULATION

The telecommunications industry dates to the nineteenth century and Alexander Graham Bell. An important modern date is 1984, when AT&T was broken up. Under arrangements with the federal government, the new AT&T would provide long-distance phone service and would compete with firms such as MCI and Sprint. This settlement was the outcome of a long debate that began in the 1970s with a federal antitrust suit against AT&T.

In the 1984 breakup, local phone service was divided among seven regional operating companies, which were referred to as the Baby Bells: Ameritech, Bell Atlantic, BellSouth, Nynex, Pacific Telesis, Southwest Bell, and US West. These firms were granted monopolies in local phone service in their areas of the country. However, under the conditions of the breakup agreement, the regional operating companies were not to provide long-distance phone service.

Twelve years later, further significant regulatory change occurred in the industry. The Telecommunications Act of 1996 altered the terms of the Bell breakup. The regional operating companies were allowed to provide long-distance service, on the condition that their local market was deemed competitive. The 1996 act also removed restrictions on the combination of phone and cable service.

CAUSES AND EFFECTS OF TELECOMMUNICATIONS DEREGULATION

Deregulation and Technology

An important phenomenon illustrated by the telecommunications industry is that deregulation often occurs in the midst of substantial technological change. A case in point is the 1984 removal of the regulated monopoly status of long-distance phone service in the United States. This deregulation evolved contemporaneously with the development of microwave and fiber-optic technology by firms such as MCI and Sprint, which made these firms viable competitors against AT&T's wireline network. Indeed, the interaction of technology and deregulation was not isolated to the United States. The initial privatization of British Telecom, for example, occurred at the same time as the Bell breakup.

Further technological developments interacted with the causes and effects of the Telecommunications Act of 1996. Cellular technology greatly improved between 1984 and 1996. The wireless phone was invented by Bell Labs in 1947. However, commercial viability was noticeably enhanced in the 1990s when McCaw Cellular produced innovations that facilitated nationwide roaming networks. Such innovations enabled direct competition with local phone service.

Technological change has, more generally, blurred distinctions across sectors. Innovations related to satellite use of the electromagnetic spectrum have spurred more competition within media transmission as a whole, engaging companies that previously specialized in either phones or cable. As a whole, much of the deregulation in 1996 was spurred by technology

and its effect on the competitive features of local phone service and cable transmission of media.

Deregulation and Industry Risk

The interaction of technological change and deregulation can be expected to alter the risk faced by the telecommunications industry. One source of changing risk stems from the buffering effect modeled by Sam Peltzman (1976). The regulatory buffering model predicts that a firm subject to governmental rate regulation will face an altered, less risky profit stream relative to a nonregulated firm. The intuition provided by Peltzman (1976) is that regulators will not permit the firm to gouge customers, but at the same time will always allow the regulated firm to cover costs and not let the firm go bankrupt. Support for Peltzman's (1976) model has been provided by Norton (1985) for electric utilities, and by Fraser and Kannan (1990) for a variety of industries including financial services and transportation.

Chen and Merville (1986) studied deregulation in the telecommunications industry to provide a novel test of the buffering hypothesis. They relied on the natural experiment of the 1984 Bell breakup to examine the effects of deregulation on risk within an industry. Consistent with Peltzman's (1976) model, Chen and Merville (1986) found that AT&T's risk increased after 1984.

Another reason that deregulation can be expected to be followed by an increase in industry risk stems from the fact that deregulation usually is associated with new entry. For example, the Telecommunications Act of 1996 was associated with a significant increase in the entry of competitive local exchange carriers, known in industry jargon as CLECs. These new entrants were generally smaller, younger firms that were seeking the opportunities provided by the removal of the monopoly control of the regional Bell companies (Gilpin, 2002, p. 8).

A case in point is Allegiance Telecom, a company that went public in 1998. In the firm's initial public offering (IPO) prospectus filed with the U.S. Securities and Exchange Commission, it is stated, "The Company believes that the Telecommunications Act of 1996, by opening the local exchange market to competition, has created an attractive opportunity for new facilities-based CLECs like the Company" (p. 3). Allegiance Telecom also alerted investors regarding the risks inherent in the new company's operations, stating in the prospectus:

> There can be no assurance that it will be able to achieve any of these objectives, generate sufficient revenues to make principal and interest payments on its indebtedness or compete successfully in the telecommunications industry. (p. 9).

This entry of new, riskier firms such as Allegiance Telecom after the passage of the Telecommunications Act of 1996 would be expected to measurably increase industry risk. As a simple test of the effects of entry, we estimated the stock market beta of the Dow Jones Telecom Index, using the S&P 500 as a proxy for the market index. We indeed found that risk in the telecommunications industry increased subsequent to the 1996 act. The beta for the DJ Telecom Index was noticeably below 1 during the period 1991 to 1995. The beta increased to more than 1.5 during the period 1996 to 2000. This increase in industry risk is an important effect of deregulation and corresponding technological change.

Deregulation, Technology, and Corporate Strategy

The interacting forces of technology and deregulation directly affect the strategic process at the firms in the telecommunications industry. The obvious example is AT&T, a company that has tried to reinvent itself several times since the 1984 breakup. Most of AT&T's strategic initiatives attempt to incorporate new technologies or react to the new business opportunities provided by deregulation. AT&T dabbled in computers by acquiring NCR in 1991, cellular by acquiring McCaw in 1993, and broadband by acquiring TCI in 1999. As summarized in many media articles, the results of these efforts have been mixed at best.

The effect of deregulation and technology on corporate strategy is not isolated to AT&T. All of the firms in the industry must continually consider avenues for expansion, as well as areas that should be retrenched.

An interesting case on the strategic process in the telecommunications industry is provided in Hertzel, Smith, and Smith (2001). They studied the causes and effects of the different strategies in the cable and phone industries. They focused on the period surrounding the proposed merger of Bell Atlantic and TCI in 1993. Confirming the importance of strategy in an ever-changing business environment, Hertzel, Smith, and Smith (2001) concluded that strategic decisions of particular firms in the cable and phone industries have spillover effects on the valuation of other industry competitors. See also Maloney and McCormick (1995) and Green and Lehn (1995).

DEREGULATION, TECHNOLOGY, AND CORPORATE RESTRUCTURING

Deregulation and technological change jointly create new business opportunities for incumbent firms in an industry, as well as for potential entrants. One way to take advantage of such opportunities is through in-house production. An alternative is to enter a new opportunity by acquiring another firm. Such a choice will arguably be based on the transaction cost considerations modeled by Coase (1937). We maintain that the acquisition route is often the least-cost response to deregulation and technological change. In this section, we study many of the important mergers in the telecommunications industry during the decade of the 1990s, as well as since the year 2000.

Telecommunications Mergers in the 1990s

During the 1990s, the telecommunications industry experienced heavy merger activity. Indeed, in a number of research papers, the telecommunications sector was ranked as one of the top industries for mergers during the 1990s. See, for example, Mitchell and Mulherin (1996, Table 1); Mulherin and Boone (2000, Table 3); and Andrade, Mitchell, and Stafford (2001, Table 2).

Table A1 provides details of some of the major mergers in the telecommunications industry during the 1990s. The full table lists the 23 firms that comprised the Telecommunications Services Industry in the *Value Line Investment Survey* on January 19, 1990. This set of firms was part of the broader sample used by Mulherin and Boone (2000) in their study of merger activity during the 1990s.

The firms in Table A1 were the major telecom players as of 1990. The sample includes AT&T and the seven Baby Bells: Ameritech, Bell Atlantic, BellSouth, NYNEX, Pacific Telesis, Southwestern Bell, and US West. Also included are long-distance stalwarts MCI and Sprint as well as GTE, the operator of a major non-Bell communications system.

Table A1 reports the extent of merger activity within the telecommunications industry during the 1990s. The table reports the firms that were acquired, the announcement and completion dates of the merger, and the bidding firm in the acquisition. As shown, 10 of the 23 firms were the targets in a merger, an acquisition rate of 43%.

An important aspect of the telecommunications mergers in the 1990s was the remerger of many of the Baby Bells. SBC Communications (formerly Southwestern Bell) acquired Ameritech (in 1999) and Pacific Telesis (in 1997), and Bell Atlantic acquired NYNEX (in 1997). Notably, these mergers occurred in the midst of the passage of the Telecommunications Act of 1996, attesting to the association between deregulation and merger activity. Among other things, these mergers were a prelude for the entry of the former Baby Bells into long-distance service.

Several other mergers in Table A1 occurred following the Telecommunications Act of 1996. WorldCom acquired MCI in 1998 in a merger that *BusinessWeek* said could change the face of communications by combining local, long-distance, and Internet service (Elstrom, 1997, pp. 26–34). Global Crossing acquired Rochester Telephone (whose name had changed to Frontier Corporation) in 1999 as a means of linking its international fiber-optics network with the networks in the United States.

Several generalizations can be garnered from the merger data in Table A1. First, merger activity was broad in the telecommunications industry during the 1990s; 43% of the major firms were acquired. Second, a better part of the merger activity was related to deregulation; 7 of the 10 mergers listed in Table A1 were completed after the passage of the Telecommunications Act of 1996. Finally, the mergers responded to the opportunities presented by ongoing changes in technology such as the growth of the Internet and fiber optics.

The Telecommunications Industry in 2000

The telecommunications industry of today continues to be shaped by ongoing changes in technology and regulation, and by related organizational changes brought about by corporate restructuring. Some insights into this ongoing change can be gleaned by considering the list of telecommunications firms in Table A2

One thing to note is the difference in composition of the telecommunications industry in the year 2000 (Table A2) compared to the 1990s (Table A1). Relatively fewer of the firms are mainstream companies from the Bell family. This reflects, in part, the remerger of many of the Baby Bells reported in Table A1

Another reason for the changing composition of the industry is the entry of new firms following the Telecommunications Act of 1996. Ten of the 35 firms

TABLE A1 The Telecommunications Services Industry in the 1990s

Firm	*Acquired?*	*Announce Date*	*Complete Date*	*Bidder*
ALLTEL Corp.				
Ameritech	Yes	5/11/98	8/8/99	SBC Comm.
AT&T				
Bell Atlantic				
BellSouth Corp.				
C-TEC Corp.				
Centel Corp.	Yes	5/27/92	3/10/93	Sprint
Century Telephone				
Cincinnati Bell				
Citizens Utilities				
COMSAT Corp.	Yes	9/3/98	9/20/99	Lockheed Martin
Contel Corp.	Yes	7/13/90	3/15/91	GTE Corp.
GTE Corp.				
LIN Broadcasting	Yes	6/7/89	3/6/90	McCaw Cellular
MCI	Yes	11/2/96	9/15/98	WorldCom
NYNEX Corp.	Yes	12/18/95	8/15/97	Bell Atlantic
Pacific Telesis	Yes	4/1/96	4/2/97	SBC Comm.
Rochester Tel.	Yes	3/18/99	9/28/99	Global Crossing
Southern N.E. Tel.	Yes	1/5/98	10/26/98	SBC Comm.
Southwestern Bell				
Sprint				
Telephone & Data				
US West				

Number of firms acquired: 10
Number of firms in industry: 23
Rate of acquisition: 43%

(29%) in Table A2 went public in 1996 or later. These new entrants included several competitive local exchange carriers such as Allegiance Telecommunications, Level 3 Communications, RCN Corporation, and Teligent, which sought to utilize the opportunities created by the changing regulation of local phone service.

As reported in Table A2, merger activity in the telecommunications industry continued into the year 2000. Six of the 35 firms were acquired in 2000, a rate of 17%. These mergers included the large deal between Bell Atlantic and GTE Corp. that created Verizon and the acquisition of US West, another former Baby Bell, by Qwest. Another notable merger that was completed in 2000 was AT&T's acquisition of the broadband company MediaOne Group. Such mergers continue the trend from the 1990s that followed the Telecommunications Act of 1996.

SUMMARY

The telecommunications industry has witnessed significant restructuring since the Bell breakup of 1984. This restructuring activity has heightened following the passage of the Telecommunications Act of 1996.

This restructuring activity highlights the interacting effects of change forces such as technology and deregulation. Technological changes such as advancements in the use of microwave transmission and fiber optics altered the competitive structure of the telecommunications industry in the period leading up to the 1984 Bell breakup. More recent developments

TABLE A2 The Telecommunications Services Industry in 2000

Firm	*Acquired?*	*Announce Date*	*Complete Date*	*Bidder*
Adtran Inc.				
Allegiance Telecom				
ALLTEL Corp.				
AT&T				
Bell Atlantic				
BellSouth Corp.				
Billing Concepts				
Broadcom Corp.				
Broadwing Inc.				
CenturyTel Inc.				
Citizens Utilities				
Dycom Industries				
GTE Corp.	Yes	6/28/98	6/30/2000	Bell Atlantic (Verizon)
Global Crossing				
Level 3 Comm.				
MCI Worldcom				
MediaOne Group	Yes	3/22/99	6/16/2000	AT&T
Metromedia Fiber				
NTL Inc.				
Nextel Comm.				
Nextlink Comm.				
Omnipoint Corp.	Yes	6/23/99	2/28/2000	Voicestream Wireless
Paging Network	Yes	11/8/99	11/10/2000	Arch Comm.
PanAmSat Corp.				
RCN Corp.				
SBC Comm.				
Sprint Corp.				
Sprint PCS Group				
TV Guide	Yes	10/4/99	7/13/2000	Gemstar
Telephone & Data				
Teligent Inc.				
U.S. Cellular				
US West	Yes	5/17/99	7/3/2000	Qwest
Western Wireless				
WinStar Comm.				

Number of firms acquired: 6
Number of firms in industry: 35
Rate of acquisition: 17%

Source: Value Line Investment Survey, January 7, 2000.

in cellular, digital, satellite, and broadband technology played a part in the forces inducing the further regulatory changes in 1996. Indeed, the Telecommunications Act of 1996 reflected the growing evolution of substitute and lower-cost modes of media transmission and communication.

The specific examples of restructuring activity discussed in this appendix demonstrate how strategic merger decisions are predictable reactions to an ongoing, altered business environment. The remerger of many Baby Bells, the union of MCI and WorldCom, and the joining of AT&T with MediaOne Group were responses to the evolving, competitive conditions brought about by deregulation and technological change.

An important aspect of deregulation is that it adds to industry risk. The model of Peltzman (1976) poses regulation as a mechanism that prevents price gouging but at the same time does not allow regulated firms to go bankrupt. General evidence on industry betas indicates that risk increased in the telecommunications industry following deregulation in 1996. The serious difficulties of major industry entrants such as WorldCom and Global Crossing attest to the riskiness of a deregulated environment.

QUESTIONS

A1 What were the primary features of the Telecommunications Act of 1996? Why would this act be associated with subsequent merger activity?

A2 What are some reasons why industry risk increases after deregulation?

A3 Choose a merger listed in Table A1 or Table A2. Using financial media such as LexisNexis or merger documents from the SEC's EDGAR filings, summarize the reasons given for the transaction and the synergies expected. To what extent is the merger related to regulatory and technological change?

A4 Choose a merger listed in Table A1 or Table A2. Using the announcement date listed in the table, conduct an event study of the merger. What was the stock market reaction to the proposal of the merger for (1) the target and (2) the bidder?

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