NARROWING THE BROADBAND

The anti-competitive consequences of the proposed AT&T-Comcast merger

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Acknowledgments

Mr. Shepherd is particularly grateful to Harry M. Trebing, Robert Loube, Kenneth D. Boyer, and Alfred E. Kahn for discussions of these issues over many years. He also is indebted to Eric Glynn for extensive research assistance and to Robert Scott for assistance with the logistics and details.

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Executive summary

The telecommunications and cable TV industries are undergoing profound changes. Both the telephone and the cable industries have experienced tremendous growth in the markets for high-speed Internet access as the number of users has expanded from almost none to nearly 10 million within the past five years. New technologies that are being created and rapidly introduced to the public, such as provision of telephone services over cable networks, are changing the nature of competition in these industries. Bankruptcies and mergers are sweeping through the sector.

Some of the changes have been driven by changes in industry regulations and in policies that are being made by the Federal Communications Commission (FCC). The review and approval of mergers are critical aspects of these policies. The FCC and the antitrust division of the U.S. Justice Department (DOJ) are now considering Comcast's proposed purchase of AT&T's cable TV and broadband capacity. Broadband includes both high-speed Internet and other new communication services.

The merger would substantially reduce competition in both the cable TV market and the broadband market, creating a dominant firm in both. Additional mergers that would most likely follow would aggravate this loss of competition. There are a number of reasons why the FCC and the DOJ should not support the merger.

- If allowed to merge, AT&T-Comcast would control 30% of cable TV and broadband revenues, and even more if partial ownership of AOL Time Warner stock is considered. In combination with other concerns, such as high entry barriers and the trend toward concentration, the merger is harmful enough to competition for the Department of Justice to block it.

- The increase in control over broadband would be particularly important. Broadband has increasing importance to long-distance telephone service and to the hard tasks of entering local service against the Baby Bells' resistance. AT&T-Comcast would control between 47% to 65% of the market for broadband bundled with cable TV services. Economic research has demonstrated that competition is no longer effective when markets are this concentrated.

- This growing dominance of broadband would increasingly protect the cable TV market from growing competition by satellite TV technology. Cable TV users increasingly regard broadband access as a key feature, and AT&T-Comcast seems likely to keep tying broadband service to cable TV service. In any event, satellite TV has increasingly uncertain broadband prospects, partly because its service is inferior in reliability for users in most of the country.

- The merger would create vertical market power, raising AT&T-Comcast's ability to exert control and pressures on the providers of the video-programming content that cable systems carry. This upstream effect could significantly reduce the choice and variety of video program content. And if the AT&T-Comcast firm is able to drive down the prices of programming, then that could further reduce the ability of program creators to finance a full range and variety of content.

Comcast and AT&T claim that the relevant markets are extremely broad, including all forms of TV transmission and broadband: cable, satellite, and others. This could be true in some future years, but it currently is not. The markets for cable TV and broadband are distinct from those for satellite TV with broadband. As the sector continues to evolve, these diverse video and broadband services might increasingly overlap. But they may also actually diverge.

Comcast and AT&T say that cable TV markets are strictly local, each of them a pure monopoly. Therefore, in theory, the merger would not actually reduce competition in any of them. But such a claim is superficial. The main players in the cable TV industry (including AT&T and Comcast) range across large regions or the entire United States; their competitive strategies and actions are regional and/or national in scope. That reality makes the national market itself the relevant geographic market. The AT&T-Comcast merger embodies the reality of national and regional scope.

Both Comcast and AT&T can make large and legitimate gains by shifting their emphasis from long distance to broadband. But the merger goes too far toward creating cable and broadband dominance. That rise in monopoly power is inconsistent with the economics of competition and with protecting the public's welfare. Comcast and AT&T can both make the shift to broadband successfully by continuing to expand from their large and successful cable system bases. They should not be permitted to overreach and inflict the economic harms of the merger.

Introduction

Comcast's proposal to acquire AT&T broadband is a bold attempt to create market dominance in the U.S. cable services and broadband markets.[1] The resulting AT&T-Comcast corporation would become the leading cable and broadband company in the United States, with a dominant position in important markets. But the dominance would be achieved through merger, rather than through superior growth performance that meets market tests.

Part of AT&T-Comcast's market power would extend over cable services, whose prices could be raised further in line with past price increases. AT&T-Comcast would gain dominance over the nation's cable TV broadband capacity, which provides access to high-speed Internet and other new communication services. And, as is widely recognized, broadband is more important for the future. Also, AT&T-Comcast could exert more vertical control over video-programming providers.

In these several ways, the merger would increase market power and, in turn, would probably cause higher prices, reduced incentives for innovation, and a narrower range of consumer choices.

Comcast and AT&T's economic defense of the merger offers a number of theoretical claims with inconclusive evidence.[2] Comcast and AT&T claim that the markets are broad, that monopoly will not be raised, and that competition will be increased in many directions. They also say that the merger will bring only large net benefits, including efficiencies, growth, and new services.

In fact, the markets are narrower, and the supposed net benefits are not assured. New technologies are still evolving rapidly, and they can be shaped by Comcast and AT&T, especially after the merger rather than shaping the industry's structure themselves. Moreover, many gains of the merger would not be "net" benefits. If Comcast and AT&T remain separate, many of the said gains could happen through their internal growth, long-term contracts, and direct innovation. Indeed, the progress might be larger and faster if the merger does not occur, because the incentives for many of the gains would be stronger.

In the background is the basic fact that a majority of large mergers have actually harmed the acquiring company and its shareholders, rather than yielded gains.[3] Comcast's and AT&T's claims appear to display the same optimism that infuses many mergers that turn out instead to be harmful.[4] Moreover, AT&T's own CEO, C. Michael Armstrong, is himself widely regarded as having bungled several earlier mergers, causing large financial losses for AT&T. One was the merger with Tele-Communications Inc., which was bought at too high a price. "TCI, for one thing, owned one of the most decrepit cable networks in the industry, which saddled AT&T with unexpected billions in costs to upgrade the system to handle two-way data, a prerequisite for Internet service. The company also is thought to have heavily overpaid for MediaOne, a four-million-subscriber cable operator acquired in 2000. In total, AT&T paid about $100 billion for the two companies, which industry analysts valued at roughly half that sum."[5]

The merger is under review by the Federal Communications Commission (FCC) and the Antitrust Division. Both agencies need to consider skeptically how powerful the new forces of technology really are. They also need to consider the likelihood that approving the merger would trigger a series of follow-on merger proposals, which the business press has been actively discussing.

Monopoly and its impacts are the background feature of this industry. For over two decades, the U.S. cable TV industry has been keeping its local monopolies strong and imposing on consumers the standard impacts of monopoly: rising prices, restricted choice, problems of inferior service quality, and others. Only when regulation was briefly restored during 1993-96 was the rise in cable TV prices slowed down.

Relying on the supposedly new forces of competition would be premature. Satellite transmission is not yet a sufficient substitute for cable service in large parts of the country. Moreover, the merger's effect on the broadband market would be a special harm. Rather than be neutralized by the onset of new technology, the merger could provide AT&T-Comcast with a significant degree of control over the emerging technology, with both the incentive and the ability to control its progress into new areas, such as providing local telephone services. The merger's economic harms would focus on the customers of cable TV and broadband. The prices of those services would probably climb further, and the economy's progress from the spread of broadband would be slowed.

As I will explain, these dangers and impacts emerge from the economic research literature on monopoly power, from broad business experience, and from facts developed in the FCC's ongoing studies of the sector.[6] Apart from approving the merger, the FCC could choose among three main alternatives: denial, revision, or postponement.

Denial. First, a simple denial is appropriate, because the merger would violate economic and legal standards, while probably providing scant benefits. If they were kept apart, Comcast and AT&T would continue to evolve as strong, innovative rivals within the competitive settings that involve other players as well. Competition would spread, rather than be quelled or chilled. Comcast and AT&T would separately promote the dramatic changes in these markets, rather than have incentives to slow them down.

Revision. Second, the FCC could revise the merger, requiring divestitures or other changes or constraints on the merger to preserve competition. Such revisions have become common in dealing with anticompetitive mergers.

One constraint would be to require equal-and-open access to both cable modems and DSL service. The equal-access paradigm of the AT&T divestiture in 1984 has led to a sharp reduction in AT&T's market power in the long-distance market. It is true that the price reductions in long-distance service after 1984 were mostly caused by regulated reductions in access charges. Yet there was a combined impact of regulatory oversight and the reduction of AT&T's market power. Absent close regulation and more competition, access reductions would instead have been turned into increased margins and profits rather than price reductions.

An equal-access basis for cable modems and DSL service will maintain competition among Internet Service Providers (ISP) for the right to serve the end user. This could mitigate part of the problem of the merger's impact on broadband service. Although it still would not prevent the merged firm from controlling the flow of innovation related to the underlying technologies, it could keep prices lower and would allow for innovation in service offerings that the ISPs could control.

Postponement. Third, the FCC could postpone the merger until the favorable changes in the markets' boundaries and technology have actually matured and occurred. That choice would be conservative and prudent. The postponement might require Comcast and AT&T to wait three to five years, although any earlier favorable developments could trigger an immediate reconsideration. If AT&T's claims have merit, the merger would be sound enough to stand the delay. If instead Comcast and AT&T are trying to rush the merger through, it may be because it does not have the lasting economic substance that AT&T asserts.

How the Merger Would Harm Effective Competition

The merger's anticompetitive effects would be felt in two important markets that are related: the transmission of cable TV signals and the provision of cable broadband access and capacity. Both markets are relatively young and evolving. The cable TV market arose in the 1970s, while the cable broadband market has burst forth only in the last few years.

The merger's impacts depend critically on the true nature of *effective competition*: Would competition in the cable TV and cable broadband markets be genuinely effective if the merger occurred? The economic criteria for effective competition need to be reviewed with special care, because they are often misrepresented by self-interested parties or simply misunderstood.

The minimum criteria for effective competition

The criteria for effective competition have been established by many decades of economic and financial research, going back well before 1900, and they reflect widespread business experience.[7] The fundamental need is for *competitive parity* among enough reasonably comparable rivals. In that way no single firm dominates, and collusion among the rivals also does not occur. In addition, there needs to be free entry to reinforce the mutual competitive pressure.

The criteria include three main elements, as a minimum:

- There need to be at least five competitors who are reasonably comparable. The comparable conditions create unremitting mutual pressure among the rivals. Having at least five rivals prevents the tendencies toward coordination and collusion, which prevail when there are only very few competitors. If there are fewer rivals, such as two or three, collusion becomes more likely much of the time;[8]

- There needs to be an absence of single-firm dominance. This prevents strong unilateral market control from being applied to a large share of the market.[9]

- There needs to be reasonably free entry into and among all segments of the market.

Numerous competitors. A fully competitive market requires sufficient numbers of significant competitors. When there are too few firms (especially as low as just two or three), those few firms' incentives to coordinate with each other in some degree, either directly or indirectly, will often prevail over their incentives to aggressively compete against each other. Some degree of coordination will often occur, even if there are also some periods of aggressive competition. The FCC's own policies reflect an awareness that rivals numbering below five are likely to give weak competition.[10]

Economic analysis and research indicate that a minimum of about five competitors is needed for competition to be effective. The conservative George J. Stigler, a Nobel Prize winner, set strict structural standards for "the existence of competition." He required numerous firms and an absence of dominance: "The presence of numerous firms, none dominant in size, is directly observable and is usually described by a low concentration ratio," Stigler wrote.[11] He also observed that "a large number of rivals is sufficient to achieve competition," and that "many producers" will be sufficient for "the socially optimum amount of competition."

In a landmark study, Carl Kaysen and Donald F. Turner noted that, "If we wish to eliminate unreasonable market power, we must in general move toward less concentrated markets in which there are more sellers with smaller shares. An increase in the number of competitors and a decrease in the relative market positions of the larger of them is usually a sufficient condition for the reduction of market power in any market."[12] If market concentration in the largest four firms exceeds 75%, market power is "unreasonable."[13]

This theme is repeated in major studies up to the present. As F. M. Scherer and David Ross's leading contemporary text on industrial organization notes, "Economic theory suggests that the vigor of competition is related positively to the number of firms in the relevant industry, other things (such as the height of entry barriers) being equal."[14] Moreover, there is powerful support for the five-firm-minimum benchmark from the official U.S. antitrust Merger Guidelines, which were developed by the two U.S. antitrust agencies: the Antitrust Division of the U.S. Department of Justice and the U.S. Federal Trade Commission. Those agencies use the guidelines in evaluating all mergers that come before them.

The guidelines apply the Hirschman-Herfindahl Index (HHI) as their measure of concentration in a market.[15] The HHI indicates that the market contains substantial market power when the value is above the HHI range of 1,800 to 2,000. Still higher values indicate even more market power, which is likely to cause coordination rather than strong competition.

The HHI is at 2,000 when there are five equal-sized firms (each with a market share of 20%). Any disparity in the five firms' market shares makes the HHI even higher. For example, if the five market shares are 40, 20, 20, 10, and 10, then the HHI is up to 2,600.[16] That instance involves only moderate dominance by one firm, and yet the HHI shows substantial degrees of concentration and market power. Similarly, anything fewer than five firms also puts the HHI well over 2,000. For example, four firms with 25% each give an HHI of 2,500. Three firms with one-third each raise the HHI above 3,300, and two firms with 50% each raises the HHI up even more sharply to 5,000. With each reduction below five firms (four, three, or two), the incentives for cooperation rather than competition become relatively stronger. In fact, in most normal markets, mainstream researchers would definitely expect that two or three firms would not provide effective competition.

An absence of single-firm dominance. Effective competition also requires reasonable competitive parity among rivals; such parity breeds strong mutual pressure to perform well. Market dominance is the opposite case, where the biggest firm usually has a market share of at least 40% to 50% of the market and has no close rival. In this situation, competition is usually unbalanced and ineffective.[17]

Ease of entry. Effective competition also requires reasonably free entry into the market and among all its segments.[18] Easy entry permits numerous new firms to enter quickly and freely, to survive, and to acquire significant market shares if the existing firms raise prices. Impeded entry, by contrast, permits the few firms to collude more effectively and to raise their prices further.

These three fundamental conditions provide for the dynamic sequence of vigorous pressure, struggles, and responses that comprise the core meaning of the rugged competitive process. The process generates the economic gains of minimum costs, low prices, and rapid innovation. Each competitor must achieve high efficiency and rapid innovation to survive.

Such effective competition is actually widespread in the U.S. economy and is present in over three-fourths of all the economic activity in markets.[19] This prevalence of strong competition has come about from innate economic forces, strong antitrust policies during the last century, the deregulation of many industries since 1975, and the powerful rise of imports since the 1960s. This open, competitive process is the mainspring of economic progress that continues to lift the well-being of the U.S. populace so rapidly.

Rather than let the public reap the rich benefits of full competition, competitors naturally try instead to gain dominance over their rivals. When firms succeed, through superior quality and innovation, the public can initially benefit. But mergers are instead a quick and easy way to short-circuit the market and to capture immediately a dominant market share. The mergers' large prospective profit rewards can cause rapid and large jumps in the companies' stock prices. Those money incentives stimulate other mergers that seem to promise financial gains to the companies but which are harmful to the public and even eventually to the merging companies themselves.[20] Some such instant prizes, despite the competitive harm, appear to be present in the Comcast purchase of AT&T.

Among the thousands of mergers occurring each year, most are actually harmless to competition or are even pro-competitive. But a small minority of proposed mergers would reduce competition, whatever the companies say. Mergers such as AT&T-Comcast can prevent some of the competition that these new markets have promised. Such mergers reduce competition, even though the partners say that they will instead raise competition. The burden of proof lies against the mergers' advocates, and their claims invite skepticism.

Ranges of monopoly power, including dominance and tight oligopoly

Pure monopoly, with just one firm holding all of the market, is the largest danger to innovation, efficiency, and low prices.[21] But market power begins to be significant when market shares of any one firm rise above 20% of the market, and by 30% it is usually substantial. That is clear from business experience. Firms know it, and they struggle intensely to raise their market shares to gain stronger control and higher profitability.

A classic dominant firm holding about half or more of the market can be almost as harmful as a pure monopoly. Below single-firm dominance is "tight oligopoly," where two to four firms hold most of the market. The special case of "duopoly" with just two firms is the most extreme form of tight oligopoly.

Comcast and AT&T have helped to shape competition in cable TV's tight oligopoly. Since 1980, cable TV has gone through dramatic episodes of regulation, deregulation, re-regulation, and recently deregulation again. The cable TV industry has been undergoing further consolidation at a time when satellite services are beginning to compete with cable TV in some parts of the sector. AT&T has both promoted, and benefited from, the emerging dominance of cable as the winning broadband technology. But cable's broadband component makes it quite distinct from satellite TV transmission; satellite TV itself cannot substitute for cable TV plus broadband access. The cable TV market contains specific conditions that tend to prevent competition and substitutability from satellite TV for much or most of the array of broadband customers. Therefore, the new dominance of cable broadband over other forms of broadband access has altered the development of the cable TV market. Broadband is keeping cable and satellite markets more distinct, and that makes this merger a more anticompetitive event.

Broadband may promise large, widespread contributions to the economy, but only if it stays under fully competitive conditions (Yang 2002). By creating substantial market power, the AT&T-Comcast merger (and others that would follow it) would both probably: (a) harm broadband’s development, and (b) protect much of the cable TV market from the competition of satellite broadcasting.

The Markets Where an AT&T-Comcast Merger Would Raise Market Power

Next is the prosaic but important technical task of defining the relevant markets. It is the necessary first step toward judging the merger's impacts on competition.[22]

Each market includes only those goods or services that are very closely substitutable for each other. Substitutability must exist in the two dimensions of every market: the product or service market and the geographic market. If, instead, consumers notice and care about significant differences among the products in either of the dimensions, then each product is in a different market. For example, there are separate markets for new and used cars, for mid-size and large-size cars, for large-size and luxury (Mercedes and Cadillac) cars, and for cars and sports utility vehicles, among others. To define markets accurately requires complex judgment, carefully using a variety of evidence. The evidence can involve both practical features, various patterns of prices and costs, and the opinions of informed participants.

In this industry, there are four main relevant markets in the product dimension:

- Cable delivery of video programming (cable TV)
- Cable systems also carrying broadband (cable broadband),
- Broadband provided by other systems (telephonic DSL and possibly satellite broadband)
- Satellite systems carrying video programming (satellite TV)

I will also explain that these markets are national in their geographic scope (and also probably regional in some cases), even though cable TV systems also inhabit hundreds of local-area markets.

The product-market dimension

One relevant product market is for the direct provision of TV signals by cable to residences. Cable TV is a major part of the larger industry that provides TV signals to residences.[23] The other forms of transmitting TV signals include mainly the use of direct broadcast satellite-dish systems (DBS), along with other less-important forms. The whole industry is sometimes called the MVPD industry (for Multiple-Channel Video Programming Distributors). But a leading lesson for this merger is that, as I will discuss, cable and satellite are still largely distinct forms. They are not substitutable enough to be regarded as fully inhabiting the same economic market.

The main kinds of evidence about this market converge to give a relatively clear product definition. I will draw on the standard types of evidence and judgment. As summarized in **Table 1**, they include the distinctive practical nature of the service, its price patterns and movements, and the views of market participants and customers.[24]

An alternative method for defining markets is supposedly used at least as a formality by the U.S. antitrust agencies in recent years.[25] According to the published Merger Guidelines:

- One first tries to imagine a 5% price increase for a service (for example, cable TV).
- One also imagines that the price increase lasts for exactly one year.
- Then one measures (or rather, guesses hypothetically) if there would be "much" substitution of other services (say, in this case, by satellite-dish service).

TABLE 1
How to consider the main types of evidence used in determining the relevant markets

Consider close substitutes. Each market contains goods that consumers think are just about the same. Good indicators of that can be:

a. the general character and uses of the goods

b. judgments of people who know the industry well

c. the cross-elasticity of demand (rarely measured)

Then decide the product dimension. That usually depends on the following questions:

a. Are there distinct groups of buyers and sellers?

b. Are there price gaps among buyers?

c. Do the goods' prices move In parallel or independently?

Finally, fix the geographic area of the market. Usually consider:

a. The area within which buyers actually choose

- Use data on actual locations and buying patterns

b. The area within which the sellers ship

- Compare shipping costs to the costs of production
- The distances that products are normally shipped
- The ratios between goods shipped in and out of areas

Source: See Shepherd, *The Economics of Industrial Organization*, 4th ed., Prentice-Hall, 1997, Table 3.1.

If the analyst thinks that there would be a large amount of substitution, then the market is deemed to include both of those services. Unfortunately this process involves mostly conjecture and uncertainty, and it gives little guidance, as many observers have explained recently.[26] The approach relies on guesses and judgments, because reliable data are rarely available. The benchmark criteria (a 5% price rise over a one-year period) are arbitrary, and their specific values are likely to be uncertain or inappropriate for the specific market's own conditions. A 10% rise over six months, or a 3% rise for two years, or even a 12% rise for two months, may be more correct depending on the individual situation.

Unfortunately, there is virtually no economic basis for determining which criteria (an 8% price rise or 10%; a six-months time period or two years, etc.) might be economically valid. And further, there are usually no reliable data for applying the method and whatever specific numerical standards are chosen. Amid this doubt and speculation, the choices depend on the guesses of the staff members or other officials involved. Therefore, practical-minded judges in court trials of real cases do not usually trust the method. And it cannot safely be relied on in this case even though interested parties and the FCC and antitrust agencies, as well as the merging companies may try to introduce results that are supposedly definite and scientific.

Is there a bundled broadband-and-cable-TV market?

Cable systems are tying broadband to cable TV service. This bundling is important for current customers who want broadband: It means that they must also take cable TV service.[27] Neither satellite nor DSL services are close substitutes for this tied pair of services.

This specific market has special importance in judging the merger. If competition is not preserved, cable will have first-mover advantages as technology and the market evolve so that broadband becomes the distribution platform for all information and entertainment.

Are satellite TV and broadband services reasonably identical to cable TV and broadband services?

Cable systems provided about 78% of all MVPD services as of June 2001, while satellite-dish systems have grown to provide about 18%.[28] Satellite-dish service has recently taken a rising share, and so some observers, including the FCC, infer that there is an increasing overlap and mingling of the two types. They say, then, that there is already just one big market. But that view is premature. It ignores important areas where cable and satellite-dish services simply do not overlap significantly, and it ignores the fact that the two are not highly substitutable.

Among Comcast's and AT&T's claims is that the cable TV and broadband markets are not distinct from satellite and other methods of transmission. Instead, they say that the markets are extremely broad, embracing not only cable and satellite but also all other media transmitters as well. This approach seems to reflect the common defense of debatable mergers. The companies claim markets that are improbably wide to minimize their own market position. These assertions may be right, or perhaps partly right, but it is difficult to tell because the Comcast and AT&T witnesses are advocates for the merger and therefore partial.

The claim that cable, satellite, and other services all compete in one common market involves an act of faith: Such future changes in technology and market shares will wipe out distinctions that are now still important and that may actually increase. In fact, there are several distinct actual markets for differing services that are not yet reasonably substitutable for each other. As the sector continues to evolve, cable TV, satellite TV, and broadband services might increasingly overlap. But it is too early to say safely that this has already happened or will certainly happen in the near future.

Satellite problems: local interests, interferences, and rural areas

One problem has been central in past debates about the market: Until recently, satellites have been unable to serve the locally focused interests of local TV viewers. A second problem is that many cities and neighborhoods have configurations and limits that are hostile to receiving satellite signals, which come from low in the southern sky. A third problem is that many low-density rural areas are difficult or impossible for cable to serve at any reasonable cost. For them, satellite is the only possible method of access, and it will remain so.

Satellites: inferior service reliability

The unreliable service quality of satellite transmission is an even greater problem. Satellite transmission is reduced or poor when there are clouds or other atmospheric disturbances. That instability of quality can be decisive for customers who also need to have broadband service, because broadband requires very high levels of service reliability and precision. There have recently been some tests of new two-way satellite service that can carry broadband. But they have been concentrated in the southwestern United States where clouds are rare. For the rest of the country, cloud cover, location, and weather instabilities may provide definitive barriers for satellite broadband.

Recently, EchoStar has actually halted its efforts to make satellite a possible future carrier of broadband service. The *Wall Street Journal* reported on April 5, 2002 that EchoStar, "dealing a fresh blow to efforts to provide Internet access via satellites, has stopped marketing such services to its satellite-television subscribers."[29] This hardens the separation between the cable services and the satellite services markets.

All of these reasons indicate that cable and satellite access are not reasonably substitutable for much or possibly most of the U.S. population. After at least three more years, or perhaps more than five years, the two technologies might come to overlap more, at least in many of the submarkets. Congress may take steps to revise laws and rules so that satellite systems might focus on local services more closely. But for now, it is premature to say that the changes have already been radical and are advanced enough to create a common market. Substantial sections of both the cable and the satellite markets still appear to be captive customers who could be exploited by either cable or satellite systems if mergers were permitted to raise market power.

Broadband is itself a separate market. In addition, it makes the borders of "the cable TV transmission market" more definite, because satellite is not particularly a close substitute for cable TV when the tie to broadband is recognized.

The geographic market dimension

As for its geographic dimension, it is a national market, although it also contains many local submarkets. The local features are important, because most cable customers are closely focused on the local stations for news and events that are of interest, as well the many kinds of national programming. Some observers may doubt that the relevant geographic market is as large as the national United States, or even simply large regions. They may think instead that cable TV markets are chopped into hundreds of mere locales. This is because each local area often gives a franchise to one cable company, which then holds a local monopoly of cable TV in that area.

But the view that markets are strictly local is superficial. It ignores the full scope of the competitive interactions among the cable TV companies. Many of the companies and their strategic actions typically stretch over large regions or even over the whole country. They extend across many scores or many hundreds of localities.

The proposed AT&T-Comcast merger reflects precisely the nationwide scope of the cable TV and cable broadband markets. AT&T's and Comcast's operations and capacity have been on a national and regional basis, and their calculations and plans for this merger are fully national in scope. One of their main interests is in regional clustering strategies, especially in program purchasing. Further, Comcast and

AT&T cite as a synergy of the merger that they will be able to capture $100-$200 in national advertising revenue. These national interests are like those of all other major participants: aimed toward national actions and results.

Competition is among the whole cable and satellite chains, on a regional and national scale. They are adopting strategies and mobilizing resources that go far beyond each local market. The same is true of all chains (Wal-Mart, Staples in office supplies, Home Depot, department stores, movie chains, newspaper chains, etc.).

Practitioners in the cable-satellite business know this, even though some theoretical economists are willing to deny it. AT&T and Comcast and Time Warner and Charter and other media giants are engaged in large national battles to dominate their markets. Another analogy would be that of the Democratic and Republican parties. One could say that they are only fighting in 531 Congressional races, each one in total isolation, but this perspective ignores the forest for the trees. Political professionals and policy scientists know that the real battle is between the two whole parties in the national political marketplace.

Moreover, Comcast, AT&T, and other companies try to, and do, exert market power over large groups of locales and over whole regions within the entire national range of operations. Therefore, there may be important region-wide geographic submarkets, as well as genuine national markets for cable TV and cable broadband. The AT&T-Comcast merger will cause substantial changes in those regional markets, as well as in the entire national market.

The companies themselves claim that the merger makes AT&T and Comcast both stronger, increasing their resources. After the merger, and only because of the merger, their combined resources, including revenues, profits, and other financial resources, will be significantly higher, giving them more ability to work against all other competitors.

Comcast and AT&T also claim that the market includes all video signal transmission. If so, then cable competes with satellite and other modes in most of those metropolitan areas. These hundreds of markets are *not* completely monopolized, but cable is the dominant provider.

By giving AT&T-Comcast more resources to fight against satellite service, the merger will reduce the chances for satellite to develop into effective competition for cable. If they are allowed to merge, AT&T and Comcast will benefit from greatly increased resources acquired only by merger, not by internal growth against the rugged tests of the market, defeating a lesser competitor. And satellite is the only real, lesser competitor.

An "essential facility." In addition, the facilities that give access to cable TV may be acquiring features of an "essential facility," to use the traditional utility-regulation phrase.[30] Each cable system controls access into households for crucial services (the TV signal) and for a variety of increasingly important other related services (especially broadband access to the Internet and new services now being developed).

Satellite is now challenging cable TV's control over access, but that challenge is in progress and incomplete. Cable TV's bundling of broadband means that it has added control. Therefore, the cable system may be able to extend its market power further, extending over other activities in addition to just

TV viewing or even over broadband itself. This control would present more problems right now than ever before, when regulators are rapidly withdrawing from their jurisdictions.

Broadband is an important market, perhaps the most important market affected by the merger. Cable TV systems have been developing broadband access strongly, and this method is becoming the dominant form of broadband access. Meanwhile the Baby Bells' competitive telephonic version of broadband (DSL) has been fading in relative success in recent years. That fading partly reflects DSL's apparent inferiority of capacity, reliability, and cost and its technical problems, at least so far. DSL's problems also include a disparity in regulatory treatment. DSL is regulated and must be unbundled at cost-based or below-cost pricing, whereas cable modems are not (Pociask 2002).

For the economy as a whole, broadband is particularly important as a critical new contributor to economic progress. This is because broadband is also crucial to the future spread of Internet use by the general populace and by businesses of all sizes.

Yet AT&T-Comcast would have market power enough to reduce broadband's future contribution to U.S. economic progress, by raising prices and slowing growth. Accordingly, the merger threatens broadband's long-run future, with even more harmful future effects than the short-run harm to competition and consumers in cable TV. These reasons provide added grounds for preventing the merger.

Hypothetical question: if markets were strictly local, each with a monopoly cable TV system, would the merger be harmless? This claim, raised by AT&T and its leading economic expert, is a clever technical point, seeking to immunize the merger from antitrust policy. If cable markets were purely local, and they contain cable monopolies already, the merger could seem not to make the monopolies any more monopolistic. But the claim is not true. The relevant market is national in its scope, and the merger would raise market power in it.

An AT&T-Comcast Merger Would Raise Market Share and Market Power Too Significantly

Although market power is often difficult to measure and can be misrepresented, this merger's impact is reasonably clear.

Market share is the primary indicator of market power, and the merger will raise it by too much

Economic research and widespread business experience have long confirmed, as noted above, that each firm's market share is the primary indicator of its possible degree of monopoly power.

All video transmission (all MVPD). In the broad market embracing cable, satellite, and all other forms of video transmission, Comcast's purchase of AT&T Broadband would seem to raise the combined share to just under 30% of that market. The share would still give a substantial degree of influence over the market, and the likely follow-on mergers would add to the total effect. Yet, the market share could be used by the merger's advocates to claim that the merger is within legal limits. Even so, the Antitrust Division might find that all conditions especially the market shares, the trend toward concentration, and high entry barriers make the merger harmful enough to justify blocking or altering it.

This all-MVPD market is probably too broad, at this time, and we need to look at the narrower markets within that large array of services.

The markets for cable TV service and for broadband bundled with cable TV service. The market share data in this case indicate that the merger will give AT&T-Comcast dominance over the cable TV market. Moreover, it will create an even higher degree of AT&T-Comcast dominance over broadband service, which is bundled with cable TV service.

As **Table 2** indicates, the combined market share of AT&T-Comcast will be about 37% of the cable market; when taking into account AT&T's other holdings, AT&T-Comcast's market share will increase to approximately 53% of the market.

The next largest rival Charter will have just a 10% market share, much smaller than AT&T-Comcast. Also, there are high barriers against any possible new entrants, which will prevent any important outside constraint on AT&T-Comcast's control over cable TV and broadband. AT&T-Comcast will not need to limit its pricing and strategic choices by directing any significant attention to the dangers of outside threats or possible new entrants.

Economic research and wide business experience are both clear that in such dominant-firm situations competition is normally no longer effective. The official U.S. Merger Guidelines help to indicate the problems. The HHI for a firm holding a 50% market share is automatically 2,500 for that firm alone, well above the 2,000 benchmark for market power. The best basis for market share is the firm's percent share of the market's total dollar revenues, for all firms. Yet the numbers of subscribers are the more easily available evidence, and they have become the standard basis of market shares. They show that the

TABLE 2
Market shares in the U.S. cable TV market

	Subscribers (millions)	Market share (%)
AT&T	15.9	24.9
Time Warner	**12.8**	**20.1**
Comcast	7.7	12.1
Charter	6.4	10.0
Cox	6.2	9.7
Adelphia	5.7	9.0
Cablevision	3.0	4.7
Insight	1.4	2.2
Mediacom	0.8	1.2
Cable One	0.8	1.2

Source: *Broadcasting & Cable Magazine.*

combined 22 million subscribers of AT&T-Comcast would be 32.8% of the current total of approximately 70 million cable subscribers.

That is significant not so much because it exceeds the 30% standard for cable TV ownership. That standard is, after all, currently under judicial challenge. But in economic research, a 33% market share normally embodies substantial market power and influence on the market. AT&T-Comcast's possible influence over the market could actually extend further than that, to subscribers of Time Warner Entertainment (TWE) and Insight Communications. They have a combined 14 million subscribers. AT&T holds stockholdings of 25% in both companies, and that provides AT&T with substantial control. The power and influence of large minority holdings are widespread facts of American industrial life. AT&T's brief for the merger asserts that it will shed or neutralize such holdings, but that has not yet occurred. AOL is both unwilling and unable to buy the shares from AT&T.[31]

One standard, conservative way to indicate the extent of that influence is to attribute influence by the proportion of the stock that AT&T-Comcast would own.[32] AT&T owns some 25% of the stock of AOL Time Warner's cable organization, which might normally give an influence about 50% as strong as a 50.1% ownership would give with its fully effective control. Accordingly, AT&T's influence over AOL Time Warner cable policies can be estimated at about half as strong as if AT&T owned effective control of AOL Time Warner's cable business.

On that basis, the total reach of the merged AT&T-Comcast's control and influence would extend to about 31 million subscribers. That would be about 44% of the 70 million total subscribers in the United States. If instead all of the TWE and Insight subscribers were attributed in full to AT&T-Comcast, then the resulting 37 million subscribers would be about 53%. Both the 44% and the 53% would provide high degrees of market control. AT&T-Comcast would immediately become the dominant firm in the market, well above the next rival.[33]

TABLE 3
Market shares in U.S. broadband markets

	Subscribers (millions):		Market shares		HHI Index for cable broadband
	All	Cable	% of all broadband	% of cable broadband	
AT&T-Comcast	2.2	2.2	31.9	46.8	2,190
AOL Time Warner	1.7	1.7	24.6	36.2	1,310
SBC	1.2	—	17.4	—	—
Verizon	1.0	—	14.5	—	—
Cox	0.8	0.8	11.6	17.0	289
Total	6.9	4.7	100.0%	100.0%	3,789

Source of underlying data: Jupiter Media Metrix; see also “Buyout Expected to Boost Broadband: Comcast Agreement Puts It In The Driver’s Seat As a Provider Of High-Speed Internet Connections,” *Atlanta Journal and Constitution,* December 25, 2001, Business, page 1E.

Broadband markets. The major providers of cable broadband and telephonic broadband (DSL) are few, as **Table 3** shows. The AT&T-Comcast merger will shrink their numbers even further, from four to three. AT&T-Comcast will have about 32% of all broadband subscribers, both cable and DSL.

If cable broadband is genuinely different from DSL in both quality and price, then cable broadband can be considered to be a separate market. In that market, the merged AT&T-Comcast firm would immediately have a market share of about 47%, or nearly half of the entire market.

In either case, the AT&T-Comcast merger would shrink broadband competition down to a very tight oligopoly, especially in cable broadband alone. The classic tendencies toward cooperation rather than competition among these few rivals would be substantially increased.

The HHI index gives the same conclusions

This anticompetitive impact can also be assessed using the Hirschman-Herfindahl Index (HHI). For the HHI, one squares the market shares and adds them up, as noted above. The HHI is routinely used by the U.S. antitrust agencies the Antitrust Division of the Department of Justice, and the U.S. Federal Trade Commission in assessing the possible impacts of mergers in raising monopoly power. The HHI values can range between 0 for perfect competition and as high as 10,000 for a pure monopoly with 100% of the market.

AT&T-Comcast’s anticompetitive impact in cable broadband is even more evident from the HHI values in **Table 3**. The merger raises the HHI to nearly 3,800, about double the range (1,800-2,000) at which market power becomes significant. This level, and the large increment to HHI caused by the AT&T-Comcast merger, would exceed the usual antitrust Merger Guidelines. Although that is not a definitive lesson, it establishes a presumption that the merger harms competition. There would need to be other strong reasons to exonerate the merger.

All this is true even without allowing for AT&T-Comcast's added influence on AOL-Time Warner through its large minority shareholdings. If the partial ownership does provide roughly half of complete control as discussed above, then AT&T-Comcast would have a market share of about 65%, notably a high degree of dominance. The market's HHI would rise to about 4,800.

Triggering more mergers

In addition, skilled observers of this industry expect the merger to trigger a series of other similar mergers.[34] If the Antitrust Division and the FCC will accept the high impact of an AT&T-Comcast merger, they would find it difficult or impossible to disapprove a series of smaller but numerous later mergers, involving other cable systems.

The harmful trigger effect was clearly illustrated by the aftermath of the Bell Atlantic/NYNEX merger in the early 1990s. It was the first major merger between any of the seven large regional Bell holding companies. It reduced competition in the New York City metropolitan market, and it eliminated potential competition between the two Baby Bells in several other markets. But the FCC allowed the merger, without setting constraints or protections. After that, there was no basis for preventing SBC's swallowing of Pacific Telesis and then Ameritech, two mergers that reduced competition even more sharply.

Discussions in the business press have centered on a series of consolidations that would change the current "big seven" cable systems down to only a "big four." Moreover, in a related development, the officials of EchoStar have used the AT&T-Comcast merger to demand approval of their proposed merger with Hughes Electronics.[35] That merger would turn satellite service into a nearly complete monopoly. If satellite and cable do evolve further to be more substitutable, then the future combined market would be essentially a two-firm duopoly from its beginnings.

Therefore, the total eventual impact of the merger is likely to be much larger than its own direct effects. The Antitrust Division and the FCC need both to foresee that and to allow for it.

Baby Bells, DSL, and open access

Although DSL has been fading far behind cable TV broadband, cable TV's broadband advantage may change radically if some variant of the Tauzin-Dingell bill eventually passes.[36] This would exempt both the Baby Bells and cable companies from providing open access. That would place into official policy Comcast's bitter resistance to open access.[37] The consequences could cut back the degree of competition and choice for customers by preventing open access and its benefits. AT&T has earlier said that it would experiment with open access on part of its system. But the experiment has not yet yielded clear answers, and the AT&T-Comcast merger would block further possibilities.

In short, vertical expansion by the Baby Bells could adversely affect competition, especially if it excludes open access which the AT&T-Comcast merger would also reduce. This is a problem that the FCC should be guarding against now.

Mild regulation

There might be only weak constraints or protections on AT&T-Comcast's increased market power, either by the FCC, by antitrust agencies, or by local officials. If the merger is approved, close attention should be paid to possible monopoly effects.

Entry will be prevented

Some economists have said that the possibility of entry by new competitors could provide tight pressures to prevent any monopoly effects.[38] In theory, that could happen, at least in extreme, ideal cases.[39] But this theoretical effect would not help in the cable TV and cable broadband markets to constrain the newly dominant AT&T-Comcast position. Entry barriers are already high, and they would become higher, because the AT&T-Comcast firm would be able to use strategic price discrimination, advertising, and other weapons to create more disadvantages and difficulties, that is, barriers against possible new entrants.

Among the strongest barriers against new competition are endogenous ones, which include the voluntary actions that a dominant firm can take against new entrants. **Table 4** summarizes some of the main kinds of barriers. The tactics include dynamic, strategic price discrimination, and tightly focused advertising blitzes.

The endogenous barriers—that is, a range of voluntary actions—are under the control of the dominant firm. Such actions are often powerful enough to block out new firms from attracting enough customers to survive. The AT&T-Comcast dominant firm would have enlarged resources and controls that could often overwhelm the small new entrants. Yet the power of the endogenous barriers is not generally recognized in the literature. Nor can the barriers be reliably measured, because they depend on the voluntary choices made by the leading firms.

TABLE 4
Some main types of economic barriers against new competition

Exogenous causes: External Sources of Barriers

1. *Capital Requirements.* They are related to the minimum efficient scale of plants and firms; and to the capital intensity of technology. The needed capital is further increased by imperfections in capital markets.

2. *Economies of Scale.* When they are large, they require entry to be at large scale, with greater costs of entry, risks of loss, and intensity of retaliation.

3. *Advertising Intensity.* This product differentiation may occur naturally in many consumer-product markets, such as cereals, beer, cosmetics and cigarettes.

4. *Research & Development Intensity.* It requires entrants to spend heavily on the creation of new technology and products. It excludes firms that do not or cannot undertake that spending.

5. *Vertical Integration.* It may require entry to occur simultaneously at two or more stages of production, in order for the entering firm to be viable. That raises the costs and risks, and hence the barriers.

6. *High Switching Costs.* Purchasers of complex systems may have to invest in training and associated equipment. After than, any switch to an entrant selling complex systems would impose substantial costs. That raises the difficulty of entry.

7. *Gaps and Asymmetries of Information.* Entrants may inherently lack crucial information about market conditions, which incumbents are fully informed about through their position and experience. That may deter the outside firms from trying to enter, or it may cause them to enter recklessly and futilely, and/or it may cause capital markets to require entrants to pay higher costs of capital.

Endogenous causes: Voluntary and Strategic Sources of Barriers

1. *Pre-emptive and Retaliatory Price Actions by Incumbents.* The devices may include dynamic price discounts, even to very low levels, so as to deter or punish specific entrants.

2. *Advertising Blitzes and Targeted Promotions.* These apply to specific entrants, impeding their attempts to grow.

3. *Segmenting of the Market.* This segregates customers groups by their demand elasticities and other attributes. It creates distinct market areas and makes new across-the-board entry more difficult.

4. *Patents.* They may provide exclusive control over critical or lower-cost technology and products. That can directly exclude entry.

5. *Raising Rivals' Costs.* An incumbent may take actions, which require a prospective entrant to incur extra costs. Those costs then require the entrant to raise price or incur losses upon entering.

6. *Secrecy and Concealment About Crucial Conditions.* The incumbent firms may be able to take specific actions, which hide information about key conditions, which would otherwise permit entrants to compete fairly.

Source: Shepherd, *The Economics of Industrial Organization*, chapter 9, especially pp. 208-14.

TABLE 5
Principal economic goals for well-performing markets

EFFICIENCY IN RESOURCE ALLOCATION

a. *Internal efficiency,* in minimizing all costs (also called “X-efficiency,” or “business efficiency”).
b. *Allocative efficiency.* Resources are allocated among markets and firms in patterns that maximize the value of total output. Price is everywhere equal to Marginal Cost.
c. *Avoidance of simple resource wastes.*

TECHNOLOGICAL PROGRESS

New products and production methods are adopted rapidly.

EQUITY IN DISTRIBUTION

There is a “fair” distribution of wealth, income and opportunity, in line with the society’s standards of fairness.

THE COMPETITIVE PROCESS

Competition itself provides social values of open opportunity and rewards to effort and skill.

OTHER DIMENSIONS

Including:
a. *a maximum of individual freedom of choice,*
b. *security from extreme economic risks and costs,* such as from job losses, or health-care expenses.
c. *support for healthy democratic processes by dispersing power.*

Source: drawn from Shepherd, *The Economics of Industrial Organization*, op. cit., Table 2.1.

How an AT&T-Comcast Merger Would Harm Consumers and the Economy

The economic goals

America has always expected a lot from its competitive markets in many dimensions of good economic performance. The main economic goals are summarized in **Table 5**.

The goals begin with low prices, which should be kept tightly down by competition to no more than the level of costs. Keeping the firms’ costs low and the product quality high are other goals. These several good results add up to an efficient allocation of resources. In addition, the innovation of new products and technologies should be as rapid as possible. This creative goal is often more important and valuable than achieving an efficient static allocation of given resources.

Important though they are, these are not the only economic goals. In addition, there is the value of the competitive process itself, as part of the American reliance on a healthy, competitive market economy. Many economists also regard fairness in the distribution of wealth and income important. Also, people’s freedom of choice should be maximized, giving them the range to meet their own diverse preferences and needs. Such freedom of choice is a bedrock conservative value in American society and culture, and market power reduces choice.

The merger's economic harms

This merger is likely to harm all of these goals, significantly or even substantially. The increased monopoly power over broadband may cause the most serious harms for the longer future. AT&T-Comcast is likely to become immediately the solidly established dominant firm in broadband service. It would be able to charge higher prices and to control the development of broadband and related service capacity.

Prices will be raised. The rates paid by cable customers will be raised, probably substantially. There is evidence from the past that indicates the scope for the price effects when there is no protective regulation. During 1984-93 there was little or no public regulation of cable rates, and the prices rose by 92%. That was more than double the general rate of inflation of consumer prices. Then during 1993-96, a degree of federal regulation was restored, and cable rates rose just 2%. Finally, regulation was largely removed again, and cable rates have gone up by 35%, which is double the general rate of inflation of consumer prices.

The quality of service will probably be reduced. The pressures on AT&T-Comcast to improve or maintain service quality will be less. Service quality has always been a nagging problem for cable TV throughout the country for all cable systems. There are strong, widespread incentives for cable companies to skimp on the quality and reliability of their service. Many of the companies do skimp on quality, scraping along and enduring continual complaints about low service quality. The merger would reduce the pressures for good service quality even further.

The competitive process will itself be abridged. By substantially raising market power, the merger will compromise the competitive process itself. The turbulence and pressures of rugged competition will be reduced in favor of AT&T-Comcast's greater control and uniformity.

Innovation will probably be slower. Since 1990, economists have been giving greater weight to the importance of innovation, particularly in the information and telecommunications sector. The economic research literature has long indicated that dominant firms tend to innovate more slowly, because competitive pressures are weaker.[40] Business history provides many examples of such slowness of dominant firms in adopting innovations.

For instance, AT&T itself has long been famous for delaying innovations, particularly from the 1910s through the 1970s, when it was a lightly regulated but supposedly progressive large firm. AT&T was slow with a series of major innovations that occurred more quickly in Europe and other countries. Leading instances of AT&T's slowness have included switchgear technology, rotary dialing, computer switching, and optical fiber. Even when AT&T's Bell Laboratories had made the important inventions, AT&T often delayed putting the new technology into practice, because it would displace their existing equipment.[41] Another example is IBM, which was a slow innovator in the 1970s and 1980s when it dominated the market for mainframe computers.[42]

Currently, AT&T has strong incentives for innovation to increase its market position by successful growth. But letting AT&T instantly capture market dominance through a merger will dilute or reverse those incentives. The merged AT&T-Comcast firm will be more oriented toward protecting the value of its existing technology and products, rather than replacing them with new innovations.

There will be less freedom of consumer and producer choice. The range of consumer choices will be reduced as AT&T-Comcast extends its influence over more than half of all cable service in the United States. The merger will also reduce the opportunities for growth and competitive challenges by other cable providers. Finally, it will set loose in the halls of Congress and the states a richer and more dominant AT&T-Comcast, primed to lobby more power and favors for itself.

Possible future cures or offsetting benefits

Basic new trends may erode or neutralize the added market power and its harms. Ever since the 1880s, the telecommunications sector has always generated blue-sky hyperbole and exaggerations about the supposed power of the latest trends that will change everything, yesterday.

This new era is no different, and the excited rhetoric is coloring the current debates and the treatment of this merger. There are claims that new technologies (satellite access, wireless, Internet features, and others) are undercutting existing market positions and may soon wipe them out. Of course, important changes have been happening, but officials need to be realistic and cautious about them. An AT&T-Comcast merger may let a dominant firm capture and control precisely those emerging trends, fixing a dominant position permanently in place.

The rising substitution for cable by satellite service has not yet gone very far, and it is still patchy. Other trends have also not developed adequately to transform the cable market significantly enough to vindicate this merger.

The merger will not provide offsetting net benefits from realizing economies of scale. Often, an anticompetitive merger will be defended with claims that it provides large economies of scale. Those claims are usually overstated, but they may have some basis in fact.

AT&T and Comcast claim enormous benefits for this merger, but it actually seems to offer limited possible net economies. The combined firm may have more power in buying other systems at reduced prices and in forcing discounts for the inputs it buys, including programming. That claim of lower input prices is made routinely in large-firm mergers, which would raise market shares substantially. AT&T has been studiously avoiding that claim, so that it can deny gaining and exercising vertical market power against the providers of program content.

Actually, AT&T-Comcast will gain significant vertical power (see below), which will make the combined AT&T-Comcast firm more profitable by transferring revenues from program providers to AT&T-Comcast. But those gains would not be genuine economies of scale, which have economic value to society. And they may well not be passed on to consumers in lower prices if competitive pressures are weak and the FCC has withdrawn from protecting consumers in the relevant markets.

Vertical Effects on the Providers of Program Content

There are important vertical features relating cable TV to the provision of video programming.[43] The merger will probably have substantial upstream effects from cable TV on the providers of program content.[44] The first step in considering the vertical impacts is to recognize that there is little or no basis for other firms to exert countervailing vertical power against the AT&T-Comcast firm.

Most other telecommunications markets do have some concentration—some major customers that can exert vertical power to protect or enhance their interests.[45] But the programming suppliers and the customers of cable TV and satellite services appear instead to be fragmented industries with effective competition. And for cable, the customers are even more highly dispersed and unconcentrated. In both instances, therefore, they are unlikely to be able to exert significant pressures to constrain AT&T-Comcast's market power and controls.

On the contrary, there is increasing speculation that leading media companies will be targets for takeover by cable companies. For example, "The odds-on favorite for a Disney takeover is the combined AT&T-Comcast," according to an informed source.[46] Therefore the merger would raise vertical market power for AT&T-Comcast, particularly in the cable TV area. The added market power would probably have effects in both directions: both upstream against the program providers and downstream to TV viewers and broadband users. In the upstream direction, AT&T-Comcast would be able to exert more control in choosing the programming that is created and provided to the cable services and in seeking lower prices. Such control is likely to be significant or even substantial, given the high degree of AT&T-Comcast's dominance.

The problem is important to the companies that develop and sell program content and specialized channels that carry specific programming. These providers apply relatively little vertical pressure on the TV transmission services (cable and satellite systems), because they are diverse and numerous. This is true even though some content producers (such as the Disney company and various Hollywood studios) may seem to be large and influential. But much of the supposed economic bulk is illusory, because the companies are subject to high risk and unstable market positions.

The content producers need a maximum amount of effective competition at the cable and satellite level, so that the final consumers' preferences are given a chance to be transmitted upstream and to be served by a maximum of diversity in programming content. Instead, consolidation among the cable and satellite systems would tend increasingly to reduce and control the transmitters' competition. Such tightening gives more vertical market power to the cable and satellite systems, which can then extract more revenues from the program sources.

The more important economic and social harm is from the tighter restriction on programming access and diversity, that is, on the breadth of consumer choices that viewers are able to make as they use cable or satellite signals. The monopoly power of the local cable systems and of AT&T-Comcast's substantial array of systems in particular would be accentuated by their tie-in of broadband with cable TV systems. Satellite's ability to compete with cable will be reduced, intensifying the cable systems' ability to restrict consumer choice as well as taking revenues from the programmers.

If AT&T and Comcast remain separate and their markets are competitive, consumer choice and diversity of programming will remain as broad and responsive as possible. The merger, however, would reduce those benefits, and later follow-on mergers could narrow program diversity even further.

Arguments Used in Defending an AT&T-Comcast Merger

Several other points by AT&T and its advocates deserve to be mentioned.

Claim: Conditions are dynamic. Only static thinkers imagine that there can be market power in this case. This is merely rhetoric. Advocates citing dynamic factors often misrepresent and exaggerate those changes. My discussion here, like most other discussions, allows fully for dynamic factors.

Claim: The entertainment alternatives for customers are so ever-changing that AT&T-Comcast could not create or exercise market power. This too applies mere rhetoric to a complex situation that requires careful deliberation. How fast are the alternatives really changing and with what effects?

Claim: There will be large net economic gains. Comcast and AT&T's claims are impressive in a variety of supposed efficiencies, growth, improvements, and new services. They stress that these will be net gains that could not be achieved without the merger. Unfortunately, the claims cannot be reliably assessed, and they may reflect self-interest in exaggerating the possible gains.

As noted earlier, a majority of mergers actually cause economic harm to the companies undergoing them, not net benefits. Of course, many mergers do generate genuine economic gains, and often some or all of the gains are passed on to the public in lower prices. But in many other cases, where the mergers are not likely to create benefits, the merging companies nonetheless fabricate attractive assertions about gains. And even when some economic gains do occur, they are often much smaller than the partners had claimed before the merger. Accordingly, the predicted gains for virtually every merger are likely to be exaggerated, and they always deserve deep skepticism.

Claim: The merger will increase competition, not reduce it. Comcast and AT&T claim that competition will increase "on all fronts," rather than being reduced.[47] Such conjectures cannot be disproved in advance; anything could happen. But the specific reductions in competition are important, as detailed above, and highly likely.

Claim: Without the merger, the two companies could not develop and invest in growth and new services nearly as well as AT&T-Comcast could. Merger partners always create the impression that they make things possible that could not otherwise happen well, or even at all. Yet two points make this claim dubious.

First, both Comcast and AT&T are already large companies with substantial resources and skills in the industry. Their incentives for growth and progress will be at least as strong if the merger does not occur, and probably much stronger. The merger will probably absorb attention and resources when meshing the two companies, diverting them from their main goals. The merger, therefore, may well subtract from their ability and incentive for growth and progress.

Second, because a majority of all mergers fail to improve the companies' efficiency and finances, the merger should be regarded from the start as likely to be harmful rather than a source of enhanced resources.

Changes That Might Make an AT&T-Comcast Merger Acceptable

Preventing the merger

An anticompetitive merger is often simply blocked entirely by the FCC or antitrust agency. If the FCC did that in this case, reinforced by the Antitrust Division's unfavorable judgment, it would reassert its determination to promote and protect competition in these markets. It might also prevent follow-on mergers.

Comcast and AT&T claim that their proposal fits market realities and should prevail. Yet some informed business interests are doubtful about the proposal and its claimed benefits, and they expect the FCC to deny it on the merits. By disapproving the merger, the FCC would align its standards and actions with business realities and with the public interest.

Specific alterations in the merger

A middle choice might also be possible. Some defective mergers can be salvaged by ridding them of the anticompetitive feature or by taking some other action short of a straight denial. A divestiture of some operations or capacity might reduce the monopoly impact enough to make the merger acceptable.

Partial divestiture. In theory, the merger could be revised so that it involves only part of the AT&T-Comcast assets, and that might preserve competition in the rest. But that kind of divestiture or transfer does not appear to be a realistic possibility. There has been no discussion of any such possible changes, neither by AT&T and Comcast, nor by any other interested party.

Requirements and constraints. One constraint would be to require equal-and-open access to both cable modems and DSL service. In one important example of this, the equal-access paradigm of the AT&T divestiture in 1984 has led to a sharp reduction in AT&T's market power in the long-distance market. It is true that the price reductions in long-distance service after 1984 were mostly caused by regulated reductions in access charges. Yet there was a combined impact of regulatory oversight and the reduction of AT&T's market power. Absent close regulation and more competition, access reductions would instead have been turned into increased margins and profits rather than price reductions.

An equal-access paradigm for cable modems and DSL service would maintain competition among Internet Service Providers (ISP) for the right to serve the end user.[48] This could mitigate part of the problem of the merger's impact on broadband service.[49] Although it still would not prevent the merged firm from controlling the flow of innovation related to the underlying technologies, it would keep prices lower and would allow for innovation in service offerings that the ISPs could control.

An important potential constraint on this option is that the proposed Tauzin-Dingell bill would allow both the regional Bell operating companies and cable companies to restrict access to their Internet services.

Postpone the merger

The FCC could withhold its approval of the AT&T-Comcast proposal "at this time." The FCC could then later be reassured by the emergence of the conditions that would actually prevent the harms of the merger.

Postponing the merger would make economic sense, as I suggested for the proposed merger in 2001 between WorldCom-MCI and Sprint (Shepherd 2000). Postponement would allow the benefits of the underlying trends, which are largely just theoretical and speculative so far, to become sufficiently real and significant. Moreover, the specific role of broadband in locking in many cable TV customers might intensify rather than abate. The delay would probably involve at least a three-year period, depending on careful monitoring of the changing conditions. Requiring the postponement would not brand the merger as simply unacceptable.

The FCC would have specific conditions to evaluate as time passes, including the following:

- Are large numbers of MVPD customers increasingly locked into cable TV in order to obtain broadband, or has DSL been able to revive and substantially reduce cable's dominance of broadband access?
- Is satellite TV transmission changing so that it overlaps more closely with cable TV's local-station focus?
- Have Comcast and AT&T increased their shares of the total U.S. cable TV market, or instead have their combined shares decreased?
- Are the merger's claimed economic gains being realized by other developments, including internal growth and alternative sources of investable funds?
- Are Comcast and AT&T severely hampered by their "small" size in trying to obtain financing for growth and innovation?

Postponing the merger's approval may be an unconventional choice among merger policies. The merger partners instead demand prompt approval, because they seek the profits immediately and fear that the merger will come apart as conditions change. The partners try to create a stampede atmosphere, criticizing careful evaluations as obstructive and even antibusiness. They emphasize their claims of large gains, trying to turn attention away from alternative means of achieving the same gains.

Haste by the Antitrust Division and the FCC is necessary only if the merger will not stand a careful assessment. If the economic basis for the merger is sound, it will endure. But its excess monopoly power and economic harms will probably not be reversible. Once the supposedly radical trends have faded and the new dominant AT&T-Comcast firm is secure, the hopes of optimistic officials may look in retrospect like regrettable mistakes. It may take decades for market forces or new policies to undo the errors made during a formative but deceptive period such as the present.

Endnotes

[1] See Owen and Wildman (1994), Johnson (1994), and Federal Communications Commission (2002).

[2] See Federal Communications Commission (February 28, 2002), Federal Communications Commission (September 21, 2001). See also specifically “Declaration of Janusz A. Ordover on Behalf of AT&T Corp.,” AT&T Comments, Appendix A, January 2, 2002, in the Federal Communications Commission, “Further Notice of Proposed Rulemaking,” CS Dockets No. 98-82 and 96-85, and MM Dockets 92-264, 94-150, 92-51, and 87-154, released September 21, 2001.

[3] From a voluminous and growing literature, see Jeffrey L. Kiday, “Most Mergers Fail to Add Value, Consultants Find,” *Wall Street Journal*, October 17 1998, page B2.

[4] Another example in this sector involves the merger of AOL Time Warner in 2001. That merger-created firm recently wrote off some $54 billion in assets, and the company’s losses have been on about the same scale. There is now strong pressure from powerful investment interests to reverse the merger.

[5] Michael A. Hiltzik, “Giant Cable Deal: AT&T Returning to the Basics; Telecom: Its Costly Venture Into Broadband and Wireless Phone Businesses “Was a Multibillion-Ddollar Oops,” One Analyst Says,” *Los Angeles Times*, December 21, 2001, Business section, Part 3, p. 1. The harm was worsened by mishandling of the @Home system, which came with TCI. AT&T paid “$2.9 billion for shares selling on the open market for only $523 million.” *ibid*.

[6] See Scherer and Ross (1991) and Shepherd (1997).

[7] See Fellner (1949), Kaysen and Turner (1959), Scherer and Ross (1991), Shepherd (1997), and Tirole (1988).

[8] The earlier economic literature used to call for 10 or more comparable firms, so as to make collusion quite unlikely. Since 1970, mainstream researchers have retreated to specifying only about five or more competitors, but that is an absolute minimum.

[9] See American Bar Association (1992).

[10] A recent example is in telecommunications. For many years the wireless telephone service industry was a duopoly, with just two rivals. Prices remained high. Then the FCC auctioned off enough spectrum to yield four or five players in each market, and prices fell dramatically. This major accomplishment of the FCC has wider relevance for competition in all markets, including cable, satellite, and broadband.

[11] See Stigler (1968).

[12] See Kaysen and Turner (1959, 25).

[13] See Kaysen and Turner (1959, 29-34).

[14] See Scherer and Ross (1991).

[15] The HHI is calculated by obtaining the market share of each firm, squaring that market share, and adding together all of the squared market shares. The HHI values can range as low as near zero, and as high as 10,000 (for a monopoly with 100% of the market).

[16] The squared values are 1,600, 900, 400, 400, and 100, adding up to 3,400.

[17] See Scherer and Ross (1991), Hay and Vickers, (1987), and Shepherd (1997).

[18] See Bain (1956).

[19] See Shepherd (1982).

[20] Other artificial incentives include rich rewards that the managers can promise themselves in the terms of the mergers. For recent extreme examples, see Andrew Ross Sorkin, “Those Sweet Trips to the Merger Mall,” *New York Times*, April 8, 2002, Business section p. 1 and 7. In the Comcast purchase of AT&T, the agreement includes highly controversial long-range guarantees and job protections for AT&T’s Armstrong and Comcast’s Roberts, along with other debatable features.

[21] See Shepherd (1997), Scherer and Ross (1991), Bain (1967), and Stigler (1968).

[22] See Areeda and Turner (1978) and Shepherd (1997).

[23] See Federal Communications Commission (2002).

24. See Shepherd (1997).

25. See Willig (1991) *Special Issue on Merger Guidelines, Review of Industrial Organization*, 8 (April 1993).

26. See Shepherd, Shepherd, and Shepherd (2000).

27. Alternatively, in some cable systems TV customers have ordered broadband services at significantly lower prices than if broadband is purchased alone, and this price gap is growing.

28. See Federal Communications Commission (2002).

29. Andy Pasztor, "EchoStar Will No Longer Offer Web Via Satellite," *Wall Street Journal*, April 5, 2002, page B5. "By abruptly backing away from StarBand Communications Inc., a money-losing joint venture with Israel's Gilat Satellite Netwrks Ltd. which so far has managed to attract barely 40,000 U.S. subscribers, EchoStar has further clouded the prospects of one of the last remaining consumer-oriented projects offering Internet connections via space."

30. See Bonbright (1961), Kayn (1971), and Schmalensee (1979).

31. Seth Schiesel, "How Does AOL Fit in the Grand Plan Now?" *New York Times*, April 21, Section #, p. 1, 10-11. "AT&T's stake is generally considered to be worth at least $10 billion, and AT&T has been trying to sell it back to AOL for years, but AOL has seen no reason to write such a big check for a stake in a venture that it already controls. Now that Comcast has agreed to take over AT&T's minority stake in the venture, AOL may have to write that check. According to people close to AT&T and Comcast, there is essentially no chance that AT&T or the forthcoming AT&T-Comcast will agree to package America Online with its own cable modem service until AOL Time Warner comes up with the $10 billion or so for the Time Warner Entertainment stake. Needless to say, AOL Time Warner does not have $10 billion, at least at the moment."

32. Instead, minority holdings with small percentages often exert influence that is highly disproportionate to those percentages.

33. For comparison, Procter & Gamble has only about 50% of detergents; General Motors never had as much as 60% of automobiles at its maximum; Boeing has had about 60% of the global civilian jet aircraft market; Anheuser-Busch has become the dominant beer company with approximately 50% of the U.S. beer market; and AT&T's own share of the long-distance telephone market has slipped below 50%.

34. For example, see Geraldine Fabrikant, "AT&T's Cable Deal: Expect More Mergers, Experts Say, at Expense of Consumers," *The New York Times*, December 21, 2001, Section C, p. 8; and "EchoStar Says AT&T/Comcast Deal Makes Hughes Merger 'Essential'," *AFX News Limited*, December 20, 2001.

35. See Jennifer Beauprez and Kris Hudson, "Consumers May Like AT&T-Comcast Deal: Merger Could Bring High-Speed Net Choices," *The Denver Post*, December 25, 2001, Business, p. K-03.

36. Stephen Labaton, "Congressional Broadband Fight Intensifies," *New York Times*, February 27, 2001, p. C4.

37. See, for example, "Comcast ISP Deal Meets With Charges About Open Access Strategy," *Communications Daily*, February 27, 2002.

38. See Baumol, Panzar, and Willig (1982).

39. See Shepherd (1984) and Shepherd (1995).

40. See Scherer and Ross (1991), Kamien and Schwartz (1975), and Shepherd (1984).

41. See Sheahan (1956), Evans (1983), and Brennan (1987).

42. See DeLaMarter (1986), Shepherd (1970), and Kirkpatrick (1992). See also the severe criticism in the *Wall Street Journal*, November 11, 1988, discussing how IBM had become "a giant calcified institution," with "bad habits and inefficient processes that had taken root over seven decades....The colossus has one of the world's most luxuriantly thick bureaucracies" with "layer upon layer."

43. See Owen and Wildman (1999), Johnson (1994), Ford and Jackson (1997), Waterman and Weiss (1997) and Chipty (2001).

44. For example, see Vikas Bajaj, "Analysts Say AT&T Comcast to Gain Major Power Over Media Companies," *Dallas Morning New*s, December 21, 2001.

45. See Shepherd, Shepherd, and Shepherd (2000).

46. See Diane Mermigas, “Disney Could Be Takeover Target: GE, AT&T-Comcast Are Likely Suitors,” *Electronic Media*, February 4, 2002, p. 3.

47. "Comcast, AT&T Say Merger Will Increase Competition on All Fronts,” *Communications Daily*, March 5, 2002.

48. Yochi J. Dreazen, “AT&T, Comcast Assert Big Benefits of Cable Union Outweigh Risks,” *Wall Street Journal*, April 24, 2002, p. D4. “Much of the hearing revolved around the hot-button issue of ‘open access,’ or whether the government should force the merged firm to carry rival Internet-service providers. Garry Betty, CEO of EarthLink Inc., the nation’s third-biggest Internet provider, said the cable industry’s reluctance to carry rival ISPs was slowing the pace of broadband adoption across the nation. ‘This take-it-or-leave-it approach has resulted in higher prices and lower adoption rates than would be the case if consumers had competitive choice in their Internet provider over cable,’ he said. Several lawmakers agreed with Mr. Betty’s contention that the government should impose open-access requirements on AT&T-Comcast as part of any merger approval.” Though AT&T and Comcast say that they are arranging access for specific rival ISPs, they reject any setting of formal requirements to provide open access.

49. See Yochi J. Dreazen, “AT&T, Comcast Assert Big Benefits Of Cable Union Outweigh Risks,” *Wall Street Journal*, April 24, 2002, p. D4. It would be similar to what AOL Time Warner was forced to accept. Lawmakers “said the provisions could resemble the language adopted when regulators approved the AOL Time Warner union last year. As part of that approval, the regulators forced the media and Internet giant to carry three rival ISPs over its high-speed cable pipes.”

Bibliography

American Bar Association. 1992. *The 1992 Horizontal Merger Guidelines: Commentary and Text*. Chicago, Ill.: American Bar Association.

Areeda and Turner. 1978. *Antitrust Law*, Vol. 8. Boston, Mass.: Little, Brown.

Bain, J. S. 1956. *Barriers to New Competition*. Cambridge, Mass.: Harvard University Press.

Bain, J. S. 1967. *Industrial Organization*. 2nd ed. New York, N.Y.: Wiley.

Baumol, W. J., J. C. Panzar, and R. D. Willig. 1982. *Contestable Markets and the Theory of Industry Structure*. San Diego, Calif.: Harcourt Brace Jovanovich.

Bonbright, J. C. 1961. *Principles of Public Utility Rates*. New York, N.Y.: Columbia University Press.

Brennan, T. J. 1987. "Why Regulated Firms Should Be Kept Out of Regulated Markets: Understanding the Divestiture." *United States v. AT&T, Antitrust Bulletin,* 32 (3): 741-91.

Chipty, T. 2001. "Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry." *American Economic Review,* 91 (3): 428-53.

DeLaMarter, T. 1986. *Big Blue: IBM's Use and Abuse of Market Power*. New York, N.Y.: Dodd, Mead.

Evans, D. S., 1983. *Breaking Up Bell: Essays on Industrial Organization and Regulation*. New York, N.Y.: North Holland.

Federal Communications Commission. 2002. "Declaration of Janusz A. Ordover on Behalf of AT&T Corp." AT&T Comments, Appendix A.

Federal Communications Commission.2001. "Further Notice of Proposed Rulemaking," CS Dockets No. 98-82 and 96-85 and MM Dockets 92-264, 94-150, 92-Federal Communications Commission.Federal Communications Commission.51, and 87-154, released September 21.

Federal Communications Commission. 2002. *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Eighth Annual Report*. CS Docket No. 01-129. Washington, D.C.: FCC, January 14.

Federal Communications Commission. 2002. "In the Matter of Applications for Consent to the Transfer of Control of Licenses: Comcast Corporation and AT&T Corp. to AT&T Comcast Corporation." *Applications and Public Interest Statement* February 28.

Fellner, W. J. 1949. *Competition Among the Few*. Chapter 1. New York, N.Y.: Alfred Knopf.

Ford, G. S., and J. D. Jackson. 1997. "Horizontal Concentration and Vertical Integration in the Cable Television Industry." *Review of Industrial Organization,* 12: 501-18.

Hay, D., and J. Vickers. 1987. *The Economics of Market Dominance.* Oxford, England: Basil Blackwell.

Johnson, L. L. 1994. *Toward Competition in Cable Television*: *AEI Studies in Telecommunications Deregulation*. Cambridge, Mass.: MIT Press.

Kamien, M. I., and N. L. Schwartz. 1975. "Market Structure and Innovation: A Survey." *Journal of Economic Literature,* 13 (1): 1-38.

Kayn, A. E. 1971. *The Economics of Regulation*, *Vol. 2*. Wiley.

Kaysen, C., and D. F. Turner. 1959. *Antitrust Policy: An Economic and Legal Analysis.* Chapter 3. Cambridge, Mass.: Harvard University Press.

Kirkpatrick, D. 1992. "Breaking Up IBM," *Fortune Magazine* July 27: 44-48.

Owen, B. M. and S. S. Wildman. 1999. *Video Economics.* Cambridge, Mass.: Harvard University Press.

Pociask, Stephen. 2002. *Putting Broadband on High Speed: New Public Policies to Encourage Rapid Deployment.* Washington, D.C.: Economic Policy Institute.

Scherer, F. M. and D. Ross. 1991. *Industrial Market Structure and Economic Performance*. 3rd ed. Boston, Mass: Houghton Mifflin.

Schmalensee, R. 1979. *The Control of Natural Monopolies*. Lexington, Mass.: Lexington Books.

Sheahan, J. 1956. “Integration and Exclusion in the Telephone Equipment Industry.” *Quarterly Journal of Economics*, 70 (2): 249-69.

Shepherd, G. B., H. S. Shepherd, and W. G. Shepherd. 2000. “Sharper Focus: Market Shares in the Merger Guidelines.” *Antitrust Bulletin*, 45 (4): 835-885.

Shepherd, W. G. 1970. *Market Power and Economic Welfare*. New York, N.Y.: Random House.

Shepherd, W. G. 1982. “Causes of Increased Competition in the U.S. Economy, 1939-1980.” *Review of Economics and Statistics*, 64: 613-26.

Shepherd, W. G. 1984. “‘Contestability’ versus Competition.” *American Economic Review*, 74 (3): 572-87.

Shepherd, W. G. 1995. “Contestability vs. Competition-Once More.” *Land Economics*, 71 (3): 299-309.

Shepherd, W. G. 1997. *The Economics of Industrial Organization*. 4th ed. Englewood Cliffs, N.J.: Prentice-Hall.

Shepherd, W. G. 2000. *Wrong Numbers: MCI WorldCom, Sprint, and Monopoly Power in the Long-Distance Market.* Washington, D.C.: Economic Policy Institute.

Stigler, George J.. 1968. *The Organization of Industry.* Homewood Ill.: Richard D. Irwin.

Tirole, J. 1988. *The Theory of Industrial Organization.* Chapters 5-7. Cambridge, Mass.: MIT Press.

Waterman, D., and A. A. Weiss. 1997. *The Effects of Vertical Integration Between Pay Cable Networks and Cable Television Systems*. Cambridge, Mass.: MIT Press.

Willig, R. D. 1991. “Merger Analysis, Industrial Organization Theory, and Merger Guidelines.” Special Issue. *Brookings Economic Papers*. Washington, D.C.: Brookings Institution: 281-312.

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