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TESTIMONY OF

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**BEFORE THE
UNITED STATES SENATE JUDICIARY COMMITTEE,
SUBCOMMITTEE ON ANTITRUST, BUSINESS RIGHTS, AND
COMPETITION**

ON

**DOMINANCE IN THE SKY: CABLE COMPETITION
AND THE ECHOSTAR-DIRECTV MERGER**

MARCH 6, 2002

Consumers Union¹ is extremely concerned about the enormous concentration of control over multichannel video distribution systems – predominantly cable and satellite – which has prevented the growth of vibrant competition. Attached to our testimony is an Appendix entitled “Cable-Satellite Competition (And Other Myths That Are Distorting Mass Media Policy),” prepared by Dr. Mark Cooper, Research Director for the Consumer Federation of America, which describes in great detail the market structure and concentration levels for multi-channel video services.

Direct broadcast satellite (DBS) stands as the most likely competitor to today’s cable monopolies. While further consolidation in the satellite industry could be dangerous to consumers, it also holds the potential to make satellite more competitive with cable monopolies. We believe that antitrust issues related to satellite mergers should be reviewed in the overall context of policies designed to foster more competition in the multichannel video market.

It is important to understand that, while antitrust is an excellent tool to prevent monopolization or substantial dilution of competition, it may do nothing to create new competition or explode existing monopolies. Consumers need both – strong antitrust enforcement and strong pro-competitive policies.

SATELLITE

Over the last three years, there has been a great deal of consolidation within the satellite TV industry. The number-one provider, DirecTV, bought two of its competitors,

¹ Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the state of New York to provide consumers with information, education and counsel about goods, services, health and personal finance, and to initiate and cooperate with individual and group efforts to maintain and enhance the quality of life for consumers. Consumers Union’s income is solely derived from the sale of *Consumer Reports*, its other publications and from noncommercial contributions, grants and fees. In addition to reports on Consumers Union’s own product testing, *Consumer Reports* with more than 4 million paid circulation, regularly carries articles on health, product safety, marketplace economics and legislative, judicial and regulatory actions that affect consumer welfare. Consumers Union’s publications carry no advertising and receive no commercial support.

PrimeStar and United States Broadcasting. Meanwhile, the number-two company, EchoStar, acquired the assets of American Sky Broadcasting.²

Today, EchoStar and DirecTV serve nearly every home that has a satellite dish.³ And now EchoStar is attempting to buy DirecTV.

If this merger is approved, it would combine the dominant players in the satellite TV market to become the second-largest pay-TV company in America, behind AT&T's combined cable holdings. See Appendix at 35 (describing AT&T's full and partial cable ownership interests, covering as many as 30-40 million households).

The potential antitrust problems presented by this merger are serious and substantial. Currently, most consumers have three choices for pay-TV services: EchoStar's Dish Network, DirecTV, or their local cable company. This merger would reduce their choices from three to two. For rural America, the prospects are even grimmer. Approximately 13 million homes in rural areas are not wired for cable TV.⁴ These consumers can only choose between DirecTV and EchoStar. Thus, the merger would leave them with EchoStar as their only option.⁵

Therefore, Consumers Union believes that this proposed merger poses significant antitrust problems and must be rejected, unless the problems are adequately addressed before the merger is completed. Under certain circumstances, we also believe the merger could offer consumers some significant benefits, such as more local broadcast channels and better high-speed Internet options available via satellite. We believe that government approval should be contingent on specific market-opening preconditions and protections against anti-competitive practices. These would involve antitrust

² Hoffmeister, Sallie. "GM Deal to Create New Pay TV Giant," Los Angeles Times, Oct. 29, 2001.

³ *FCC Seventh Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming* (CS Docket No. 00-132), January 8, 2001.

⁴ *Advanced Telecommunications in America*, report by Rural Utilities Service and National Telecommunications and Information Administration.

⁵ Beauprez, Jennifer. "Tech Town," Denver Post, November 4, 2001.

consent decree requirements to prevent monopolistic pricing and inferior service, plus Federal Communications Commission (FCC) action to encourage competition.

CABLE

To understand the full set of trade-offs related to this proposed merger, we believe that the issues surrounding satellite concentration should be viewed in the overall context of persistent cable monopoly dominating the multi-channel video programming market.

Sixteen percent of American households have satellite dishes, while about 68 percent have cable.⁶ A substantial portion of satellite subscribers also purchase cable in order to receive local broadcast programming or to satisfy multiple TV viewing needs. Thus far, satellite has failed to provide price competition to cable. As one industry analyst writes:

We believe that more than 95% of all cable churn is caused by factors other than DBS competition. Competition generated churn rates of just 1.3% per year during the past five years, suggesting that former cable customers make up less than one-third of DBS's current customer base. The implication of this finding is significant because it suggests that the vast preponderance of DBS's growth depended on first-time multi-channel video (MVC) subscribers. We believe that growth in the MVC market will drop off in the next several years as the potential population of first-time MVC subscribers dwindles.⁷

Every year, cable rates keep going through the roof. In the five years since the Telecommunications Act became law, cable subscribers have seen their rates go up 36 percent. That's nearly three times the rate of inflation.⁸ Cablevision recently announced a 7 percent rate hike, two weeks after AT&T announced a 7.4 percent hike.⁹ In cities all around the country, cable companies are raising rates with an alarming pace. The following are just a sampling of rate increases: Wichita, KS – 14%,¹⁰ St.

⁶ *FCC Seventh Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming* (CS Docket No. 00-132), January 8, 2001.

⁷ Jason B. Bazinet, *The Cable Industry* (J.P. Morgan Securities, Inc., November 2, 2001), p. 4.

⁸ Bureau of Labor Statistics, consumer price indexes, Dec. 2001.

⁹ Berkowitz, Harry. "Cablevision Rates Rising Again," *Newsday*, November 21, 2001.

¹⁰ Lillian Martell, "Cox to Increase Rates for Cable, Internet Service." *The Wichita Eagle*, (Feb. 22, 2002).

Louis, MO – 14-26%,¹¹ Reno, NV and Memphis, TN – 15%,¹² Boston, MA – 12%,¹³ Vancouver, WA – 9%,¹⁴ Atlanta, GA and Austin, TX – 10%.¹⁵

Unfortunately, the 1996 Telecommunications Act phased out cable rate regulation. It gave consumers the impression that cable competition would expand sooner rather than later, and cable prices would go down, not up.

The law assumed that the elimination of legal barriers to entering the cable business would unleash a torrent of competition from local telephone companies, electric utilities and others.

Unfortunately, it just hasn't happened. The local telephone companies have virtually abandoned their efforts to compete with cable,¹⁶ and electric utilities have had difficulty breaking into the market. Without the benefit of regulations that prevent cable price gouging, only consumers in the few communities where two wire-line companies engage in head-to-head competition for cable services are receiving the benefits promised in the 1996 Act. FCC data show that head-to-head competition saves consumers 14 percent compared to prices charged by cable monopolies (where satellite service is also available), and independent research indicates that competition can save consumers as much as 32 percent on their cable bills.¹⁷

Unfortunately, two-wire towns are the exception to the rule in today's marketplace. Large companies that are well-positioned to block competition increasingly dominate the cable industry. Currently two companies (AT&T and AOL Time Warner) together own cable systems serving more than 50% of the nation's cable subscribers and are partially

¹¹ Jerri Stroud, "Charter Plans to Raise Cable Rates by End of Year." St. Louis Post-Dispatch, (Sep. 26, 2001).

¹² Tom Walter, "Time Warner Raising Cable Rates for 6th Year in a Row." The Commercial Appeal, (Nov. 21, 2001).

¹³ Monica Collins, "Boston Subscribers at the Mercy of Cable Rate Hikes." The Boston Herald, (Nov. 18, 2001).

¹⁴ Mike Rogoway, "Cable TV Rates to Increase 9 Percent." The Columbian, (Nov. 3, 2001).

¹⁵ Amy Schatz, "Time Warner is Upping Cable Rates." Austin American Statesman, (Nov. 28, 2001).

¹⁶ *FCC Seventh Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming* (CS Docket No. 00-132), January 8, 2001.

¹⁷ See Declaration of Thomas Hazlett, Ph.D. (Resident Scholar, American Enterprise Institute for Public Policy Research). *In the Matter of Applications of Northpoint USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. To Provide a Fixed Service in the 12.2-12.7 GHz Band.* (ET Docket No. 98-206). See also Margaret Talev, "Consumers Have Little Recourse on Cable Rates." Los Angeles Times (Feb. 4, 2001).

co-owned through Time Warner Entertainment. In most places, the local cable company is the only cable company. As cable TV pioneer Ted Turner recently said: "I think it's sad we're losing so much diversity of thought and opinion.... We're getting to the point where there's going to be only two cable companies left."¹⁸

Cable companies often argue that programming costs and capital outlays account for the increase in rates. But these arguments simply do not hold up under scrutiny.

For one, cable industry data show that a substantial portion of the increase in programming costs are offset by corresponding increases in advertising revenue. As programming gets more expensive, cable companies get more revenue from advertisers who run commercials during the programming.¹⁹

Secondly, the largest cable system operators have financial interests in about one-third of all national and regional programming. So when cable companies complain about having to pay more for programming that they partly own, some are simply taking money of the right pocket and putting it in the left pocket.

Even at the local level, the cable industry's complaint about rising programming costs does not hold water. Since the passage of the 1996 Act, cable revenues have increased much faster than costs. Since 1996, total revenues have increased by 50 percent, while operating revenues are up 43 percent.²⁰ Average operating revenues (total revenues minus operating costs) have actually increased by 32 percent.²¹ Most notably, the revenues that are associated with the expansion of systems -- advertising, pay-per-view and shopping services, advanced services and equipment -- are up 123 percent.²² The dollar value of revenue increases for new and expanded services since 1997 alone swamps the increase in programming costs. Virtually all of the increases in

¹⁸ Patrizio, Andy. "Ted Turner Laments Cable Mergers," *Wired News*, November 28, 2001.

¹⁹ *FCC Fifth Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming* (CS Docket No. 98-102), December 17, 2008.

²⁰ *FCC Seventh Video Competition Report* at 1002, Table B-6.

²¹ *Id.*

²² *Id.*

basic and expanded basic service revenues have been carried to cable's bottom line in the form of increases in operating profits.

COMPETITION

So how does satellite TV stack up against cable? Cable companies may contend that satellite is a serious rival, but evidence shows that, thus far, satellite is not an effective competitor to cable. For most consumers, satellite is still more expensive and less attractive than cable. Installation and multiple TV hookups make satellite significantly more costly than cable. In addition, poor satellite reception is a problem for some consumers in urban areas, and most consumers still cannot get all of their local TV stations from satellite. The attached Appendix illustrates how satellite serves a rural, unwired-niche market (about 40% of satellite subscribers, or approximately 6 million households) and a mega-service market that cable has just entered with digital services, but satellite fails to compete with cable's 42 million basic and enhanced basic "lunch bucket" customers. See Appendix at 13.

If satellite can provide local channels in more areas and continue to bring down up-front equipment costs, it could be well-positioned to be the most likely competitor to cable in the future.

One of EchoStar's major arguments for a merger with DirecTV is that combining the dominant players of the satellite industry is the only way for them to compete head-to-head with the cable monopolies. We do not believe this combination alone would guarantee that satellite becomes an effective competitor to cable TV. However, the combined companies would have additional satellite capacity to beam local channels into more markets than they do now. They would also be able to reduce costs per subscriber and possibly speed up the availability of high-speed Internet service in rural areas. Once again, all of these would increase the likelihood that satellite could become a price and service competitor to cable.

Nonetheless, the only way that antitrust and other competitive concerns about this merger can be addressed is to require the conditioning of the merger with two significant safeguards.

First, EchoStar should be required to implement a broad array of protections for rural subscribers. The company should have to agree to offer the same prices, terms, and conditions to consumers in rural areas as it does to consumers in more competitive areas. The same installation options, program packages, promotions, and customer service that EchoStar provides in the closest, most competitive markets would then be available where consumers have cable and only one satellite choice. An alternative approach to achieve the same result would require a structural separation (divestiture) of enough satellite capacity to serve rural customers through a new satellite competitor that could challenge the combined Echostar/DirecTV.

The second safeguard we would suggest is aimed at improving competition. If consumers are going to lose one competitor in the multichannel video market, particularly when it means unwired markets will go from two choices to one, the FCC should move forward to open the door to another competitor.

For example, Northpoint/Broadwave is a promising potential competitor to both cable and satellite TV. It is trying to secure a license for its service, but it is caught in a regulatory morass at the FCC. Two of the companies that have pressed the FCC to reject the application are the companies that could see the stiffest competition – EchoStar and AT&T.²³

The addition of Northpoint/Broadwave or a comparable firm to the marketplace could offset the loss of a satellite competitor as a result of this merger. Therefore, we are asking the FCC to approve licensing of Northpoint/Broadwave -- if the service can be

²³ "FCC and FTC," Warren's Cable Regulation Monitor, April 9, 2001

provided without interfering with satellite service -- before the antitrust officials complete their review of this merger.²⁴

In conclusion, I would like to recall the last telecommunications merger to receive this kind of attention from Congress – the merger of America Online and Time Warner. Some of you probably remember the antitrust concerns that were raised when AOL first unveiled its merger plans.

I know that former FTC Chairman Pitofsky remembers them well. And thanks to his insight and leadership at the FTC, that merger was transformed from a potential threat to consumers to a model for the protection of consumers.

That merger was very different in many ways from the merger under discussion here today. But they do have at least two things in common.

Like the merger of AOL and Time Warner, the merger of EchoStar and DirecTV presents serious problems that could be dangerous to consumers. But as the government's approval of AOL Time Warner demonstrated, problems can be fixed if the companies and federal officials are willing to do so.

Rather than reject this proposal out of hand, we would urge the federal government to seize an opportunity to improve consumers' standing in the marketplace and bring some sorely-needed competition to the multi-channel video market.

²⁴ See *Comments of Consumers Union, et al., In the Matter of EchoStar Communications Corp., General Motors Corp., and Hughes Electronics Corp. for Authority to Transfer Control*. FCC Docket No. 01-348 (Feb. 4, 2002).

Appendix

***CABLE – SATELLITE COMPETITION
(AND OTHER MYTHS DISTORTING MASS MEDIA POLICY)***

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March 6, 2002

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I. INTRODUCTION

A. COMPETITION BETWEEN CABLE AND SATELLITE IS DRIVING MAJOR PUBLIC POLICY DECISIONS, BUT IT IS FAR WEAKER THAN THE CABLE INDUSTRY CLAIMS

The U.S. Court of Appeals for the D.C. Circuit recently overturned the Federal Communications Commission (FCC or the Commission) rule that prevents cable TV system operators (multiple system operators or MSOs) from owning broadcast TV stations in their own market. At a key point the Court points to the claim made by cable companies that “competition from direct broadcast satellite (DBS) providers makes discrimination against competing stations unprofitable.”²⁵ The Court did not conclude that the cable companies are correct; rather, as in most of the decision, the Court chastised the FCC for failing to build an adequate evidentiary record to respond to the claim.

We acknowledge that the court should ordinarily defer to the Commission's predictive judgments, and we take the Commission's point about remedies. In this case, however, the Commission has not shown a substantial enough probability of discrimination to deem reasonable a prophylactic rule as broad as the cross-ownership ban, especially in light of the already extant conduct rules...

The Commission failed to consider competition from DBS, to justify its change in position from the *1992 Report*.²⁶

Ironically, in an ongoing proceeding the Commission has before it exactly the record it needs to address this issue.²⁷ In seeking to end the FCC rule that prevents a single cable company from owning systems that reach more than 30 percent of all multichannel video programming subscribers,²⁸ the cable companies have argued that competition from satellite undermines their ability to discriminate against programmers. The expert witness for the nation's largest MSO claims that “stiff competition”²⁹ from a close substitute³⁰ denies the industry market power.

My central thesis – that an economically sound limit must rely on *dynamic* considerations and reflect the demonstrated ability and willingness of consumers to switch between cable-based and direct broadcast satellite (“DBS”)-based multi-video programming distribution (“MVPD”).³¹

²⁵ *Fox Television Stations, Inc., v. Federal Communications Commission*, 2002 WL 233650 (D.C. Cir.), February 19, 2000 (hereafter, *Fox v. FCC*), p. 15.

²⁶ *Fox v. FCC*, p. 15

²⁷ Federal Communications Commission, In the Matter of Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992 Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996 The Commission's Cable Horizontal and Vertical Ownership Limits and Attribution Rules Review of the Commission's Regulations Governing Attribution Of Broadcast and Cable/MDS Interests Review of the Commission's Regulations and Policies Affecting Investment In the Broadcast Industry Reexamination of the Commission's Cross-Interest Policy, CS Docket No. 98-82, CS Docket No. 96-85, MM Docket No. 92-264, MM Docket No. 94-150, MM Docket No. 92-51, MM Docket No. 87-154 (hereafter, *Horizontal Limits Proceeding*), September 21, 2001.

²⁸ This rule itself was remanded to the Commission by the same court (see *Time Warner Entertainment v. FCC*, 240, F.3d 1126 (D.C. Cir. 2001)).

²⁹ Declaration of Janusz A. Ordovery on Behalf of AT&T, (hereafter *Ordovery*), p. 23.

³⁰ *Ordovery*, p.20.

³¹ *Ordovery*, p. 4.

Since these claims about competition between cable and satellite have and will play a critical role in determining the ownership structure of the dominant distribution mechanism for news, information and entertainment in our society,³² they deserve extremely close examination. This paper demonstrates that the cable industry claims are wrong. Cable and satellite are not close substitutes providing stiff competition for one another. As a result, cable companies have a great deal of market power at the point of sale. This market power has impacts throughout the industry and its related markets.

B. OUTLINE OF THE PAPER

Section II notes the critical role of competition at the point-of-sale in the cable industry argument and demonstrates that industry analysis presents the Commission with a mixture of blatant misrepresentation of the empirical evidence and simplistic analysis that is incorrect and misleading. This section takes a hard look at the empirical evidence that bears directly on issue of competition – looking at elasticities of demand and substitution and patterns of expansion in the market.

After showing that these indicate a lack of competition, Section III provides details of a realistic map of the multichannel video product space. It draws on the results of an extensive survey of attitudes of cable and satellite consumers.

With a firm grounding in empirical reality, Section IV of this paper turns to the public policy issues. First it reviews Congressional concerns and thinking. Then it provides an economic discussion of the issues before the Commission.

Section V presents an economic analytic framework for assessing cable market power. Finally, Section V reviews the economic evidence on market power.

This paper examines the ability of cable operators to discriminate and traditional measures of market power that indicate they are doing so. A direct demonstration of the incentive to discriminate and tactics used to do so is left to a separate analysis.

II. FACT V. FICTION IN CABLE-SATELLITE COMPETITION

A. THE CRITICAL ROLE OF COMPETITION AT THE POINT-OF-SALE

The cable industry throws a great deal of theory at the Commission, but at its heart the matter is empirical. The industry desperately needs to invoke competition at the point-of-sale to justify the policies it would like to have the Commission adopt, but the facts do not fit their argument. They simply misrepresent and ignore reality.

³² Approximately 85 percent of all households now receive TV signals from a multi-channel distributor (see Federal Communications Commission Federal Communications Commission, *In the Matter of Annual Assessment of Competition in markets for the Delivery of Video Programming*, Eight Annual Report, CS Docket No. 01-129, January 14, 2002 (hereafter, Eighth Annual Report, C-1). TV is the most frequently used and the most influential news source (followed closely by newspapers) news source (see Roper Report, January 2002) and the most heavily used entertainment medium (accounting for half of all media usage, see U.S. Census Bureau, *Statistical Abstract of the United States: 2000*, Table 909.

The centrality of competition at the point-of-sale is demonstrated by the inability of cable industry experts to articulate their arguments against the horizontal rule without invoking head-to-head competition as the driving force in the industry. For example, Gregory Rosston and Howard Shelanski experts for the National Cable Television Association, start the substantive discussion of their reply comments in the horizontal limits proceeding with a section (p.3) entitled “The Major Concern in this proceeding is the National Market for Video programming,” In that section, they claim that

we assess the economic incentives that may give rise to concern about monopsony power from cable concentration on a national level and look at performance of the national programming market to see if there is any evidence of monopsony harm.

Yet at the core of their discussion just three pages later, they are forced to rely on competition at the point-of-sale (i.e. the local market) as the critical disciplining force. In fact, they admit that the public policy issue of greatest concern is most affected by the status of competition at the point of sale.

To be sure, any firm will try to use whatever purchasing power it has to obtain lower prices and gain a greater share of the rents to be allocated between buyer and seller. But that is very different from causing the kinds of social harm – reduced output and quality – that are generally ascribed to monopsony. If a cable operator were to exercise monopsony in such a manner, it would lose customers to DBS rivals who can purchase more, and higher quality, programming and thereby take market share from cable.

Ordovery, provides a series of observations that make it clear how central this issue is to the policy decision:

First, exercise of buyer market power requires a *credible* threat to withhold carriage if the supplier refuses to accede to the buyer’s anticompetitive demands. Here, however, programming suppliers know that in the presence of DBS (and other cable competitors such as overbuilders and MMDS providers), inefficient purchasing decisions by a cable operator – *i.e.*, refusals to carry competitively priced programming that subscribers demand – would impose substantial costs on the cable operator in the form of (existing and future) subscribers lost to rivals... the willingness of customers to choose DBS over cable is highly relevant to the programming supplier’s own assessment of its available alternatives.³³

First, because of the growing competitive threat from DBS and other alternative MVPDs, franchised cable systems have private incentives to provide good customer service and signal quality independent of the franchise renewal process.³⁴

The demonstrated ability of customers to switch from cable to DBS and alternative providers is very important here. If these other MVPD distributors can garner share from the foreclosing firm by virtue of offering superior

³³ Ordovery, p. 10.

³⁴ Ordovery, p. 46.

programming (and attractive rates), then even being foreclosed from a large MSO does *not* mean that a foreclosed programmer will lose a significant share of the distribution needed to maintain competitive viability.³⁵

Any attempt by a cable MSO to degrade the quality of its programming in order to foreclose a rival would cause it to lose significant customers to DBS and other alternatives thereby undermining the effectiveness of its strategy.³⁶

B. CABLE SATELLITE COMPETITION IS WEAK

If satellite were a close substitute for cable, one would expect that it would have a large effect on cable. In fact, the Commission's own findings and data contradict the claim repeated by the cable companies that vigorous competition between satellite and cable precludes the cable industry from exercising market power over the programming market.

The Commission never stated that cable and satellite are close substitutes. It found that satellite only "**exerts a small (shown by the small magnitude of DBS coefficient) but statistically significant influence on the demand for cable service.**"³⁷

In the same econometric estimation, the Commission concluded that the "**the demand for cable service is somewhat price elastic (i.e. has a price elasticity of minus 1.45) and suggests that there are substitutes for cable.**"³⁸ This elasticity is not very large and the Commission recognizes that in using the adjective "somewhat."

The FCC also attempted to estimate a price effect between satellite and cable. If cable and satellite were close substitutes providing stiff competition, one would also expect to see a price effect. Most discussions of in economics texts state that substitutes exhibit a positive cross elasticity.³⁹ The FCC can find none. In fact, it found quite the opposite. The higher the penetration of satellite, the higher the price of cable.⁴⁰

³⁵ Ordovery, p. 53.

³⁶ Ordovery, p. 59.

³⁷ Report on Cable Industry Prices, February 14, 2002, p. 36.

³⁸ Report on Cable Industry Prices, February 14, 2001, p. 36.

³⁹ Pearce, George, The Dictionary of Modern Economics (MIT Press, Cambridge, 1984), p. 94.

Cross Elasticity of Demand. The responsiveness of quantity demanded of one good to a change in the price of another good.

Where goods i and j are substitutes the cross elasticity will be positive-i.e. a fall in the price of good j will result in a fall in the demand for good

i as j is substituted for i. If the goods are complements the cross elasticity will be negative. Where i and j are not related, the cross elasticity will be zero.

Taylor, John, B., Economics (Houghton Mifflin, Boston, 1998), p. 59.

A sharp decrease in the price of motor scooters or rollerblades will decrease the demand for bicycles. Why?

Because buying these related goods becomes relatively more attractive than buying bicycles. Motor scooters or rollerblades are examples of substitutes for bicycles. A substitute is a good that provides some of the same uses or enjoyment as another good. Butter and margarine are substitutes. In general, the demand for a good will increase if the price of a substitute for the good rises, and the demand for a good will decrease if the price of a substitute falls.

Bannock, Graham, R.E. Bannock and Evan Davis, Dictionary of Economics (Penguin, London, 1987).

Substitutes. Products which at least partly satisfy the same needs of consumers. Products are defined as substitutes in terms of cross-price effects between them. If, when the price of records goes up, sales of compact discs rise, compact discs are said to be a substitute for records, because consumers can to some extent satisfy the need served by records with compact discs. This account is complicated by the fact that, when the price of an item changes, it affects both the REAL INCOME 01 consumers and the relative prices of different commodities. Strictly, one

The other piece of empirical evidence the cable company rely on to demonstrate cable-satellite competition is even more damning. The expert witness for AT&T claims that a study by Goolsbee and Petrin⁴¹ indicates that cable and satellite are close substitutes.⁴²

Likewise, in a recent paper, Professors Goolsbee and Petrin... estimate a system of demand curves for over-the-air TV, DBS, expanded basic cable services and expanded basic and premium cable services... From their estimated elasticities and shares, one can compute diversion ratios, which are a measure of substitutability between goods... These diversion ratios are significant and imply that **DBS and basic cable are close substitutes**.⁴³

In fact, Goolsbee's and Petrin's conclusion is quite the opposite.

The demand for cable is rather insensitive to its own price and to the DBS price. Premium cable is more price responsive than basic is, though neither is particularly elastic... In other words, the demand estimates indicate that **DBS is not a particularly good substitute for cable in the minds of consumers**.⁴⁴

This is no simple oversight. The Goolsbee and Petrin study actually starts by citing the complaints of consumer groups that prices were being deregulated without adequate market forces to discipline them. It set out to study DBS and found it wanting as a competitor (see Exhibit 1).

The Telecommunications Act of 1996, however, phased out most price regulation and instead tried to promote competition as a check on price. The explicit goal of the Act was to stimulate local phone companies or new cable start-ups to enter the market.

As a general matter, this effort to encourage entry failed. Phone company and new cable entrants have been rare. Consumer advocates say that unfettered monopolies can now raise prices with impunity (Consumer Federation of America, (2001)). As the CPI and the Cable Television CPI data... indicate, since the phase out of price regulation began in 1996, the prices of cable have grown about 2.5 times faster than overall prices in the economy. This has led to increasing public calls for congress and the FCC to re-regulate cable, at least until there is "viable competition" (Kimmelman (1998)).⁴⁵

product is a substitute for another if it enjoys increased demand when the other's prices rises and the consumer's income is raised just enough to compensate for the drop in living standards caused (pp. 390-391).

Cross-price elasticity of demand. The proportionate change in the quantity demanded of one good divided by the proportionate change in the price of another good. If the two goods are SUBSTITUTES (e.g. butter and margarine), this ELASTICITY is positive. For instance, if the price of margarine increases, the demand for butter will increase (p. 99).

⁴⁰ Report on Cable Prices, p. 11.

⁴¹ Austan Goolsbee & Amil Petrin, *The Consumer Gains from Direct Broadcast Satellites and the Competition with Cable TV*, University of Chicago Graduate School of Business Working Paper (October 2001).

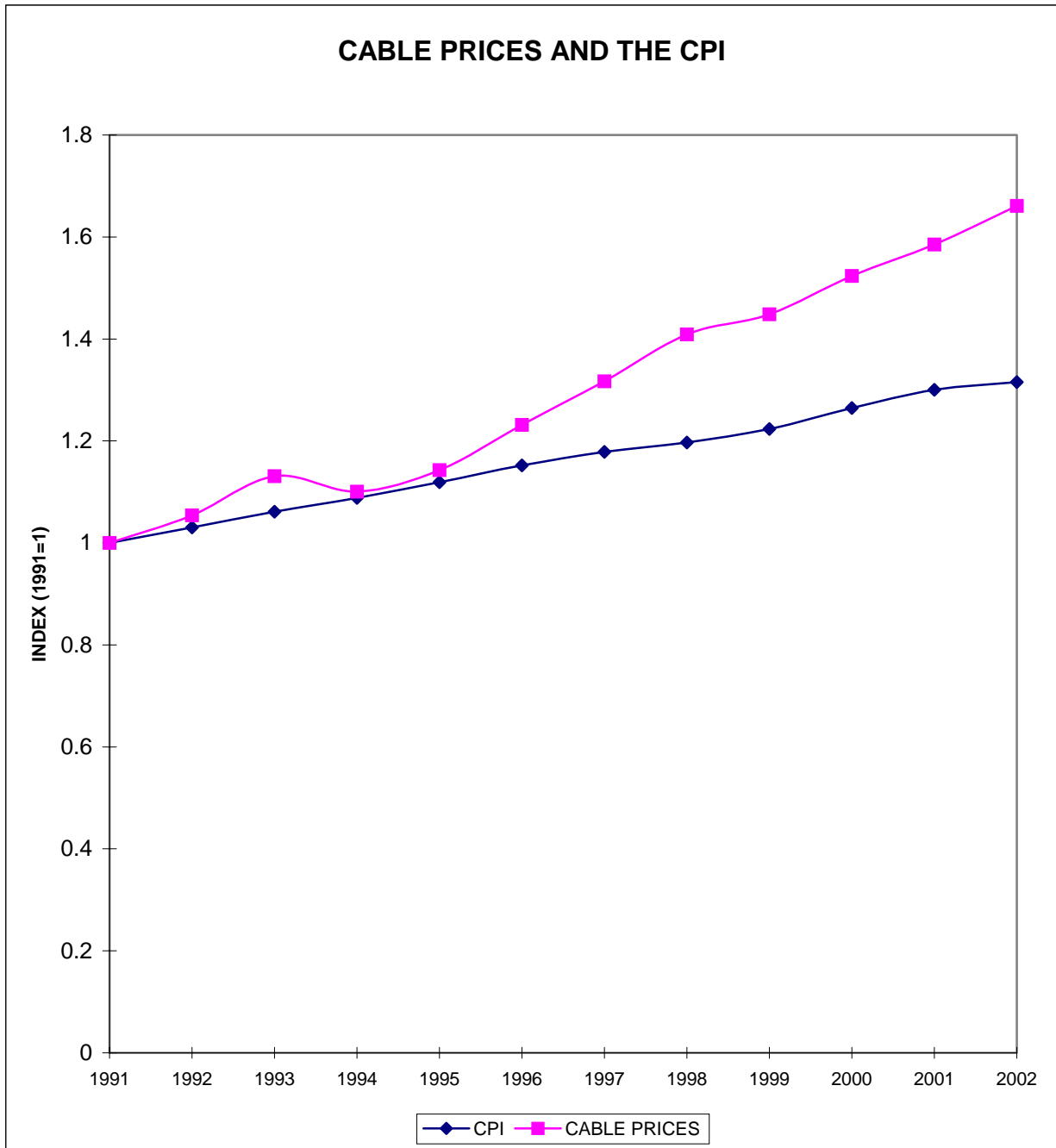
⁴² Rosston and Shelanski (p. 20), dismiss this study on the grounds that the data precedes the advent of local-into-local, but we point out it also largely precedes the advent of digital cable, which has negated the effect of local into local.

⁴³ Ordover, p. 62, footnotes omitted.

⁴⁴ Goolsbee & Petrin, p. 11.

⁴⁵ Goolsbee and Petrin, p. 4.

EXHIBIT 1:



Source: Austan Goolsbee and Amil Petrin, *The Consumer Gains from Direct Broadcast Competition with Cable TV* (May 29, 2001) (extended through January 2002).

The study found a lower elasticity of demand than the Commission and noted that the cable operators moved aggressively to increase prices, upon deregulation. Their behavior was consistent with the exercise of market power.

Using the baseline specification, the results indicate that to get to the point where the elasticity of demand reached -1 (the minimum price increase compatible with static profit maximizing), the firms would need to raise prices by 17%. To give some perspective, in the period immediately following our sample, prices actually rose by about 11%.⁴⁶

This misstatement of facts has a devastating impact on the cable industry arguments. Without point of sale competition, cable operators do not face market discipline in their programming choices. They can scrimp on quality to enrich themselves, degrade the programming bundle by discriminating against non-affiliated programs, or use monopoly rents to further the political agenda of the system owners, without suffering significant economic loss.

C. SUBSCRIBER PATTERNS SUPPORT THE VIEW OF LIMITED COMPETITION BETWEEN SATELLITE AND CABLE

With feeble support for the claim of competition in the econometric evidence, it is not surprising that cable industry analyses are forced to misinterpret subscriber patterns to keep the maintain a consistent story. Ordover states that “the non-cable share of the MVPD business continues to experience an annual growth rate of nearly 20%. Most of this growth has come from luring away existing cable subscribers.”⁴⁷

This statement is wrong (see Exhibit 2). Cable’s subscriber base is growing and has continued to grow at a steady pace throughout the recent period of rapid satellite growth. Without careful analysis, cable industry experts incorrectly assume the growth of satellite has come entirely at the expense of cable. Rosston and Shelanski state that “Since cable had virtually 100% market share of MVPD customers in 1994, the gains for the DBS providers has come at the expense of cable.”⁴⁸ This simplistic analysis is wrong and does not stand close scrutiny.

The cable industry experts have ignored new markets. In fact, satellite drew its subscribers from two places that cable had not gone. As discussed below, a very substantial segment of the satellite market exists in places not served by cable. Moreover, satellite was the only digital service available for a considerable period of time. In other words, cable was not losing subscribers to satellite, satellite was expanding the market and there is no reason to believe that, during this time period, cable could have entered those markets with an economically attractive offering. Because a very substantial part of satellite growth did not “come at the expense of cable,” it did not discipline the market behavior of cable.

The implications of this analysis for public policy are important and straightforward. Satellite has always been a digital niche player. It never competed for the bulk of cable’s basic/expanded basic customer base. J.P. Morgan has recently offered exactly this view of the cable-satellite product space.

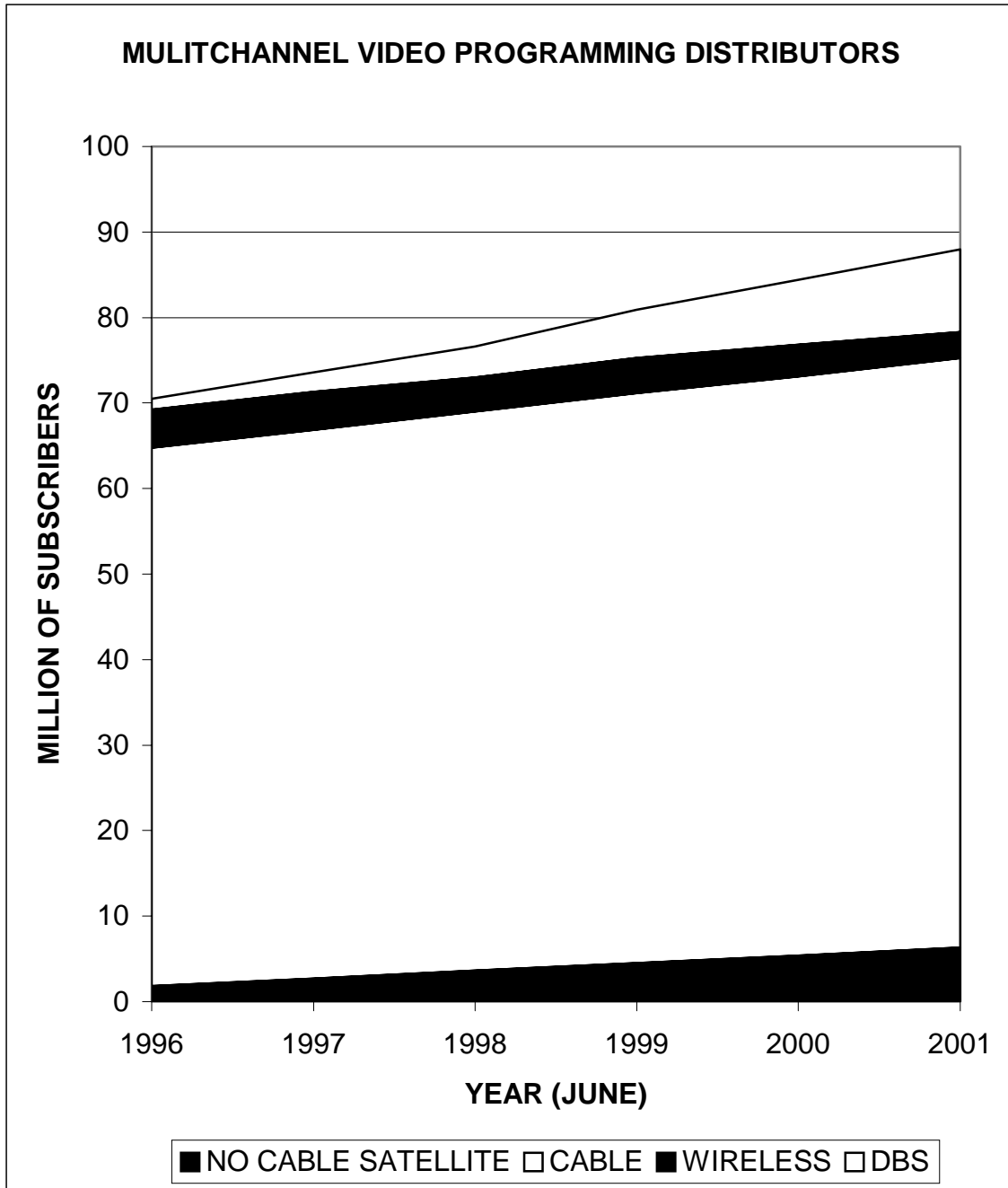
⁴⁶ Goolsbee and Petrin, p. 27.

⁴⁷ Ordover, p. 24.

⁴⁸ Rosston and Shelanski, p. 8).

EXHIBIT 2

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Source: Federal Communications Commission, Eighth *Annual Report*, In the Matter of Annual Assessment of the Status of the Market for Delivery of Video Programming, January 14, 2002.

We believe that more than 95% of all cable churn is caused by factors other than DBS competition. Competition generated churn rates of just 1.3% per year during the past five years, suggesting that former cable customers make up less than one-third of DBS's current customer base. The implication of this finding is significant because it suggests that the vast preponderance of DBS's growth depended on first-time multi-channel video (MVC) subscribers. We believe that growth in the MVC market will drop off in the next several years as the potential population of first-time MVC subscribers dwindles.⁴⁹

Failing to make a careful analysis of subscriber patterns, cable commenters incorrectly project large continuing gains for satellite.⁵⁰ The addition of high-capacity digital cable and cable modem Internet services allows cable operators to attack the high-end niche that satellite occupies.⁵¹ Cable will be able to leapfrog satellite at the high-end of the market, particularly when it is bundled with high-speed Internet access. Exhibit 3 shows the pattern of growth of digital subscribers in markets where cable and satellite actually compete. Cable's offering is growing much faster than satellite's comparable service. Therefore, the cable industry's projection of past trends to try to project vigorous future competition between satellite and cable is undercut.

The fact that cable now has an offering to compete in the satellite niche will slow satellite penetration. Cable has other advantages as well.

The outlook for DBS is all the more ominous when we look at total digital net adds across both cable and DBS. Since cable began offering a digital video service, it has increasingly shown its ability to capture a larger portion of net adds in each successive quarter. In large part, we think this reflects the simple reality that cable must merely convert existing customers from analog while DBS must acquire a new customer, a far costlier and perhaps untenable proposition in the long run. Cable's simple structural advantage will likely be difficult for DBS to overcome.⁵²

The J.P. Morgan analysis shows that satellite digital additions peaked in late 1999 and early 2000. Morgan Stanley Dean Witter had earlier predicted this pattern when it state that "we also believe that DBS additions will peak in 2000 as the cable television industry completes the majority of its system upgrades and deploys digital cable service throughout the U.S."⁵³

As a result, cable is in a much stronger position than satellite. JP Morgan analysis concluded that "[with the multi-channel video market approaching saturation and cable now capturing more than 70% of digital net adds against DBS, the satellite threat is significantly diminished."⁵⁴ Similarly, Merrill Lynch projects that digital cable growth will "slow" to about a 30 percent growth rate next year, still at least 50 percent than satellite.⁵⁵

⁴⁹ Jason B. Bazinet, *The Cable Industry* (J.P. Morgan Securities, Inc., November 2, 2001), p. 4.

⁵⁰ Ordover, pp. 23-27.

⁵¹ Boersma, Matthew, "The Battle for Better Bandwidth – Should Cable Networks be Open?," *ZDNet*, July 11, 1999.

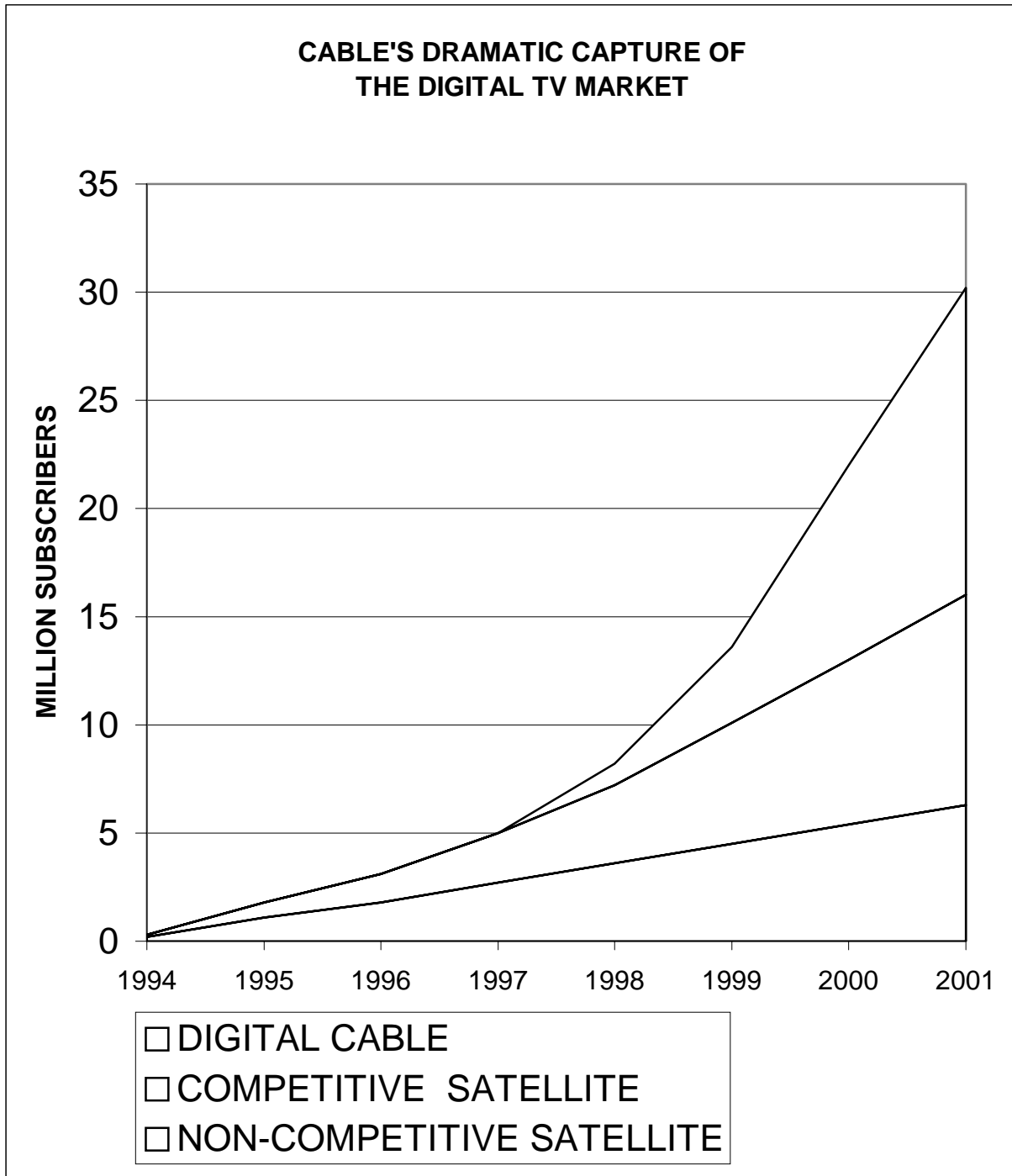
⁵² Bazinet, p. 9.

⁵³ Richard Bilotti, *The Digital Decade* (Morgan Stanley Dean Witter, April 6, 1999), p. 9.

⁵⁴ Bazinet, p. 1.

⁵⁵ *Cable Television*, March 1, 2002, p. 1.

EXHIBIT 3:



Source: Federal Communications Commission, Eighth *Annual Report*, In the Matter of Annual Assessment of the Status of the Market for Delivery of Video Programming, January 14, 2002. Jason B. Bazinet, *The Cable Industry* (J.P. Morgan Securities, Inc., November 2, 2001),

Recognizing saturation, a lack of competition, and market segmentation, shows satellite to be a niche player that is more likely to lose customers to cable over the next few years. Simply put, competition was never strong and it is getting weaker with the roll-out of digital cable.

Although we think the competitive overlap between DBS and cable is low, a historical analysis of DBS net adds relative to digital cable net adds suggests cable is rapidly closing in on DBS. In 1999, both digital cable and DBS were adding subscribers at roughly the same rate, but now digital cable is rapidly closing the gap. Presumably it is less expensive to upgrade an existing cable customer than it is for a DBS player to sign up a brand new customer.⁵⁶

III. SURVEY RESULTS SHOW THAT CABLE AND SATELLITE ARE VIEWED DIFFERENTLY BY CONSUMERS

The previous section demonstrated the inability of satellite to discipline cable with quantitative data on pricing and product substitution. As suggested above, this data “indicate that DBS is not a particularly good substitute for cable in the minds of consumers.” This section examines survey data to gain another perspective what is going on ‘in the minds of consumers.’ It explores two traditional aspects of market analysis from a public policy point of view. When economists analyze competition in markets they refer to product and geographic competition. The survey evidence suggests that there are significant differentiations between the satellite and cable products in both regards. Recognizing geographic and product market differences we reinforce the conclusion that “the competitive overlap between DBS and cable is low.”

A. OVERVIEW OF PRODUCT AND GEOGRAPHIC MARKETS

These observations are based on patterns that are readily identifiable in a number of data sets. For example, Centris, which does weekly surveying of multichannel video households, recently estimated that

- 40 percent of satellite subscribers live in areas where cable is unavailable,
- 2 million households subscribe to both satellite and cable, and
- digital cable and DBS households have relatively high PPV [pay per view] buy rates.⁵⁷

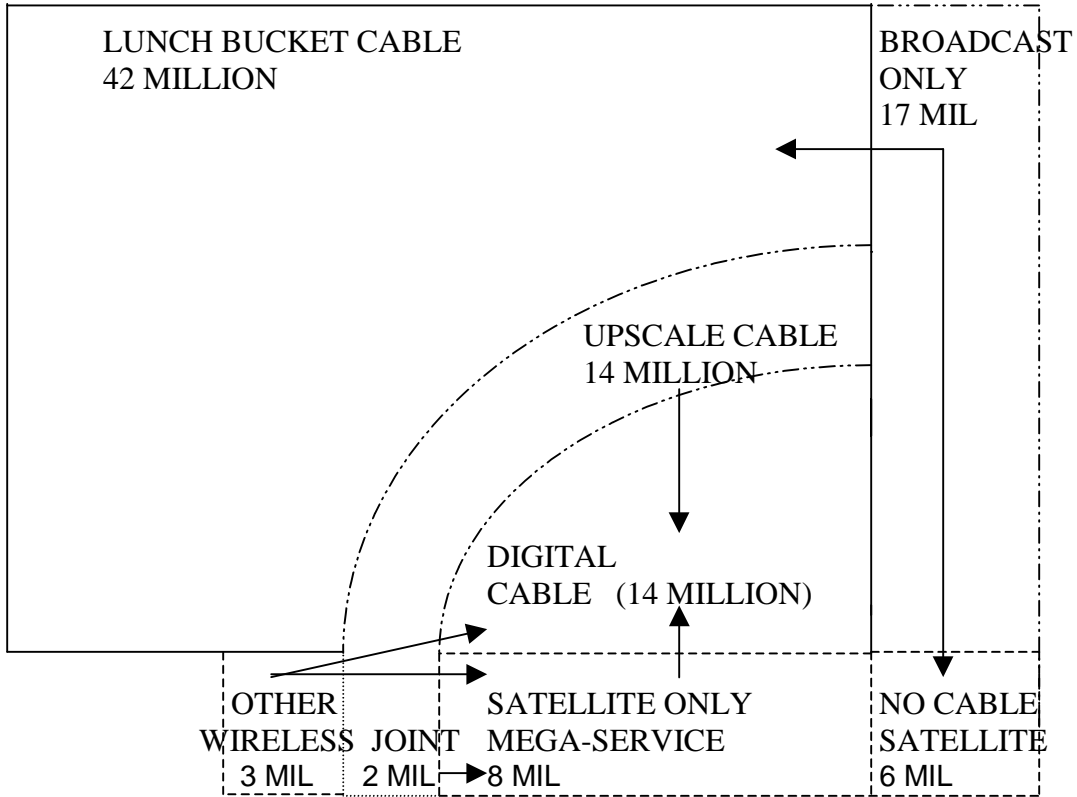
Respondents to a Consumers Union survey (CU Survey) exhibit these characteristics as well and the detailed questions on preferences and demographic characteristics enable us to use the data to explore the implications of these patterns. In particular, we explore the characteristics of satellite and digital cable subscribers. As the above quotes from Centris and the analysis in the previous sections indicate, the deployment of digital cable triggers competition within the niche that satellite has occupied not the broader cable market.

⁵⁶ Bazinet, p. 24.

⁵⁷ Centris, *Digital Cable and DBS households are 25% more likely to be on the web*, March 20, 2001.

For the purpose of describing the competitive landscape between cable and satellite, we describe the following market segments in the subsequent text (see Exhibit 4).

EXHIBIT 4:
THE MULTICHANNEL VIDEO DISTRIBUTION PRODUCT SPACE



We identify three types of satellite subscribers.

- No Cable – Satellite. These respondents have satellite and cannot get cable. They represent about 6 million subscribers.
- Satellite Only – Mega Service: These respondents have satellite and can get cable, but choose to take satellite only. They are about eight million subscribers.
- Joint (satellite+cable): These respondents have satellite and cable. They are about 2 million subscribers.

We also identify three types of cable subscribers.

- Digital Cable: These respondents take the digital cable tier. They are about 14 million subscribers.
- Analog cable subscribers who total about (56 million) are divided into two subgroups.
 - Lunch Bucket (basic) Cable: After examining viewing patterns and bills, we identify a group of cable subscribers we call the “lunch bucket crowd,” who take only the basic and expanded basic tiers of service. They are about 42 million subscribers.
 - Upscale cable subscribers, who take several additional tiers of service, but remain on analog. They are about 14 million subscribers.

There are still about 17 million households that receive TV over the air. We do not analyze these households in this discussion. As the JP Morgan analysis suggests, they are not likely to be a significant source of growth for cable or satellite in the near future. Several million are simply not served by cable or satellite and many in this group are lower income households unable to afford either.

B. THE NO CABLE - SATELLITE (PRIMARILY RURAL) NICHE

This section identifies the largely rural niche market that is served by satellite in which cable offers limited competition. It has long been recognized that satellite subscribership is much higher in rural areas. Simply put, satellite penetrated first and foremost in areas where cable was not available.

For example, in filings at the FCC, DirecTV states that its subscriber base was half urban and half rural.⁵⁸ In the recent past, however, it claims that about two thirds of new subscribers have been from urban areas. Given that over three-quarters of the U.S. population lives in urban areas, satellite subscribers are still disproportionately rural. In the CU satellite survey, 41 percent of respondents live in areas classified as having fewer than

⁵⁸ Seventh Annual Report, para 66.

100,000 people. In fact, the vast majority of places that fall in this category have fewer than 10,000 residents.⁵⁹ Thus, the survey respondents seem typical of satellite subscribers.

This can be seen in the survey data in two ways. First, we find that respondents in low density areas are much more likely to say they could not get cable. Over half the respondents (55 percent) who live in places with less than 100,000 people said they could not get cable. In contrast, less than one quarter (24 percent) of respondents who live in places with more than 2 million people said they could not get cable.

Second, we find that the majority (57%) of those who said they could not get cable live in places with less than 100,000 people. Another 13 percent of satellite owners who said they were unable to get cable live in places with between 100,000 and 500,000 people. Only 31 percent of satellite owners who said they had access to cable live in places with fewer than 100,000 people. In contrast to the satellite owners, cable subscribers are much more likely to come from more populous places. Approximately 47 percent of cable subscribers come from places with over 2,000,000. Another 21% live in places with between 500,000 and 2,000,000. In other words, approximately 70 % of the satellite owners who say they cannot get cable live in places with fewer than half a million people, whereas 68% of cable -only subscribers live in places with more than half a million people (see Exhibit 5).

This analysis shows a substantial part of the satellite base for which head-to-head competition with cable appears to be muted. For just over 40% of the satellite subscribers cable cannot compete.

C. DUAL SERVICE RESPONDENTS INDICATE THAT CABLE AND SATELLITE ARE COMPLEMENTS, NOT SUBSTITUTES, IN SOME MARKETS

Approximately 11 percent of the respondents take both cable and satellite service. This percentage is consistent with the figure of about 2 million subscribers cited above. JP Morgan puts the figure at 2.5 million. For these customers, the two would appear to be complements rather than substitutes.

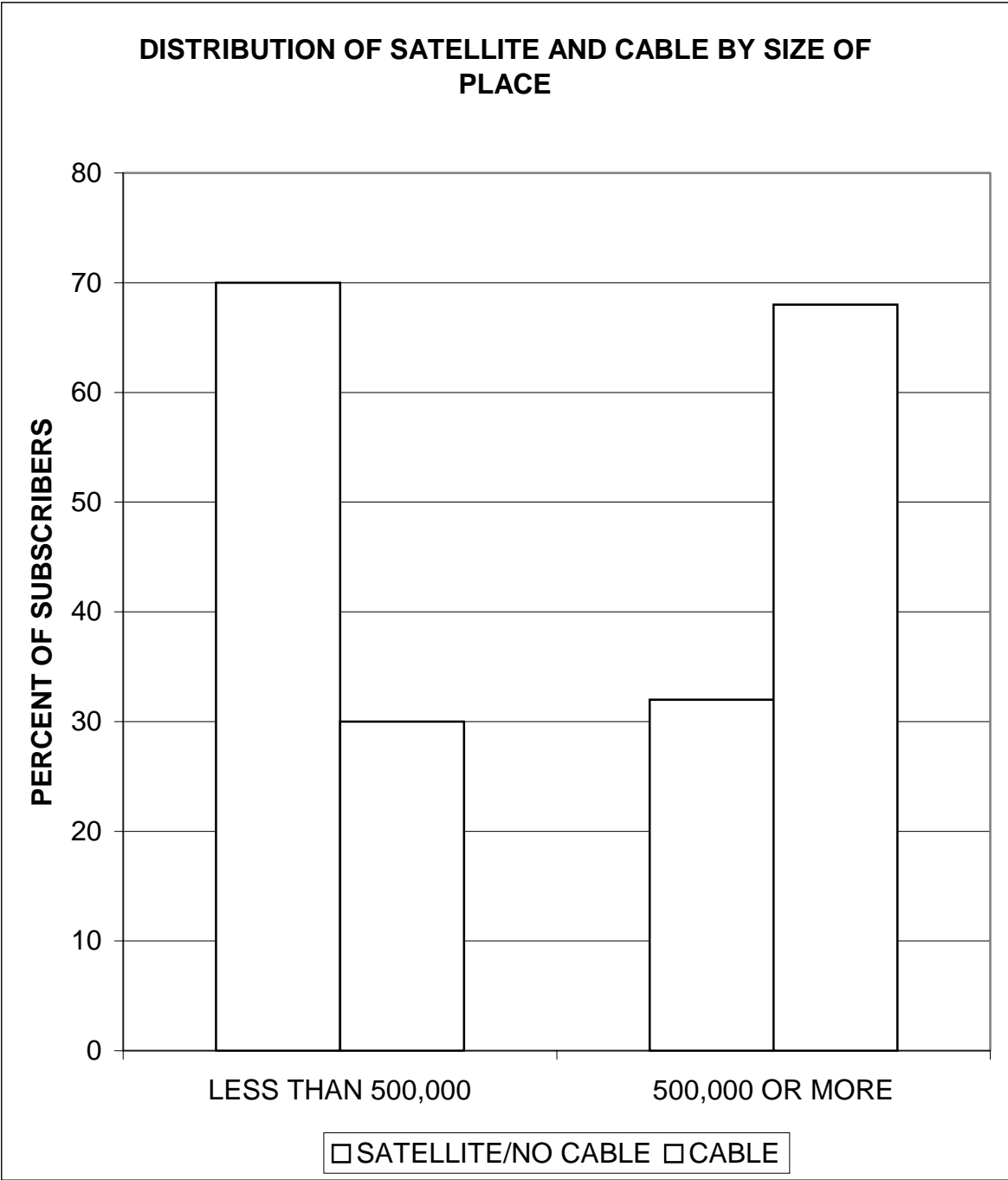
One reason to take both services is that local programming is more limited from satellite. Satellite subscribers who also take cable have a lower cable bill than other cable subscribers. They are almost three times as likely to report that their cable bill is less than \$30 per month (46 percent to 17 percent), suggesting that they take the basic tier which gives them the local channels they cannot get with satellite. They also report watching many fewer channels than other satellite subscribers and cable subscribers.

Satellite may overcome this handicap in some markets, depending on available capacity to transmit local channels. However, with the advent of digital cable, as the JP Morgan analysis suggests, it is unlikely that this will be a large source of future growth for satellite.

Thus, in this survey, just over half of respondents either cannot get cable or appear to view it as a complement, rather than a substitute. Just under half of the respondents have a choice between satellite and cable and choose satellite over cable. They are the focal point of the remainder of the analysis.

⁵⁹ US Bureau of the Census, *Statistical Abstract of the United States: 2000*, Table 38.

EXHIBIT 5:



D. SATELLITE FILLS A HIGH VOLUME/HIGH QUALITY SERVICE NICHE

This section analyzes the responses of satellite subscribers who have both cable and satellite available. The subset of consumers who take satellite only does so because it is perceived as a high volume, higher quality service. The most frequent reason given is the large number of channels (see Exhibit 6). Three quarters of the satellite-only subscribers are attracted by the large number of channels and 40 percent cite dissatisfaction with cable channel selection. A majority also says cable costs too much. Since, as we will show, cable is less expensive than satellite, this may seem odd, but the puzzle is solved by looking at the value proposition of satellite and cable.

EXHIBIT 6: REASONS FOR SUBSCRIBING TO SATELLITE SERVICES:
(Percent of Respondents, Multiple Responses Allowed)

SATELLITE POSITIVES	n =	Only Satellite
Wider selection		597
Lg. # of Channels		75%
Sports selection		26
Pay-per-view selection		24
Audio selection		21
Higher Quality Sound & Pictures		31
CABLE NEGATIVES ^{b/}		
Cost too much		51
Poor selection of channels		40

Source: Consumers Union Survey

A direct question posed to consumers on their perception of the value of satellite and cable knits these responses together (see Exhibit 7). Respondents were asked, "Overall, how good a value (in terms of programming choices and quality) do you consider this system to be, given the costs?" Satellite fared better.

Overall, satellite subscribers are much more favorable about the value proposition than cable subscribers. Although for both services the most frequent response was 'good value,' for satellite there was a much larger group of subscribers who see their value as excellent than for cable (30 percent v. 6 percent). In contrast, for cable there was a much larger group who see their service as a poor value than satellite (31 percent v. 8 percent).

However, dissatisfaction with the cable value proposition does not always translate into a decision to subscribe to satellite. Only 17 percent of the cable respondents said they would consider switching to satellite. Those who are willing to switch are much more likely to have expressed dissatisfaction with the cable value proposition. Nevertheless, less than one-third of those who said cable is a poor value are willing to switch.

EXHIBIT 7: VALUE PROPOSITIONS FOR SATELLITE

	Satellite only	All cable
n =	487	646
Excellent	35	6
Good	59	63
Poor	7	31
TOTAL	100	100

VALUE PROPOSITIONS FOR CABLE AND WILLINGNESS TO SWITCH

	Willing to switch	Not willing to switch	Total
n =	95	460	
Excellent	0	100	100
Good	12	88	100
Poor	31	69	100
TOTAL	17	83	100

Source: Consumers Union Survey

Given the attraction of satellite's wide selection, we should not be surprised to find that satellite owners have very different viewing patterns than analog cable subscribers (Exhibit 8). In the table the arrows highlight the relevant differences.

Satellite-only subscribers are less likely to watch broadcast networks and local public access channels (which they probably cannot get). Even the satellite subscribers who also get cable are less likely to watch local public access channels. Satellite-only subscribers are more likely to watch premium movie, sports and pay per view channels than those who get cable and satellite or just analog. However, digital cable subscribers look more like satellite-only subscribers than analog cable subscribers in their purchases of premium movies, sports and pay-per view.

Examination of the data reveals that the cable analog group has a clearly identified subgroup that we call the "lunch bucket," cable group. Eighty percent of the cable analog group subscribes to only basic and expanded basic service and takes no additional tiers. This represents the largest segment of cable subscribers by far, with 42 million. The remainder of the analog cable group is more upscale, subscribing to, on average, a total of 4 tiers.

EXHIBIT 8:
VIEWING PATTERNS
(Percent of Respondents)

PROGRAM TYPE	SATELLITE ONLY				SATELLITE + CABLE				CABLE ANALOG			CABLE DIGITAL			
	N	O	D		N	O	D		N	O	D	N	O	D	
Broadcast Networks	30	26	45	→	4	26	70		1	4	75	2	22	76	
Local Pub. Access	68	23	9	←	48	38	14	→	29	62	9	32	52	10	
Std. Cable/ Sat Channels	5	48	47	←	25	39	36	→	3	61	36	4	58	38	
Premium Movie	37	34	30	→	78	15	7		73	22	5	←	38	34	28
Premium Sports	67	27	7		86	9	5		81	16	3	←	59	29	12
Pay-per-View	48	51	2	←	89	11	0		95	5	1	←	71	21	2

Notes

N = Not at all; O = Once a month to a few times a week; D= Daily or almost daily.

* = Sample size vary across the comparisons but to nonresponses. Cell sizes and statistical tests are available upon request.

Source: Consumers Union Survey

E. PRICING DIFFERENCES BETWEEN CABLE AND SATELLITE SHOW THAT THEY ARE CONSIDERED DIFFERENT PRODUCTS

As suggested in the quotes from Centris in the introduction, the demographic and consumption patterns of market segments receive a great deal of attention in the industry literature, since knowing the kind of market is important to investors and others who are trying to assess future revenue prospects. We are not concerned about whether one market is upscale or not as a measure of how much revenue can be extracted from it, but we are interested instead in whether products are likely to compete across the market segments.

Pricing is a good example of the difference between market analysis and policy analysis. The issue of whether satellite is more expensive than cable is always confounded by differences in quality. Satellite is a different product. Satellite tends to deliver more channels. It has higher front end costs. Just over two-thirds of the respondents paid for their satellite system and the median cost was \$200. Over half paid for installation, and the median was \$75. In contrast, over four-fifths of cable subscribers paid less than \$25 for installation. Pricing has varied historically. When we looked at costs we looked at the last year only. Cable costs have been increasing and satellite costs have been declining. Nevertheless, even renting the satellite equipment, which has become an option, adds to the cost.

Monthly charges exhibit different patterns, particularly when the market segments are considered. Exhibit 10 compares the “lunch bucket” cable group (analog no additional tiers) to the satellite- only group in areas where cable is available as well as digital cable and satellite plus cable. There are very few satellite subscribers who take a small package of services similar to this group of cable subscribers.

Taking this view, the lunch bucket cable group reports a substantially lower bill (median of \$36) with the distribution skewed to the low end (95 percent spend less than \$50). At the other extreme are those who take cable and satellite. They have a median bill of \$68, with the distribution skewed to the high end (almost 80 percent spend more than \$50). Digital cable and satellite subscribers fall between the two extremes, both with a median bill of about \$50 and an even distribution of bills.

F. THE CABLE-SATELLITE PRODUCT SPACE

Combining the previous analyses, we can draw a clear map of the cable-satellite product space (see Exhibit 3 above). We have found that over 40 percent of satellite subscribers could not get cable. For these 6 million households the geographic market definition precluded competition. The absence of local programming undermines competition by creating a strong product segmentation for another 10 to 15 percent of satellite subscribers (2 to 2.5 million subscribers).

Of the eighty million multichannel video subscribers who live in areas where cable and satellite are both available, only about 10 percent have chosen satellite over cable. These subscribers have preferences and viewing patterns that are quite distinct from the typical “lunch bucket” cable subscribers, who make up over half the 80 million households where both cable and satellite are available.

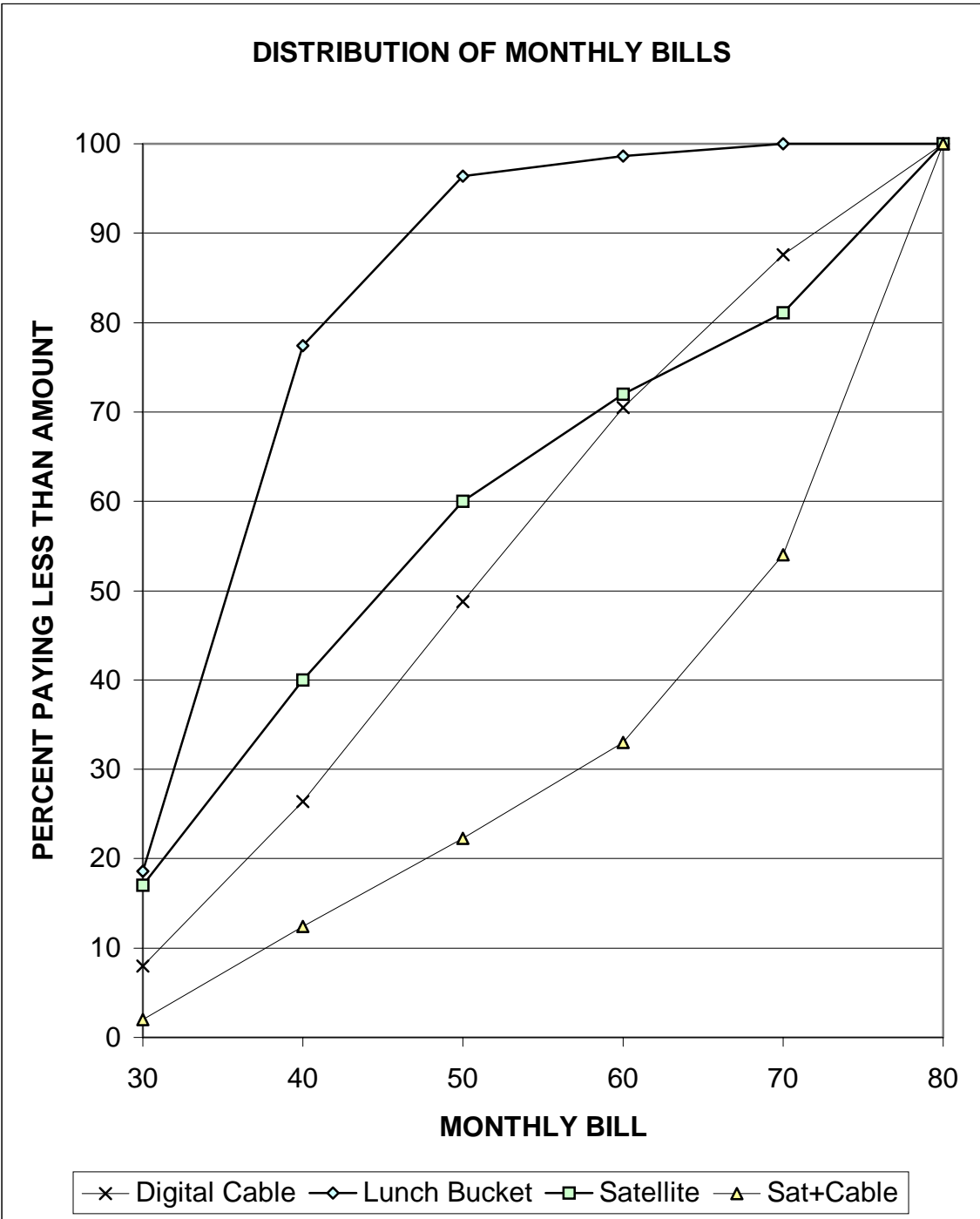
The satellite subscribers are, however, similar to digital cable subscribers. The number of subscribers to digital cable now almost equals the total number of satellite subscribers and it has been growing about twice as fast, especially in areas where both cable and satellite are available. Digital cable is a new technology development that hems in satellite as a competing product. This product offering puts a collar around satellite (some might say a noose), which will further diminish its competitive impact.

IV. THE PUBLIC POLICY ISSUE

A. CABLE INDUSTRY PERFORMANCE AND PUBLIC POLICY CONCERNS

Having painted a realistic picture of the lack of competition between satellite and cable, we turn to the public policy implications of this finding. In the 1984 Cable Act, the Congress gave the FCC the authority to deregulate prices in competitive cable TV markets. Congress had been told that head-to-head competition between cable companies would grow as new cable operators overbuilt incumbents and competing technologies would add further

EXHIBIT 10



competition.⁶⁰ The FCC determined that three over-the-air channels were enough to establish effective competition with cable in each community. As a result, cable systems serving about 80 percent of the country were deregulated.

Effective competition failed to materialize either from the entry of additional cable companies into the local franchise area or from other technologies. Over-the-air signals were extremely feeble competition. Numerous examples of discrimination in programming came to light. Cable prices exploded and public outcry ensued. In an effort to stave off legislation to re-regulate cable, the FCC reconsidered its three over-the-air rule and switched to six over-the-air stations as a standard. However, the pricing abuse was too great and the FCC's standard too weak to convince Congress that cable's market power would be checked.

By 1992, Congress had observed a continuing monopoly at the point-of-sale, with increasing concentration at the national level and growing vertical integration between programming and distribution. Congress re-regulated cable rates in 1992 and placed a range of "procompetitive" conditions on the industry, including a requirement that the Commission develop a structural limit on ownership (in the 1992 Cable Act).

During the second period of regulation, rate increases were diminished and the DBS satellite TV industry came into existence. Cable kept growing, adding approximately 7 million subscribers between the end of 1992 and 1995, boosting the total to about 62 million. Its penetration rate grew at a slightly higher rate during the regulated period than at any time after deregulation in 1984.

When Congress revisited the structure of the multichannel video market in the Telecommunications Act of 1996, it decided to relax rate regulation in anticipation of growing transmission competition from satellite and telephone companies. It cautiously left the ban on cross-ownership and the requirement for a horizontal limit in place.

Congressional caution was well-grounded in contemporary economic theory and in the empirical reality of the cable TV industry. Empirically, one of the great disappointments of the 1996 Telecommunications Act has been the failure of competition from alternative technologies to break down the market power of the incumbents.⁶¹ Congress devoted a whole section of the law to telephone competition for cable through open video systems.⁶² Open

⁶⁰ "Testimony of Thomas Wheeler, President of the National Cable Television Association, " before the *Subcommittee on Communications of the Committee on Commerce, Science and Transportation*, United States Senate, June 21, 1989, pp. 4-5.

Any analysis of cable ownership issues must begin with the fact that cable systems have developed as local monopolies. The premise of the 1984 Act was that cable would develop in a competitive market. Many legislators may have relied upon the promise of the cable industry that:

"A consumer will have a couple of choices of cable companies. There will be two cable wires running down the street." (citing Testimony of Preston R. Padden, President Association of Independent Television Stations, Inc." before the *Subcommittee on Communications, Committee on Commerce Science and Transportation*, United States Senate, February 16-17, 1983) pp. 126-127.

Other legislators likely relied on the anticipation that cable would face competition from emerging technologies such as direct broadcast satellite.

With the 20/20 vision of hindsight, it is now clear that there is no competition -- no head to head cable competition, and no effective competition from other media.

⁶¹ This section is drawn from the Mark Cooper and Gene Kimmelman, *The Digital Divide Confronts the Telecommunications Act of 1996*, February 1999.

⁶² Title II, part 5.

video systems are non-existent.⁶³ As this paper shows, cross-technology competition from satellite is weak as well.

B. THE PERVASIVE PROBLEM OF MARKET POWER IN THE CABLE INDUSTRY

Conceptually, the problem of market power in the industry is pervasive with a persisting virtual monopoly at the point of sale, substantial vertical integration between distribution and programming, and concentration at the national level. Standing alone, each of the structural conditions merits strong concern; taken together, the combination of these three factors gives integrated cable operators a great deal of market power. Throughout the FCC's ongoing ownership and cross-ownership proceedings and analysis, the three different sources of concern are intertwined.

The cable-broadcast cross-ownership proceeding deals with a situation that would involve both vertical integration and horizontal concentration. Cable operators are the primary distribution mechanisms for video programming, with about two-thirds of all TV households subscribing to cable. If allowed to merge with local broadcast stations, cable operators would be purchasing a partially competing local distribution company and one that produces an input (programming) to the final product sold to the public.⁶⁴ The horizontal limit proceeding also has elements of both horizontal concentration and vertical integration, since the large dominant MSOs are also programmers.

We have already explored the issue of monopoly power at the point-of-sale. This plays a critical role in the debate over programming. The harm that a large purchaser of programming could impose on the national programming market (monopsony power) is greatly enhanced if it possesses market power as a seller of video services to the public at retail (monopoly power).

1. Horizontal Market Power as a Buyer in the Program Market

A large national player, with market power at the point-of-sale, has an interest in controlling the flow of unaffiliated programming, even if it does not own any of its own programming. Controlling the flow of programming enables it to deny programming to potential rivals. By denying the availability of inputs to rivals, it can reduce the likelihood of entry. Exercising its monopsony power, it can raise its rate of profit, relative to actual or potential competitors, and drive programmers to seek to recover their costs from smaller program purchasers.

All of the industry experts incorrectly equate the simple economics of program production with the political economy of market structure.⁶⁵ For example, Rosston and Shelanski argue that

the incentive of cable operators to act monopsonistically is further weakened by the fact that programs are non-rivalrous goods. One operator's distribution of a

⁶³ Federal Communications Commission, *In the Matter of Annual Assessment of Competition in markets for the Delivery of Video Programming*, Fifth Annual Report, Appendix C.

⁶⁴ Another 13 percent of TV households takes satellite only. A substantial percentage of these may still rely on over the air broadcast for local TV stations, since local into local over satellite has not become pervasive.

⁶⁵ Ordoover, pp. 12-17; Joskow and McLaughlin, *An Economic Analysis of Subscriber Limits*, Horizontal Limits Proceeding, pp. 8-10.

program does not interfere with the ability of another operator to disseminate the same program.⁶⁶

In reality, one operator certainly can interfere with the ability of another operator to disseminate the same program, for strategic reasons that have nothing to do with the rivalrousness of production costs. This can and does occur, as numerous examples from the hearing record make clear. When a large operator demands exclusivity so that potential or actual competitors cannot have access to it,⁶⁷ or explicitly demands to be given the lowest price,⁶⁸ or implicitly pushes the programmer to recover a disproportionate share of his costs from smaller operators who lack monopsony power,⁶⁹ he places the competitor at a disadvantage. The size of the entity is critical to the effectiveness of the demand, but that is what monopsony is all about.

2. Vertical Integration

Market power at the point-of-sale is also readily transmitted back up the value chain when cable operators become vertically integrated. Reduced competition at the point-of-sale enables them to favor their own programming or hinder unaffiliated programming in reaching the market, since unaffiliated programs have little or no chance of reaching consumers within the service areas that the cable operators dominate. Once they become vertically integrated, cable companies have incentives to withhold programming from potential competitors in (downstream) distribution markets or to squeeze those competitors by driving up their costs.⁷⁰

A substantial market share for dominant firms in the national programming market is an independent problem that is reinforced by horizontal concentration and vertical integration. Given the nature of television programming, with its high first-copy costs, producers need to achieve a large audience quickly to survive. By controlling a substantial number of eyeballs, cable operators can make or break programming. Exercising monopsony power as buyers, they can squeeze programmers by holding down what they pay or by insisting on sharing the profits (demanding equity stakes). Once they become vertically integrated, their incentive to squeeze out rivals is reinforced. The fewer the alternatives available for specialized inputs (creative producers), the easier their task of controlling the programming market.

C. RESTATING THE POLICY PROBLEM IN ECONOMIC TERMS

The public policy problem can be rendered in formal and quantitative economic terms of market structure and market power analysis. In its notice of proposed rulemaking in the horizontal limit proceeding the Commission identifies three specific measures of market power that will be discussed below. At the outset it is important to ground these measures in a proper economic framework.

⁶⁶ p. 6.

⁶⁷ See comments of the Consumer Federation of America, et al, Horizontal Limits Proceeding, p. 102-105, 124-139, Consumer Federation of America Reply Comments, pp. 46-56.

⁶⁸ See comments of the Consumer Federation of America, et al, Horizontal Limits Proceeding, p. 102-105, 124-139, Consumer Federation of America Reply Comments, pp. 46-56.

⁶⁹ See comments of the Consumer Federation of America, et al, Horizontal Limits Proceeding, p. 102-105, 124-139, Consumer Federation of America Reply Comments, pp. 46-56.

⁷⁰ See comments of the Consumer Federation of America, et al, Horizontal Limits Proceeding, p. 102-105, 124-139, Consumer Federation of America Reply Comments, pp. 46-56.

Economic public policy is primarily concerned with market performance.⁷¹ The concept of performance is multifaceted, including both efficiency and fairness.⁷² The measures of performance to which we traditionally look are pricing, quality, and profits. They are the most direct measure of how society's wealth is being allocated and distributed.

The performance of industries is determined by a number of factors, most directly the conduct of market participants. Do they compete? What legal tactics do they employ? How do they advertise and price their products?⁷³ Conduct is affected and circumscribed by market structure. Market structure includes an analysis of the number and size of the firms in the industry, their cost characteristics and barriers to entry.⁷⁴ Market structure is influenced by basic conditions, such as the elasticities of supply and demand and the constraints of available technologies.⁷⁵

Market structures that support competition are the primary goal of public policy because "[c]ompetition has long been viewed as a force that leads to an ideal solution of the economic performance problem, and monopoly has been condemned."⁷⁶ The predominant reason for the preference for competitive markets reflects the economic performance they generate, although there are political reasons to prefer such markets as well.⁷⁷ In particular, competition fosters an efficient allocation of resources, the absence of profit, the lowest cost production, and a strong incentive to innovate.⁷⁸ Where competition breaks down, firms are said to have market power⁷⁹ and the market falls short of these results.⁸⁰ Pure and perfect competition is rare, but the competitive goal is still valid.⁸¹ Therefore, public policy pays a great deal of attention to the relative competitiveness of markets as well as the conditions that make markets more competitive or workably competitive.⁸²

⁷¹ Scherer, F. M. and David Ross, *Industrial Market Structure and Economic Performance* (Boston, Houghton Mifflin: 1990), p. 4. Shepherd, William, G., *The Economics of Industrial Organization* (Prentice Hall, Engelwood Cliffs, N.J., 1985), p. 5, presents a similar view.

⁷² Scherer and Ross, p. 4.

⁷³ Scherer and Ross, p. 4.

⁷⁴ Scherer and Ross, p. 5.

⁷⁵ Scherer and Ross, p. 5.

⁷⁶ Scherer and Ross, p. 15.

⁷⁷ Scherer and Ross, p. 18.

⁷⁸ Scherer and Ross, p. 20.

⁷⁹ Scherer and Ross, pp. 17...18.

⁸⁰ Scherer and Ross, Chapter 18.

⁸¹ Scherer and Ross, p. 16...17

⁸² Scherer and Ross, pp. 53-54. Summarizing the literature, Scherer and Ross develop a useful list of these characteristics as follows:

Structural Criteria: The number of traders should be at least as large as scale economies permit, There should be no artificial inhibitions on mobility and entry; There should be moderate and price-sensitive quality differentials in products offered.;

Conduct Criteria: Some uncertainty should exist in minds of rivals as to whether price initiatives will be followed; Firms should strive to attain their goals independently, without collusion; There should be no unfair, exclusionary, predatory, or coercive tactics; Inefficient suppliers and customers should not be shielded permanently; Sales promotions should be informative, or at least not misleading; There should be no persistent, harmful price discrimination.

Performance Criteria: Firms' production and distribution operations should be efficient and not wasteful or resources; Output levels and product quality (that is variety, durability, safety, reliability, and so forth) should be responsive to consumer demands; Profits should be at levels just sufficient to reward investment, efficiency, and innovation; Prices should encourage rational choice, guide markets toward equilibrium, and not intensify cyclical instability; Opportunities for introducing technically superior new products and processes should be exploited; Promotional expenses should not be excessive.; Success should accrue to sellers who best serve consumer wants

Market structure analysis identifies situations in which a small number of firms control a sufficiently large part of the market to make coordinated or reinforcing activities feasible. Through various implicit and explicit mechanisms, a small number of firms can reinforce each other's behavior rather than compete. Identification of when a small number of firms can exercise this power is not a precise science. Generally, however, when the number of significant firms falls into the single digits, there is cause for concern, as the following suggests.

Where is the line to be drawn between oligopoly and competition? At what number do we draw the line between few and many? In principle, competition applies when the number of competing firms is infinite; at the same time, the textbooks usually say that a market is competitive if the cross effects between firms are negligible. Up to six firms one has oligopoly, and with fifty firms or more of roughly equal size one has competition; however, for sizes in between it may be difficult to say. The answer is not a matter of principle but rather an empirical matter.⁸³

D. MEASURES OF MARKET POWER

1. Market Structure – the Number and Size of Firms and the HHI

The DOJ defines levels of concentration to determine the extent of review of mergers in terms of the Herfindahl-Hirschman Index (HHI).⁸⁴ This measure takes the market share of each firm, squares it, sums the result, and multiplies by 10,000.⁸⁵ A second method to quantify market concentration is to calculate the market share of the largest 4 firms (4 firm concentration ratio or CR4).

Under its Merger Guidelines, the DOJ considers a market with an HHI of 1000 or less to be unconcentrated (see Exhibit 11). Such a market would have the equivalent of ten equal sized competitors. In such a market, the 4-firm concentration ratio would be 40 percent. Any market with a concentration above this level is deemed to be a source of concern. The DOJ considers an HHI of 1800 as the point at which a market is considered highly concentrated. This level falls between five and six equal-sized competitors.

⁸³ J. W. Friedman, *Oligopoly Theory* (Cambridge: Cambridge University Press, 1983), pp. 8-9.

⁸⁴ U.S. Department of Justice, *Merger Guideline*, revised, 1997.

⁸⁵ Shepherd, p. 389, gives the following formulas for the Herfindahl-Hirschman Index (HHI) and the Concentration Ratio (CR):

$$H = \frac{n}{I} \sum_{i=1}^n S_i^2$$

$$CR = \frac{m}{i} \sum_{i=1}^m S_i$$

$m = i = 1$
where

n = the number of firms

m = the market share of the largest firms (4 for the 4 firm concentration ratio)

S_i = the share of the i th firm.

EXHIBIT 11:
DESCRIBING MARKET CONCENTRATION FOR PURPOSES OF PUBLIC POLICY

DEPARTMENT OF FIRM JUSTICE MERGER SHARE GUIDELINES	TYPE OF MARKET	EQUIVALENTS IN TERMS OF EQUAL SIZED FIRMS	HHI	4-
Highly Concentrated Moderately Concentrated Unconcentrated	Monopoly	1 (with 65% or more)	5300+	100
	Duopoly	2	3000+	100
	Tight Oligopoly	6	1800	67
	Moderately Concentrated	10	1667	40
	Atomistic Competition	50	1000	8

Sources: U.S. Department of Justice, *Horizontal Merger Guidelines*, revised April 8, 1997, for a discussion of the HHI thresholds; Shepherd, William, G., *The Economics of Industrial Organization* (Prentice Hall, Englewood Cliffs, N.J., 1985), for a discussion of 4 firm concentration ratios.

Shepherd describes these thresholds in terms of four-firm concentration ratios as follows:⁸⁶

Tight Oligopoly: The leading four firms combined have 60-100 percent of the market; collusion among them is relatively easy.

Loose Oligopoly: The leading four firms, combined, have 40 percent or less of the market; collusion among them to fix prices is virtually impossible.

Shepherd refers to collusion in his discussion, but it is important to note that is not the only concern of market power analysis or the Merger Guidelines. The DOJ Guidelines are oriented toward conditions under which a broad range of types of anticompetitive behaviors are sufficiently likely to occur to require regulatory action. The Merger Guidelines recognize that market power can be exercised with coordinated, or parallel, activities and even unilateral actions in situation where there are small numbers of market players.⁸⁷ The area of

⁸⁶ Shepherd, p. 4.

⁸⁷ Horizontal Merger Guidelines, at section 0.1.

noncollusive, oligopoly behavior has received a great deal of attention. A variety of models have been developed in which it is demonstrated that small numbers of market participants interacting in the market, especially on a repeated basis, can learn to signal, anticipate, and parallel one another to achieve outcomes that capture a substantial share of the potential monopoly profits. This leads us to identify several other specific types of markets when such behavior is more or less likely.

First, the highly concentrated category can be broken down into two types of markets that are a special source of concern. Although the expression 'monopoly' technically refers to one firm, antitrust practice refers to monopoly power when the market share of a firm rises to the level of 60 to 70 percent. In both these cases the CR4 would be 100. The HHI can vary, depending on the size of the second firm in the market. A dominant firm with a market share of 65 percent and ten small firms would result in an HHI of about 4,300. A 'duopoly' refers to a market with only two firms. Two equal sized firms would be a duopoly with an HHI of 5,000. As a practical matter in media markets we observe that monopoly situations where the leading firm has over 65 percent of the market share exhibit HHIs of 5,300 or higher. Duopolies where two firms are generally fall in the 60/40 percent range, exhibit HHIs between 3000 and 5300.

On the other hand, we should not forget that although ten firms constitute an unconcentrated market, that number does not ensure vigorous competition. Generally, a much higher number, perhaps fifty, is associated with the concept of vigorous or atomistic competition. With 50 equal size competitors, the HHI would be 200 and the CR 4 would be 8.

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The area of noncollusive, oligopoly behavior has received a great deal of attention. A variety of models have been developed in which it is demonstrated that small numbers of market participants interacting in the market, especially on a repeated basis, can learn to signal, anticipate, and parallel one another to achieve outcomes that capture a substantial share of the potential monopoly profits.⁸⁸

The rule of thumb reflected in all iterations of the Merger Guidelines is that the more concentrated an industry, the more likely is oligopolistic behavior by that industry.... Still, the inference that higher concentration increases the risks of oligopolistic conduct seems well grounded. As the number of industry participants becomes smaller, the task of coordinating industry behavior becomes easier. For example, a ten-firm industry is more likely to require some sort of coordination to maintain prices at an oligopoly level, whereas the three-firm industry might more easily maintain prices through parallel behavior without express coordination.

⁸⁸ Rosston and Shelanski misstate the operative problem of market power (p. 7). They insist on unilateral action when they argue that "if the cable operator were not large enough to dictate the nature of programming for the market as a whole, then the large cable operator would face competition." This ignores the role of coordinated or parallel strategic actions. Lawrence Sullivan and Warren S. Grimes, *The Law of Antitrust: An Integrated Handbook*, Hornbook Series (West Group, St. Paul, 2000), pp. 531 describe the general issue as follows.

They go on to note the mechanisms that might be used and the usefulness of the HHI in this regard. Oligopoly conditions may or may not require collusion that would independently violate Section 1 of the Sherman Act. A supracompetitive price level may be maintained through price leadership (usually the leader is the largest firm), through observance of a well-established trade rule (e.g., a convention of a 50 percent markup in price among competing retailers), or through strategic discipline of nonconforming members of the industry...

2. Price – the Lerner Index

The public policy goal we have outlined in theory and that Congress has clearly articulated in its directives to the FCC is to prevent the abuse of market power. The primary measure of that harm is in the impact it has on prices and efficiency, although increasing attention is paid to quality and innovation. Price analysis focuses on the firm's ability to set price above cost to achieve above normal profits.

This analytic framework has been articulated by prominent "liberal" (Scherer and Ross) and "conservative" economists (Landes and Posner)⁸⁹ with a focus on the Lerner index, to which the horizontal limit notice refers.⁹⁰ The *Lerner Index* is the extent to which prices are marked up over costs, defined as⁹¹

$$L = (\text{Price} - \text{Marginal Cost}) / \text{Price}^{92} = \frac{P - MC}{P} = \frac{1}{E}$$

Landes and Posner express the price/cost margin by converting it to the reciprocal of the elasticity of demand. The lower the elasticity of demand, the greater the market power. They then transform the index into an expression that used the market share of the dominant firm and decomposed the elasticity of demand into two components.

$$L = \frac{(P - C)}{P} = \frac{1}{E_d} = \frac{S}{e_m^d + e_j^s (1 - s_i)}$$

where:

To the extent that one or very few members of a concentrated industry have much higher market shares than other members, the opportunities for strategic disciplining may expand... The expanded ability of the larger firm to coerce price discipline is reflected in the Herfindahl-Hirschman Index (HHI), which will assign a high concentration index to an industry with a very large participant. An industry with the same number of participants, each of them roughly equal in size, will have a lower index.

Lawrence Sullivan and Warren S. Grimes, describe the DOJ approach as follows pp. 596-597:

The coordination that can produce adverse effects can be either tacit or express. And such coordination need not be unlawful in and of itself. According to the 1992 Guidelines, to coordinate successfully, firms must reach terms of interaction that are profitable to the firms involved and be able to detect and punish deviations. The conditions likely to facilitate these two elements are discussed separately, although they frequently overlap.

In discussing how firms might reach terms for profitable coordination, the Guidelines avoid using the term "agreement," probably because no agreement or conspiracy within the meaning of Section 1 of the Sherman Act is necessary for the profitable interaction to occur. As examples of such profitable coordination, the Guidelines list "common price, fixed price differentials, stable market shares, or customer or territorial restrictions." Sometimes the facilitating device may be as simple as a tradition or convention in an industry.

⁸⁹ Landes, W. M. and R. A. Posner, "Market Power in Anti-trust Cases," *Harvard Law Review*, 19: 1981.

Interestingly, the first economic text cited by Landes and Posner (at note 6) was the 1980 edition of Scherer and Ross.

⁹⁰ Horizontal Limit Proceeding, para. 63

⁹¹ Scherer and Ross, at 70... 71.

⁹² Scherer and Ross, at 70... 71.

S = the market share of the dominant firm

E_m^d = elasticity of demand in the market
 E_s = elasticity of supply of the competitive fringe
 s_i = market share of the fringe.

The decomposition of that index into the key market structure characteristics – market shares, elasticities of supply and demand – elucidates the fabric of the concept of market power. In words this formula says that the markup of price over cost will be directly related to the market share of the firm and inversely related to the ability of consumers to reduce consumption (the elasticity of demand) and to the ability of other firms (the competitive fringe) to increase output (the elasticity of this supply).

Interestingly, the point of the Landes and Posner article was to argue against the rote use of market shares in market power analysis. The elasticities of supply and demand were of particular concern.

Market Share Alone Is Misleading. -Although the formulation of the Lerner index in equation (3) provides an economic rationale for inferring market power from market share, it also suggests pitfalls in mechanically using market share data to measure market power. Since market share is only one of three factors in equation (2) that determine market power, inferences of power from share alone can be misleading. In fact, if market share alone is used to infer power, the market share measure in equation (2), which is determined without regard to market demand or supply elasticity (separate factors in the equation), will be the wrong measure. The proper measure will attempt to capture the influence of market demand and supply elasticity on market power.⁹³

This reminds us in simple terms that when we talk about market forces we mean the ability of consumers to cut back or shift their demand and the ability of producers to increase their output in response to price increases, i.e., the elasticities of supply and demand. If these elasticities are low, market forces are weak and the exercise of market power will take place.⁹⁴ Once one brings these elasticities into play in an industry like cable TV, the analysis becomes extremely troubling. Landes and Posner point out that when demand elasticities are low, market power becomes a substantial problem – the formula “comes apart.”⁹⁵

3. Profit – Tobin’s q

If prices are set above costs, we would expect market power to be observable in a heightened level of profitability. Scherer and Ross describe a series of profitability measures that includes profit margins, return on equity, and return on investment.⁹⁶ One of the other

⁹³ Landes and Posner, at 947.

⁹⁴ An improvement in the formula was suggested to take patterns of strategic interaction into account by Ordoover, J.A. and R. D. Willig, “Herfindahl Concentration, Rivalry, and Mergers,” *Harvard Law Review*, 95: 1982.

⁹⁵ Landes and Posner, at 942.

⁹⁶ Scherer and Ross, at 415... 416.

As a surrogate, researchers have chosen diverse profitability measures that can be used, with varying degrees of reliability, as proxies for the evaluation of price above marginal cost.

measures of profitability identified by Scherer and Ross is Tobin's q, which "captures the deviation between the market value of a firm and the replacement cost of its assets."⁹⁷

$$q = \frac{M_C + M_P + M_D}{A_R}$$

The numerator is the sum of all common and preferred stock plus outstanding debt. The denominator is the cost of replacing total assets. The logic is straightforward since "in an industry that meets all the conditions of pure competition, the q ratio should be one." Supranormal profits would attract entry. This means that if entrepreneurs could simply enter the market and put up competing systems, they could do so at a much lower cost. Needless to say, if competitors could actually enter the market, incumbent firms could not command such a premium price for their systems. Scherer and Ross note that all of the profitability measures present problems, but they are all highly correlated. The Commission asks specifically about Tobin's q as a measure of market power distinct from the Lerner index discussed above.

V. INDICATORS OF MARKET POWER

A. BASIC MARKET CONDITIONS AND PRICING PATTERNS

1. Demand and Income Elasticities

We have demonstrated a low elasticity of demand and substitution with a number of different types of data. The low price elasticity of demand and elasticity of substitution interact with a low income elasticity of demand to reinforce the market power on the supply side at the

A good long-run approximation to the Lerner index is the ratio of supra-normal profits to normal cost. This is approximated by the ratio:

$$\frac{\pi_s}{s} = \frac{\text{Supra-normal profit}}{\text{Sales revenue}}$$

where supra-normal profit = sales revenue – noncapital costs – depreciation – (total capital x competitive cost per unit of capital).

Second-best surrogates falling into three categories.

One is the accounting rate of return on stockholders' equity:

$$\frac{\pi_E}{E} = \frac{\text{Accounting profits to stockholders}}{\text{Book value of stockholders equity}}$$

Or on capital:

$$\frac{\pi_E}{E} = \frac{\text{Accounting profits + interest payments}}{\text{Total Assets}}$$

⁹⁷ Scherer and Ross, p. 416.

point of sale.⁹⁸ This means that consumer resistance to price increases is limited⁹⁹ and that consumers are willing to pay more as their incomes rise.

Cable's low elasticity of demand stems from the lack of alternatives and the popularity of television. Low price elasticity and low income elasticity both feed off of fundamental television viewing patterns that have been established over four decades.¹⁰⁰ Americans watch a significant amount of television – in the neighborhood of eight hours per day.¹⁰¹ Television has come to be the premier source of information and entertainment in American life. Deeply entrenched viewing patterns and strong demand for entertainment, news, information, and sports make the market potential for cable huge. The ability to deliver large numbers of channels gives cable a huge advantage in meeting this demand.

2. Price

The absence of competition in this expanded core monopoly product of cable has similar implications for programming quality. To the extent that cable companies need to invest, they direct their efforts elsewhere, developing niche products or extending their market power into neighboring markets, such as broadband Internet access. Despite all of the talk about changes in technology and more aggressive efforts to stimulate competition in the 1996 Telecommunications Act, rate increases during the period since its passage have been similar to increases in the period after the passage of the 1984 Act, when rates were partially, then fully, deregulated. In fact, rates increased resumed their earlier deregulated pattern of relentlessly rising at two to three times the rate of inflation. As we have seen, cable operators have relentlessly raised basic cable rates in the exercise of that market power.

Not only have prices increased, but the industry has also restructured its revenue stream to maximize the leverage afforded by its market power. It has engaged in bundling, price discrimination, and other anti-consumer behavior (including activities such as efforts to impose negative check-offs and tie-in sales), driving consumers to buy bigger and bigger packages of programs at higher prices. While basic packages were being expanded and bundled to force consumers to pay higher prices, rates for pay services were flat. With consumers forced to buy more and more programs, the industry has increased its advertising revenues even more sharply than its other sources of revenue.¹⁰²

⁹⁸ Mayo, J. W. and Y. Otsuka, "Demand, Pricing and Regulation, Evidence from the Cable TV Industry," Rand Journal of Economics, Autumn, 1991; Pacey, P. L., "Cable Television in a Less Regulated Market," Journal of Industrial Economics, September, 1985; Webb, G.K., The Economics of Cable Television (Lexington: Lexington Books, 1983); Duncan, K. R. and C.F. DeKay, Estimation of an Urban Cable Demand Model and Its Implications for Regulation for Major Markets, Center for Metropolitan Planning and Research, Johns Hopkins University, March 1976; Charles River Associates, Analysis of the Demand for Cable Television, April 1973; Noll R.G., M.J. Peck, and M.J. McGowan, Economic Aspects of Television Regulation (Washington, D.C.: The Brookings Institution); R.E. Park, "Prospects for Cable in the 100 Largest Television Markets," Bell Journal of Economics and Management Science, Spring, 1972; Commanor, W.S. and B. M. Mitchell, "Cable Television and the Impact of Regulation," Bell Journal of Economics and Management Science, Spring, 1971, all find demand elasticities less than 1.5, even in large urban markets.

⁹⁹ As Landis and Posner put it (W. M. Landes and R. A. Posner, "Market Power in Anti-trust Cases," Harvard Law Review, 94: 1981, p. 50.)

¹⁰⁰ Cable Price Report, p. 11, finds an income elasticity of .62, which is quite low.

¹⁰¹ Consumer Reports in Competitive Issues in the Cable Television Industry, Subcommittee on Antitrust, Monopolies and Business Rights, Committee on the Judiciary, United States Congress, March 17, 1988, at 244; U.S. Census Bureau, Statistical Abstract of the United States: 2000, Table 909.

¹⁰² Rosston and Shelanski, p. 19, ignore the bundling and tiering that pervades the cable industry and enhances its ability to price discriminate.

This is a prime illustration of the theory of extraction of consumer surplus that can be found in the economic and marketing literatures.¹⁰³ The key point here is that the ability to add programming to the expanded basic package allows the cable operator to charge more for expanded basic service than it is worth. Even where over-the-air signal might be competitive, this bundling gives cable operators the opportunity to exercise market power. People pay for something they apparently could get for free because they are actually buying something else-access to the multiple channels.¹⁰⁴

It is clear that pricing/packaging in this way is intended to force consumers to take the package. In economic terms it transforms consumer surplus into producer surplus. Although consumers would be less willing to pay for certain elements of the larger cable programming package, they must swallow the whole thing because their access to the desired elements is tied to those they do not want. The companies never offer channels on an *a la carte* basis to determine if consumer demand exists. Consumers are forced to pay for the added, low value channels because they do not want to give up the whole bundle. Since there is no competition, there is no real alternative.

The cable strategy for responding to satellite is to exploit market power in the lunch bucket segment by driving up prices much faster than inflation. Viewers with less expensive tiers of cable programming are insensitive to rate increases because DBS only competes with cable for multiple pay-service tier subscribers (those who buy expensive sports and movie packages). Furthermore, cable MSOs are able to extract monopoly rents from the lower tier subscribers to cross-subsidize their competition with DBS for mega-service subscribers.

Given the low elasticities, it makes better economic sense for cable operators to increase prices than to hold them down. Cable makes much more money by increasing prices for basic cable than competing in the DBS niche. The revenue gained by increasing cable prices to existing subscribers since the Telecom Act of 1996 exceeds the revenue lost to all DBS-only subscribers by almost 2-to-1 and all DBS-only subscribers in areas where cable is available by 3-to-1. Cable revenues added from new subscribers, at the higher prices, just

¹⁰³ Joseph P. Gaultinan, "The Price Bundling of Services: A Normative Framework," *Journal of Marketing*, 51: April (1987), at 75.

Consider, for example, a case in which we have two products or services and can estimate the distributions of reservation prices (the maximum amounts buyers are willing to pay) for each product. By bundling the products together, we essentially create a new product. If the two products are independent in demand, some customers who would only buy one of these if they were priced individually will now buy both products. The reason is that the value these customers place on one product is so much higher than its price that the combined value of the two products exceeds the bundled price. In economic terminology, the consumer surplus (the amount by which the individual's reservation price exceeds the actual price paid) from the highly valued product is transferred to the less valued product.

¹⁰⁴ Pricing philosophy in the industry clearly exhibits an effort to capture consumer surplus. As an article in an industry journal pointed out just before deregulation (Celia Conrad, "Choosing Cable Programming Services," *Cable TV and New Media*, 4:9 (1986):

If viewers can purchase one channel and watch a second channel for free, they never will pay the market value of the second channel. A more profitable alternative for the pay television operator would be to offer program type A on the first channel and program type B on the second, and then sell both channels as a package. At an appropriate price, consumers will purchase the package. Even if the costs of scrambling were minimal, the package selling strategy would be more profitable than selling each channel individually.

The practice of bundling recognized that consumers have preferences not only for program types but also for program variety. For example, some consumers might pay \$25 for service A only; \$25 for service B only, but \$37.50 for a bundle of both A and B. Bundling is like an insurance policy. Whatever occurs, the consumer can watch his or her preferred program. But package selling may be attractive even aside from its insurance policy attributes. With package selling, the profitability of carrying a program type depends not only on how much revenue it generates on its own, but also increases the total package's revenues.

about equaled cable revenues lost to new DBS-only subscribers in areas where cable is available.¹⁰⁵

The failure of satellite to discipline pricing should come as no surprise. Even in the midst of the debate over delivery of local stations by satellite, the largest satellite provider eschewed price competition for the basic package.¹⁰⁶ Ironically, the FCC was well aware of this process in its econometric analysis. In trying to explain away the contradictory finding that the cross-price elasticity between cable and satellite had the wrong sign, it suggested that the cable operators reporting DBS penetration numbers “is made up almost entirely of small operators, may not be representative of the response to DBS generally.”¹⁰⁷ Note that the same representativeness problem that is invoked to discredit the contrary finding of a wrong sign of the price elasticity would also call into question the substitution effect. More importantly, the FCC goes on to suggest that “anecdotal evidence shows that the response by large cable operators to increased DBS competition often includes the offering of new services such as digital tiers and Internet access, rather than by lowering monthly charges.”¹⁰⁸

We have shown that cable operators have a secure base of monopolized customers (i.e. a market share far in excess of the traditional standard for monopoly). With this secure base of customers to exploit, cable now has developed a strategy to attack the mega-service niche of satellite – its digital tier and bundled video high speed Internet package. The weak market forces observed in the recent past are likely to get weaker.

B. LOCAL AND NATIONAL MARKET CONCENTRATION

1. Local Markets Are a Virtual Monopoly

Head-to-head competition between cable companies is virtually non-existent. Out of 3000 plus cable systems, head-to-head competition exists in fewer than 200, although another 150 have certified entry. In short, only about 1 percent of franchise territories have experienced head-to-head competition between cable companies. While a number of other

¹⁰⁵ The pricing strategy was apparent to some industry observers, as a Cisco publication noted (Abe, George, *Residential Broadband* (Cisco Press, Macmillan Technical Publishing, 1997), p. 217.

Cable MSO management apparently agrees it is necessary to get more from each subscriber. Since the passage of the Telecom Act of 96, cable operators have taken the opportunity to raise subscription rates more than twice as fast as the consumer price index, clearly not a strategy for getting new households.

¹⁰⁶ Mundy, Alicia, “The Price of Freedom,” *MediaWeek*, March 29, 1999, p. 32.

Congress has been moving at an unusual speed to pass a bill that would give DBS providers the right to beam local network signals to local subscribers ...

“It’s not a cure-all,” said Hartenstein, who has run DirectTV since its inception in 1990. For one thing, Hartenstein’s business plan is not based on beaming local network signals to his customer base, soon expected to top 9 million. Instead, he is suggesting that subscribers buy new antennas to supplement their coverage. DirecTV is working with retailers to have the specialized antennas available at reduced prices. He calls this program “Distant/Terrestrial,” meaning he sends you all the cable and movie channels you could dream of (for which he can charge), and you pick up the free network feeds with an extra antenna.

Furthermore, Hartensteins’ game plan does not include fighting for cable customers by undercutting cable prices. Analysts for the DBS and cable industries have figured out which indicate that the average American homeowner will cough up \$30 per month for TV. Above that level, both camps believe, many consumers will bolt and run.

Hartenstein seems determined to compete on quality and depth of service, not on price.

¹⁰⁷ Report on Cable Prices, p. 11.

¹⁰⁸ Report on Cable Prices, p. 11.

communities have authorized additional overbuilding, this activity is slowing, as the regional bell operating companies pull back and pure overbuilders retrench.¹⁰⁹

Cable's dominance as the multichannel medium is overwhelming, with a subscribership of approximately two-thirds of all TV households. Its penetration is about four times as high as the next multichannel technology, satellite. Because a large number of satellite subscribers live in areas that are not served by cable, competition in geographic markets is less vigorous than the national totals suggest.

This monopoly at the point of sale is reinforced by a strong trend toward regionalization in which one company gains ownership of many firms in a region. Clustering has increased sharply since 1994, up by almost 75 percent.¹¹⁰ Just over one-half of all subscribers were clustered in 1997 but by 2000 four-fifths were.¹¹¹ The FCC has found that clustering is associated with higher prices.¹¹²

The failure of competition in multichannel video is most evident in local markets. Over 95 percent of the homes passed in the country are served by only one cable company.¹¹³ Satellite has about 10 million subscribers in markets where cable and satellite meet. In these markets, there are only 8 million satellite only subscribers. This suggests that cable retains a market share at the point of sale of well over 85 percent.¹¹⁴ The HHI index at the local level is above 7000. As discussed above, these market shares and levels of concentration for cable operators are virtual monopolies.¹¹⁵

2. National Markets

The wave of concentration in the industry after deregulation is striking at the national level (see Exhibit 12). When cable was deregulated in 1984, the distribution segment was not concentrated at all (HHI about 350), with the equivalent of about 30 equal sized competitors. A decade later, concentration had advanced to the point where the distribution segment had the equivalent of about 11 equal-sized competitors (HHI about 930). This is just close to the moderately concentrated threshold.

Although the FCC claims that the MVPD market falls just below the level of being moderately concentrated (HHI = 954), it arrives at this conclusion by ignoring AT&T's substantial ownership interests in Cablevision and AOL Time Warner. Taking AT&T's ownership interests into account places the cable TV market into the moderately concentrated category. The Echostar DirecTV merger would add about 150 point and move the market to the middle of the moderately concentrated range. The ATT/Comcast merger would have about twice that impact.

¹⁰⁹ FCC, Seventh Annual Report, p. 20, notes that cable operators in only 330 communities have been granted status as effectively competitive on the basis of overbuilding.

¹¹⁰ FCC, Eighth Annual Report, Table C-1.

¹¹¹ Paul Kagan Associates, *Major Cable TV System Clusters*, 1998.

¹¹² FCC, Report on Cable Industry Prices, p. 31.

¹¹³ FCC, Seventh Annual Report, p. 20.

¹¹⁴ FCC, Seventh Annual Report, p.34, notes increasing urban subscribers, but figure show that satellite is still disproportionately rural.

¹¹⁵ Rosston and Shelanski (p. 23), give a hypothetical local market with a cable firm having an 80 percent market share and satellite having 20 percent in making apppoint about the impact of concentration in national markets. They never discuss the local HHI, which would be 6800. This meets the antitrust definition of a monopoly.

EXHIBIT 12: CONCENTRATION OF NATIONAL CABLE EYEBALL MARKET

YEAR		4-FIRM	HHI
1984		28	360
1992		48	930
2001	FCC without attribution	52	910
	with attribution	55**	1040
	with attribution + Cablevision	58***	1180
	with attribution + Cablevision + TWE	66****	1810
ATT/ Comcast	without attribution	59	1210
	with attribution	62	1440
	with attribution + Cablevision	66	1660
	with attribution + Cablevision + TWE	73	2530
	with attribution and TWE	69	2230
EchoStar/ DirecTV	without attribution	59	1060
	with attribution	62	1200

SOURCES AND NOTES: Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, First Report, CC Docket No. 94-48, Eighth Report, CC Docket No 00132; Applications and Public Interest Statement *In the Matter of Application for Consent to the Transfer of Control of Licenses Compact Croperation and AT&T Corp. Transferors to AT&T Comcast Corporation*, All estimates are rounded to the nearest 10.

*The FCC double counts subscribers to both cable and satellite. In previous analyses, we have placed the MVPD market at 86 million rather than 88.3 million. This has caused some confusion. Since the difference is small, we use the FCC number in this analysis.

**With attribution puts AT&T now claims 18.8 million subscribers having very recently sold off cablevision stock to get its ownership share to 4.98%.

***AT&T claims of technical compliance with the attribution rules, or its ability to remain in compliance, given how close it has chosen to stay to the limit of non-attribution have yet to be demonstrated.

**** AT&T's efforts to divest its TWE holdings have been unsuccessful to date

No matter how the concentration is calculated, there has not been any improvement since 1992. To the extent that concentration in this market was a source of concern to Congress when told the Commission to adopt a horizontal limit, conditions have not changed. With attribution and particularly with the attribution of TWE interests, the market has become more concentrated.

C. THE IMPLICIT LERNER INDEX DEMONSTRATES THE MARKET POWER IN THE CABLE INDUSTRY

The Lerner index is closely related to pricing and it supports these conclusions. The FCC has estimated demand and price elasticities for cable service. In spite of the fact that the FCC has not shown a cross price elasticity between cable and satellite, which would be a critical step towards demonstrating that cable and satellite are substitutes, the FCC finds that

satellite subscribership “exerts a small” influence on the demand for cable services. The FCC’s econometric analysis indicates that cable has substantial market power.

The demand and supply elasticities estimated by the FCC in its most recent econometric analysis are low. The elasticity of demand is 1.452, which the FCC describes as “somewhat price elastic.” The elasticity of fringe, satellite supply is .136, which is quite low. As a consequence, under the typical circumstances in MVPD markets, cable operators can raise prices by over 50 percent above costs, indicating a large degree of market power. Consider satellite a “competitive fringe that could expand readily, but is limited by its general characteristics to the cross demand elasticity it has previously demonstrated. The national average market share for cable service in markets in which cable and satellite compete is 85 percent.

Market power at the point of sale in a typical cable market can be estimated as follows, based on the market shares and elasticities.

$$L = \frac{S}{e_m^d + e_j^s (1 - s_l)} = \frac{.85}{1.452 + .136 (.15)} = .58$$

Even if we assume the competitive fringe (satellite) was not restrained by its small market share (i.e. set the market share equal to 1 instead of .15), the Lerner Index would be .54.

D. CABLE SYSTEM VALUES AND TOBIN’S Q PROVIDE EVIDENCE OF MONOPOLISTIC PRICING

For cable systems, the most frequently used measure of the extraction of value from consumers is the sale price of systems. When systems sell for a lot more than its cost to build them, the assumption is that entry barriers are preventing competition from driving down the price.¹¹⁶ When systems can be built for a lot less than they are being sold, there must be something preventing entrants from coming into the field. The incumbent owners are clearly enjoying the benefits of the added value that barriers to entry are creating by selling at inflated prices.¹¹⁷ In the cable industry, entry is extremely difficult. Incumbents hold a franchise and they resist over-building with a vengeance.¹¹⁸ Moreover, even if a potential entrant exists, the integrated nature of the industry denies that entrant access to programming, which is necessary to compete.

The best and most direct interpretation of Tobin's q in this case is that it represents a massive monopoly premium, earned by cable operators who possess market power. Exhibit

¹¹⁶ Direct estimates of price cost margins are virtually non-existent. Robert Rubinovitz, Market Power and Price Increases for Basic Cable Service Since Deregulation, (Economic Analysis Regulatory Group, Department of Justice, August 6, 1991) finds that about half of the price increases since 1984 are due to the exercise of market power.

¹¹⁷ Formally, the ratio is called Tobin's q and it is represented as the ratio of the sales price to the reproduction cost of the assets. This measure has been used for the past decade in the cable industry. In particular, it was used by telephone companies in arguing that they should be allowed to enter the cable TV business, see Shooshan and Jackson, Measuring Cable Market Power: Recent Developments, December 1988; S. J. Grossman, On the Misuse of Tobin's Q To Measure Monopoly Power, February 26, 1990.

¹¹⁸ Senate Committee Report at 13-14; House Committee Report at 45; Noam, 1984, op. cit., at 15.

13 shows estimates of the transaction price for cable systems compared to estimates of reproduction costs. There is no doubt that there was a tremendous increase in q ratios after deregulation.

EXHIBIT 13: TOBIN'S q

YEAR	CABLE TV	
	System Sale Price (a)	Reproduction Cost
1983	1000	645 (b)
1986	1300	400-700 (c)
1988	2000	500-600 (d)
1992	1700	700 (e)
1994	1900	500(f) - 700 (g) - 800 (h)
1997	1900	
1998	2900	
1999	4000	
	basic	500-700 (j)
	interactive	2000 (j)
2000	5900	1300 – 1500 (f)
2001	\$3700(k)	

SOURCES:

- a) Kagan Associates Inc., *Cable TV Master Database*, various issues, rounded to the nearest \$100.
 - b) H. L. Vogel, *Entertainment Industry Economics* (Cambridge University Press, Cambridge, 1986).
 - c) Shooshan and Jackson, *Opening the Broadband Gateway: The Need for Telephone Company Entry Into the Video Services Marketplace*, October 1987.
 - d) Shooshan and Jackson, *Measuring Cable Industry Market Power*, March 2, 1990; Leland L. Johnson and David P. Reed, *Residential Broadband Services By Telephone Companies?* (Santa Monica, Rand, 1990).
 - e) David P. Reed, *Residential Fiber Optic Networks* (Artech House, Boston, 1992), Tables 5.3 and B.8.
 - f) Thomas Hazlett and George Bittlingmayer, *The Political Economy of Cable "Open Access"* (Joint Center, Working Paper 01-06, May 2001)
 - g) Johnson, Leland, and David P. Reed, *Residential Broadband Services By Telephone Companies?* (Santa Monica, Rand, 1990).
 - h) Bell Atlantic, *In the Matter of the Application of The Chesapeake and Potomac Telephone Company of Maryland and Virginia for Authority Pursuant to Section 214 of the Communications Act of 1934, as amended, to Construct, Operate, Own and Maintain Facilities and Equipment to Provide a Commercial Video Dialtone Service within a Geographic Territory Defined by the Maryland and Virginia Portions of the Washington Local Access Transport Area, December 1994, Exhibit 3; U.S. West, In the Matter of the Application of U.S. West, Inc., for Authority Pursuant to Section 214 of the Communications Act of 1934, as amended, to Construct, Operate, Own and Maintain Facilities and Equipment to Provide a Commercial Video Dialtone Service in Portions of Colorado Springs.*
 - (i) These are widely reported prices paid per subscriber in the wake of the AT&T-MediaOne deal.
 - (j) Morgan Stanley Dean Witter, *Digital Decade*, April 6, 1999.
 - (k) Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Eight Annual Report*, January 14, 2002, Table B-3.
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These numbers show that at the time of deregulation in 1984, the premium paid for systems was about \$400. Tobin's q was about 1.6. This premium rose steadily until 1988, when systems were selling at \$1500 more than their reproduction costs. Tobin's q had risen to 3 to 4. These figures were quite damning and the cable industry first tried to deny the fact that Tobin's q had grown dramatically, but finally was forced to fall back on efforts to justify the increase.¹¹⁹

During the regulated period of the 1990s, the premium declined. Price controls squeezed the monopoly profits. In 1994 the premium was about \$1000 and Tobin's q declined to about 2.5. Since then, deregulation has driven the prices through the roof; with prices approaching \$5,000 and premiums exceeding \$4,000. The evidence of market power at the level of performance is overwhelming. There is no denying the fact that "cable operators possess substantial market power in subscription video markets."¹²⁰ Looking back at the FCC's First Annual Report on Cable Competition and the other evidence of the extent of cable market power in the early 1990s, these performance measures indicate not only that cable operators have market power, but also that it has been increasing. The HHI, the Lerner Index,¹²¹ and Tobin's q are all higher today than they were in 1992. In other words, the advent of satellite competition has not undermined the immense market power of the cable industry. The relentless rise of prices since the 1996 Act, the period when satellite was making the market share gains so highly touted by the industry, only reinforces this conclusion.

VI. CONCLUSION

The direct evidence on the weakness of competition between satellite and cable should lead objective observers to expect to find the abuse of market power. While it can be argued that each of the measures of market power leaves something to be desired, when all of them point so clearly in the same direction, the obvious conclusion cannot be denied. There is a great deal of market power being exercised by cable operators at the point-of-sale in the multi-channel video programming distribution market.

The evidence of market power at the level of performance is overwhelming. There is no denying the fact that "cable operators possess substantial market power in subscription video markets."¹²² Looking back at the FCC's First Annual Report on Cable Competition and the other evidence of the extent of cable market power in the early 1990s, these performance measures indicate not only that cable operators have market power, but also that it has been increasing. The HHI, the Lerner Index,¹²³ and Tobin's q are all higher today than they were in 1992. In other words, the advent of satellite competition has not undermined the immense market power of the cable industry. The relentless rise of prices since the 1996 Act, the period when satellite was making the market share gains so highly touted by the industry, only reinforces this conclusion.

Thus the lynchpin for each of the court decisions that have remanded cable ownership rules and vacated cable-broadcast cross-ownership limits, and suggestions to relax or eliminate these structural limits involve the incorrect assumption that the cable industry faces

¹¹⁹ Shooshan and Jackson, S. J. Grossman, On the Misuse of Tobin's Q To Measure Monopoly Power, February 26, 1990; Paul W. MacAvoy, Tobin's q and the Cable Industry's Market Power, February 28, 1990

¹²⁰ Hazlett and Bittlingmayer, p. 3.

¹²¹ The current Lerner index is higher than two-thirds of those estimated in the First Annual Report.

¹²² Hazlett and Bittlingmayer, p. 3.

¹²³ The current Lerner index is higher than two-thirds of those estimated in the First Annual Report.

meaningful competition from satellite. Cable operators need not fear loss of subscribers at the point of sale resulting from discrimination against non-affiliated programmers.

Cable's persistent monopoly in local communities and the ability of large cable system operators to undercut competition for both transmission and programming both provide a clear public policy imperative to preserve a 30 percent cable ownership cap and ban on local cable companies owning broadcast TV stations in the same community.