Before the
CALIFORNIA PUBLIC UTILITIES COMMISSION

In the matter of Joint Application of Charter Communications, Inc.; Charter Fiberlink CACCO, LLC (U6878C); Time Warner Cable Inc.; Time Warner Cable Information Services (California), LLC (U6874C); Advance/ Newhouse Partnership; Bright House Networks, LLC; and Bright House Networks Information Services (California), LLC (U6955C) Pursuant to California Public Utilities Code Section 854 for Expedited Approval of the Transfer of Control of both Time Warner Cable Information Services (California), LLC (U6874C) and Bright House Networks Information Services (California), LLC (U6955C) to Charter Communications, Inc., and for Expedited Approval of a pro forma transfer of control of Charter Fiberlink CA-CCO, LLC (U6878C).	Application 15-07-009

Reply Testimony

of

LEE L. SELWYN

on behalf of the

Office of Ratepayer Advocates
of the
California Public Utilities Commission

January 15, 2016

REDACTED FOR PUBLIC INSPECTION

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EXECUTIVE SUMMARY

Public Utilities Code §854 requires that the Commission make certain findings before it approves a change of control of the type being sought in the instant Application. The Assigned Commissioner's Scoping Ruling issued November 13, 2015 has determined that the instant transactions is subject to §854(c). In this Reply Testimony, I address the following specific §854(c) requirements:

> §854(c): Before authorizing the merger, acquisition, or control of any electric, gas, or telephone utility organized and doing business in this state, ... the commission shall consider each of the criteria listed in paragraphs (1) to (8), inclusive, and find, on balance, that the merger, acquisition, or control proposal is in the public interest.
>
> (1) Maintain or improve the financial condition of the resulting public utility doing business in the state.
>
> (5) Be fair and reasonable to the majority of all affected public utility shareholders.
>
> (6) Be beneficial on an overall basis to state and local economies, and to the communities in the area served by the resulting public utility.

In considering the public interest aspects of the proposed merger, the Commission will need to balance the purported benefits of the transaction against the significant increase in overall market concentration, market power, and the potential for further diminution of competition in what is already a largely monopolistic market for high-speed (25 Mbps download / 3 Mbps upload) broadband Internet access. The benefits that the Joint Applicants seek to ascribe to the merger easily pale when compared with the significant risks that the merger will create for California consumers, content producers, competitors, and state and local economies.

The Joint Applicants' "benefits" theory is premised upon the notion that the increased scale of New Charter's operations relative to those of any of the three companies standing alone will benefit from increased economies of scale, and in so doing will produce significant efficiency gains, lower marginal costs of inputs, and additional incentives both for New Charter and for third-party "partners" whose services would utilize the New Charter broadband service platform to invest in innovation. But this "bigger is better" theory could be applied to virtually any corporate merger or acquisition, but the prospect of economic gains due to increased scale is not and must not be the sole consideration in addressing the public interest concerns surrounding a transaction of this magnitude. The Joint Applicants' claims as to these "benefits" are highly speculative and are not supported by anything beyond a few limited anecdotal examples that are themselves either of extremely minor economic significance or that assume the presence of what are in reality nonexistent competitive alternatives to the Joint Applicants' largely monopolistic broadband service offerings. Moreover, in order for any public benefits to result from such efficiency gains (if, in fact, any would actually materialize), some significant portion of these gains would need to flow through to customers, or to the broader state and/or local economies. The utter lack of effective competition for most of the Joint Applicants' services will enable them to retain most or all of any gains without being compelled either to reduce prices or to make needed infrastructure upgrades. The Joint Applicants have failed to show that their proposed transaction will actually provide any substantive "benefits" or otherwise serve the public interest.

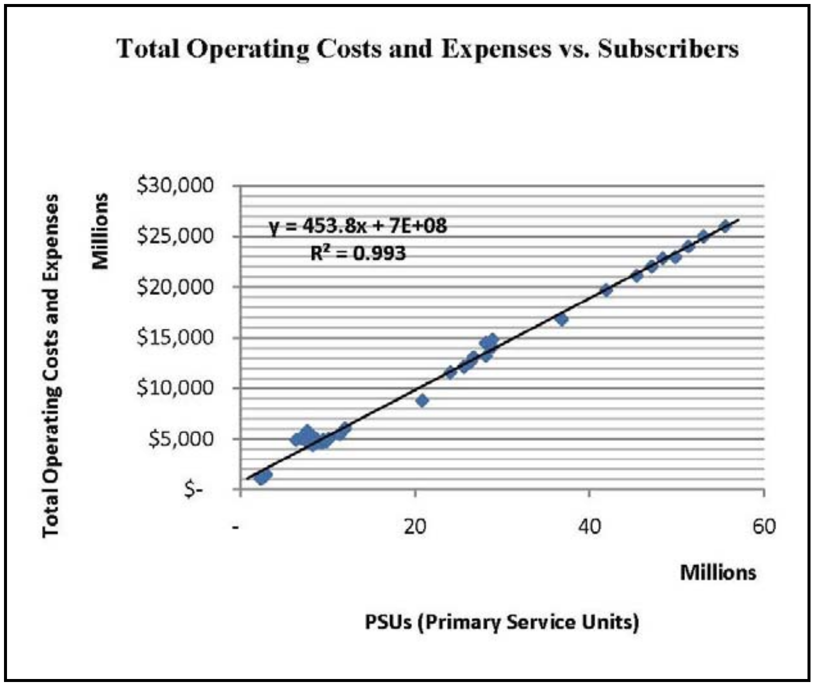
The US Department of Justice/Federal Trade Commission *Horizontal Merger Guidelines* are quite specific as to what types of evidence regarding "merger-specific" efficiency gains will be considered:

> Efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means. Projections of efficiencies may be viewed with skepticism, particularly when generated outside of the usual business planning process. By contrast, efficiency claims substantiated by analogous past experience are those most likely to be credited.

The *Guidelines* also require that claims of increased efficiencies must be demonstrated to be merger-driven, i.e., must not be capable of being achieved by the merging firms on their own:

> Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.

The "efficiency" evidence being offered by the Joint Applicants here does not come even close to satisfying these requirements. In fact, virtually all of their "public interest" or "public benefit" claims are rooted in speculations that are largely, in some instances entirely, unsupported by any actual facts or evidence, are vague, speculative, and are incapable of being verified by reasonable means. They are also not merger-specific. Other than *claiming* that certain initiatives and outcomes would not occur absent the proposed merger, the Joint Applicants have offered no substantive facts or verifiable evidence that the Joint Applicants could not, absent their merger, pursue and achieve these results on a stand-alone basis. Finally, even if the Joint Applicants' projections of merger-driven increases in earnings before interest, taxes, depreciation and amortization ("EBITDA") are to be believed, the even larger projected increase in ongoing debt service (interest plus amortization of principal) payments that will result from additional debt that Charter will incur to finance its acquisition of TWC and Bright House actually exceeds its own forecasted EBITDA improvement.



In contrast to the Joint Applicants' unsupported and unverifiable speculations regarding economies of scale, I have conducted an econometric analysis using publicly reported financial data from the five largest publicly traded cable multi-system operators ("MSOs") to determine, based upon empirical evidence, whether any of the claimed economies of scale are actually present. This analysis demonstrates that cable MSO costs and capital assets vary linearly and in direct proportion to each company's total output (the number of Primary Service Units, a widely-accepted measure of output for firms in this industry). The claimed benefits of increased size and scale simply do not exist and will not arise here.

A merger of TWC, Charter and Bright House will create a broadband entity that will dominate the Southern California market. New Charter will pass approximately 82% of all households in census blocks within the 10-county Southern California area. 69.4% of those New Charter-passed households will have no other broadband service provider capable of supporting download speeds of at least 25 Mbps. The Joint Applicants' own expert, Dr. Fiona Scott Morton, has conceded that "[t]he post-merger New Charter would serve 87% of cable MSO video subscribers in the Los Angeles Designated Market Area ('DMA')." New Charter does face competition for the provision of its Multi-Channel (Linear) Video Distribution ("MVPD") services. If MVPD was the only business in which the three merging companies operated, the presence of satellite TV and OVD rivals might well constrain its ability to extract monopoly rents or engage in other monopolistic practices in the MVPD market. However, the Joint Applicants' business activities are not confined to MVPD services. They are also in the voice telephone service and high-speed broadband access business. The Joint Applicants' two largest MVPD rivals – DirecTV and DISH – do not provide broadband access at comparable speeds, if at all, and most of AT&T's *U-verse* broadband that is available in California does not meet the current FCC minimum threshold of 25/3. New Charter's dominance of and monopoly over most of the Southern California 25/3 broadband market enables it to successfully offset MVPD revenue losses by shifting revenues (through price increases) to its far more captive broadband customers, as the Joint Applicants have each been doing for a number of years. And even where New Charter will confront competition in the MVPD space, its control over certain highly desirable content that it will inherit from TWC – the LA Dodgers – affords it a substantial competitive advantage over MVPD rivals that have thus far been unwilling to accede to TWC's terms for carriage of such content.

In the 2014 TWC/Comcast merger proceeding, several parties expressed serious misgivings as to the potential *monopsony* power that a combined TWC/Comcast entity would wield in the state, where it would have passed more than 84% of all households statewide. The relevant geographic market being addressed by the Joint Applicants here is Southern California. And in Southern California, New Charter's level of dominance – 82% – would be virtually identical to the 84% that a post-merger Comcast/TWC would have controlled statewide. The Joint Applicants have only minimal presence outside of these ten counties. Indeed, only about 258,000, about 4%, of the nearly 6.4-million total New Charter households passed statewide, are *outside of* the ten Southern California counties. Including the remaining 48 California counties in which the Joint Applicants have little or no presence in a market analysis makes no more sense than including the abutting states of Arizona, Nevada or Oregon in the "relevant geographic market" for purposes of evaluating the impact of the proposed merger upon *California* consumers, competitors, content producers, and local and state economies.

For all of the foregoing reasons, it is my considered opinion that the proposed merger of TWC, Charter and Bright House is not in the public interest and would not support the public interest finding that is expressly required by P. U. Code §854(c).

REPLY TESTIMONY OF LEE L. SELWYN

I, Lee L. Selwyn, declare as follows:

I.

INTRODUCTION AND SUMMARY

Qualifications, background and experience

1. My name is Lee L. Selwyn. I am President of Economics and Technology, Inc. ("ETI"), One Washington Mall, 15th Floor, Boston, Massachusetts 02108. ETI is a research and consulting firm specializing in telecommunications economics, regulation and public policy. My Statement of Qualifications is annexed hereto as Attachment 1 and is made a part hereof.

2. I hold a Ph.D. degree in Management from the Alfred P. Sloan School of Management, Massachusetts Institute of Technology. I also hold a Master of Science degree in Industrial Management from MIT and a Bachelor of Arts degree with Honors in Economics from Queens College of the City University of New York. In 1970, I was awarded a Post-Doctoral Research Grant in Public Utility Economics under a program sponsored by the American Telephone and Telegraph Company, to conduct research on the economic effects of telephone rate structures upon the computer time-sharing industry. This work was conducted at Harvard University's Program on Technology and Society, where I was appointed a Research Associate. I was also a member of the faculty at the College of Business Administration at Boston University from 1968 through 1973, where I taught courses in economics, finance and management information

systems. I founded my firm, Economics and Technology, Inc., in January 1972, and have served as its President continuously since that date.

3. I have been actively and continuously involved in the fields of telecommunications economics, policy and regulation since the late 1960s. I have provided expert testimony and analysis on telecommunications economics, technology, rate design, service cost analysis, market structure, form of regulation, and numerous other telecommunications issues before more than forty state public utility commissions, the Federal Communications Commission, the United States Congress, and regulatory bodies in a number of foreign countries, on behalf of commercial organizations, non-profit institutions, and local, state and federal government authorities. Attachment 1 to this Declaration provides a complete record of my publications and prior expert testimony and appearances before regulatory agencies and courts.

4. I have submitted expert reports and testimony in numerous telecommunications regulatory proceedings before the Federal Communications Commission ("FCC") and state public utilities commissions in approximately forty states dating back to the late 1960s, dealing with a broad range of ratesetting and policy matters, including switched and special access charges, price cap regulation, Sec. 251/252 interconnection and unbundling requirements, total service resale and wholesale pricing, universal service, broadband and related Internet access issues, intercarrier compensation, spectrum allocation, handset interoperability, CMRS early termination fees, and many others. I have provided expert testimony in numerous California

PUC proceedings dating back to the mid-1970s. A complete listing of these appearances is included in Attachment 1 hereto.

5. I have had extensive experience with the analysis of consumer and competitive impacts of mergers and spin-offs involving large telecommunications companies, including a number of matters before the California PUC on behalf of the Office of Ratepayer Advocates or Division of Ratepayer Advocates – A. 96-04-038, SBC/Pacific Bell merger (1996-7); A. 98-12-005, Bell Atlantic/GTE merger (1998); A. 05-02-027, SBC/AT&T merger (2005); A. 05-04-020, Verizon/MCI merger (2005), the Comcast/TWC merger, A.14-04-013/A.14-06-012, and most recently, the transfer of control of Verizon's ILEC operations in California, Texas and Florida to Frontier Communications, A.15-03-005. In 1993, I submitted testimony on behalf of DRA in I.93-02-028, the "spin-off" by Pacific Telesis Group of its cellular and other wireless subsidiaries. I also submitted expert testimony on similar merger-related issues before the FCC and in several other state PUC matters, including Maine PUC Docket No. 96-388, Bell Atlantic/NYNEX merger (1996), on behalf of the Maine Office of Public Advocate; Connecticut DPUC Docket No. 98-02-20, SBC/SNET merger (1998), on behalf of the Connecticut Office of Consumer Counsel; United States District Court for the District of Columbia, Civil Action No. 1:05CV02102 (EGS), SBC/AT&T merger; Verizon/MCI merger, Civil Action No. 1:05CV02103 (EGS) (1996), on behalf of the National Association of State Utility Consumer Advocates (NASUCA); Illinois Commerce Commission Docket No. 09-0268, Verizon sale of its Illinois exchanges to Frontier Communications, Inc. (2009), on behalf of the People of the State

of Illinois and the Citizens Utility Board; and FCC WT Docket No. 11-65, AT&T/T-Mobile merger (2011), on behalf of the Ad Hoc Telecommunications Users Committee.

6. I have published several articles dealing specifically with Net Neutrality and related Open Internet issues, including "Revisiting the Regulatory Status of Broadband Internet Access: A Policy Framework for Net Neutrality and an Open Competitive Internet," (with Helen E. Golding), *Federal Communications Law Journal*, Vol. 63 Num. 1, December 2010. I have also contributed chapters to two recent American Bar Association publications, "Network Industry Markets: Telecommunications" (with Helen E. Golding), Chapter X in *Market Definition in Antitrust: Theory and Case Studies*, ABA Section of Antitrust Law (2012), at pp. 411-436, and "Economic Underpinnings: The Economics of Communications Networks, Market Power, and Vertical Foreclosure Theories" (with Helen E. Golding et al), Chapter I in *Telecom Antitrust Handbook, Second Edition*, ABA Section of Antitrust Law (2013), at pp. 1-61.

7. In addition to my various professional activities, I am an elected Town Meeting Member in the Town of Brookline, Massachusetts, and serve on the Town's Advisory and Finance Committee and on the Town's Audit Committee, and have recently served on a special Tax Override Study Committee.

Assignment

8. I have been asked by the Office of Ratepayer Advocates ("ORA") of the California Public Utilities Commission ("CPUC" or "Commission") to review Application 15-07-009 filed herein

by Charter Communications, Inc.; Charter Fiberlink CACCO, LLC ("Charter"); Time Warner Cable Inc.; Time Warner Cable Information Services (California), LLC ("TWC"); and by Advance/Newhouse Partnership; Bright House Networks, LLC; and Bright House Networks Information Services (California), LLC ("Bright House" or "BHN"), collectively, "Joint Applicants", together with their Applications and accompanying expert reports and other related documentation, and based thereon to provide the Commission with an assessment of the various economic and other public interest benefits being ascribed to the transaction by the Joint Applicants, the potential impact of the proposed transaction upon competition for broadband telecommunications and Internet access services, voice telephone services including both circuit-switched and VoIP, within the Joint Applicants' individual and combined California operating areas, the fairness of the transaction to the two companies' shareholders, and to offer specific recommendations to the Commission regarding the manner in which economic and other benefits being ascribed to the transaction will flow through to ratepayers and other conditions that will protect the public interest, together with recommendations for the disposition of this Application.

Summary and Recommendations

9. PU Code §854 requires that the Commission make certain findings before it approves a change of control of the type being sought in the instant Application. The Assigned Commissioner's Scoping Ruling issued November 13, 2015 has determined that the instant transactions is subject to §854(c). In this Reply Testimony, I address the following specific §854(c) requirements:

> §854(c): Before authorizing the merger, acquisition, or control of any electric, gas, or telephone utility organized and doing business in this state, ... the commission shall consider each of the criteria listed in paragraphs (1) to (8), inclusive, and find, on balance, that the merger, acquisition, or control proposal is in the public interest.
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> (1) Maintain or improve the financial condition of the resulting public utility doing business in the state.
>
> (5) Be fair and reasonable to the majority of all affected public utility shareholders.
>
> (6) Be beneficial on an overall basis to state and local economies, and to the communities in the area served by the resulting public utility.

Other provision of §854(c) are being addressed by other ORA experts.

10. In considering the public interest aspects of the proposed merger, the Commission will need to balance the purported benefits of the transaction against the significant increase in overall market concentration, market power, and the potential for further diminution of competition in what is already a largely monopolistic market. The benefits that the Joint Applicants seek to ascribe to the merger easily pale when compared with the significant risks that the merger will create for California consumers, content producers, competitors, and state and local economies.

11. The Joint Applicants' "benefits" theory is premised upon the notion that the increased scale of New Charter's operations relative to those of any of the three companies standing alone will benefit from increased economies of scale, and in so doing will produce significant efficiency gains, lower marginal costs of inputs, and additional incentives both for New Charter and for third-party "partners" whose services would utilize the New Charter broadband service

platform to invest in innovation. But this "bigger is better" theory could be applied to virtually any corporate merger or acquisition, but the prospect of economic gains due to increased scale is not and must not be the sole consideration in addressing the public interest concerns surrounding a transaction of this magnitude. The Joint Applicants' claims as to these "benefits" are highly speculative and are not supported by anything beyond a few limited anecdotal examples that are themselves either of extremely minor economic significance or that assume the presence of what are in reality nonexistent competitive alternatives to the Joint Applicants' largely monopolistic broadband service offerings. Moreover, in order for any public benefits to result from such efficiency gains (if, in fact, any would actually materialize), some significant portion of these gains would need to flow through to customers, or to the broader state and/or local economies. The utter lack of effective competition for most of the Joint Applicants' services will enable them to retain most or all of any gains without being compelled either to reduce prices or to make needed infrastructure upgrades. The Joint Applicants have failed to show that their proposed transaction will actually provide any substantive "benefits" or otherwise serve the public interest.

12. The Department of Justice/Federal Trade Commission *Horizontal Merger Guidelines* are quite specific as to what types of evidence regarding "merger-specific" efficiency gains will be considered:

> Efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means. Projections of efficiencies may be viewed with skepticism, particularly when generated outside of the usual

> business planning process. By contrast, efficiency claims substantiated by analogous past experience are those most likely to be credited.[1]

The *Guidelines* also require that claims of increased efficiencies must be demonstrated to be merger-driven, i.e., must not be capable of being achieved by the merging firms on their own:

> Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.[2]

The "efficiency" evidence being offered by the Joint Applicants here does not come even close to satisfying these requirements. In fact, virtually all of their "public interest" or "public benefit" claims are rooted in speculations that are largely, in some instances entirely unsupported by any actual facts or evidence, are vague, speculative, and are incapable of being verified by reasonable means.

13. In contrast to the Joint Applicants' unsupported and unverifiable speculations regarding economies of scale, I have conducted an econometric analysis using publicly reported financial data from the five largest publicly traded cable multi-system operators ("MSOs") to determine whether, based upon empirical evidence, any such economies of scale are actually present. This analysis demonstrates that cable MSO costs and capital assets vary linearly and in direct proportion to each company's total number of Primary Service Units, a widely-accepted measure

1. United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines 2010 edition* ("*HMG*"), at §10, Efficiencies.

2. *Id.*

of output for firms in this industry. The claimed benefits of increased size and scale simply do not exist and will not arise here.

14. A merger of TWC, Charter and Bright House will create a broadband entity that will dominate the Southern California market. New Charter will pass approximately 82% of all households in census blocks within the 10-county Southern California area. 69.4% of those New Charter-passed households will have no other broadband service provider capable of supporting download speeds of at least 25 Mbps. The Joint Applicants' own expert, Dr. Fiona Scott Morton, has conceded that "[t]he post-merger New Charter would serve 87% of cable MSO video subscribers in the Los Angeles Designated Market Area ('DMA')." New Charter faces competition for the provision of its Multi-Channel Linear Video Distribution ("MVPD") services, which is not in dispute. Indeed, if MVPD was the only business in which these three companies operated, the presence of satellite TV and OVD rivals might well constrain their ability to extract monopoly rents or engage in other monopolistic practices in the MVPD market. However, the Joint Applicants' business activities are not confined to MVPD services. They are in the voice telephone service and high-speed broadband access business as well. The Joint Applicants' two largest MVPD rivals – DirecTV and DISH – do not provide high-speed broadband access at all, and most of AT&T's *U-verse* broadband that is available in California does not meet the current FCC minimum threshold of 25/3. New Charter's dominance of and monopoly over most of the Southern California 25/3 broadband market enables it to successfully offset MVPD revenue losses by shifting revenues (through price increases) to its far more captive broadband customers. And even where New Charter will confront competition in the

MVPD space, its control over certain highly desirable content that it will inherit from TWC – the LA Dodgers – afforda it a substantial competitive advantage over MVPD rivals that have thus far been unwilling to accede to TWC's terms for carriage of such content.

15. In the 2014 TWC/Comcast merger proceeding, several parties expressed serious misgivings as to the potential *monopsony* power that a combined TWC/Comcast entity would wield in the state, where it would have passed more than 84% of all households statewide. The relevant geographic market being addressed by the Joint Applicants here is Southern California. And in Southern California, New Charter's level of dominance – 82% based upon the CPUC Broadband Availability Database for the 10 counties, and 87% for the Los Angeles DMA per Dr. Scott Morton's testimony[3] – is virtually identical to the 84% that a post-merger Comcast/TWC would have controlled statewide. The Joint Applicants have only minimal presence outside of these ten counties. Indeed, only about 258,000, about 4%, of the 6.4-million total New Charter households are located *outside* of Southern California. Including the remaining 48 California counties in which the Joint Applicants have little or no presence in a market analysis makes no more sense than including the abutting states of Arizona, Nevada or Oregon in the "relevant geographic market" for purposes of evaluating the impact of the proposed merger upon *California* consumers, competitors, content producers, and local and state economies.

3. Fiona Scott Morton June 25, 2015 FCC Declaration, submitted as Exhibit A to her December 4, 2015 CPUC testimony ("Scott Morton June 25, 2015 FCC Decl."), at para. 18; Table 2 (p. 7).

16. For all of the foregoing reasons, it is my considered opinion that the proposed merger of TWC, Charter and Bright House is not in the public interest and would not support the public interest finding that is expressly required by P. U. Code §854(c).

II.

GENERAL DESCRIPTION OF THE TRANSACTION AND SHAREHOLDER AND CUSTOMER IMPACTS

The Transaction

17. As contemplated by the proposed transaction, Charter, TWC and Bright House, together with their respective subsidiaries and affiliates, will merge to form a new entity to be known (perhaps tentatively) as "New Charter." The corresponding operations of the three Joint Applicants will be combined and integrated, although the individual operating units will apparently continue to exist as they had prior to the merger.

18. An overarching concern in any "change of control" type of investigation is whether, on balance, the transfer of ownership and management responsibility for an essential public resource – cable television, broadband wireline Internet access, and voice telephone services – to a new and much larger entity will be in the public interest. PU Code §854(c) identifies a number of specific public interest considerations that the Commission is required to evaluate. §854(c)(6) requires that the Commission find that the transaction will "[b]e beneficial on an overall basis to state and local economies, and to the communities in the area served by the resulting public utility." For the reasons set out in the testimony that follows, I do not believe that the Joint Applicants have demonstrated that this will in fact occur.

19. The terms and details of the proposed transaction are set out in a "Agreement and Plan of Mergers" dated as of May 23, 2015.[4] The transaction itself involves a number of separate and affiliated corporate and LLC entities, and is to be effected through a complex succession of individual exchanges of equity and debt securities and cash payments.

The incurrence of additional debt to finance the transaction will result in a more highly leveraged post-merger entity.

20. The proposed transaction involves the purchase by Charter of TWC and BHN stock. TWC will receive approximately $55-billion in cash and stock. The deal, including debt transfer, values TWC at approximately $78.7-billion. Bright House will receive approximately $10.4-billion in cash and stock.[5] Charter will raise the required cash to pay for these acquisitions primarily through $23.8-billion in new debt financing. Upon completion of the transaction, Charter (or more properly, "New Charter"), will be somewhat more leveraged – i.e., will have a larger proportion of debt in its financial structure – than the existing pre-merger company, and will be significantly more leveraged than the existing pre-merger TWC.

21. Charles Fisher, Senior Vice President, Corporate Finance at Charter Communications, Inc,, testifies that, post-transaction, Charter's Earnings Before Interest, Taxes, Depreciation and

4. Joint Applicants' FCC Application, Exhibit B.

5. Joint Application filed at CPUC, at 15-16; See also, "Charter Strikes $55 Billion Deal for Time Warner Cable," *The Wall Street Journal*, May 26, 2015, available at http://www.wsj.com/articles/charter-to-merge-with-time-warner-in-55-billion-deal-1432635774 (accessed 1/14/16)

Amortization ("EBITDA"[6]) is expected to increase from $3.2-billion to $12.9-billion.[7] Mr. Fisher also notes that Charter's leverage ratio (which he defines as debt divided by EBITDA) will increase from 4.2x to 4.5x.[8] This would imply that Charter is entering the transaction with approximately $13.44-billion in debt ($3.2-billion x 4.2 leverage) and will close the deal with a total of $58.05-billion in debt ($12.9-billion x 4.5 leverage); the total debt will be a combination of existing Charter debt, TWC debt, and new debt to finance the transaction. "Subject to market conditions, Charter expects to finance part of the consideration for the transaction with additional indebtedness of approximately $23.8 billion."[9]

Table 1

EFFECT OF THE PROPOSED TRANSACTION UPON NEW CHARTER'S LEVERAGE FINANCING

	CHARTER	PRO FORMA NEW CHARTER
EBITDA	$3.2-billion	$12.9-billion
DEBT	$13.44-billion	$58.05-billion
LEVERAGE	4.2x	4.5x

6. EBITDA is a widely-used measure of a company's operating cash flow. It is calculated by looking at earnings derived from current operations (i.e., revenues minus operating expenses) before the deduction of interest expenses, taxes, depreciation, and amortization. EBITDA is of particular interest where companies have large amounts of fixed assets that are subject to heavy depreciation charges (like the Joint Applicants here) or in the case where a company has a large amount of acquired intangible assets on its books and is thus subject to large amortization charges (such as a company that has purchased a brand, a book of existing customers, and/or one that is involved in a large acquisition). EBITDA is a useful way of comparing companies' ongoing operations without such comparisons being distorted by differences in financial structure, tax situation, and accounting treatments of previously-acquired capital assets. On the other hand, comparisons based upon EBITDA do not consider differences in ongoing investment levels, asset replacement, and growth in the firm's capital asset base.

7. Opening Testimony of Charles Fisher, December 4, 2015 ("Fisher"), at 2.

8. *Id.*, at 5.

9. Charter response to ORA Data Request, Set 11, no. 6(a).

22. In its most recent Form 10-K annual report for 2014 filed with the US Securities and Exchange Commission, TWC indicates that its current EBITDA is $8-billion, and that its total debt is $23.7-billion.[10] Using Mr. Fisher's measure of leverage, TWC would be entering the transaction with a leverage ratio of only 3.0x.

Table 2

EFFECT OF THE PROPOSED TRANSACTION
UPON TWC'S LEVERAGE FINANCING

	CHARTER	TWC	PRO FORMA NEW CHARTER
EBITDA	$3.2-billion	$8.0-billion	$12.9-billion
DEBT	$13.44-billion	$23.7-billion	$58.05-billion
LEVERAGE	4.2x	3.0x	4.5x

Taken together, this data suggests that the transaction is expected to result in increased EBITDA for the two companies combined of at most $1.7-billion. Even at the new 4.5x leverage ratio as proposed for New Charter, $1.7-billion in EBITDA should come with only $7.65-billion in new debt ($1.7-billion x 4.5 leverage). Instead, under the proposed transaction, total debt will increase by $21-billion or more.[11]

10. TWC 2014 Form 10-K, at 68, 86.

11. This estimate of the net debt increase appears to be conservative. Charter's response to ORA Data Request Set 11, no. 6a states that "Subject to market conditions, Charter expects to finance part of the consideration for the transaction with additional indebtedness of approximately $23.8 billion."

Table 3

TOTAL PRE-MERGER VS. POST-MERGER DEBT

		EBITDA	DEBT
	NEW CHARTER	$12.9-billion	$ 58.05-billion
less	TWC	$ 8.0-billion	$ 23.7-billion
less	CHARTER (pre-merger)	$ 3.2-billion	$ 13.44-billion
	NET INCREASE	$ 1.7-billion	$ 20.91-billion
Sources: Fisher December 4, 2015 testimony, at 2 (Charter and New Charter); TWC 2014 Form 10-K			

Mr. Fisher's testimony provides only the *average* leverage ratios pre- and post-merger. However, it is far more instructive to examine the *increments* in debt and EBITDA that will result from the transaction. In order to achieve the projected $1.7-billion in additional (incremental) EBITDA, New Charter will be required to assume additional (incremental) debt of $20.91-billion. Thus, with respect to this merger-driven *increment*, the *incremental* leverage ratio (using the same metric as utilized by Mr. Fisher) will be 12.3x – that is, Incremental Debt ($20.91-billion) divided by Incremental EBITDA ($1.7-billion). Mr. Fisher describes the new debt increase as only a minor change to *Charter's* leverage *because he incorrectly focuses upon the pre- vs. post-transaction averages* rather than on the specific *incremental* effect of the merger as required by §854(c)(1). He thus fails to note that from the perspective of TWC (a much larger company), leverage is increasing substantively. From a debt leverage perspective, TWC is a healthier, better managed company than Charter. This transaction would put the TWC portion of New Charter on shakier ground. To put this differently, Charter and TWC taken together (but without merging) would have only $37.14-billion in debt, for a combined leverage of only 3.3x, vs. $58.5-billion in debt and a leverage ratio of 4.5x by joining forces into a single entity.

23. A lower leverage ratio is better for a number of reasons. First, when a company has a higher leverage ratio, all else equal, it is forced to spend a greater portion of its earnings on debt service obligations, leaving less of its cash flow available to fund innovation or capital projects including, for example, extending broadband availability to unserved and underserved areas. Second, in the context of this merger, the higher leverage ratio must be viewed in the context of how the funds are being used and as negating any efficiency gains that might otherwise be achieved: Increased debt means that even more money is being paid out to TWC and BHN shareholders, debtholders, and in golden parachute payments, thus diverting capital resources that could otherwise be used to fund service and infrastructure improvements, and innovation. Finally, a company with a leverage ratio of 3.3x is less likely to default on its debt payments than a company with a higher ratio, and is thus in a stronger position to borrow when needed to finance capital projects. Defaulting on its debt would have serious consequences for New Charter -- it would increase costs associated with filing for bankruptcy and reorganizing the business; it would increase the company's cost of debt and/or foreclose the company from accessing the capital markets entirely, which would decrease innovation and capital expenditures; and it would create difficulties for New Charter to refinance or restructure its long term debt. In fact, the Joint Applicants' *Proxy Statement* identifies a number of risk factors along these lines associated with the substantial increase in debt that New Charter will assume:

> New Charter's and its subsidiaries' indebtedness could have negative consequences to New Charter after the mergers (and, if completed, the BHN transactions), such as:
>
> - requiring New Charter to dedicate a substantial portion of its cash flow from operating activities to payments on its indebtedness, thereby reducing the availability

of cash flow to fund working capital, capital expenditures, research and development efforts, potential strategic acquisitions and other general corporate purposes;

- limiting New Charter's ability to obtain additional financing to fund growth, working capital or capital expenditures, or to fulfill debt service requirements or other cash requirements;

- exposing New Charter to increased interest expense to the extent New Charter refinances existing debt with higher cost debt;

- to the extent that New Charter's debt is subject to floating interest rates, increasing New Charter's vulnerability to fluctuations in market interest rates;

- placing New Charter at a competitive disadvantage relative to competitors that have less debt;

- adversely affecting New Charter's relationship with customers and suppliers;

- limiting New Charter's flexibility to pursue other strategic opportunities or in planning for, or reacting to, changes in its business, the cable and telecommunications industries, and the economy at large; and

- limiting New Charter's ability to buy back New Charter Class A common stock or pay cash dividends.

If current debt amounts increase, the related risks that Charter now faces may intensify.[12]

In evaluating the financial efficacy of this transaction in the context of §854(c)(1) and (c)(5), it is important to recognize that the substantial increase in corporate indebtedness that Charter will be taking on is almost entirely *transactional* in nature. That is, the additional debt is *not* being used to finance a major capital investment, innovation, infrastructure expansion or improvement, purchase of equipment, or other activity that would operate to increase the post-merger firm's

12. *Joint Proxy Statement of Charter Communications, Inc. and Time Warner Cable, Inc. filed Pursuant to Section 14(a) of the Securities Exchange Act of 1934* dated August 20, 2015 ("*Proxy Statement*"), at 98-99.

real output. Rather, the new debt is being used primarily to finance a cash purchase of TWC and BHN stock, the various merger implementation costs, as well as "golden parachute" severance payments to be given to several senior executives. Put differently, if a publicly traded firm the size of New Charter were to suddenly announce plans to incur $23.9-billion in new debt for the principal purpose of purchasing stock from existing shareholders, the financial markets would almost certainly look askance at the proposal. While companies do on occasion initiate programs to repurchase a portion of their outstanding shares, this most is almost always driven by and financed with an excess of cash, not with substantial new debt. Yet the practical effect of what is being proposed here is not fundamentally different.

The increased debt service payment obligations to which New Charter will be subject may actually exceed the net increase in annual Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) that the Joint Applicants attribute to the transaction.

24. Mr. Fisher notes in his testimony that the weighted average cost of the new debt being proposed to finance the transaction is approximately BEGIN CONFIDENTIAL << [redacted] >> END CONFIDENTIAL.[13] In the first year of the transaction, New Charter will therefore face an increase in interest expense alone (which does not include the cash flow associated with the debt amortization itself) of roughly BEGIN CONFIDENTIAL << [redacted] >> END CONFIDENTIAL (i.e., $20.91-billion in debt x BEGIN CONFIDENTIAL << [redacted] >> END CONFIDENTIAL, assuming no compounding during the year). But New Charter will need to fully service its debt, paying both interest and principal. According to Charter's Hart-Scott-

13. Fisher, at 5.

Rodino ("HSR") filing, the weighted average maturity of new debt is approximately BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL years. With a level amortization, New Charter's annual payments required to service this new incremental debt will be BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL – well above the $1.7-billion in possible (but not guaranteed) EBITDA increases. Even at a BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL -year average maturity, New Charter's new debt service payments would wipe out the entire assumed EBITDA gains.

One component of the increase in EBITDA that the Joint Applicants anticipate may be the result of post-merger price increases for services that confront little or no effective competition.

25. It is noteworthy that no specific support or explanation is being offered by the Joint Applicants for this assumed $1.7-billion increase in EBITDA. Expressed most simply, an improvement in net earnings can be attributable to a combination of three possible factors:

(1) Cost synergies and efficiency gains resulting from organizational consolidations, adoption of best practices, and economies of scale;

(2) Revenue increases resulting from an increase in total output (sales) based upon pre-merger price levels; and/or

(3) Revenue increases resulting specifically from merger-specific price increases that are made possible by the overall increases in market concentration resulting from the merger, and in the post-merger New Charter's market power vs. that of the individual pre-merger entities standing alone.

The Joint Applicants have suggested that, following completion of their post-merger integration and reorganization activities, they anticipate ongoing "run-rate operating cost synergies of approximately $400 million per year"[14] and another BEGIN CONFIDENTIAL [redacted]>> END CONFIDENTIAL in programming cost savings.[15] As I will discuss in detail in the next section of this report, their evidence as to the specific sources of such savings consists almost entirely of unsupported speculations and anecdotes. But even if the total of BEGIN CONFIDENTIAL <<[redacted]>> END CONFIDENTIAL in claimed synergies were to occur, that still leaves some BEGIN CONFIDENTIAL <<[redacted]>> END CONFIDENTIAL of the $1.7-billion in EBITDA increases to be achieved through price increases imposed upon existing services and customers, as summarized in Table 4 below:

14. *Id.*, at 3.

15. Charter response to ORA Data Request Set 11, No. 3(e).

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Table 4

COMPONENTS OF THE $1.7-BILLION PROJECTED INCREASE IN EBITDA

Projected increase in EBITDA		$ 1,700,000,000
Projected Run Rate Operating Cost Savings	$ 400,000,000	
Projected Programming Cost Savings	$ [redacted]	
Total Projected Savings		$ [redacted]
Balance to be obtained through price increases		$ [redacted]

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That New Charter will be capable of effecting these price hikes is entirely plausible. As I also discuss in this report, New Charter post-merger will dominate the Southern California broadband market, passing at least 82% of all households in the 10 Southern California counties and, by the Joint Applicants' own testimony, some 87% of all households in the Los Angeles DMA. As I discuss at para. 124 below, with respect to broadband services capable of satisfying the current FCC "advanced telecommunications services" definition – i.e., 25 Mbps download and 3 Mbps upload[16] – I have calculated a weighted average Herfindahl-Hirschman Index (HHI) of 8,466, far exceeding the Department of Justice/Federal Trade Commission's minimum threshold of 2,500 for a "highly concentrated" market. With this level of market dominance, it is entirely reasonable to ascribe a substantial portion of the projected $1.7-billion increase in post-merger EBITDA to price increases that would – and that could – be put into effect by New Charter.

16. See fn. 79, *infra*.

26. Notably, Charter has made no commitment to pass any portion of the "run-rate operating cost synergies of approximately $400 million per year" to customers. Dr. Scott Morton states that "[a] portion of these cost savings will likely be passed through to the post-merger firm in the form of lower input prices. In turn, the post-merger firm will likely pass through a portion of the savings associated with lower input prices to its subscribers."[17] Addressing that statement, ORA Data Request Set 11, no. 24, asked the Joint Applicants to indicate specifically "how much of any cost savings (in dollars and percent) does New Charter commit to passing through to consumers in CA?" In its response, Charter states simply that Dr. Scott Morton "concludes that these cost savings will likely benefit both suppliers and subscribers of New Charter [and that] [t]his is an anticipated efficiency from the transaction, not a 'commitment' by New Charter." In fact, extrapolating from the financial data provided by Mr. Fisher and in Charter's response to ORA Data Request Set 11, no. 3(e), it appears that the most "likely" outcome of the transaction will be *higher prices*, not lower prices, and certainly no pass-through of any "savings" to consumers.

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17. Scott Morton June 25, 2015 FCC Decl., at para. 21. In her November 2, 2015 FCC Declaration, Dr. Scott Morton provides a dollar estimate of the potential programming cost savings and suggests that 50% of those savings might be flowed through to subscribers. However, I am not aware of any specific commitment by the Joint Applicants to actually flow through any savings to their subscribers.

III.

THE JOINT APPLICANTS' "PUBLIC INTEREST" CLAIMS

The Joint Applicants seek to portray their proposed merger as producing economies of scale and other efficiency gains as a central element of the transaction's purported "public interest" benefit.

27. The core of the Joint Applicants' §854(c) "public interest" showing is the notion that the increased size and scale of the post-merger New Charter's operations relative to the individual companies each standing alone will result in various efficiency gains and other benefits that would flow to the merged company's customers and would thus benefit local and state economies overall. These "public interest" claims are offered through the testimony of Dr. Fiona Scott Morton, a Senior Consultant at Charles River Associates. Cut to their essentials, Dr. Scott Morton outlines several interrelated public interest benefits that she ascribes to the merger:

(1) Following the merger, "New Charter will have an increased incentive to invest in new and upgraded technology and services, because the post-merger firm will have increased scale and scope relative to any of the stand-alone firms. This increased incentive is procompetitive and will lead New Charter to increase its investments. Those increased investments will benefit subscribers."[18]

18. *Id.*, at para. 6.

(2) "Because of its increased scale, the post-merger firm's marginal cost will decrease ... because it will be purchasing higher volumes of inputs like co-axial [sic] cable, construction services, set-top boxes, and modems."[19]

(3) "The post-merger firm will have an increased incentive to invest in its network ... [resulting in] increased speed that will become available to the post-merger firm's high speed data ("HSD' or 'broadband') subscribers."[20]

(4) "The post-merger firm's larger scale will make it a better partner for innovators."[21]

(5) "New Charter will have an increased incentive and ability to promote OVDs [Online Video Distributors] and other edge providers in order to encourage usage that expands subscribership to its broadband network."[22]

28. The Department of Justice/Federal Trade Commission *Horizontal Merger Guidelines* are quite specific as to what types of evidence regarding "merger-specific" efficiency gains will be considered:

19. *Id.*, at para. 21.

20. *Id.*, at para. 24.

21. *Id.*, at para. 28.

22. *Id.*, at para. 37.

> Efficiency claims will not be considered if they are vague, speculative, or otherwise cannot be verified by reasonable means. Projections of efficiencies may be viewed with skepticism, particularly when generated outside of the usual business planning process. By contrast, efficiency claims substantiated by analogous past experience are those most likely to be credited.[23]

The *Guidelines* also require that claims of increased efficiencies must be demonstrated to be merger-driven, i.e., must not be capable of being achieved by the merging firms on their own:

> Cognizable efficiencies are merger-specific efficiencies that have been verified and do not arise from anticompetitive reductions in output or service. Cognizable efficiencies are assessed net of costs produced by the merger or incurred in achieving those efficiencies.[24]

The "efficiency" evidence being offered by the Joint Applicants here does not come even close to satisfying these requirements.

29. Virtually all of their "public interest" or "public benefit" claims are rooted in speculations that are largely, in some instances entirely unsupported by any actual facts or evidence, are vague, speculative, and are incapable of being verified by reasonable means. Dr. Scott Morton's claims regarding merger-specific efficiencies are entirely relativistic (e.g., "the post-merger firm's marginal cost will decrease") but devoid of any quantitative assessment or evidence as to the actual dollar magnitude of the claimed improvements, nor any substantive demonstration of any net benefits to consumers. She uses phrases such as "the more likely it is,"

23. United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines 2010 edition* ("*HMG*"), at §10, Efficiencies.

24. *Id.*

"will be more likely to," "reduction in cost would likely be passed through to subscribers," "innovation is more likely to occur faster," "would likely reduce its cost," "New Charter's increased scale will not likely give it the ability to foreclose innovators," and "New Charter would likely lose a significant number of subscribers if it foreclosed OVDs." Indeed, the words "likely" or "unlikely" appear approximately 39 times in Dr. Scott Morton's FCC Declaration. As I shall discuss below, Dr. Scott Morton's various assessments as to what is "likely" or "unlikely" to occur if the merger is approved are based upon speculations, not facts or empirical evidence, and in the one area of her testimony where what appears at first glance to be a quantitative analysis of some sort is put forth – the claim that New Charter would be unlikely to foreclose entry by Online Video Distributors – is premised upon what can best be described as an "all or nothing" analysis based upon unsupported assumptions as to the ability of broadband customers of a post-merger New Charter to actually switch to an alternative broadband Internet access provider.

New Charter's purported increased incentive to invest in new and upgraded technology and services

30. Dr. Scott Morton argues that "because there are many important innovations whose costs are mostly fixed,"[25] the increased scale that will result from the merger – i.e., a larger number of individual customers – will result in a lower per-customer outlay. As a result, she suggests, this lower per-customer cost will provide an increased incentive for the larger post-merger company to invest in innovations that the three firms, standing alone, would otherwise forego. The

25. Scott Morton June 25 FCC Decl., at para. 9.

arithmetic here is straightforward enough – if you divide a fixed amount by a larger denominator, the result will be smaller. But exactly how much smaller will it actually be, and is that amount actually enough to influence whatever "incentive" is required to justify a particular investment? Dr. Scott Morton is utterly silent on both of these points, because she offers neither a specific quantification of the magnitude of the "increased incentive" nor any sort of business case or capital budgeting analysis of the relationship, if any, between whatever reduction in the per-customer cost that might be attributable to the merger and the efficacy of any proposed "fixed" investment of the type to which she refers.

31. As an "example" of the potentially lower per-customer cost of a "fixed investment in innovation" to which she refers, Dr. Scott Morton cites to pre-merger Charter's decision to "invest more than BEGIN HIGHLY CONFIDENTIAL<< [redacted] >>END HIGHLY CONFIDENTIAL in fixed product and network operations costs during 2014 and 2015 in order to deploy its new cloud-based Spectrum Guide to Charter subscribers."[26] Notably, this particular example actually *disproves*, rather than supports, her "increased incentive" contention both as to its cost and its purported public benefit. First, the hypothesized merger-driven decrease in per-customer investment in the Spectrum Guide project is so small as to be almost immeasurable. Second, what Dr. Scott Morton seeks to portray as a "benefit" to consumers – the Spectrum Guide – is far more strategically beneficial to Charter (and New Charter post-merger) because it allows the company to extend its current "gatekeeper" function vis-a-vis programming and other content as it has long practiced for MVPD services into the Online Video Distributor segment.

26. *Id.*, at para. 12.

32. It is noteworthy that the "Spectrum Guide" investment was made by the *existing* pre-merger Charter, with only 4.3-million video customers, roughly one-fourth the 17.3-million video customers that New Charter would be serving post-merger.[27] The per-subscriber outlay would perhaps have been lower had the project been undertaken by a much larger firm, but the fact that the "small" pre-merger Charter had decided to pursue it anyway confirms that even at the higher (pre-merger) per-customer fixed costs, the investment initiative was still viewed as economically sound – i.e., even without the additional 13-million subscribers, Charter still had the "incentive" to pursue this particular "innovation" on its own. Indeed, and in the context of the *Merger Guidelines'* treatment of merger-driven efficiencies, Dr Scott Morton's recounting of Charter's Spectrum Guide investment provides an affirmative demonstration that such investments can be – and in fact *were* – made by Charter *on its own*, and specifically *did not require the increased scale that would result from the merger* in order for the project to be undertaken.

33. We can get a good sense of the relative importance, or more accurately the relative *unimportance*, of the increased scale of the post-merger entity in affecting the actual per-customer cost of this undertaking from the data that Dr. Scott Morton has herself provided. Table 5 below summarizes this analysis, and demonstrates that any "savings" purportedly resulting from the increased scale would be essentially *de minimis*.

27. *Id.*, Table 1 (at p. 3).

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Table 5

ANALYSIS OF PRE- AND POST-MERGER "SPECTRUM GUIDE" INVESTMENT

	Total capital investment	Number of MVPD Video Subscribers	Per-subscriber capital investment	Per-subscriber investment spread over 48 months
Charter (pre-merger)	[redacted]	[redacted]	[redacted]	[redacted]
New Charter (post-merger)	[redacted]	[redacted]	[redacted]	[redacted]
Merger-driven "savings" in per-customer monthly cost				[redacted]
2014 Average (monthly) Revenue Per Unit ("ARPU") for Charter video subscribers				[redacted]
Monthly cost savings as a percentage of ARPU				[redacted]
Source: Scott Morton June 25, 2015 FCC Decl., at para. 12, Table 1; para. 43, Table 4.				

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Pre-merger Charter's per-customer capital investment cost for the Spectrum Guide is given as BEGIN HIGHLY CONFIDENTIAL <<[redacted]>>END HIGHLY CONFIDENTIAL, a one-time outlay that can be recovered across many years of use. If we assume, conservatively and for the sake of discussion, that the Spectrum Guide was expected to remain in use for just four years (i.e., 48 months),[28] spreading the per-subscriber cost over 48 months would work out to about BEGIN HIGHLY CONFIDENTIAL <<[redacted]>>END HIGHLY CONFIDENTIAL per month. Dr. Scott Morton explains that roughly BEGIN HIGHLY CONFIDENTIAL<<[redacted]>>

28. The "useful" or "economic" life of a capital investment is a critical factor in any assessment of its overall economic merit. A "Spectrum Guide" of the type being described by Dr. Scott Morton is a key element of the user interaction with the MVPD or other video provider. Known generically as a "Graphical User Interface" or "GUI," a Spectrum Guide represents the platform by which individual customers navigate among the cable company's various program and other content offerings and make their selections. While a GUI of this type is certainly subject to periodic updates and enhancements, it is a key element of the user interface platform and will be in continuous use for many years. My choice of 48 months for the purpose of discussion here in thus extremely conservative.

END HIGHLY CONFIDENTIAL of additional investment cost would be required to adapt the Charter Spectrum Guide for use on the TWC and BHN systems post-merger, thus bringing the total up-front fixed investment cost to BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL. However, when spread over the increased number of customers (17.3-million vs. 4.3-million), the per-customer investment cost would drop to BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL. Spread over the same 48 month time frame, this would work out to a per-customer monthly cost of about BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL, resulting in a net savings of slightly more than BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL per customer per month. According to other data also provided by Dr. Scott Morton, pre-merger Charter's Average (monthly) Revenue Per Unit ("ARPU") for its video subscribers in 2014 was BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL.[29] In other words, the net effect of the increased scale on the per-month cost of the Spectrum Guide would be only about BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL, or about BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL of the pre-merger Charter video services ARPU. It stretches credulity to its limits to seriously suggest that this noise-level drop in per-customer monthly cost would have made any material difference in whatever "incentives" may have confronted Charter at the time of the investment decision vs. that which would confront a New Charter post-merger. And as to the cost impacts of the larger scale, the change here is so *de minimis* that even if this immeasurably small cost savings were to be passed

29. *Id.*, at para. 43, Table 4.

through to customers, it can hardly qualify as a consequential "public interest" benefit that can be legitimately ascribed to this transaction.

34. In offering Charter's "Spectrum Guide" investment as an example of how the merger would create incentives to "innovate" in ways that benefit the public interest, Dr. Scott Morton limits her focus to only one – and perhaps the least important – aspect of this particular investment initiative:

> Charter's Spectrum Guide also offers consumer benefits. The Guide assembles available content for the consumer to browse and search among, and then view. BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL This obviates the need for the consumer who wants to watch OVD content from having to change input sources, pick up her Roku or Apple remote control and start searching there. Being able to move seamlessly from MVPD offerings to OVD offerings is a consumer benefit.
>
> A unified Spectrum Guide is a good way for a partnering OVD to get access to many viewers and thereby lower its subscriber acquisition costs.[30]

But this description of enhanced customer convenience actually conceals Charter's true strategic purpose in developing its Spectrum Guide. MVPDs have long occupied a "gatekeeper" role with respect to content carried over their cable TV or satellite services. The MVPD decides which channels to carry, how to package them into service tiers or offer certain channels on an *a la*

30. Scott Morton November 2 FCC Decl., at paras. 44-45, footnote references omitted.

carte basis, how to price them, how individual channels will be positioned in its on-screen channel guide, and how the various service tiers and individual *a la carte* channels will be marketed. If the MVPD decided not to carry a particular channel, or to include it only in the more expensive service tiers, customers could either not get access to that channel at all or might be discouraged from purchasing it due to its pricing. And even for channels that are included in the customer's selected service tier, the location in the on-screen guide where that channel appears will also directly affect the customer's ability to view it. Irrespective of which channels or channel tiers the customers decides to purchase, all of these can be purchased only through the customer's MVPD.

35. Online Video Distributor services that can be streamed directly over the customer's broadband access service effectively bypass the MVPD's gatekeeper position. Rather than being forced to buy the content from the MVPD and to buy only the content that the MVPD has chosen to offer, the OVD customer is able to deal directly with the content provider. Rather than being forced to purchase a bundle of channels – many of which the customer may not even care about – the ability to deal directly with OVDs offers customers the ultimate choice as to what services to purchase. Moreover, this *a la carte* approach to selecting and subscribing to OVD services stimulates competition among OVDs *and has even forced MVPDs to alter their own pricing in response*. In a move toward *a la carte* pricing, Verizon in 2015 announced that it would offer "skinny bundles" consisting of fewer channels and offered at relatively lower prices than the

larger "tiers" that had long characterized MVPD pricing.[31] Several other MVPDs have since followed Verizon's lead.[32]

36. When a subscriber purchases content directly from one or more OVDs, the MVPD (Charter in this case) loses revenue. Focus on the statement by Dr. Scott Morton that I quoted above: "A unified Spectrum Guide is a good way *for a partnering OVD to get access to many viewers and thereby lower its subscriber acquisition costs*."[33] Dr. Scott Morton contends that New Charter has an incentive to and will affirmatively support its customers' access to OVDs because "OVDs very likely increase the demand for and profits from broadband services ... [and] from video and phone services as well."[34] But that in no way suggests that New Charter will have an incentive to treat *all* OVDs equally and, from Dr. Scott Morton's testimony, it is clear that New Charter has no plans to do so:

> BEGIN HIGHLY CONFIDENTIAL <<[redacted]
> >>END HIGHLY CONFIDENTIAL. In order to provide a wide variety of content, Charter has chosen to support OVDs. BEGIN HIGHLY CONFIDENTIAL <<[redacted]

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31. "Verizon FiOS shifts to 'skinny bundles' for TV service," *CNET*, available at http://www.cnet.com/news/verizon-fios-announces-plug-and-play-tv-service-centered-on-genre/ (accessed 1/14/15); see also, "TV Goes A La Carte Lite: Verizon Fios Rolls Out Customizable 'Skinny Bundle'," *Advertising Age*, April 17, 2015, available at http://adage.com/article/media/verizon-fios-rolls-skinny-bundle-programming-model/298110/.

32. "Consumers want fewer TV channels and lower monthly bills - will 'skinny' packages work? ,"*Los Angeles Times*, August 14, 2015, available at http://www.latimes.com/entertainment/envelope/cotown/la-et-ct-skinny-bundles-verizon-dish-20150816-story.html

33. Emphasis supplied.

34. Scott Morton November 2, 2015 FCC Decl., at para. 13.

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Dr. Scott Morton's repeated reference to "partners" makes it clear that New Charter will treat different OVDs differently. OVDs offering content that conforms to New Charter's "strategy" will be offered slots on the Spectrum Guide and may also be carried under a "zero rating" arrangement at such time as New Charter decides to implement data caps and overage charges. Dr. Scott Morton has described "zero rating" as providing "discriminatory exemptions from a data cap.[36] While the Spectrum Guide may, incidentally, afford certain convenience to customers *with respect to those selected OVDs with which New Charter has entered into what it terms a "partnership,"* its real purpose is strategic – to support New Charter's broader goal of discriminating in favor of strategically compatible OVDs while discriminating against those OVDs that have not been offered or have not agreed to its "partnership" terms. On balance, there is no basis to accept Dr. Scott Morton's and New Charter's claims that innovations and investment such as the Spectrum Guide are necessarily in the public interest or that they are in any remote sense merger-specific.

37. Dr. Scott Morton also suggests that "[t]here are many examples of fixed cost investments that the stand-alone firms have chosen not to make due to lack of scale. For example, all three firms cite a lack of scale as a reason for having smaller research and

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35. *Id.*, at para. 31.

36. *Id.*, at para. 128. New Charter has "committed" that it "will not charge consumers additional fees to use specific third-party Internet applications, or engage in zero-rating" for three years After three years, New Charter would be free to do so.

development teams. With more scale, the incentive to increase the size of those teams will increase."[37] Her reference to "smaller research and development teams" is, of course, a relative assessment, but she does not specify "smaller than what" nor does she offer to actually quantify just how the merger would affect the size of these R&D "teams." In pursuit of this information, ORA asked "[f]or each of the Joint Applicants, for broadband, telephony, and video and in total companywide, please provide for each of the last four years, the number of R&D employees at year end."[38] From the Joint Applicants' confidential responses, it would seem that "R&D teams" of the type referred to by Dr. Scott Morton do not actually exist. From Charter:

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[redacted]

37. Scott Morton June 25, 2015 FCC Decl., at para. 14.

38. ORA Data Request Set 11, no. 20.

[redacted]

Time Warner Cable's response was:

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[redacted]

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And Bright House Networks responded that:

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[redacted]

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These vague descriptions clearly cannot support Dr. Scott Morton's assertion. Moreover, inasmuch as BEGIN CONFIDENTIAL << [redacted] >> END CONFIDENTIAL, BHN's R&D is already benefitting from scale equal to some 75% of where it would be if the merger is allowed.

38. An examination of Charter's and TWC's recent companywide R&D spending further undermines Dr. Scott Morton's contention that the scale of a post-merger New Charter is necessary in order for the Joint Applicants to have the proper incentive to invest in innovation and R&D:

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Table 6

**ANNUAL COMPANYWIDE SPENDING ON RESEARCH AND DEVELOPMENT
($ millions)**

	2011	2012	2013	2014	2015
Charter		[redacted]	[redacted]	[redacted]	[redacted]
TWC	[redacted]	[redacted]	[redacted]	$[redacted]	

Source: Charter Response to ORA Data Request Set 11, no. 19.

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Rather than supporting Dr. Scott Morton's claim that the increased scale of a larger New Charter will incent additional R&D spending, the actual experience of Charter and TWC compel precisely the opposite conclusion. Over the four-year period of 2012 through 2015, Charter, a company that is roughly only one-third the size of TWC, increased its R&D spending by almost a factor of BEGIN CONFIDENTIAL <<[redacted]>> END CONFIDENTIAL. Yet over a comparable four-year period from 2011 through 2014, TWC's R&D spending BEGIN CONFIDENTIAL <<[redacted] >> END CONFIDENTIAL. Rather than conclude that it takes a large behemoth like a New Charter to have the wherewithal and incentives to invest in R&D, the actual experience of these two companies standing alone compels precisely the opposite conclusion: That it is the small, upstart, scrappy company like Charter that will invest far more in R&D than the complacent giant like TWC. In that regard, it should come as no surprise that it is the far smaller Charter that would be swallowing up the much larger TWC, rather than the other way around. An even larger firm like New Charter is far more likely to feel less, not more, pressure to innovate, and can be expected to divert funds that might otherwise have gone into R&D into additional corporate profits.

39. While Dr. Scott Morton does offer some quantification of pre-merger Charter's Spectrum Guide investment, she enumerates – but without quantification – a list of several other new products and services that she had been advised would be pursued by New Charter if the merger goes forward but that (presumably) would be deferred or not pursued at all by the individual stand-alone merger partners. To be more precise, what Dr. Scott Morton actually says is that a post-merger New Charter is "more likely to make [investments in these other new products and services] promptly,"[39] not that, but for the merger, these investments would not be made at all. Based solely upon some unspecified "input" she claims to have received from

39. Scott Morton June 25, 2015 FCC Decl., at para. 16.

several senior Charter and TWC executives, Dr. Scott Morton provides a specific and highly confidential list of certain "fixed cost investments that the stand-alone [TWC is said to have] chosen not to make due to lack of scale:"[40]

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[redacted]

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But unlike her discussion of the Charter Spectrum Guide investment, Dr. Scott Morton here offers no indication as to the dollar magnitude of these "investment" programs that TWC claims to have put on hold. Notably, the Joint Applicants have requested that this information be afforded "HIGHLY CONFIDENTIAL" treatment – a request that I find particularly remarkable in that *none of these purportedly deferred projects or investment programs would even remotely qualify as pushing the state-of-the-art relative to what is already widely available on the market*. In fact, virtually all of these specific service initiatives are already available from third-party providers on an over-the-top ("OTT") basis using their customers' existing broadband Internet access. For example:

40. *Id.*, at para. 14.

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[redacted]

[redacted]

[redacted]

41. http://www.vonage.com/personal/features/softphone (accessed 12/22/15).

42. http://www.vonage.com/personal/vonage-mobile-app (accessed 12/22/15). "The Vonage Mobile® app lets you connect to other Vonage Mobile app users worldwide, for free*. Make and receive high-quality voice calls, video calls, and texts, as well as share photos and video and even leave video messages. Plus, you can use the app to call international phone numbers with low per-minute rates to landline and mobile phones in more than 200 countries. (* Standard data rates apply.)

43. *TR Daily*, March 25, 2004.

[redacted]

[redacted]

[redacted]

44. https://my-digitallife.att.com/learn/holiday-offer.html?_vsrefdom=mca&mchxkw=c:72544651,k:+at&t%20+digital,m:p,d:c,ai:1667048214,s:b&WT.srch=1 (accessed 12/22/15)

[redacted]

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Dr. Scott Morton provides an even shorter list of investment initiatives that Charter claims to have deferred but, like TWC's list, there is nothing particularly novel or special about these items. As with TWC's list, Dr. Scott Morton has offered no quantitative details as to the magnitude of the "investment costs" that are purportedly sensitive to scale-driven incentives. However, it is difficult to imagine that the slightly lower per-customer cost that might result from the merger would have materially impacted any of these investment initiatives or decisions.

40. Indeed, Dr. Scott Morton offers no quantitative cost details for any of these purportedly deferred projects as she had done in the case of the Charter Spectrum Guide. Yet even if the costs of all of these programs *combined* were several multiples of her figures for the Spectrum Guide, the "savings" in per-customer costs associated with the larger post-merger scale of operations would still be *de minimis*.

The possibility that increased scale "increases the incentive and ability of the firm to partner with innovators in vertically related markets," even if true, is not necessarily a net public benefit.

41. Taking her "increased incentives to invest" theory one step further, Dr. Scott Morton goes on to suggest that "[i]n the same way that the post-merger firm's larger scale increases its incentives to invest in new products and services, it also increases the incentive and ability of the firm to partner with innovators in vertically related markets."[45] In advancing this possibility, Dr. Scott Morton refers to the need for these so-called "partners" to "optimize a technology to work on a particular cable system,"[46] and suggests that such an undertaking involves significant cost that could only be justified if it could be spread across a large population of subscribers The notion being advanced here is that there is something about the Joint Applicants' individual broadband offerings that is other than generic Internet access, that for applications to successfully utilize the Joint Applicants' broadband services, the application's developer will need to somehow "customize" it for each individual cable system or broadband access provider, and finally that the costs involved in such "customization" are materially affected by the total number of customers being served by the broadband access provider. Dr. Scott Morton does not define specifically what constitutes a "partner," and it is unlikely that she is using this term in the legal sense. Rather, it appears that what she is describing as a "partnership" involves some special, perhaps even exclusive, bilateral arrangement between a third-party application developer or content provider and one or more of the Joint Applicants and/or New Charter. For

45. Scott Morton June 25, 2015 FCC Decl., at para. 28.

46. *Id.*, at para. 29.

example, where (now or in the future) the broadband provider has imposed data caps and usage-based overage charges where the "cap" is exceeded as is already the case for most wireless data pricing, it might enter into an arrangement with certain content providers under which streaming of the "partner's" content would be offered under a so-called "zero rating" arrangement in which such usage would not count against the "data cap." Wireless carriers typically impose data caps and overage charges on customers' monthly Internet access usage. T-Mobile has recently introduced "zero rating" (its "Binge-On" offer) for downloads of certain selected content.[47] On or about December 16, 2015, the FCC issued letters to Comcast, AT&T and T-Mobile regarding this practice,[48] which some have argued directly violates the FCC's Open Internet/Net Neutrality rules by favoring certain content and content providers over others.[49] Indeed, as I noted earlier, even Dr. Scott Morton characterizes "zero rating" as creating "discriminatory exemptions from a data cap" for content offered by certain OVDs selected by the ISP.[50] While third-party providers might well seek out the largest broadband companies to create such exclusive deals as Dr. Scott Morton suggests, there may also be distinct anticompetitive aspects of such arrangements. In fact, in her November 2, 2015 FCC Declaration (submitted in this case as Appendix B to her December 7, 2015 testimony), Dr. Scott Morton appears to agree that such selective "zero rating" arrangements might well disadvantage certain OVDs:

47. http://www.t-mobile.com/offer/binge-on-streaming-video.html?gclid=CPHzhoORpcoCFckYHwodIigFXQ&gclsrc=aw.ds.

48. "FCC Asks Comcast, AT&T and T-Mobile About 'Zero Rating' Services," *New York Times*, Dec. 17, 2015, http://bits.blogs.nytimes.com/2015/12/17/fccaskscomcastattandtmobileaboutzeroratingservices/.

49. "Does T-Mobile Binge On Violate Net Neutrality?," *Forbes*, January 8, 2016, available at http://www.forbes.com/sites/tonybradley/2016/01/08/does-t-mobile-binge-on-violate-net-neutrality/#2715e4857a0ba1829aa30181 (accessed 1/14/15).

50. Scott Morton November 2, 2015 FCC Decl., at para. 128.

> Comcast has developed two products to compete with OVDs. The first is Stream, designed to capture cord cutters but not cannibalize X1 and other higher cost and higher margin Xfinity products. ... Because Stream will come into a household through a managed IP network, it will not count against usage (for those households that are subject to usage-based data policies). Analysts describe Comcast Stream as an opportunistic play to extract money from broadband-only subscribers without cannibalizing video service. ... Comcast makes it relatively more costly for subscribers to use OVD services compared to Comcast's own VOD services. Comcast does this by not counting video watched through X1 as part of the data cap that applies to OVD video watched using its broadband service.[51]

Clearly seeking to separate her clients' conduct from that of Comcast, Dr. Scott Morton suggests that "Comcast is less likely [than New Charter] to support OVDs with programming that competes with NBCU programming,"[52] and in this manner seeks to draw a distinction between Comcast and the Joint Applicants insofar as their respective incentives vis-a-vis OVDs. Thus, as Dr. Scott Morton sees it, where Comcast has a strong incentive to engage in selective zero rating with respect to its own streaming services that include "partner" content provider programming, New Charter would have no such incentives and will not itself engage in such selective zero rating. On balance, it is not readily apparent that if this is the kind of "partnering" that Dr. Scott Morton has in mind, the encouragement of such exclusive arrangements would actually be in the public interest.

51. *Id.*, at paras. 54, 56, footnote references omitted.

52. *Id.*, at para. 29.

42. To be sure, developers are required to adapt their application for use on different *hardware* and operating system ("OS") platforms, such as desktop Windows PCs, Macintoshes, tablets with different operating systems (e.g., Apple IOS, Google Android, Microsoft Windows, etc.), smartphones (also with different operating systems), and other end user devices. I am not aware of any specific requirement that customization or "optimization" of the type referred to by Dr. Scott Morton would be required in order for an over-the-top broadband application to operate efficiently on different broadband provider platforms. The only specific example offered by Dr. Scott Morton is AT&T's DSL-based broadband. She suggests that "AT&T [is] understandably less likely to support innovation that ... does not fit [its] technology (i.e., AT&T's DSL)," but offers no specific example of what sort of "innovation" she has in mind. She also suggests that "Comcast [is] understandably less likely to support innovation that ... does not fit [its] strategic priorities. For example, Comcast is less likely to support OVDs with programming that competes with NBCU programming."[53] I find this last observation on Dr. Scott Morton's part to be particularly remarkable, inasmuch as she devotes more than half of her testimony arguing that New Charter will have an incentive to promote, rather than to foreclose, OVDs and other vertically related providers because New Charter would risk losing highly profitable broadband customers to competing broadband ISPs if it blocked OVDs.[54] I will address this contention in more detail at paras. 68-83 below.

53. *Id.*, at para. 29.

54. *Id.*, at paras. 35-61, at pp. 11-25.

43. Dr. Scott Morton's attempt to differentiate the Joint Applicants here from Comcast insofar as their respective incentives to promote or to hinder OVD competition is particularly noteworthy in light of testimony on this very same subject that was offered by Comcast's economic expert in the 2014 Comcast/TWC/Charter merger. There, Dr. Mark Israel advised the FCC that TWC's and Comcast's interests in supporting OVDs were actually quite the same:

> Edge providers sell services that stimulate demand for an ISP's broadband business. The value of an ISP's broadband service is largely defined by the quality of the edge services that are available when using the service and whether the speed and reliability of the broadband service permits full utilization of those services. Hence, attractive products from edge providers increase demand for broadband service. ...
>
> Given the importance of high-quality edge provider services to broadband demand, any action that the combined firm might undertake to harm edge providers would degrade the value of its broadband service to consumers and thus potentially reduce the profits it could earn. Any strategy that reduces the availability or attractiveness of edge services would reduce demand for the combined firm's broadband services, potentially causing customers to switch to rival broadband providers ... or to reduce their overall consumption of broadband services, either of which would harm the combined firm's profits.
>
> Notably, harms to its broadband business would have a significantly negative effect on the combined company's bottom line. Broadband comprises an important part of both Comcast's and TWC's businesses. For example, residential broadband accounted for approximately 25 percent of Comcast Cable revenue in 2013. Similarly, residential broadband accounted for approximately 32 percent of TWC's residential services revenue in 2013. Moreover, in part because of the lack of programming costs associated with broadband, it accounts for an even higher percentage of Comcast's and TWC's operating cash flow.[55]

55. *In the Matter of Applications of Com cast Corp. and Time Warner Cable Inc. for Consent to Transfer Control of Licenses and Authorizations*, MB Docket No. 14-57, Declaration of Dr. Mark A. Israel, "Implications of the Comcast/time Warner Cable Transaction for Broadband Competition," submitted as Exhibit 6 to the Applications and Public Interest Statement of Comcast Corporation and Time Warner Cable, Inc., April 8, 2014, at paras. 36-38.

By Dr. Scott Morton's reasoning, Comcast's interests vis-a-vis OVDs differ from those of the Joint Applicants here because Comcast owns a major content producer, NBCU. However, Comcast owned NBCU in 2014 and would have continued to own NBCU had the 2014 merger gone through. Have Comcast's strategic interests undergone this 180º turn in just twelve months, or does 20/20 hindsight now demonstrate that Dr. Israel's testimony was simply wrong at the time he had offered it? Either way, Dr. Scott Morton's corresponding assessments of Charter's strategic interests vis-a-vis OVDs are certainly of dubious merit at best.

44. Dr. Scott Morton goes on to suggest that "[b]ecause the post-merger firm will increase the options for innovators that need this type of scale, it will reduce the cost to innovators."[56] Yet like her earlier speculations regarding New Charter's own incentives to invest in innovation, Dr. Scott Morton here offers no quantitative evidence that the kind of "scale" that only the merger could provide will have a material effect upon "partners'" innovation investment decisions. Moreover, two paragraphs later, she directly contradicts her own "scale encourages innovation" theory by noting that *pre-merger* Charter – which has only one-fourth the scale of post-merger New Charter – has designed its Spectrum Guide "so that it could be expanded to include OVDs in the program grid. Charter is actively working with OVDs, including some of the largest, national OVDs, to include their programming applications within the Charter program grid."[57] Clearly, the larger scale of a New Charter was not required to incent these OVD "partners" to participate in whatever was involved in conforming to the small, pre-merger

56. *Id.*, at para. 30.

57. *Id.*, at para. 32.

Charter Spectrum Guide program grid. By her own testimony, Dr. Scott Morton has confirmed that the types of innovations exemplified by the Spectrum Guide are distinctly not merger-specific, that they can and are being pursued by the Joint Applicants individually without the need for the proposed merger.

45. Addressing Dr. Scott Morton's theories regarding these "partners'" incentives to innovate, ORA asked Charter to "[p]lease state what partnerships to develop innovative services Charter is not currently pursuing but commits to pursue if the transaction is consummated."[58] Charter's response was particularly vague and unspecific:

> In his opening testimony, Charles Fisher stated that third-party innovators would have greater incentives to partner with New Charter, relative to the three stand-alone firms, because of, among other things, the larger subscriber base that any innovator would be able to reach through one partnership with New Charter. In the status quo, by contrast, an innovator may have to develop separate services for each of Charter, Time Warner Cable, and Bright House Networks – each of which may have incompatible platforms – resulting in transaction costs and duplicative, inefficient effort. *Charter cannot identify specific innovators who have not developed applications or products for any of Charter, Time Warner Cable, and Bright House Networks* due to these economic realities. The salient point is that, in general, an innovator would be more likely to develop a product or application for, and pursue a partnership with, New Charter following the Transaction than he or she would be with respect to each of the Joint Applicants absent the Transaction.[59]

It is not surprising that neither Charter nor its expert can point to any specific situation to support this particular contention. While the costs associated with whatever "customization" is involved

58. ORA Data Request to Charter, Set 11, no. 8(j).

59. Charter Response to ORA Data Request Set 11, no. 8(j), emphasis supplied.

may be substantial, it seems highly implausible that a would-be "partner" would forego pursuing a deal with a stand-alone Charter merely because there were only 4-million potential customers involved, let alone foregoing a deal with a stand-alone TWC to gain access to its 13-million subscribers. Even though Roku and Amazon offer competing streaming devices and platforms, Amazon Video is available on the Roku channel guide. Expanding the number of potentially addressable customers benefits both "partners" to such arrangements and, more importantly, *does not require that the underlying platform providers merge their operations in order to achieve the "larger subscriber base" to which Charter refers in its Response to ORA*. The fact is that whether spread over 4-million, 13-million or 17-million subscribers, the per-subscriber cost that any potential "partner" would confront in order to adapt ("customize" or "optimize") its own application for the specific broadband carrier is simply not large enough to materially alter the "partner's" "incentive" to pursue the arrangement. "Partner" arrangements of the type being described by Dr. Scott Morton afford the OVD significant advantages both in an absolute sense as well as vis-a-vis other OVDs that would not "qualify" for "partnership" with Charter and would thus be excluded from its "gate." In advancing these various speculations regarding the OVDs' "incentives to invest in innovation," neither Dr. Scott Morton nor the Joint Applicants offer any specific quantitative analysis as to the effects of the increased scale on "partners'" investment decisions. As gatekeepers, Charter, TWC, BHN, or New Charter get to decide who is "in" and who is "out." The disadvantages of being "out" are likely fully sufficient to provide any would-be "partner" with whatever incentives it needs to incur the costs of being allowed "in."

46. There is an important flaw in Dr. Scott Morton's contention that without the scale of a New Charter, "partner" firms would be unable to invest in innovation. Were that the case, New Charter's increased scale could give it the ability to foreclose innovators. But Dr. Scott Morton theorizes that this is "not likely" to occur, because now she claims that innovators apparently do not actually require as much "scale" as New Charter would presumably provide. In support of that point, she observes that "Netflix launched its video streaming service in 2007 when it had about 7.5 million subscribers ...."[60] Netflix, of course, is accessible over virtually any broadband provider of any size, as long as it is offering download speeds capable of supporting uninterrupted video streaming. Streaming devices like Roku boxes, AppleTV, Chromecast TV, and Amazon Fire TV – each of which includes a "cloud-based channel guide" capable of supporting end user navigation across a broad range of video sources – were certainly developed and introduced long before the number of broadband customers was anything even close to the level that Dr. Scott Morton claims is now needed to provide incentives for "partners" to invest in innovation. Her "innovation investment requires the scale of a New Charter" argument is thus without merit and offers no support for her overall "the merger will provide public benefits" argument.

60. Scott Morton June 25, 2015 FCC Decl., at para. 34.

The Joint Applicants have offered no substantive facts or analysis to support their assertions that the proposed merger will result in material decreases in the post-merger firm's marginal costs.

47. Dr. Scott Morton claims that "[b]ecause of its increased scale, the post-merger firm's marginal cost will decrease ... because it will be purchasing higher volumes of inputs like co-axial [sic] cable, construction services, set-top boxes, and modems." As with her "incentives to invest" discussion, Dr. Scott Morton offers no quantitative data or facts as to the actual magnitude of this purported reduction in marginal cost that she seeks to ascribe to the merger. Notably, the one specific quantitative example that she does provide actually *contradicts* her core argument.

48. Specifically, Dr. Scott Morton provides unit costs for set-top boxes incurred by TWC and by Charter. TWC's total cost is given as BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL vs. only BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL for the much smaller pre-merger Charter.[61] In this instance, the larger company (TWC) is incurring a BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL cost than the smaller company (Charter). Thus, in this one instance at least, the effects of "scale," not to mention claims regarding the merger's effects upon

61. Scott Morton June 25, 2015 FCC Decl., at para. 22. "TWC currently pays BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL plus BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL in cableCARD fees for an HD set-top box. Charter currently pays BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL plus BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL in platform fees for a World Box HD set-top box that does not need a cableCARD because it uses downloadable security. Due to the difference between the cableCARD fees and platform fees, the World Box is less costly than the TWC box by BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL" Footnote references omitted.

marginal costs, appear to be BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL. Moreover, there is nothing in Dr. Scott Morton's testimony that would support a conclusion that the relative size of each of the two firms had anything whatsoever to do with what each was paying for set-top boxes. In any event, the BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL differential in the one-time purchase price of a set-top box as between the higher cost and lower cost service provider is so small as to hardly qualify as a demonstration of the potential improvement in marginal cost arising from the merger – when amortized over, for example, 48 months, the differential works out to about BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL per month. Presumably, Dr. Scott Morton has selected as her example of marginal cost savings one of the larger ones (if there are, indeed, any others at all) – yet the one example she has provided here is so minuscule that it is barely worth mentioning, let alone serving as a basis for concluding that the proposed merger will result in consequential efficiency gains.

There is compelling quantitative evidence confirming that scale-driven cost effects are not significant, and that the overall costs of operating a large geographically dispersed multi-system cable company ("MSO") are directly proportional to the number of customers being served.

49. As I have noted, the Joint Applicants' various claims as to the potential scale and scope economies and efficiency gains to be achieved through the merger are being advanced without any substantive quantitative or empirical analysis. Rather, they are at best optimistic

speculations as to what *ought to occur* rather than being based upon any hard factual or empirical evidence that, over the size range in which these companies operate, additional economies of scale that would not arise absent the merger will be achieved through its approval.

50. I have undertaken to examine this question quantitatively based upon publicly available data, obtained primarily from cable company Form 10-K SEC filings and similar sources, utilizing a modeling technique known as "Panel Data Analysis." Panel data is particularly suited for this type of analysis due to the limited number of firms with publicly available financial results. The term "Panel Data" refers to the pooling of observations on a cross-sectional basis over multiple time periods. In his *Guide to Econometrics*, Peter Kennedy comments that "a major category of microeconometrics involves longitudinal or panel data in which a cross-section (of people, firms, countries, etc.) is observed over time. Thanks to the computer revolution, such data sets, in which we have observations on the same units in several different time periods, are more common and have become more amenable to analysis."[62] The use of panel data has become so commonplace that governments have engaged in the (expensive) process of collecting panel data for research purposes. Two major examples are the PSID (Panel Study of Income Dynamics) and NLS (National Longitudinal Surveys of Labor Market Experience) data.[63] These data sets were designed to enable examination of the causes and nature of poverty in the United States. Kennedy notes that panel data have several attractive features. The use of panel data creates more variability in the data set, alleviating potential

62. *A Guide to Econometrics, 5th Edition*, Kennedy, Peter, 2003 MIT Press, at 301.

63. *Id.*

statistical problems. "With this more informative data, more efficient estimate is possible."[64] Panel data also allows a researcher to experience the benefits of using time series analysis without the need for data spanning an overly extensive period of time.

51. A cable operator's total costs will vary both with the size of its distribution network (expressed in terms of "homes passed" – the industry standard size metric) and with the number of subscribers ("Primary Service Units"[65] or "PSUs").[66] If economies of scale are present as the Joint Applicants claim, then as output (i.e., the number of subscribers) increases, the percentage increase in costs should be less than the percentage increase in output (subscribers). Conversely, a percentage increase in costs that exceeds the percentage increase in output indicates a *diseconomy of scale*. Finally, roughly equal percentage increases in both costs and output would be an indication of *constant* returns to scale, i.e., that economies of scale are not present, that costs vary in direct proportion to output.

52. The econometric analysis that I have undertaken examined the relationship between costs and output for cable companies ranging in size between 2.3-million and 55.5-million PSUs.

64. *Id.*, at 302.

65. PSUs or Primary Service Units is an industry metric that measures the number of subscriptions to video (excludes digital video) , high-speed data, and voice services, separately counting each service provided in a bundle. For example, a single customer who subscribes to both video and high-speed data services would be counted as two PSUs.

66. Because overall penetration rates fall within a relatively narrow range, "homes passed" and "PSUs" tend to be highly correlated. To confirm this, I calculated the correlation coefficient for the number of homes passed by Comcast and its subscribers, as reported in Comcast's 10-K reports, from 2006 to 2014 and found that there is a 0.99 correlation between number of homes passed and number of subscribers. Publicly available data on subscribers (PSUs) tends to be more readily available, so I have based this analysis on this metric.

The sizes of TWC, Charter and New Charter all fall within this range. Bright House does as well, but because it is not publicly traded and does not file 10-K reports, I have not been able to include Bright House in the study. Several important conclusions can be drawn from this analysis:

(1) There is very little variation in total per-subscriber cost, including both operating and programming costs, across the smallest to the largest multi-system cable operators. Hence, in aggregate, there is no evidence that economies of scale are present, or that the proposed merger of Charter, TWC and BHN will actually result in any material cost savings relative to what these firms can achieve if they continue to operate as stand-alone companies.

(2) The Joint Applicants have provided evidence indicating that per-subscriber *programming* costs will likely decrease due to the increased size of the post-merger firm. If total costs (operating + programming) increase in direct proportion to output, and if programming cost component is increasing proportionately less than output, it follows that *non-programming* operating costs must necessarily be increasing by a greater percentage than the increase in total output. Thus, excluding programming costs, the empirical data demonstrate that *diseconomies of scale* are present as among the cable MSOs I studied, indicating that, if anything, a merger of the three Joint Applicants will result in *higher*, certainly not lower, unit costs.

53. For this analysis, I utilized Form 10-K data for the five largest publicly-traded US multi-system cable operators, Suddenlink, Charter, TWC, Cablevision, and Comcast. Other cable companies, such as Cox and RCN, are not publicly traded, so comparable information is generally not available for these firms. The figures below compare various components of the five companies' financial statements against their subscriber bases. I have plotted Number of Employees (Figure 1), inflation-adjusted Property, Plant and Equipment or "PPE" (Figure 2), inflation-adjusted Programming and Content costs (Figure 3), and inflation-adjusted Total Operating Expenses (Figure 4) of each company against the Number of Primary Service Units ("PSUs") in each year from 2006 to 2014.[67] The figures reveal a clear trend – for each one of the cable companies, the relationship between costs and subscribers appears to be approximately linear. Additionally, the slopes of the trend lines (cost per subscriber) appear to be relatively similar for the five companies. This analysis suggests that within the size range of the five companies I studied, the cable companies exhibit constant returns to scale, not increasing returns to scale as the Joint Applicants claim. Although the merger may allow the Joint Applicants to realize some limited gains from certain synergies (such as a reduction in senior management personnel, possibly reduced per-unit input costs due to higher volume purchases, etc.), any such improvements appear to be quite small. Even the nation's largest cable operator – Comcast – does not exhibit per-unit costs that are materially different than those of TWC or Charter, and may even be higher.

67. Reporting of Programming and Content Costs changed significantly over the period 2006 through 2014, therefore, I only plotted Programming and Content Costs from 2012 to 2014.

54. In these charts, I have used the Number of PSUs, which measures the number of discrete subscriptions to each service offered by a provider rather than the number of customer relationships a provider has, as an index of the overall size (scale) of each firm. Using PSUs as the measure of subscribers generates a more accurate estimate of economies of scale because growth in total costs can be measured against almost all of the key revenue generating activities of the business.

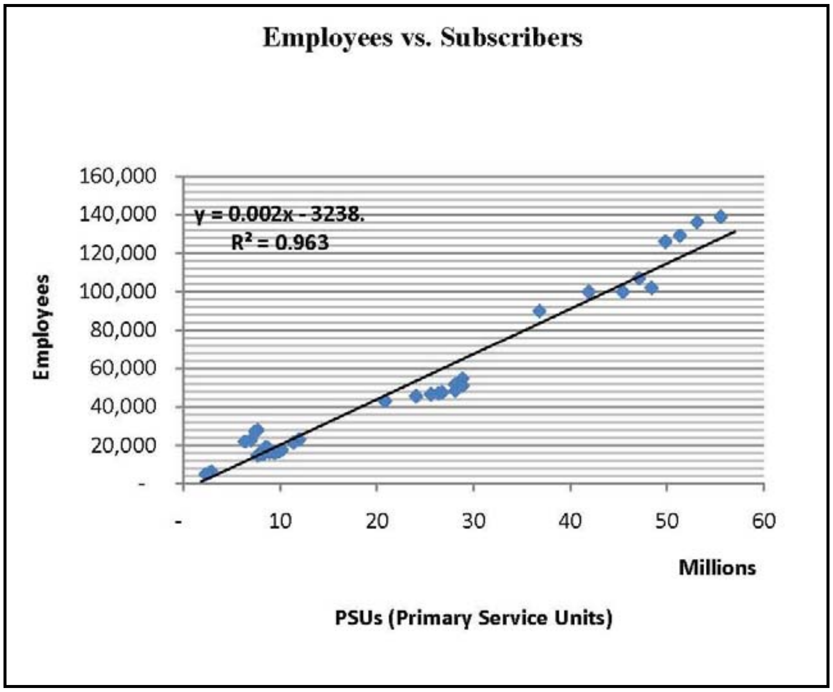

Figure 1. Cable MSO Employees vs. Primary Service Units

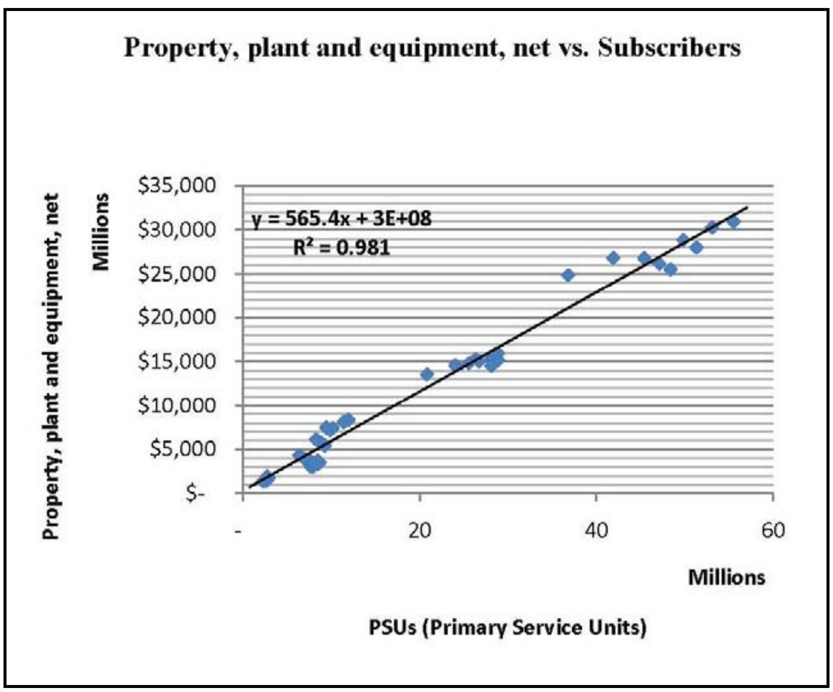

Figure 2. Cable MSO Property Plant and Equipment (PPE) vs. Primary Service Units

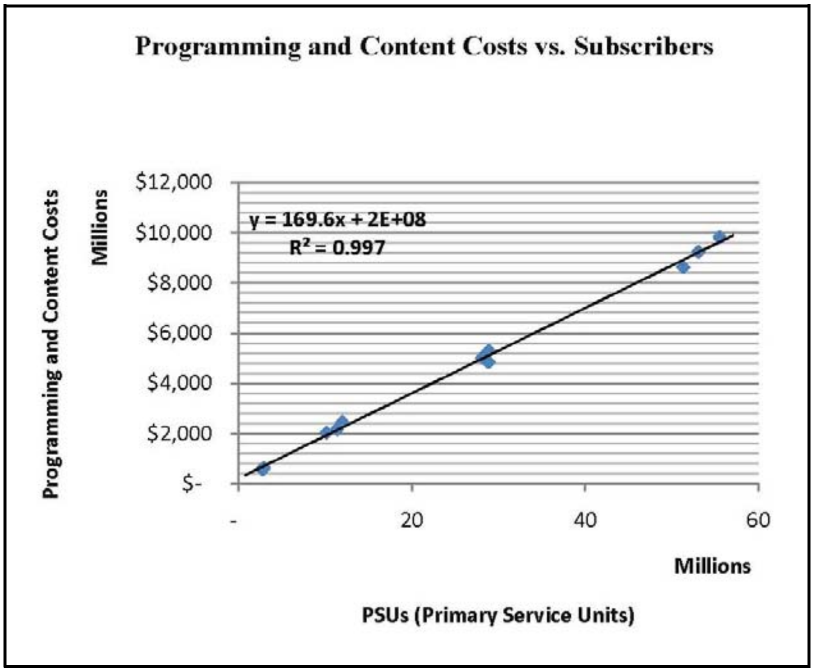

Figure 3. Cable MSO Programming and Content Costs vs. Primary Service Units

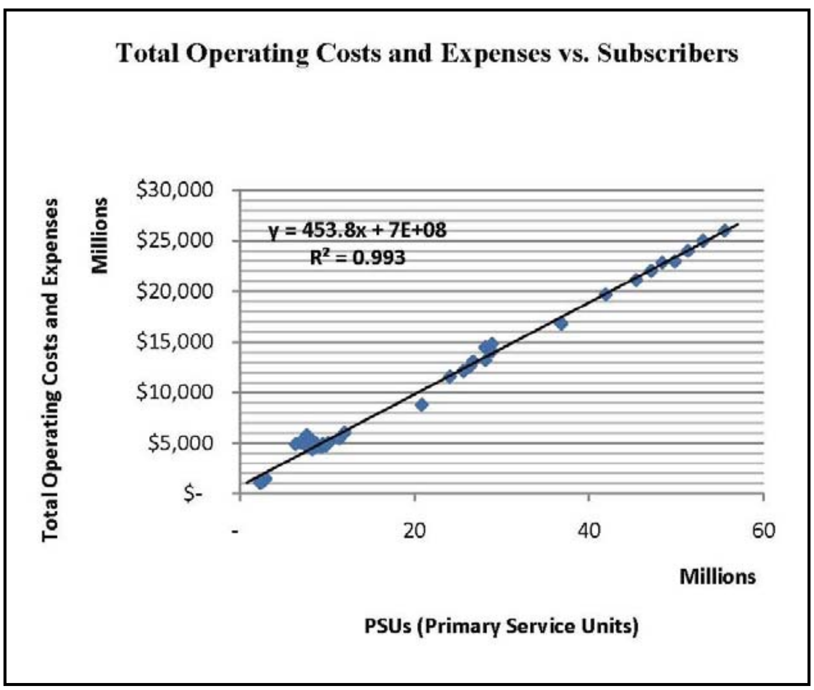

Figure 4. Cable MSO Total Operating Costs and Expenses vs. Primary Service Units

55. In addition to plotting number of employees, PPE, and total investment costs and operating expenses against subscriber counts, I have also plotted Employees per PSU (Figure 5), PPE per PSU (Figure 6), Total Operating Costs and Expenses per PSU (Figure 7), and Programming and Content Costs per PSU (Figure 8) for the five companies over the nine-year period from 2006 through 2014.

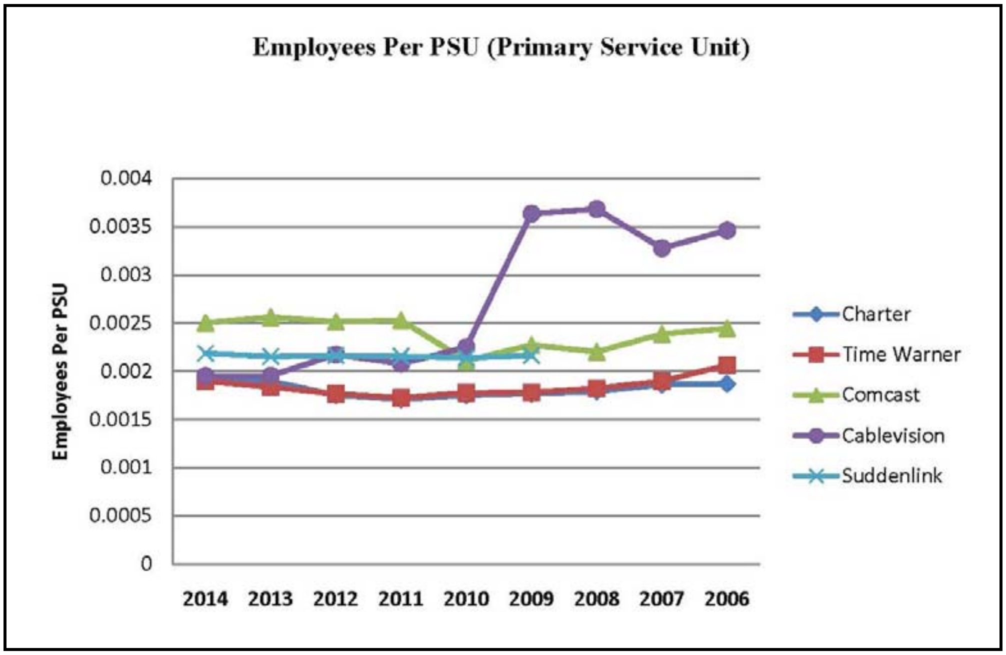

Figure 5. Cable MSO Employees per PSU

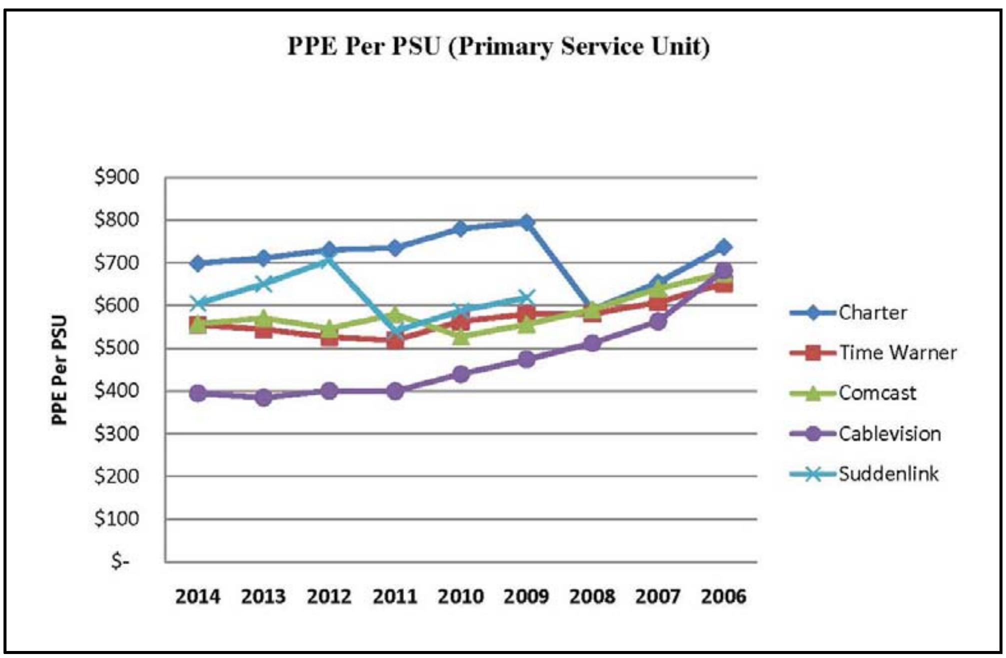

Figure 6. Cable MSO Property Plant and Equipment per PSU

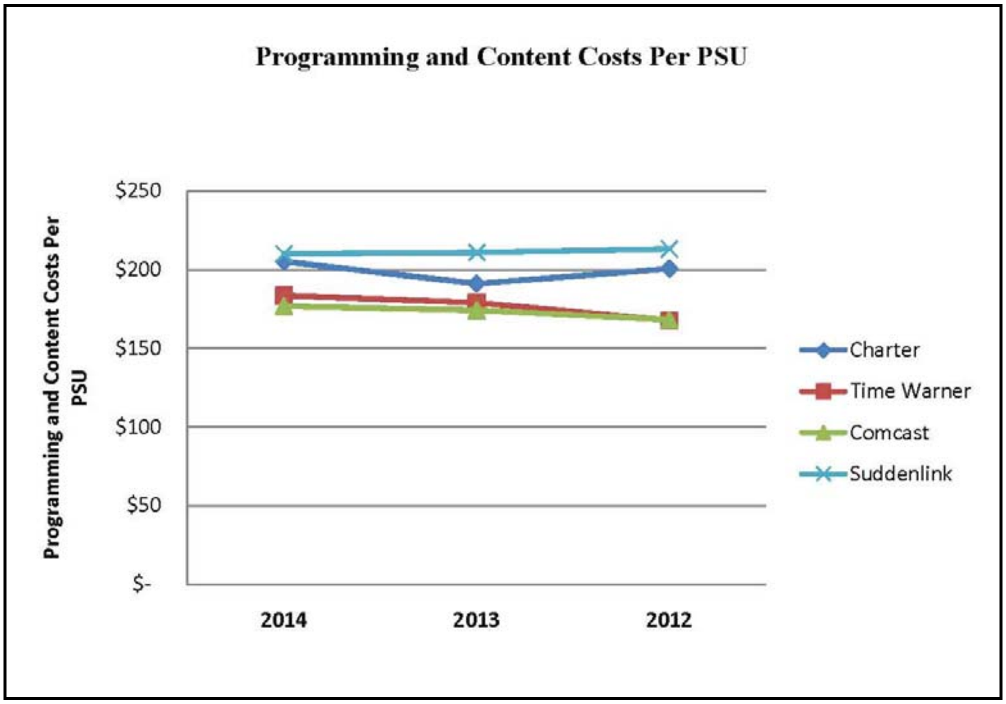

Figure 7. Cable MSO Programming and Content Costs per PSU

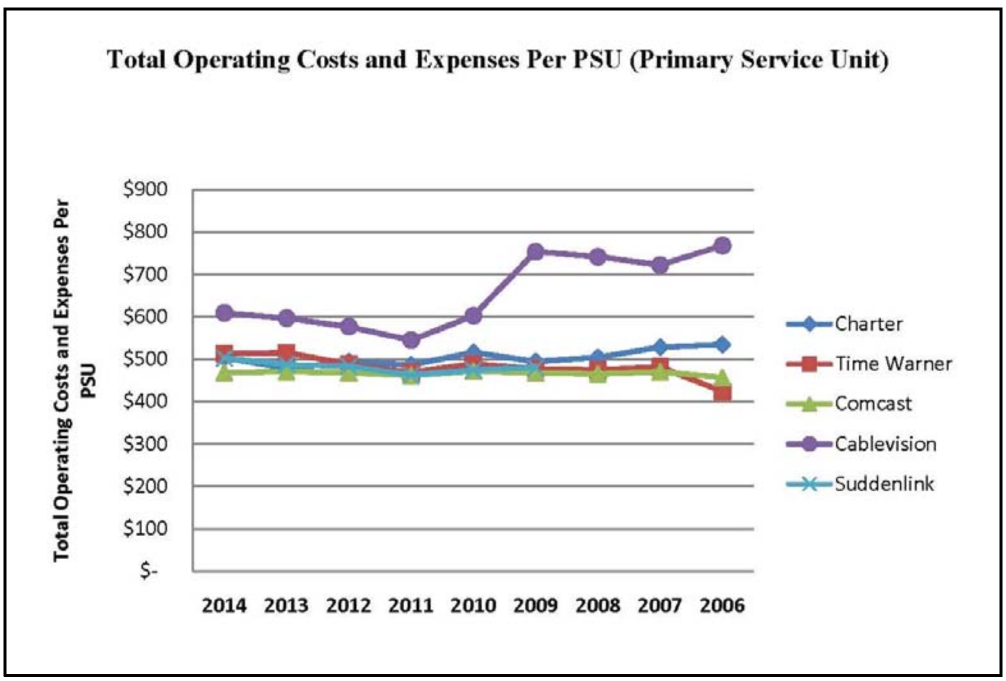

Figure 8. Cable MSO Total Operating Costs and Expenses per PSU

56. Although scatter plot analyses of the types shown in Figures 1-4 above can provide a good indication of the relationship between two variables, estimating an econometric model with a specific functional form permits relationships between each of the dependent variables being examined (Employment, PPE, Programming/Content Cost, or Total Operating Expenses)) and multiple "explanatory" variables. In order to test whether the cable companies exhibit economies of scale, I have estimated four functional forms commonly used in econometrics – linear, quadratic, log-log, and trans-log – for each of the four components of the cable companies' financial statements (Employees, PPE, Programming/Content Costs, and Total Operating Expenses).

57. The econometric evidence derived from the five MSOs' financial statements do not support the Joint Applicants' claims that the larger New Charter will realize economies of scale and efficiencies not available to the smaller stand-alone entities. Instead, the analysis reveals that cable companies exhibit either constant returns to scale or *diseconomies of scale* in three of the four cost categories that I have considered. The companies appear to exhibit economies of scale only with respect to Programming and Content Costs, which is not unexpected given that larger MSOs are likely to have more bargaining power in their dealings with content producers. This evidence is also consistent with the arguments presented in the Reply Declaration of Michael L. Katz that suggest that the merger will result in a reduction in per subscriber programming costs.[68] However, Programming and Content Cost is just one component of Total

68. "The proposed transactions will allow New Charter to realize lower marginal costs of video programming, particularly for legacy Charter systems. The lower marginal costs resulting from the proposed transactions will benefit consumers by generating economic incentives for the combined firm to offer better and cheaper video

(continued...)

Operating Expenses, which overall appear to exhibit either constant returns to scale or diseconomies of scale. This finding suggests that, despite the fact that the cable companies may benefit from lower per-customer Programming Costs, these gains are completely offset by the *diseconomies of scale* extant with respect to other operating costs and expenses.

58. In summary, the principal finding of these econometric models – that cable companies generally do not exhibit economies of scale – is consistent across all of the four model specifications that were examined. Additionally, the statistical properties of the models suggest that their results are quite robust. The high level summary statistics like the *Adjusted* R^2 and *F*-statistic indicate that these models generally fit the data well. The *Adjusted* R^2, a statistic ranging from zero to one, is typically interpreted as the percent of variation in the dependent variable that is explained by the independent variables.[69] For each of the econometric models, the *Adjusted* R^2 is very high (between 98% and 99%) indicating that the independent variables included in these models explain a large portion of the variation in the dependent variables.[70] Another measure, the *F*-statistic, can also be useful in determining whether a regression model fits the data well. The *F*-statistic is used to test the statistical significance of multiple regression

68. (...continued)
services. Moreover, the lower prices and higher quality of the combined firm's services can be expected to create competitive pressures for rival service providers to reduce prices and improve their services in response, further benefitting consumers", Reply Declaration of Michael L. Katz, November 2, 2015, at 4.

69. Stock, J. H. & W. W. Watson, *Introduction to Econometrics (3rd ed.)*. Boston: Addison-Wesley, 2011 ("Stock & Watson"), at 769.

70. Stock & Watson note that "[t]he R^2" is useful because it quantifies the extent to which the regressors account for, or explain, the variation in the dependent variable", *Id.*, at 195.

coefficients or an entire regression model.[71] I tested the overall significance of each regression model and determined that each model was statistically significant at the 99% confidence level, which – like the high *Adjusted* R^2 statistics – indicates that the econometric models fit the data well. The *t*-statistic (a measure of the statistical significance of the individual regression coefficients) is significant at the 95% confidence level for the primary variable of interest -- "PSUs" -- for all four of the linear models and for three of the four log-log models. In some of the quadratic and trans-log specifications, *t*-statistics on higher-order terms describing the relationship between costs and subscribers ("$PSUs^2$" and "0.5 × ln(PSUs) × ln(PSUs)") are also statistically significant at the 95% confidence level.

59. There are two important takeaways from these results: First, the charts show that there has been little change in inflation-adjusted unit cost per subscriber over the plotted periods despite ongoing continuous growth in total subscribers that each of the five MSOs has experienced, and in fact it is not at all clear that the inflation-adjusted cost per subscriber has decreased, as one would expect to have occurred if the cable companies exhibit the types of economies of scale that the Joint Applicants claim. In fact, *total costs and expenses per subscriber have increased for all five companies over the past five years*. Second, it is notable that costs per subscriber are relatively similar for Comcast and TWC (Charter's costs appear to be slightly higher than the two larger cable companies). Given that Comcast has nearly twice the

71. *Id.*, at 221-223.

number of PSUs than TWC and has approximately 79% more broadband subscribers,[72] it seems implausible that the proposed merger of TWC and Charter (which would result in a company with approximately 80% of the number of PSUs that Comcast serves) would be able to achieve a level of cost per subscriber materially lower than that of the larger Comcast or the existing TWC, especially in the absence of any significant competition. Any reduction in marginal costs as a result of the merger will be so small as to be nearly immeasurable.

60. In each of the four diagrams, the calculated trend line passes through or very close to the origin, suggesting that total costs vary *in direct proportion* to total output as measured by the number of PSUs. The regression results are consistent – the intercept or constant term is not statistically significant (not statistically different from zero) in all categories except for Programming and Content. Put differently, and directly contrary to the unsupported speculations of the Joint Applicants and their expert, there is no basis to anticipate a material reduction in unit cost to result from the merger relative to that for the three individual firms operating on a stand-alone basis. Bright House and Charter may experience some modest improvement, but TWC, which represents some 63.5% of the customers affected by the proposed transaction,[73] is unlikely to experience any consequential improvement in average unit cost.

72. Comcast 2014 10-K, at 3; TWC 2014 10-K, at 47-51.

73. TWC 2014 10-K, at 47-51; Charter 2014 10-K, at 4; "About Bright House Networks," http://brighthouse.com/about/about-us/about-us.html.

Reductions in per-subscriber programming costs that might be experienced by a post-merger New Charter are not beneficial on an overall basis to state and local economies or to the communities in the areas being served.

61. PU Code §854(c)(6) requires the Commission to find, on balance, that the merger, acquisition, or control proposal is in the public interest, and to base such a finding upon, among other things, a determination that the transaction will "[b]e beneficial on an overall basis to state and local economies, and to the communities in the area served by the resulting public utility." If by merging their respective operations, the Joint Applicants were able to actually achieve significant economies of scale – i.e., they would be able to produce the same combined level of output using fewer economic resources – that result could be said to satisfy the §854(c)(6) requirement that the transaction "[b]e beneficial on an overall basis to state and local economies, and to the communities in the area served ..." Suppose, for example, that there are two hypothetical companies that each manufactures 10,000 units of a particular product, that each employs 100 people, and occupies a 50,000 square foot production facility. Taken together, the two companies produce 20,000 units of output, employ 200 people, and occupy 100,000 square feet. Now suppose that, were the two firms to combine their operations, they could together achieve synergies that would enable the merged firm to produce the same 20,000 units of output with only 160 employees and require only 80,000 square feet for their combined production facility. In this example, the same output (20,000 units) is produced but using few economic resources – 40 fewer employees and 20,000 square feet less space. This type of efficiency is economically beneficial, because it permits the freed-up resources to be redeployed to other productive activities, thereby increasing overall economic output. Indeed, it could be argued that the realization of synergies resulting in a net decrease in the use of economic resources

constitutes a benefit to state and local (and, for that matter, national) economies even if the merged firm does not directly flow through any such efficiency gains to customers in the form of lower prices. However, in the case of cable MSOs such as the three Joint Applicants, the empirical evidence does not indicate that any such savings will arise. Therefore, there would be no net benefit "on an overall basis to state and local economies, and to the communities in the area served ..."

62. Dr. Scott Morton states that she "understand[s] that Charter estimates that it will save approximately BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL per Charter subscriber in programming costs due to the deal."[74] Prof. Michael Katz explains that such reductions in programming costs are possible because "New Charter will be able to lower its marginal costs by stepping into TWC contracts where they offer more favorable rates."[75] Using the same types of Form 10-K data that I have used in the econometric analysis I have been discussing here, Prof. Katz demonstrates that the per-subscriber programming costs are highest for the smallest MSOs – Suddenlink and Charter – and that they decline as the number of subscribers increases – i.e., TWC's per-subscriber costs are lower than Charter's, and Comcast's are lower than TWC's.[76] Prof. Katz cites another Joint Applicant expert, Professor John Kwoka, who has concluded that "there is a widely understood and well

74. Scott Morton November 2, 2015 FCC Decl., at para. 102.

75. Michael J. Katz, November 2, 2015 FCC Decl., at para. 9.

76. *Id.*, at para. 17, Figure 1.

documented inverse relationship between the size of an MVPD and its programming costs per subscriber."[77]

63. The ability of larger MVPDs to negotiate lower per-subscriber programming fees with content providers arises from the larger firms' increased *monopsony* market power relative to that of smaller operators. However, the content provider's costs for *producing* a particular program are not reduced or otherwise impacted when New Charter "step[s] into TWC contracts ... offering more favorable terms." Unlike the situation where genuine synergies exist, there is no material savings in economic resources for the content provider arising from the merger of two or three smaller cable MSOs into one larger company that is able to demand more favorable terms by, for example, threatening not to carry the content at issue. What is involved here is basically a wealth transfer – the MSO pays less and the content provider receives less – with no material impact upon the underlying costs of or resources involved in the content production activity itself.

64. The economic effects of these reduced programming costs are almost entirely pecuniary in nature. They arise due to shifts of the relative market power of the buyers and sellers of programming, and not as a consequence of a net reduction in the quantity of economic resources involved in the program production activity. Dr. Scott Morton states that "New Charter will lower the prices it charges Charter video subscribers by 50% of the program cost reduction. It also means that the video margins New Charter will earn on current Charter subscribers will

77. *Id.*, at para. 16, citing Kwoka, at para. 40.

increase by approximately BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL ..."[78] Notwithstanding Dr. Scott Morton's statement, I am not aware that the Joint Applicants have made any such specific commitment to reduce prices for legacy Charter MVPD subscribers, or that Dr. Scott Morton has been delegated with the authority to offer such a commitment here. However, whether or not any reductions in programming fees are actually flowed through to subscribers (as Dr. Scott Morton would seem to be promising) or are retained, in whole or in part, by New Charter, the potential for reduced programming fees would not qualify as satisfying the §854(c)(6) requirement that the transaction "be beneficial on an overall basis to state and local economies, and to the communities in the area served ..." Indeed, to the extent that important segments of the "state and local economies" in California are heavily involved in the production of video programming content, the transfer of wealth from program producers to New Charter could well have precisely the opposite impact.

Empirical evidence demonstrates that New Charter will likely experience significant diseconomies of scale with respect to its other, non-programming operating costs.

65. As I have shown, there is compelling empirical evidence and econometric analysis indicating that cable MSO operating expenses vary directly with output, i.e., that taken across all of their expense categories (including programming costs), these companies are experiencing constant returns to scale. However, as I have just been discussing, evidence presented to the FCC by the Joint Applicants also confirms that programming costs tend to increase at a lower

78. Scott Morton November 2, 2015 FCC Decl., at para. 102.

percentage rate than the total number of subscribers, that from the perspective of the Joint Applicants, there are economies of scale with respect to the fees they pay to content producers.

66. If total operating expenses (including programming costs) exhibit constant returns to scale while the programming cost component exhibits *increasing* returns to scale, it would then follow that, *excluding programming costs*, all other operating expenses are increasing at a higher percentage rate than the volume of output. The financial data that is available from public sources (principally Forms 10-K) does not provide sufficient detail to permit an analysis of *non-programming operating costs*, so it is not possible at this time to provide a quantitative assessment of the extent to which these decreasing returns to scale are evident. However, from the evidence and analysis that is available – including evidence submitted by the Joint Applicants themselves – it is clear that diseconomies of scale are present to at least some degree. The merger will result in more, not fewer, economic resources being required to produce the same volume of output. That condition is clearly at odds with the requirements of §854(c)(6) specifically and with the broader public interest requirements of §854(c) overall.

There is no basis upon which to expect that any post-merger scale- or merger-driven efficiency gains will be flowed through to customers.

67. In order for individual customers to actually benefit from any such economies of scale and such improvements in marginal cost as may arise post-merger, New Charter would have to flow at least some, if not all, of the purported efficiency gains through to its customers rather than simply to flow them to its "bottom line." Thus, in order for these purported "efficiency

gains" to constitute a *bona fide* public benefit specifically attributable to the proposed merger, the veracity of each of two separate questions would need to be evaluated:

(1) Will the efficiency gains that the Joint Applicants ascribe to scale economies resulting from the larger size of New Charter *vis-a-vis* any of the three individual companies actually arise; and

(2) To the extent that any such efficiency gains do actually materialize and given that New Charter's rates will not be subject to any cost- or earnings-based regulation, will New Charter be constrained by competitive marketplace forces to actually flow through the realized cost savings to its customers either in the form of lower prices or expanded availability of broadband access?

Nothing in Dr. Scott Morton's testimony demonstrates the quantitative impact on cost that will result from the merger. At best, Dr. Scott Morton has offered several isolated anecdotal examples of areas where, according to her, scale-related savings or other scale-related benefits are "likely" to arise. Unlike Dr. Scott Morton, I have undertaken to examine this question through quantitative econometric analysis utilizing a more comprehensive top-down examination of the effects of scale upon various indicia of cost. This analysis confirms that scale-driven cost effects are not significant, and that the overall costs of operating a large geographically dispersed multi-system cable company ("MSO") are proportional to the number of customers being served.

Contrary to the Joint Applicants' contention, the absence of effective competition for high-speed 25/3 broadband within New Charter's Southern California operating areas provides it with both the ability and the incentive to recover MVPD revenues losses to OVDs by increasing its broadband prices.

68. In the next section of this report, I provide a detailed analysis of the extent to which the Joint Applicants will confront competition for high-speed (25 Mbps download/3 Mbps upload) broadband within their California operating areas post-merger. 25/3 is the benchmark speed adopted by the FCC as the minimum threshold for "advanced telecommunications services" in the current demand and supply context.[79] As my analysis demonstrates, only about 30% of households in the Joint Applicants' post-merger service area in their primary California market – the ten Southern California counties – can obtain qualifying broadband service from a competing provider. For the remaining 70%, New Charter will be the *only* source of 25/3 broadband.

69. New Charter's video (MVPD) services compete directly with so-called Online Video Distributor ("OVD") services that can be accessed by end-users via their high-speed broadband Internet access services. As a consequence of its extreme dominance of the Southern California broadband access market, New Charter will have both the incentive and the opportunity to limit its broadband customers' ability to access competing OVD services by implementing such devices as "throttling" of high-speed content data streams and by establishing "data caps" with usage-based overage charges where the "cap" is exceeded. Dr. Scott Morton argues that New

79. *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126, *2015 Broadband Progress Report and Notice of Inquiry of Immediate Action to Accelerate Deployment*, FCC 15-10 (rel. February 4, 2015), at para. 3.

Charter has no such incentive and that, were it to attempt to engage in such tactics, it would risk losing customers of its highly-profitable broadband services to rival ISPs.

70. To support this argument, Dr. Scott Morton has provided an analysis, based upon highly confidential cost and revenue data that was furnished to her by her clients, that compares the relative profit margins being realized on each of the Joint Applicants' various services – video, broadband and voice.[80] Her analysis suggests that broadband is far more profitable to each of the Joint Applicants than their MVPD video services. On this basis, she posits that New Charter would have no incentive to foreclose or otherwise frustrate OVD competition because doing so would risk a mass defection of broadband customers to a competitor.[81] The core of her theory here rests on the proposition that if New Charter's broadband customers were unable to effectively utilize OVD streaming over New Charter broadband services, they would simply discontinue their New Charter broadband in favor of a competing provider. Based upon her marginal cost and profit margin data, Dr. Scott Morton then concludes that New Charter would suffer a larger profit loss from the defection of a broadband customer than it would gain by foreclosing OVD competition for its video services.[82] *Yet entirely absent from Dr. Scott Morton's analysis is any quantitative or other assessment of the actual risk that customers would actually be able to discontinue their New Charter broadband in favor of a competing broadband provider were the Company to engage in tactics that frustrate or block access to OVDs.* Her

80. See, generally, Scott Morton June 25, 2015 FCC Decl., at paras. 35-56.

81. *Id.*, at para. 54.

82. *Id.*, at paras. 52-53.

"analysis" and the mass defections that she describes are premised upon the hypothetical case where New Charter would work to foreclose *all OVD competition*, rather than selectively support OVDs whose services are compatible with New Charter's own strategic interests, while blocking or frustrating entry by those on New Charter's "most favored OVD" list.

71. Of course, the types of defections of New Charter broadband customers to competing broadband providers could only occur if there actually is a "competing provider" offering a level of broadband service (i.e., 25/3) that is capable of supporting video streaming by multiple devices in the home. If no such competing provider actually exists *for any given New Charter customer's residential address*, then there is no ability *for that customer* to switch to a (non-existent) competitor. Without the actual possibility of its customers switching to a competing broadband provider, there is no risk that New Charter will lose its highly profitable broadband revenue if it were to intentionally attempt to frustrate or foreclose OVD competition by, for example, imposing data caps, engaging in speed throttling, or other service degradation tactics.

72. As I noted earlier, Dr. Scott Morton has actually suggested that the incentives confronting New Charter *vis-à-vis* OVDs are just the opposite of those that confront Comcast. Her reasoning is that because it owns a major content provider, NBCU, "Comcast is less likely to support OVDs with programming that competes with NBCU programming."[83] She offers no further analysis to support this conjecture. If, as she claims, broadband service is extremely profitable and broadband customers would depart in droves if their ISP (New Charter in this

83. *Id.*, at para. 29.

case) were to limit or block their ability to access OVD content, then why would Comcast not confront that very same concern? Dr. Scott Morton's "explanation" – that "Comcast is less likely to support OVDs with programming that competes with NBCU programming" – rings hollow, for several reasons. First, the *content provider's* goal is to reach the largest audience by whatever means, because that is what generates revenue in the form of retransmission fees, broadcast license fees, advertising, and (for pay-TV services) subscriber revenue. From the perspective of NBCU or any other content provider, it really doesn't matter whether its programming is accessed via cable, satellite TV, OVDs, or even over-the-air broadcasts. Does Dr. Scott Morton believe that Comcast could stimulate demand for unpopular low-rated NBCU programs such as "The Biggest Loser" or "Undateable" by throttling OVD streaming of such highly-rated OVD content like *House of Cards* and *Orange is the New Black* (Netflix), *Transparent* and *Alpha House* (Amazon Prime) merely by throttling OVD content? If there were any merit to Dr. Scott Morton's notions as to Comcast's incentives, then how could she explain the decisions by major content providers with traditional MVPD ties, like HBO, Showtime, Disney, ESPN, CNN, AMC and FX Networks, to introduce their own, or otherwise participate in, OVD streaming? And how would her theory explain why CBS and its local CBS-owned broadcast TV stations – all major recipients of cable TV retransmission revenue – would have decided to introduce its own streaming service, "CBS All Access," which not only provides OVD access to virtually all current and past CBS TV programs (and even to archival programs that are no longer being produced), and even offers live streaming of the subscriber's local CBS TV affiliate? The short answer is that there is no "explanation" that would support Dr. Scott Morton's lack of understanding as to how the content business operates.

73. Dr. Scott Morton's assessment as to the differences between New Charter's and Comcast's incentives vis-a-vis OVDs seems also to be premised upon her "all or nothing" notion regarding New Charter's own incentives. Her "profitability analysis" comparing broadband and MVPD margins purports to assess the consequences of a New Charter decision to block *all OVD competition*, rather than just some of it. By "partnering" with those OVDs willing to accept its terms, New Charter is able to retain its gatekeeper role and protect its overall MVPD profit margins while blocking those OVDs that are unwilling to accede to New Charter's demands. Its affiliation with NBCU notwithstanding, Comcast confronts precisely the same set of incentives as New Charter, and is able to implement them by means of its own "Xfinity" counterpart to New Charter's Spectrum Guide.

74. In fact, it is the Joint Applicants' and New Charter's MVPD services – and not their broadband offerings – that actually do confront competitive choices and the risk of customer defection. Even before OVD type competition was a serious concern, cable MVPD operators confronted competition from satellite TV providers (Dish and DirecTV) and, at least with respect to the broadcast television networks and local TV stations, from traditional over-the-air broadcasts. From the customer's perspective, one of the principal attractions of OVD services is the ability to subscribe to specific programming on an *à la carte* basis. Cable MVPD operators typically offer their linear video services in packages or "tiers" that include multiple channels and services, and have for many years actively resisted adoption of *à la carte* pricing models. TWC's MVPD service tiers offered in the Los Angeles Designated Market Area ("DMA") range in price from $10.00 for "Starter TV" with 20 channels to "Preferred TV" with 250+ channels

including HBO and Showtime or Starz for $79.99 per month.[84] Note that the prices shown on TWC's website are *promotional prices* that will increase after 12 months. TWC does not disclose the full retail prices that will apply after the end of the promotion period. Dr. Scott Morton cites data she obtained from her clients indicating that the weighted average ARPU for video (MVPD) services calculated across all three firms is BEGIN HIGHLY CONFIDENTIAL << $[redacted] >> END HIGHLY CONFIDENTIAL per month,[85] an amount that BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL all of the promotion prices currently being displayed on TWC's website. In some cases, in order to obtain a specific channel that the customer desires, the service tier pricing model forces the customer to subscribe to a full bundle of channels, many of which may be of little or no interest. OVD entry has dramatically altered this tier-based business model. Table 7 below provides some examples of OVD services and pricing. Some services, such as HBO, Showtime, Netflix, Amazon Prime and Hulu Plus, can be purchased individually on an *à la carte* basis at monthly prices ranging from less than $10 to somewhere in the $12 to $15 range. Dish Network last year introduced SlingTV, a multichannel services that provides 22 channels, including ESPN, ESPN2, CNN, AMC, A&E, the Food Channel, the Disney Channel, and TNT, among others, for $20 per month, with several add-on packages as well as HBO offered for additional monthly fees. Netflix and Amazon Prime offer access to a library of movies and TV shows for a fixed monthly subscription charge. Amazon also offers some movies and programming on a fee basis, and has

84. http://www.timewarnercable.com/en/plans-packages/cable-internet.html?iid=hppromostrip:1:1:shop-offers accessed 1/14/16.

85. Scott Morton June 25, 2015 FCC Decl., at Table 4.

just recently begun offering subscription channel services such as Showtime and HBO GO at monthly rates that are actually lower than when these same services are purchased directly from their respective providers.[86]

Table 7

SAMPLE OVD SERVICES AND MONTHLY SUBSCRIPTION PRICES

Netflix	$ 7.99 (basic); $ 9.99 (HD)
Amazon Prime	$ 99.95 Annual Subscription
SlingTV	$ 20.00
Showtime	$ 10.99 (available from Amazon and Hulu Plus for $ 8.99)
HBO NOW	$ 14.99
HULU Plus	$ 7.99 (or $ 11.99 with no commercials)
CBS All Access	$5.99
Sources: Company websites	

75. Another means by which an MVPD provider can limit defection from its video services is by leveraging its control of highly desirable content to force customers who want that content to remain with the MVPD provider. As Gatekeeper, the MVPD provider gets to decide, with limited exceptions,[87] which channels are included in each tier, where each will appear in the

86. For example, a subscription to Showtime can be purchased directly from Showtime at a price of $10.99 per month. The same service is available through Amazon Video for $8.99 per month.

87. Individual content providers – particularly the more popular ones – would have the market power to, and in some instances do, impose contractual limits on the MSO's discretion in exercising its gatekeeper role.

onscreen channel guide, and how the various tiers will be priced both in absolute terms and relative to each other. TWC has been utilizing this tactic for some time in the Los Angeles DMA. [redacted][89] as of now the only other MVPDs serving the Los Angeles DMA that carry the Dodgers games are Charter and BHN, and even those companies did not carry Dodgers games until June 9, 2015, roughly a month *after* TWC announced plans to merge with these two providers.[90] None of the competing MVPDs or OVDs offering services in the Los Angeles DMA have thus

88. TWC Response to FCC Staff Information Request 7(I).

89. TWC Responses to FCC Staff Information Request 8(c); 11.

90. "Small pay-TV provider feels squeeze play over Dodgers channel", Jun. 9, 2014, http://www.latimes.com/business/lafilazarus20140610column.html; "Charter to Launch Timer Warner Cable SportsNet LA on June 9th", http://www.sportsnetla.com/charter; "Bright House Networks to Launch Time Warner Cable SPORTSNET LA", https://brighthouse.com/about/about-us/newsroom/2014/bright-house-networks-to-launch-time-warner-cable-sportsnet-la.html (accessed 1/13/16).

far been willing to accept what they claim to be the onerous terms that TWC demands.[91] By effectively blocking other video service providers from carrying Dodgers games, TWC becomes the only source of this content. Thus, any Los Angeles customer who wants to watch LA Dodgers games has no choice but to purchase TWC, Charter or Bright House (and if the merger is approved) New Charter MVPD services. To the best of my knowledge, the Joint Applicants have made no commitment that would have New Charter modify the current TWC/LA Sports Network arrangement, thus extending TWC's exclusive arrangement with the LA Dodgers over to the current Charter and BHN service areas.

76. In response to ORA data requests propounded to them on this subject, the Joint Applicants have refused to provide any information regarding their content ownership and licensing activities "on the grounds that it exceeds the scope of the proceeding to the extent it seeks information regarding any video/cable services, or any other services outside the scope of this proceeding."[92] While I will not comment as to the legal merits of this argument, I would observe that TWC's (and post-merger New Charter's) ability to leverage its control of content to limit its customers' choice of video service provider has a direct bearing upon the ability of any competing broadband provider (where there is one) to address and provide service to those same customers. All three of the Joint Applicants currently bundle their video and broadband services into one or more service packages commonly referred to in the industry as "double-play (i.e., broadband and phone or broadband and video) or triple-play

91. *Id.*

92. See, e.g., TWC response to ORA Data Requests, Set 8, nos. 1-24.

(broadband, phone and video). The bundled price may often be less than the sum of the individual component services if purchased separately. When this occurs, for a customer that will subscribe to a video service tier, the additional charge for including broadband in the bundle may be less than the stand-alone price of broadband, thus making it uneconomic for a customer to purchase video from one provider and broadband from another. By locking in customers with its control of highly desirable content such as the LA Sports Network, TWC can effectively force them to take their broadband service from TWC as well.

77. When a cable MVPD customer transitions to one or more OVD services, the customer will usually either switch from a premium cable tier to basic cable, or perhaps discontinue all MVPD cable services altogether in favor of over-the-air broadcast TV for local TV channels and OVD streaming for the specific services that the customer wants. Indeed, according to Dr. Scott Morton's data, based upon December 2014 take rates for each of the three Joint Applicants, BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL of post-merger New Charter's customers will be broadband-only – i.e., will be purchasing no video services at all.[93] Dr. Scott Morton also reports that BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL of the three companies' combined broadband customers (as of December 2014) did not take *any* video service from their cable provider.[94] When an MVPD customer (so-called "cord-cutters") either downgrades or discontinues MVPD service, or when a potential MVPD customer (so-called "cord-nevers')

93. Scott Morton June 25, 2015 FCC Decl., at Table 5.

94. *Id.*, at Table 4.

elects instead to obtain video content from other-the-air broadcast stations and from OVDs only, the cable company loses revenue. But usually they don't also lose the customer. Instead, the customer continues to take broadband service from the same cable provider, because for the vast majority of customers there is no alternative. Cable companies are thus in a position to recover some, or perhaps all, of their MVPD revenue losses by simply increasing the price of their broadband services. This can be accomplished by raising the fixed monthly charge and/or by introducing "data caps" and imposing usage-based charges upon customers who exceed them. Contrary to Dr. Scott Morton's contention and utilizing her own terminology, it is far more "likely" that New Charter will seek to recover *and that it will succeed in replacing* its MVPD revenue losses by raising broadband rates than it is for New Charter to avoid degrading or otherwise foreclosing OVD entry due to the "risk" that customers who take their broadband service from someone else.

78. Introducing data caps and usage-based charges creates an additional benefit for the cable operator – it effectively *increases* the total cost to the customer of utilizing OVD content. That is, in order to stream video content from an OVD, the customer would then need to pay both the OVD for that content (either on a per-use or subscription basis) *as well as* pay the broadband access provider (e.g., New Charter) for the additional bandwidth required for the download. Thus far, in the relatively few locations in the US where the cable provider has introduced data caps and usage-based charges, the caps have been set quite high (e.g., around 300 Gb) so that very few customers would actually exceed them for most ordinary use. However, once the "camel has put its nose into the tent," the parameters of this type of pricing scheme can be

readily tweaked so as to impact successively larger number of customers. Rogers, the largest cable operator in Canada, has for a number of years set its broadband prices using a structure of usage "tiers," much like most US wireless carriers' data pricing plans. Table 8 below summarizes Rogers' current broadband pricing model (prices shown are in Canadian funds):

Table 8

EXAMPLE OF A TIERED USAGE BLOCK BROADBAND PRICING STRUCTURE
ROGERS CABLE (CANADA)

Service	Download/Upload speed	Data Cap	Monthly rate	Overage charge
Internet 5	5 Mbps / 1 Mbps	25 Gb	C$ 24.99	C$1.50/GB
Internet 30	30 Mbps / 5Mbps	125 GB	C$ 39.99	C$1.50/GB
Rogers Ignite™ 60	60 Mbps / 10 Mbps	200 GB	C$ 49.99	C$1.50/GB
Rogers Ignite™ 100U	100 Mbps / 10 Mbps	Unlimited	C$ 59.99	N/A
Rogers Ignite™ 250U	250 Mbps / 10 Mbps	Unlimited	C$ 69.99	N/A
Rogers Ignite™ Gigabit	1 Gbps / 250 Mbps	Unlimited	C$ 149.99	N/A
Source: http://www.rogers.com/consumer/internet (accessed 12/23/15)				

To put this in perspective, downloading 1080P HDTV content requires approximately 3 GB of bandwidth per hour of streaming. Thus, a customer who watches an average of 3 hours of TV each day (i.e., about 90 hours per month) would use roughly 270 GB of bandwidth, which would put him in the C$59.99 tier. Comcast has introduced a 300 GB data cap with overage charges of $10 per 50 GB in Huntsville, Mobile and Tuscaloosa, Alabama; Tucson, Arizona; Little Rock, Arkansas; Fort Lauderdale, the Keys and Miami, Florida; Atlanta, Augusta and Savannah, Georgia; Central Kentucky; Houma, LaPlace and Shreveport, Louisiana; Maine; Jackson and Tupelo, Mississippi; Chattanooga, Greeneville, Johnson City/Gray, Knoxville, Memphis and

Nashville, Tennessee; Charleston, South Carolina; and Galax, Virginia.[95] "In all of [its] trial markets except Tucson, Arizona, the data amount included with XFINITY Internet tiers was increased to 300 GB per month [with] additional gigabytes in increments/blocks of 50 GB for $10 each."[96] Comcast's Tucson trial is more like Rogers' approach, with multiple tiers being offered at successfully higher rate.[97] The user in most of Comcast's trial markets would seem to fall under the Comcast cap. However, at 4 hours per day, the Comcast cap would be exceeded by 60 GB. And this assumes only one TV receiver in the home. 4K HD requires upwards of 7 GB per hour. As more 4K HD content becomes available from OVDs for streaming, the data caps will be reached much sooner. For sake of discussion, let's use Rogers' C$ 1.50 per GB overage charge as an example. A 2-hour HD movie would require roughly 6 GB of bandwidth. At C$ 1.50 per GB, that translates into C$ 9.00 in broadband usage fees for the download, plus whatever fee the content owner charges for the movie. It isn't difficult to imagine how a $9 monthly charge for Netflix could translate into $100 or more in broadband overage fees at a lower data cap and a $1.50/GB charge. Obviously, imposing usage fees of this sort would materially – perhaps fatally – affect a customer's choice between continuing to take MVPD video from New Charter vs. buying OVD content on an *à la carte* basis.

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95. http://customer.xfinity.com/help-and-support/internet/data-usage-trials-what-are-the-different-plans-launching (accessed 12/24/15)

96. *Id.*

97. "In the Tucson, Arizona, market, the data amount included with Economy Plus through Performance Internet tiers increased to 300 GB. Those customers subscribed to the Performance Starter or Blast! Internet tiers receive 350 GB in their data usage plan; Blast! Pro customers receive 450 GB in their data usage plan; and Extreme customers receive 600 GB in their data usage plan. As in our other trial market areas, we offer additional gigabytes in increments/blocks of 50 GB for $10 each in the event that customers choose to use more than their included data amount." *Id.*

79. With respect to the introduction of data caps and overage charges, Dr. Scott Morton, relying upon the Joint Applicants' FCC *Public Interest Statement*, notes that Charter has expressly committed that

- For 3 years, New Charter will maintain a settlement free Internet interconnection policy.

- For 3 years, New Charter will not block or throttle Internet traffic or engage in paid prioritization.

- For 3 years, New Charter will not charge consumers additional fees to use specific third-party Internet applications, or engage in zero-rating (discriminatory exemptions from a data cap).[98]

But these "commitments" extend for only three years, after which New Charter will be free to engage in all of these practices whose effect will be "to foreclose or otherwise impede [OVD] development."[99] But not to worry, according to Dr. Scott Morton: "[I]n three years' time market conditions are almost certain to be such that a strategy of foreclosure or otherwise trying to impede OVDs would be even more unprofitable for New Charter than it will be immediately after the merger."[100] These "assurances" are meaningless: If New Charter has no intention to engage in any of these practices after three years because to do so "would be even more unprofitable for New Charter than it will be immediately after the merger," then why is its "commitment" limited to just three years? The Joint Applicants are asking the Commission to

98. Scott Morton November 2, 2015 Decl., at para. 128.

99. *Id.*

100. *Id.*, at para. 132.

believe Dr. Scott Morton's "assurances" as to what would or would not be profitable for New Charter, while New Charter is itself clearly dismissing its expert's assessment out-of-hand.

80. Any sunset that is based solely upon the elapse of time does not address the fundamental concerns of OVDs and consumers with respect to the increased market power than the merger will create for the Joint Applicants. To be credible, commitments of this sort must stay in place until some specific condition affecting the post-merger firm's market power has occurred. For example, the availability of competitive broadband meeting FCC minimum standards extant at that time to at least 80% of households in the Southern California market. Barring that, these "commitments" are meaningless and, indeed, portend the onset of serious anticompetitive conduct while the ink is still drying on the merger agreement.

81. Indeed, data provided by Dr. Scott Morton herself is entirely consistent with this lack of competitive choice. According to this data, all three of the Joint Applicants enjoy an operating margin with respect to their broadband services of at least BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL.[101] Thus, for example, TWC's broadband ARPU is BEGIN HIGHLY CONFIDENTIAL <<[redacted]>> END HIGHLY CONFIDENTIAL but its direct marginal cost of providing broadband service is only BEGIN HIGHLY CONFIDENTIAL

101. Scott Morton June 25, 2015 FCC Decl., at Table 4, p. 15. Note that these profit margins were provided to Dr. Scott Morton and thus were not the result of any calculation that she had conducted. Since all three categories of service – video, data and voice – make extensive use of *common* elements (the transport and distribution infrastructure and the drop wire into the customer's home), there is a large component of common cost involved here. Dr. Scott Morton has provided no information regarding how the cost calculations were made or how the common costs were allocated among the three services. Accordingly, there is no means by which any of these figures can be verified.

<<[redacted]>> END HIGHLY CONFIDENTIAL.[102] It is difficult to imagine that a firm exhibiting this kind of cost structure could possibly sustain the level of price that all three of the Joint Applicants are able to charge if there were *any* sort of real competition in the relevant market. Moreover, even if the post-merger firm's marginal cost for broadband were reduced to zero – which is presumably as low as it could possible go – there is absolutely no reason to expect that the price points that all three of the merging parties are currently able to sustain for their broadband services would be affected to any material extent.

82. In fact, it is far more likely that prices will go up, not down, following the merger. Table 9 below summarizes the 2014 video, broadband and voice ARPUs for the three companies as reported by Dr. Scott Morton.

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Table 9

CURRENT AVERAGE REVENUE PER UNIT ("ARPU") FOR EACH SERVICE CATEGORY

	Video	Broadband	Voice
TWC	[redacted]	[redacted]	[redacted]
Charter	[redacted]	[redacted]	[redacted]
Bright House	[redacted]	[redacted]	[redacted]
Weighted Average	[redacted]	[redacted]	[redacted]

Source: Scott Morton June 25, 2015 FCC Decl., at Table 4, p. 15.

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102. *Id.* Calculated as the difference between the ARPU and marginal cost of the service based upon the figures furnished to Dr. Scott Morton by the Joint Applicants.

In terms of ARPU, of the three Joint Applicants, Charter has the highest video prices, Bright House has the highest broadband prices, and TWC has the highest phone prices. Having each established and tested a high-end price point for each of these three services and given the lack of competition in its service territory, a combined New Charter will have no incentive to adopt lower prices and instead, it is reasonable to expect that New Charter will gravitate toward the highest prices in each category. None of these rates are regulated or subject to any price caps, so adopting the highest rate level extant for each service is a not unreasonable outcome.

83. Given the lack of broadband competition in the Joint Applicants' service area at the 25/3 Mbps level, even if such economies of scale were to actually materialize, there would be no market pressure to compel New Charter to pass any savings onto its existing broadband subscribers, a move whose only outcome would be a diminution in profits for the Company. Furthermore, as discussed above, from my econometric analysis of publicly traded cable MSO financial data over time, it is clear that as their subscriber bases have grown, the cable companies' costs have grown at a comparable rate – suggesting that increases in scale have not led to any significant reduction in unit cost.[103] Analysis of Comcast's financial reports – specifically financial data related to the cable distribution operation of its business – reveals a similar relationship between costs and the number of subscribers, empirical evidence that directly contradicts the unsupported speculative claims being advanced by the Joint Applicants

103. Charter Communications, Inc., Form 10-K, 2006-2014; Time Warner Cable, Inc., Form 10-K, 2006-2014.

that costs per subscriber will suddenly *and materially* decrease due to the increased scale of New Charter's operations[104]

The proposed merger will produce no improvement in the availability of high-speed broadband access throughout the Joint Applicants' California franchise areas.

84. Based upon the most current available data, none of the three Joint Applicants currently offers FCC-compliant broadband (i.e., 25 Mbps download/3 Mbps upload) to 100% of the customers within their respective franchise areas. Of the three, Charter's level of broadband availability is the lowest, as summarized on Table 10 below:

104. Comcast Corporation, Form 10-K, 2006-2014.

Table 10

HOUSEHOLDS IN JOINT APPLICANTS' CALIFORNIA FRANCHISE AREAS WHERE 25/3 BROADBAND IS CURRENTLY AVAILABLE

	Total households in franchise area	Households where 25/3 Broadband is Available	Percent Broadband Availability	Percent of households with no broadband
TWC	4,949,993	4,824,051	97.46%	2.54%
Charter	1,579,697	1,396,370	88.39%	11.61%
Bright House	214,649	207,363	96.61%	3.49%

Source: CPUC Broadband Availability Database, Round 11, as of December 31, 2014; California DIVCA Franchise Territory Shape File Note that both Charter and TWC serve some of the same census blocks. Since the analysis methodology assigns all households in any block served by any provider to that provider, the total number of households shown for the individual MSOs is slightly larger than the total that will be passed by New Charter. Also, note that TWC's response to ORA Data Request Set 1, no. 1. states that it passes BEGIN CONFIDENTIAL <<[redacted]>> END CONFIDENTIAL households statewide as of October 18, 2015. Note that Joint Applicants' responses to ORA Data Requests 9-3 (TWC), and 10-3 (Charter and BHN) provide slightly different numbers for homes without broadband availability. I have been unable to reconcile the differences between the Joint Applicants' data and the results of the analysis I prepared using the Broadband Availability Database and DIVCA Shape Files.

85. In the recently-concluded Verizon/Frontier change-of-control proceeding, Frontier had initially committed, from the outset, to increase the availability of 25 Mbps download, 2-3 Mbps upload ("25/2-3")broadband within what was to become its expanded California service area by some 250,000 additional households passed.[105] As I noted earlier, in a partial settlement reached among Frontier, ORA, TURN, and the Center for Accessible Technology, Frontier agreed to increase the 25/2-3 broadband build-out by an additional 150,000 households to a total of 400,000 households by 2022. "As part of this settlement, Frontier further commits to deploy or

105. D.15-12-005, at Appendix 1, p. 6. Frontier had also initially committed to accept $32-million in annual CAP II funding for six years and would "agree to upgrade approximately 77,402locations in California" to the minimum CAF II standard of 10 Mbps download and 1 Mbps upload over that six-year period. *Id.*

augment broadband services to provide broadband service to support speeds of 6 Mbps downstream and 1 to 1.5 Mbps upstream for an additional 250,000 unserved and underserved households in the Verizon California and/or its existing California service area by December 31, 2022. In addition, in its testimony, Frontier also committed to deploy broadband to an additional 100,000 unserved households to 10 Mbps downstream and I Mbps upstream by December 31, 2020."[106] Notably, the Joint Applicants here have made no commitment to any specific expansion of broadband availability within their combined California service areas, other than some general promises of "Improved Broadband Service."[107] If "improved broadband service" of some sort is to be considered a "public benefit" of the merger under §854(c), then nothing short of specific commitments to expand coverage to 100% of households within the New Charter franchise area should qualify for this purpose. In its order approving the TWC/Charter merger earlier this month, the New York State Public Service Commission is requiring that New Charter provide "broadband speed upgrades to 100 Mbps statewide by the end of 2018, and 300 Mbps by the end of 2019."[108] The NYPSC is also prohibiting New Charter from imposing any Line Extension charges with respect to the provision of broadband to presently unserved areas, which it defines as areas with broadband download speeds of 0 to 24.9 Mbps. Unlike California, Charter has only a minimal presence in New York State, such that the merger will have little to

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106. *Id.*

107. CPUC Application 15-07-009, filed July 2, 2015, at § VII(A)(3), at 24.

108. https://www.governor.ny.gov/news/10th-proposal-governor-cuomo-s-2016-agenda-dramatically-expand-and-improve-access-high-speed (accessed 1/10/16). See also, New York State Public Service Commission, Case No. 15-M-0388- Joint Petition of Charter Communications and Time Warner Cable for Approval of a Transfer of Control of Subsidiaries and Franchises, Pro Forma Reorganization, and Certain Financing Arrangements, *Order Granting Joint Petition Subject to Conditions*, issued January 8, 2016, at Appendix A.

no material impact upon the level of concentration in the New York broadband market. If the CPUC were to approve the proposed transaction notwithstanding the failure of the Joint Applicants to support their various "public interest" claims, there is certainly no reason why broadband upgrade and build-out requirements similar to those adopted in New York should not also be imposed in California. The Joint Applicants should be required to extend broadband to all households within their franchise territory by 2019.

The Joint Applicants have failed to identify any *bona fide* public interest benefit that can be legitimately attributed to the proposed merger.

86. In summary, the §854(c) public interest requirement is not satisfied by the proposed merger. The merger will not produce consequential operational efficiencies or cost savings because cable company costs vary directly with the aggregate number of subscribers. The only quantitative evidence offered by the Joint Applicants and/or their expert is that such economic efficiencies that may result from the increase in overall scale of operations will be *de minimis* at best, amounting to little more than a fraction of one percent of prevailing operating costs. Finally, and as I will discuss in detail below, there is no basis upon which the Commission can find that competition for broadband services is sufficiently robust to compel the post-merger entity to pass on such minimal cost savings as might potentially arise to customers.

IV.

THE TRANSACTION'S POTENTIAL IMPACT UPON COMPETITION FOR BROADBAND AND LOCAL VOICE SERVICES

In the absence of effective competition or a regulatory requirement to do so, even if consequential economies of scale were present there is no basis to expect that New Charter will flow any of those savings through to its largely captive customers.

87. In the previous section of this report, I have shown that, contrary to the Joint Applicants' claims as to efficiencies or other "benefits" purportedly stemming from the increased scale of New Charter's operations relative to those of any of the stand-alone merger partners, cable MSO costs, when examined over an extended period of time and over a number of companies, tend to vary in direct proportion to the overall size of the firm. As such, returns to scale are constant, not increasing, within the relevant size range, and so none of the various scale-related gains being claimed by the Joint Applicants can be expected to arise.

88. Even if such scale-driven cost improvements and efficiencies were to result from the merger, the claimed benefits to the public and to the state and local economies will occur only to the extent that these are actually flowed through to New Charter's customers or used to expand broadband availability and improve the Joint Applicants' California network infrastructure. Since *none* of the services (voice, data, video) being offered by the Joint Applicants pre- and post-merger are subject to any cost-based or cost-related price regulation, there is no reason to expect that New Charter will pass on any merger-driven efficiencies to its customers absent being forced to do so by competitive marketplace forces or express regulatory prescription. But

in order for that to occur, there would need to be actual competition in the market for these services and, as discussed below, the extent to which such actual competition is present is not sufficient to assure this outcome.

89. In this section, I examine the extent to which the Joint Applicants today, and New Charter post-merger, confront actual competition for their broadband services. Using data compiled by the Commission's Communications Division (which was itself derived from data submitted by carriers to the FCC) and several other sources, New Charter will overwhelmingly dominate the market for high-speed broadband Internet access across the ten Southern California counties that will constitute its principal service area. While there is no likelihood that any material economies of scale and associated efficiency gains will arise if the merger is completed, there is in any event no basis upon which to expect that any such gains, to the extent that any exist, will be flowed through to and thus provide benefit to consumers.

90. The Joint Applicants have been steadily *increasing* monthly rates for their most popular broadband services, as Table 11 illustrates. Similar patterns of price increases characterize Charter and Bright House as well.

Table 11

**TIME WARNER CABLE LOS ANGELES AREA BROADBAND PRICES
2009-2015**

Year	Download / Upload speed (Mbps) Service Name	Monthly rate	Percent increase since 2009
2009	6 / 1 Standard Internet		
2010	10 / 1 Standard Internet		
2011	10 / 1 Standard Internet		
2012	10 / 1 Standard Internet		
2013	15 / 1 Standard Internet		
2014	15 / 1 Standard Internet		
2015	50 / 5 Extreme Internet		

Source: TWC Response to ORA Data Request, Set 1, No. 9(a).

Were competition a serious factor in the geographic market that these companies serve, we would expect to see price *decreases*. This experience is entirely consistent with the minimal amount of competition that appears to be present in the Joint Applicants' primary serving area, confirming the conclusion that even in the unlikely event that economies of scale were actually to be experienced by a post-merger New Charter entity, there is no realistic basis for an expectation that any of these will be passed through to customers.

The post-merger New Charter operating footprint

91. §854(c) requires that the Commission determine that the proposed transaction is in the public interest, and that this determination be based upon at least eight specific public interest considerations. Included in these is §854(c)(6), requiring a finding that the transaction "be beneficial on an overall basis to state and local economies, and to the communities in areas

served by the utility." The November 13, 2015 Assigned Commissioner's Scoping Ruling notes that the "Joint Applicants claim that the many alleged benefits of the Transaction, specifically including its alleged beneficial implications for broadband deployment and affordability, taken together satisfy the §854(c) requirements."[109] And in that regard, the Scoping Ruling specifically identifies as one of the four specific issues that are to be addressed in considering the public interest aspects of the proposed transaction is, "How will the Transaction affect broadband deployment and/or affordability?" Since broadband Internet access services are not presently subject to rate regulation by the CPUC or by the FCC, the extent of its deployment and affordability within the communities served by the Joint Applicants is, in turn, directly affected by the extent to which competition is present in the market for broadband access within the geographic market areas to be served by a post-merger New Charter.

The relevant geographic market applicable to this transaction consists of the ten Southern California counties that constitute the Joint Applicants' primary service area in the state.

92. The Joint Applicants' primary California operating areas are to be found in the ten Southern California counties – San Diego, Orange, Imperial, San Bernardino, Los Angeles, Ventura, Riverside, Kern, Santa Barbara, and San Luis Obispo, as outlined in Figure 9 below.

109. Assigned Commissioner's Scoping Ruling, November 13, 2015, at 4.

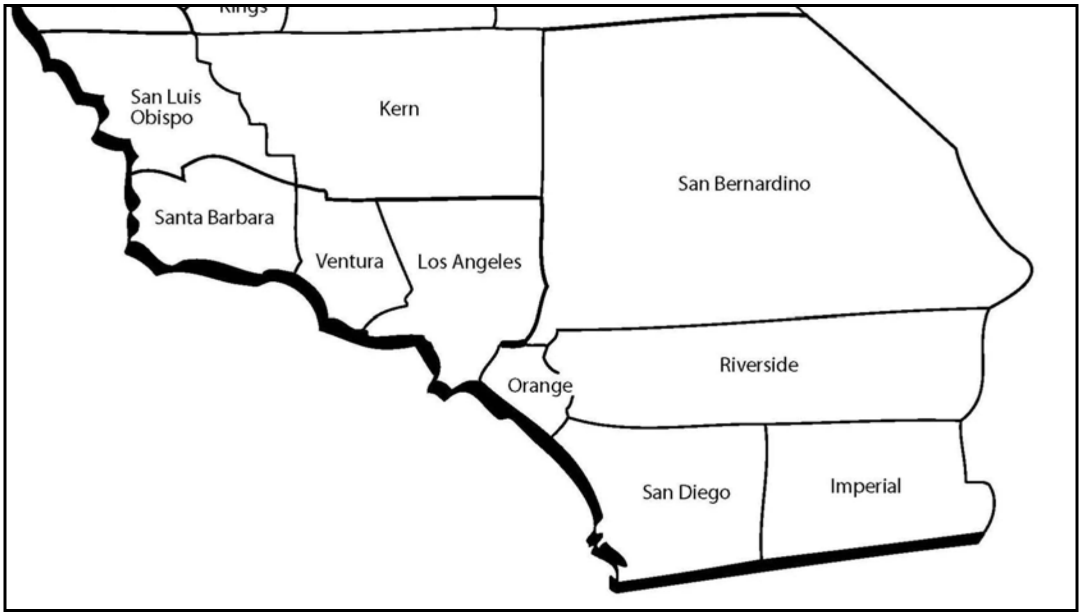

Figure 9. The Relevant Geographic Area for this transaction.

93. Although both Charter and TWC serve small areas in Northern California, the Joint Applicants pass only 257,562 households in these areas, or about 5.13% of the total Northern California households with access to broadband of 5,021,498. In the ten Southern California counties, however, New Charter will pass 6,127,257 households, or 82.05% of the total 7,467,974 households with access to broadband in these ten counties.

94. According to data provided by Dr. Scott Morton, at the national level New Charter will control roughly 20.9% of the wireline high speed data market.[110] While she does not define "high speed," it appears that her tabulation includes all services supporting download speeds of

110. Scott Morton June 25, 2015 FCC Decl., at Table 3, p. 9.

200 kbps or greater.[111] Extrapolating to the fourth quarter of 2014 from the most recently available FCC data, I estimate that of the 92.9-million "high speed" subscribers identified by Dr. Scott Morton, approximately 56.4-million are being served either by cable modem or fiber capable of supporting speeds of at least 25 Mbps downstream and 3 Mbps upstream.[112] New Charter's national market share of the 25/3 broadband market would thus be about 34.9% (see Table 12 below). The situation in Southern California is quite different. Dr. Scott Morton puts the New Charter share of the Los Angeles DMA cable MVPD (video) subscribers at 87%. However, because the Los Angeles DMA represents only about four-fifths of the total population of the 10 Southern California counties, for purposes of this estimate, I will use the percentage of households passed by New Charter in these counties, i.e., 82.04%.[113] The Joint Applicants currently provide high-speed broadband service to BEGIN CONFIDENTIAL << [redacted] >> END CONFIDENTIAL subscribers in Southern California.[114] As shown on Table 21 *infra*, Verizon (Frontier) is the only ILEC operating in Southern California capable of supporting 25/3

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111. Dr. Scott Morton's Table 3 puts the total number of fixed (non-wireless) high speed data subscribers as of the fourth quarter of 2014 at 92.9-million. The FCC's most recent edition of the Industry Analysis and Technology Division of the FCC's Wireline Competition Bureau, report on *Internet Access Services: Status as of December 31, 2013*, issued in October 2014, puts the total number of "Residential fixed-location Internet access connections over 200 kbps in at least one direction" at 88-million (at p. 12; Table 3). Given the roughly 12-month time difference and the most recently-report annual growth rate of 4%, it would appear that the two figures are comparable, and that Dr. Scott Morton's figure similarly includes all fixed broadband services offering download speeds of at least 200 kbps.

112. The 2013 *Internet Access Services* report puts the number of cable modem subscribers at 47.26-million and the number of fiber subscribers at 6.96-million, for a total of 54.22-million. Table 8, p. 26. Applying a 4% growth factor to bring this to the fourth quarter of 2014 yields an estimate of 56.22-million.

113. The Los Angeles Designated Market Area (DMA) includes Los Angeles, Ventura, Orange, San Bernardino, Inyo, and portions of Riverside and Kern Counties. San Diego, Palm Springs, Santa Barbara and Bakersfield are separate DMAs, and San Luis Obispo County is not included in any DMA.

114. Joint Applicants Responses to ORA Data Request, Set 1, No. 4.

or faster broadband. We don't have the number of *FiOS* broadband subscribers, however. From Dr. Scott Morton's Table 2, we do have the total number of *FiOS* Video subscribers in the Los Angeles DMA, which she puts at 520,000. According to Verizon's most recent Form 10-K (2014), the Company had 6.6-million *FiOS* broadband subscribers and 5.6-million FiOS video subscribers nationwide. If we apply this 1.178 broadband/video factor to the 520,000 *FiOS* video subscribers in the Los Angeles DMA as a proxy for the full ten counties (since most of the Verizon (Frontier) service area lies within the Los Angeles DMA), we can estimate the number of *FIOS* broadband subscribers at approximately 613,000. Combining the *FiOS* broadband and New Charter broadband subscriber counts, we can estimate the total number of Los Angeles DMA broadband customers at BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL, which would put New Charter's potential share of the 25/3 or faster broadband market in the Los Angeles DMA at BEGIN HIGHLY CONFIDENTIAL << [redacted] >> END HIGHLY CONFIDENTIAL – i.e., more than double the New Charter national market share.

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Table 12

ESTIMATE OF NEW CHARTER BROADBAND MARKET SHARE IN LOS ANGELES AND NATIONWIDE

	New Charter	Other cable	Fiber	TOTAL	New Charter share
Nationwide	19.44-million	29.71-million	7.24-million	56.38-million	34.9%
Southern Calif.	[redacted]	[redacted]	0.613-million	[redacted]	[redacted]

Sources: Scott Morton June 25, 2015 FCC Decl., at Table 2 (p. 7), Table 3 (p. 9); FCC report on Internet Access Services: Status as of December 31, 2013, Table 8 (p. 26); Joint Applicants' Responses to ORA Data Requests Set 1, no. 4 (HIGHLY CONFIDENTIAL); Verizon 2014 10-K

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95. Evidence being offered by the Joint Applicants at the FCC and in other jurisdictions is reflective of the national and jurisdictional level of the post-merger New Charter's relative position in these markets. The situation in Southern California is dramatically different and unique. Accordingly, it would be improper to extrapolate from conclusions that might be applicable at the national level to the unique situation that exists here.

96. Figures 10-12 below highlight the Joint Applicants' predominance in the ten Southern California counties for TWC, Charter, and Bright House, respectively. The area served by BHN is limited largely to Kern County. As shown, the Joint Applicants have only a limited presence in Northern California. For all of these reasons, it is appropriate to confine the geographic scope of the relevant market being served by the three Joint Applicants to Southern California.[115]

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115. In the 2014 proposed merger of Comcast/TWC/Charter/BHN, the relevant geographic market was all of California because Comcast was dominant in Northern California and the other three parties (TWC, Charter and BHN) were dominant in Southern California. Had the merger been allowed to go forward, the post-merger Comcast (continued...)

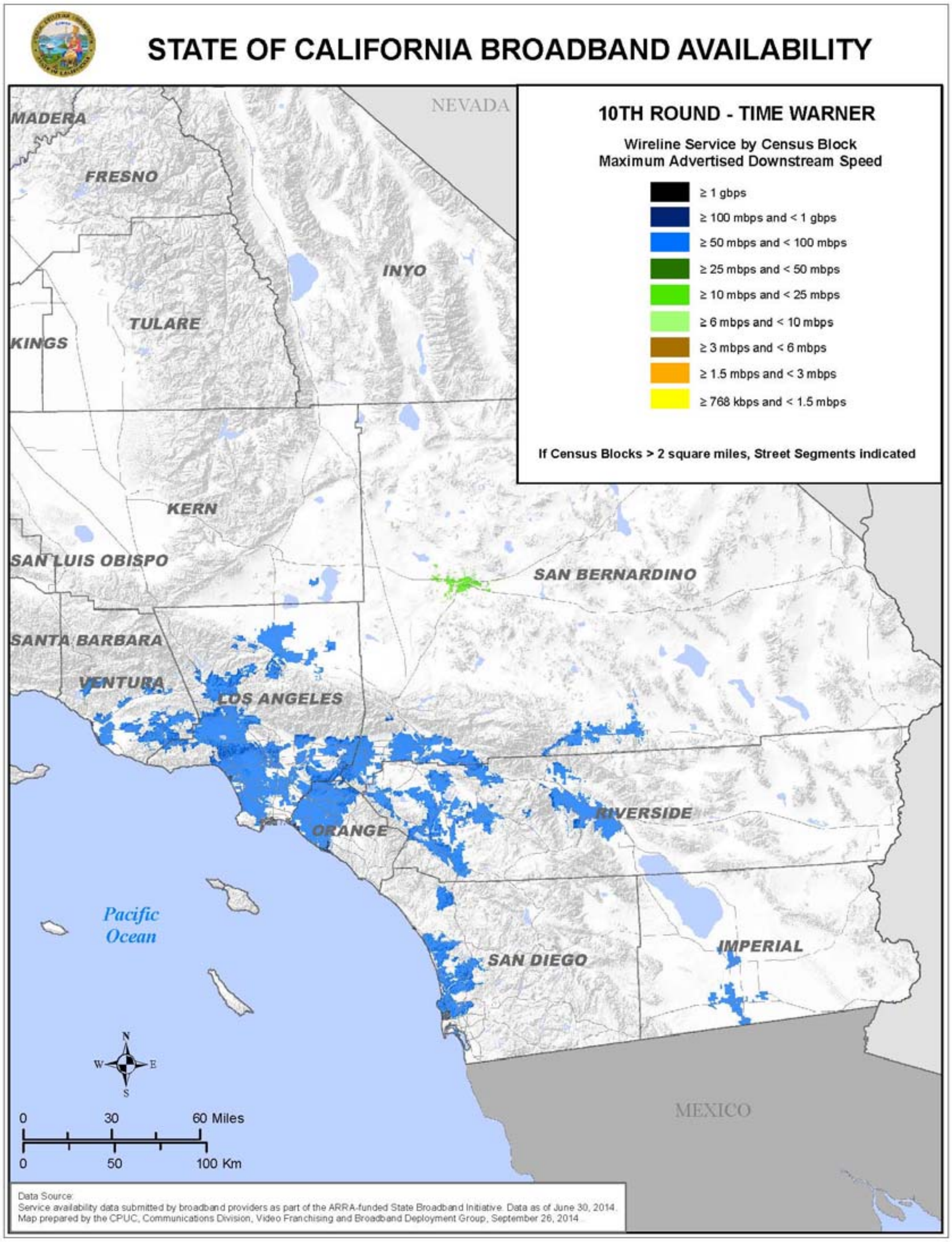

Figure 10. Time Warner Cable operating areas in California.

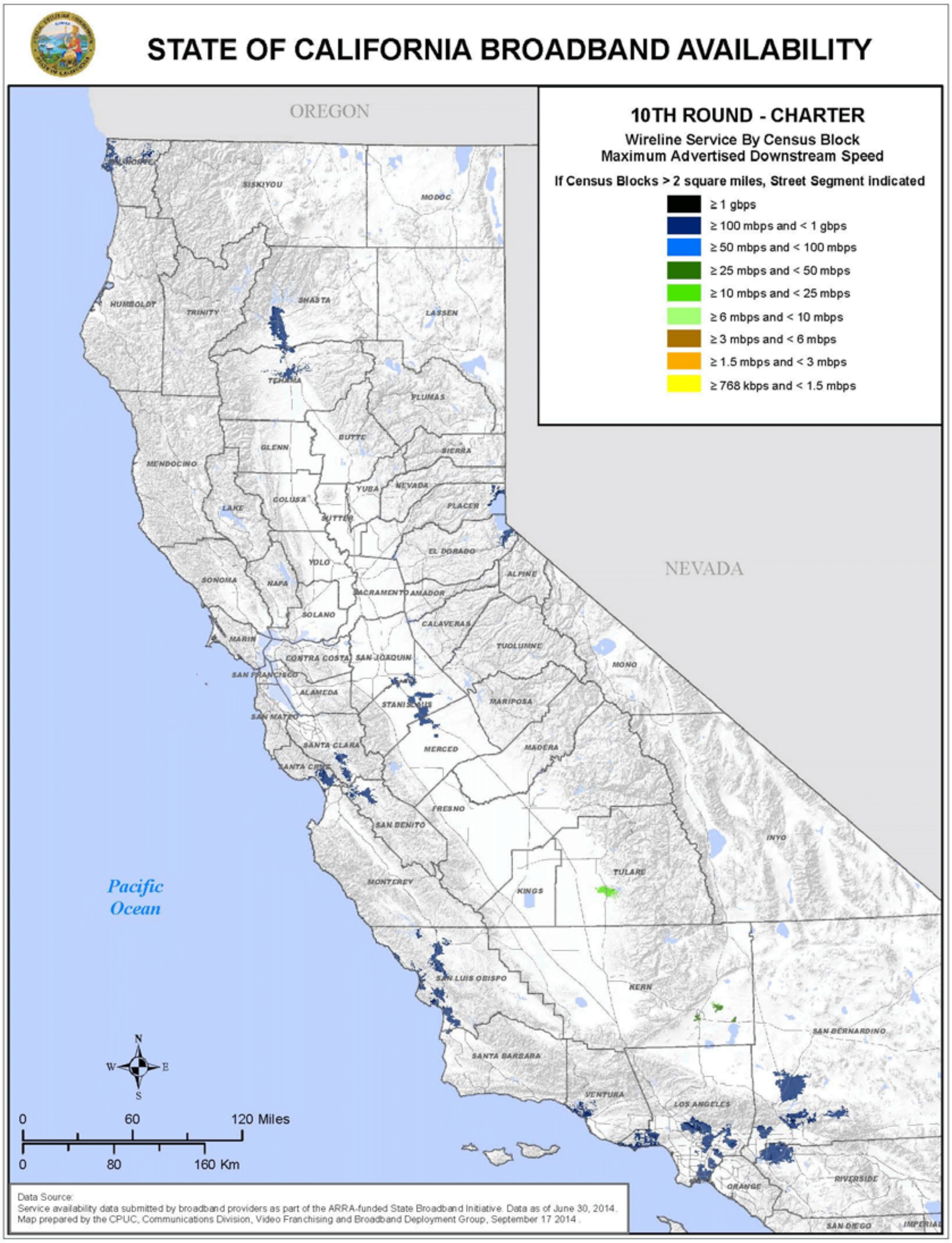

Figure 11. Charter operating areas in California

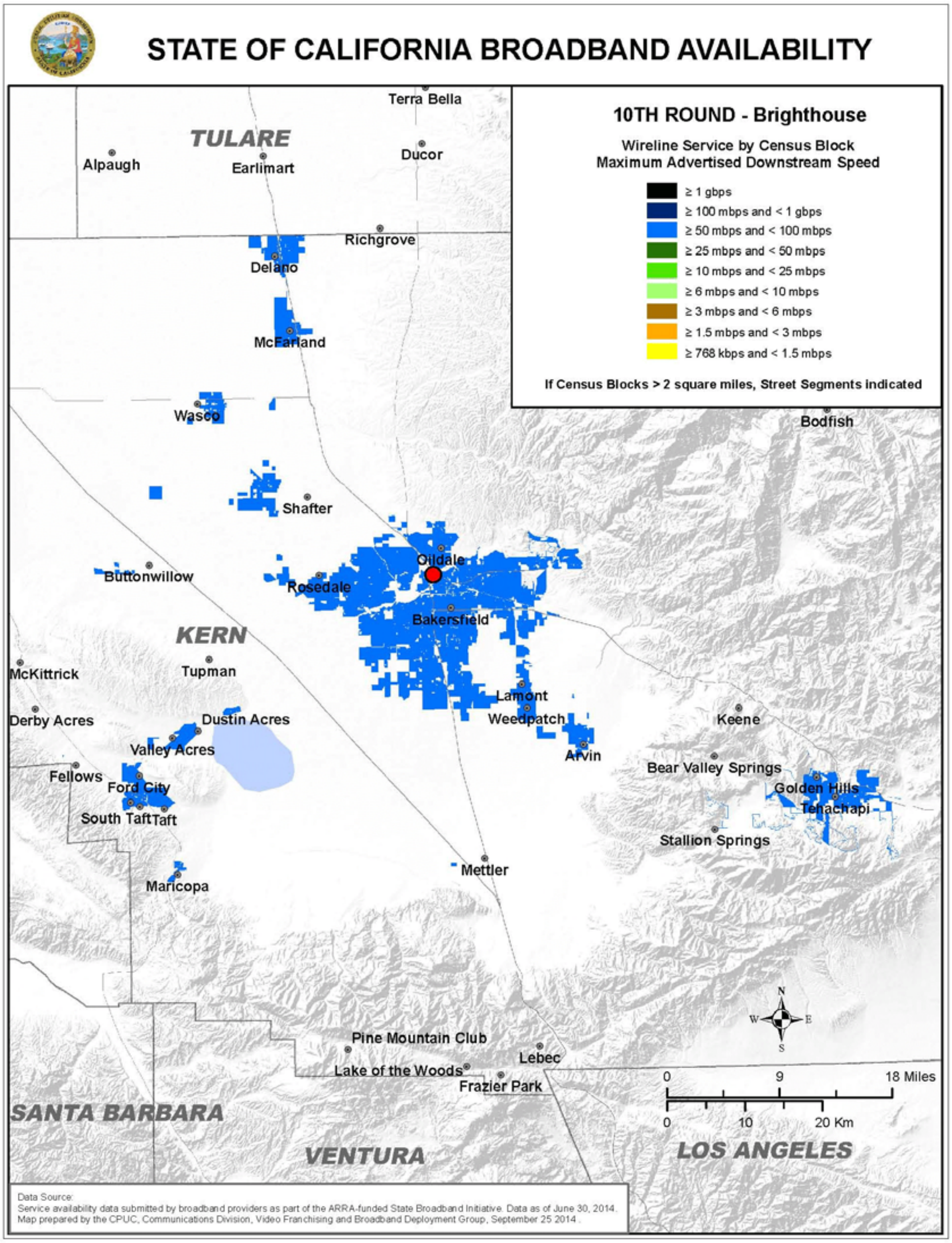

Figure 12. Bright House Networks operating areas in California

97. The Commission's Communications Division maintains a database of broadband service availability (the "California Broadband Availability Database") that can be used to assess the extent to which residential customers confront competitive sources of broadband access services at various bandwidths, based upon each provider's maximum advertised bandwidth. The most recently available "Round 11" data is based upon submissions by service providers as of December 31, 2014.[116] When combined, the post-merger New Charter will provide broadband access to census blocks containing 6,384,819 California households, representing about 51.12% of the total 12.49-million households with access to broadband statewide. However, when limited to the 10-county Southern California relevant geographic market area, New Charter will provide broadband access to census blocks containing 6,127,257 Southern California households, representing about 82.05% of the total 7,467,974-million households with access to broadband in Southern California. Table 13 below summarizes the relative sizes of the three companies both with respect to each other and with respect to the total potential Southern California broadband market, expressed in terms of the total number of households in this area

116. The California Broadband Availability ("CBA") Database contains household counts by census block based upon the 2010 US Census. More recent census data indicate a somewhat larger number of California households; however, the 12.65-million statewide household count is the aggregate of all census blocks in the CBA Database, assuring consistency between the per-provider and total state figures.

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Table 13

SOUTHERN CALIFORNIA HOUSEHOLDS AND HOMES WITH ACCESS TO BROADBAND PASSED AND SERVED BY JOINT APPLICANTS

	CPUC Broadband Availability Data		DR 1-3 CONFIDENTIAL Response	DR 1-4 CONFIDENTIAL Response
Company	Households passed	Percentage of So. Cal.	Homes passed	Subscriptions
TWC	4,824,051	64.60%	[redacted]	[redacted]
Charter	1,138,816	15.25%	[redacted]	[redacted]
Bright House	207,354	2.78%	[redacted]	[redacted]
Total	6,127,257	82.05%	[redacted]	[redacted]
Total So. Calif.	7,467,974	100.00%		

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs; US Census Bureau, American Community Survey, 2013, at http://www.dof.ca.gov/research/demographic/state_census_data_center/american_community_survey/. Subscription information (CONFIDENTIAL):Responses to ORA DR 1-3, 1-4.

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98. TWC, the largest of the three Joint Applicants, has existing Southern California operating areas that cover 151,455 census blocks ("CBs") and 4,824,051 households ("HHs"). TWC's operating area includes about 38.62% of all California households, but 64.60% of the households in the ten Southern California counties. Charter currently passes some 60,737 census blocks and 1,396,370 households located within those census blocks. Charter's operating area includes about 11.18% of all California households but 15.25% of households in the ten Southern California counties. Bright House currently passes some 7,015 census blocks and 207,363 households located within those census blocks. Bright House's operating area is located almost exclusively in Kern County (Bakersfield and vicinity), and includes about 1.66% of all

California households, but 2.78% of households in the ten Southern California counties. When combined, the post-transaction New Charter will pass 217,987 census blocks containing 6,384,819 households, or about 51.12% of all households in the state, as compared with the 82.05% of all households that New Charter will pass in the ten county area.

99. Notably, the 82.05% level of penetration, in terms of households passed, of New Charter across the 10-county Southern California service area is virtually identical to the relative position a post-merger Comcast would have controlled across the entire state – approximately 84.04% – had the 2014 proposed merger of Comcast, TWC, Charter and Bright House come to fruition.[117] Because the Joint Applicants' service areas are largely confined to the ten Southern California counties, it is this area, and not the entire state, that forms the geographic area that is relevant to the assessment of the potential competitive impact of this transaction.

Competition for broadband services exists in only a small portion of the combined post-merger New Charter California operating areas.

100. The proportion of total households in the relevant geographic area that are capable of being served by the post-merger New Charter provides an important indicia of its relative strength in the areas in which it operates. However, "households passed" would take on less importance if, for example, multiple competitors also "passed" or were capable of serving a similar number of households within the same area. Fortunately, the Commission's Broadband

117. A.14-04-013, A.14-06-012 (Comcast/TWC/Charter?BHN merger proceeding), Expert Report and Declaration of Lee L. Selwyn on behalf of ORA, December 10, 2014, at para. 12.

Availability Database also permits an examination of the extent to which rival providers are present and offering comparable services within the Joint Applicants' post-merger service area.

101. The question of what constitutes "broadband" has been under review by the FCC for several years. On February 4, 2015, the FCC released its *2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment*, and therein determined that 25 Mbps in the downstream direction and 3 Mbps upstream as the minimum acceptable level of broadband access:

> Congress directed us to evaluate annually "whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion." For a service to be considered advanced, it must enable Americans "to originate and receive high-quality voice, data, graphics, and video telecommunications." We can no longer conclude that broadband at speeds of 4 megabits per second (Mbps) download and 1 Mbps upload (4 Mbps/1 Mbps) – a benchmark established in 2010 and relied on in the last three Reports – supports the "advanced" functions Congress identified. Trends in deployment and adoption, the speeds that providers are offering today, and the speeds required to use high-quality video, data, voice, and other broadband applications all point at a new benchmark. The average household has more than 2.5 people, and for family households, the average household size is as high as 4.3. We take the needs of multiple users into account when considering what level of service is necessary to be considered advanced telecommunications capability. We consider, too, the services that providers are offering today, as well as the services that American consumers are choosing. With these factors in mind, *we find that, having "advanced telecommunications capability" requires access to actual download speeds of at least 25 Mbps and actual upload speeds of at least 3 Mbps (25 Mbps/3 Mbps).*[118]

118. Fn 79, supra, FCC *2015 Broadband Progress Report*, at para. 3 (rel. February 4, 2015), footnote references omitted, emphasis supplied.

102. The matter of what download speed constitutes the minimum acceptable level in the context of 2016 and beyond has a direct bearing upon this Commission's assessment as to the level of competition in the market for broadband access in California, and the extent to which the proposed merger will diminish broadband competition for these services. FCC Chairman Tom Wheeler directly addressed this question, observing that

> The underpinning of broadband policy today is that competition is the most effective tool for driving innovation, investment, and consumer and economic benefits. Unfortunately, the reality we face today is that as bandwidth increases, competitive choice decreases.

To illustrate this conclusion, he presented the following chart (Figure 13) which, as he aptly put it, "says it all:"[119]

119. Prepared Remarks of FCC Chairman Tom Wheeler, "The Facts and Future of Broadband Competition", 1776 Headquarters, Washington, D.C., September 4, 2014, at 1-2.

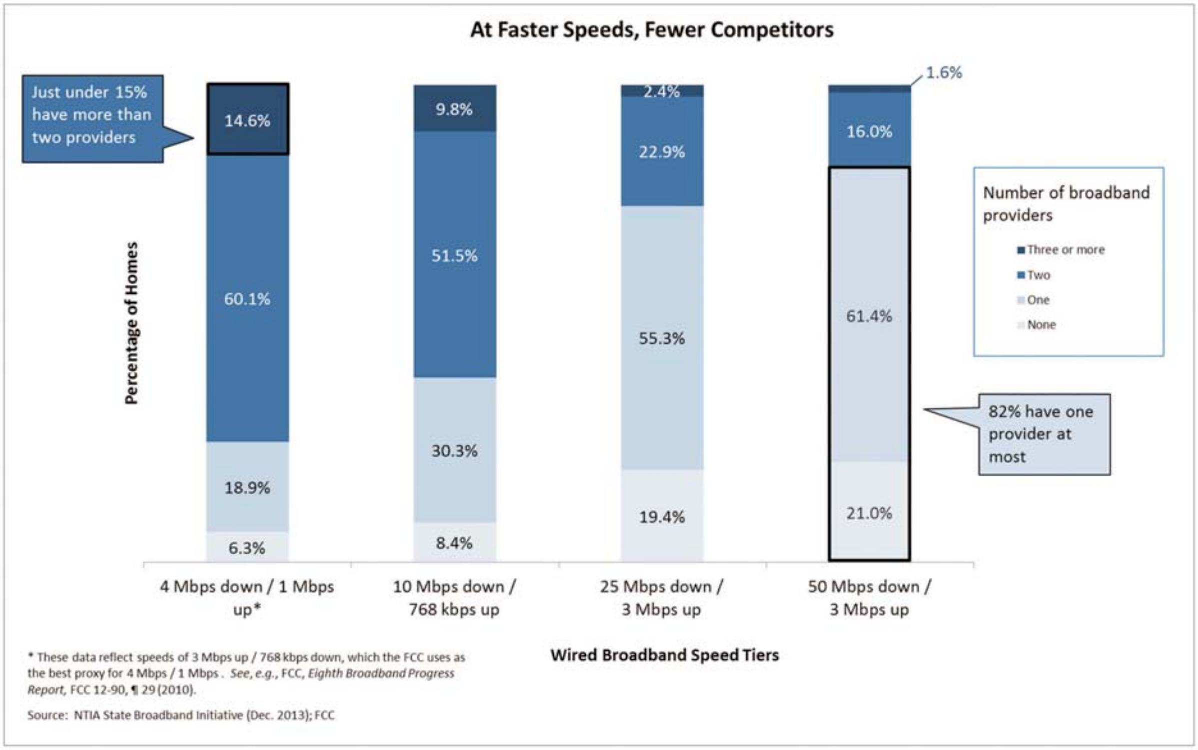

Figure 13. Level of competition diminishes at successively higher download speeds.

Several other comments submitted in Docket 14-126 also supported benchmark speeds of 25 Mbps or greater. The Internet Association, which "represents the world's leading Internet companies including: Airbnb, Amazon, AOL, eBay, Expedia, Facebook, Gilt, Google, IAC, LinkedIn, Lyft, Monster Worldwide, Netflix, Practice Fusion, Rackspace, reddit, Salesforce.com, SurveyMonkey, TripAdvisor, Twitter, Uber Technologies, Inc., Yelp, Yahoo!, and Zynga,"[120] even suggests that "providing 25 Mbps, which may be 'table stakes' today, will soon no longer serve the basic needs of most consumers."[121]

103. Indeed, the only parties to consistently argue for retention of the then-current 4 Mbps benchmark were the broadband providers themselves and their trade associations.[122] The providers' position on this issue was both self-serving and hardly surprising. As the City of Boston correctly pointed out:

> The [FCC] should also ensure that consumers can better evaluate what is truly a "competitive" broadband option. Boston's belief and experience is that the current benchmark allows providers to claim unaffordable 4G services and unacceptably slow DSL options qualify – even though these options do not work for many households.[123]

While the broadband providers have vested interests in keeping the speed bar as low as possible so as to maintain the *illusion* of a competitive market for broadband services, when the competitive availability of services at *appropriate* minimum speed levels is considered, it is clear that Chairman Wheeler's conclusion – that "as bandwidth increases, competitive choice decreases" – is indisputably correct. As he observed, "[t]oday, cable companies provide the overwhelming

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120. GN Docket no. 14-126, Reply Comments of the Internet Association, September 19, 2014, at 1, fn. 1.

121. *Id.*, at 5.

122. See, e.g., GN Docket No. 14-126, AT&T Comments, at 7-9; Verizon Comments, at 30; NCTA comments, at 5-7.

123. *Id.*, Comments of the City of Boston, September 4, 2014, at 8.

percentage of high-speed broadband connections in America. *Industry observers believe cable's advantage over DSL technologies will continue for the foreseeable future.*"[124]

104. Looking forward to 2016 and beyond, even download speeds in the range of 25 Mbps may fall short of meeting consumers' needs. So-called "4K HDTV" was introduced in 2014 and these ultra-high definition TV receivers were getting a serious push during the 2015 holiday season. And prices of 4K sets have been dropping – I have seen 42-inch 4K HDTVs being offered for as little as $249.[125] 4K HD streaming requires considerably more bandwidth than conventional 1080p HD. Netflix, for example, recommends 5.0 Mbps download speeds for conventional HD content, but for 4K ultra HD, Netflix recommends 25.0 Mbps. Households with one 4K HD set and several other HDTVs and connected devices would thus be hard-pressed to satisfy their needs even with 25 Mbps download speed; households with more than one 4K HDTV receiver would require well in excess of 25 Mbps if concurrent use of two or more sets were desired. Although 4K content is currently in limited supply, 4K content is available from Netflix,[126] and Amazon has announced that it is shooting all of its original content in 4K.[127] Recently, AT&T's DirecTV has indicated its intention to create 4K content as well.[128]

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124. Wheeler, September 4, 2014, fn. 75 *supra*, at 3, emphasis supplied.

125. http://www.walmart.com/ip/Sceptre-U435CV-UMC-42-4K-Ultra-HD-2160p-60Hz-LED-HDTV-4K-x-2K/46867816

126. http://www.forbes.com/sites/johnarcher/2015/07/24/netflixs-4k-future-14-new-shows-and-films-announced/.

127. http://www.forbes.com/sites/johnarcher/2015/09/23/amazon-unveils-6-new-original-shows-all-made-in-4k/.

128. http://www.digitaltrends.com/movies/directv-4k-service/.

105. The FCC's actions to redefine "broadband" have produced two benchmarks. 10 Mbps download/1 Mbps upload are the minimum speeds required for broadband supported by the Connect America Fund,[129] and 25 Mbps is defined as the minimum target download speed generally.[130] As summarized in Table 10 above, TWC and BHN are currently able to provide download speeds of at least 25 Mbps across more than 96% of their cable footprints, but Charter's broadband services are limited to about 88% of its households passed. To be competitive in the current and future broadband market, a rival would similarly need to be able to offer at least 25 Mbps in the downstream direction. Even now, however, efforts are underway to raise the minimum download speed well in excess of 25 Mbps. The New York PSC, in hits "Broadband 4 All" program, seeks universal statewide available of broadband with minimum download speeds of at least 100 Mbps.[131] Even at the current FCC-adopted 25/3 minimum broadband speed level, nearly 70% of Southern California New Charter customers have no broadband provider other than the Joint Applicants. At speeds in the 100-300 Mbps range, the availability of a competitive broadband provider is further reduced.

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129. *Connect America Fund et al.*, WC Docket No. 10-90 et al., *Report and Order et al.*, FCC 14-54 (rel. June 10, 2014) ("Connect America Fund FNPRM")., at para. 138.

130. Fn 79, supra, FCC *2015 Broadband Progress Report*, at para. 3.

131. https://www.ny.gov/programs/broadband-all.

The Joint Applicants face no competition at the 25 Mbps speed level in the majority of the areas they serve.

106. Table 14 below shows the current availability of broadband (download) speeds separately for pre-transaction TWC, Charter and Bright House, and for post-transaction New Charter. Table 15 provides a comparison of the broadband availability by download speed tier for pre-transaction stand-alone TWC – the largest of the three Joint Applicants – with a post-transaction New Charger. As discussed above, TWC is the largest cable provider in the 10-county Southern California area and currently passes 64.60% of Southern California households; following the transaction, New Charter's hold on the Southern California market will increase to 82.05%.

107. For the majority of customers in this market area, the Joint Applicants today and New Charter post-merger face no competition at the 25 Mbps level, and even where competition is present, there is rarely more than one competing service provider. Table 14 below provides a more detailed picture of the pre- and post-transaction broadband market served by the Joint Applicants in the Southern California counties in which they are most heavily concentrated.

Table 14

CENSUS BLOCKS PASSED BY PRE-TRANSACTION TWC, CHARTER AND BRIGHT HOUSE AT EACH DOWNLOAD SPEED – SOUTHERN CALIFORNIA

Download Speed	Census Blocks passed by TWC	Census Blocks passed by Charter	Census Blocks passed by BHN	House-holds passed by TWC	House-holds passed by Charter	House-holds passed by BHN
Total Franchise area	167,764	54,856	10,301	4,949,993	1,274,608	212,779
No broadband offered	16,309	9,872	3,287	125,942	135,791	5,426
≤200 kbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
>200 & <768 kbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥768 kbps & <1.5 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥1.5 & <3 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥3 & <6 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥6 & <10 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥10 & <15 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥15 & <20 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥20 & <25 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥25 & <50 Mbps	151,455	44,984	7,014	4,824,051	1,138,816	207,354
≥50 & <100 Mbps	150,583	44,982	7,014	4,811,895	1,138,753	207,354
≥100 Mbps & <1 Gbps	130,047	44,982	7,014	4,233,597	1,138,753	207,354
≥1 Gbps	-	-	-	-	-	-

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

108. It is also instructive to compare the market position of TWC – the largest of the three Joint Applicants – with that of a post-merger New Charter. Table 15 provides this comparison for the ten Southern California 10-county area:

Table 15

CENSUS BLOCKS AND HOUSEHOLDS PASSED BY PRE-TRANSACTION TWC AND BY POST-TRANSACTION NEW CHARTER AT EACH DOWNLOAD SPEED SOUTHERN CALIFORNIA

Download Speed	Census Blocks passed by pre-transaction TWC	Census Blocks passed by post-transaction New Charter	Households passed by pre-transaction TWC	Households passed by post-transaction New Charter
Total Franchise area	167,764	231,701	4,949,993	6,394,416
No broadband offered	16,309	29,468	125,942	267,159
≤200 kbps	151,455	202,233	4,824,051	6,127,257
>200 & <768 kbps	151,455	202,233	4,824,051	6,127,257
≥768 kbps & <1.5 Mbps	151,455	202,233	4,824,051	6,127,257
≥1.5 & <3 Mbps	151,455	202,233	4,824,051	6,127,257
≥3 & <6 Mbps	151,455	202,233	4,824,051	6,127,257
≥6 & <10 Mbps	151,455	202,233	4,824,051	6,127,257
≥10 & <15 Mbps	151,455	202,233	4,824,051	6,127,257
≥15 & <20 Mbps	151,455	202,233	4,824,051	6,127,257
≥20 & <25 Mbps	151,455	202,233	4,824,051	6,127,257
≥25 & <50 Mbps	151,455	202,233	4,824,051	6,127,257
≥50 & <100 Mbps	150,583	201,359	4,811,895	6,115,037
≥100 Mbps & <1 Gbps	130,047	180,823	4,233,597	5,536,739
≥1 Gbps	-	-	-	-

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

109. Table 16 below summarizes the availability of competing services at each of the various speed tiers in the areas currently being served by TWC in Southern California:

Table 16

CENSUS BLOCKS AND HOUSEHOLDS PASSED BY PRE-TRANSACTION TWC AND BY AT LEAST ONE COMPETING PROVIDER AT EACH DOWNLOAD SPEED SOUTHERN CALIFORNIA

Download Speed	Total Passed by TWC	Passed only by TWC		Passed by TWC and 1 competitor		Passed by TWC and 2 or more competitors	
		Number	Percentage	Number	Percentage	Number	Percentage
	Census Blocks						
≤200 kbps	151,455	22,200	14.66%	85,069	56.17%	44,186	29.17%
>200 & <768 kbps	151,455	22,200	14.66%	85,069	56.17%	44,186	29.17%
≥768 kbps <1.5 Mbps	151,455	22,200	14.66%	85,069	56.17%	44,186	29.17%
≥1.5 & <3 Mbps	151,455	23,862	15.76%	83,408	55.07%	44,185	29.17%
≥3 & <6 Mbps	151,455	31,361	20.71%	77,522	51.18%	42,572	28.11%
≥6 & <10 Mbps	151,455	43,741	28.88%	70,037	46.24%	37,677	24.88%
≥10 & <15 Mbps	151,455	56,956	37.61%	62,283	41.12%	32,216	21.27%
≥15 & <20 Mbps	151,455	79,082	52.21%	46,881	30.95%	25,492	16.83%
≥20 & <25 Mbps	151,455	108,597	71.70%	26,564	17.54%	16,294	10.76%
≥25 & <50 Mbps	151,455	112,554	74.32%	24,327	16.06%	14,574	9.62%
≥50 & <100 Mbps	150,583	115,066	75.97%	22,221	14.67%	13,296	8.78%
≥100 Mbps & <1 Gbps	130,047	94,531	62.42%	22,220	14.67%	13,296	8.78%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%
	Households						
≤200 kbps	4,824,051	129,983	2.69%	2,811,411	58.28%	1,882,657	39.03%
>200 & <768 kbps	4,824,051	129,983	2.69%	2,811,411	58.28%	1,882,657	39.03%
≥768 kbps <1.5 Mbps	4,824,051	129,983	2.69%	2,811,411	58.28%	1,882,657	39.03%
≥1.5 & <3 Mbps	4,824,051	164,103	3.40%	2,777,308	57.57%	1,882,641	39.03%
≥3 & <6 Mbps	4,824,051	338,410	7.02%	2,646,460	54.86%	1,839,181	38.13%
≥6 & <10 Mbps	4,824,051	602,667	12.49%	2,526,168	52.37%	1,695,216	35.14%
≥10 & <15 Mbps	4,824,051	868,469	18.00%	2,431,099	50.40%	1,524,483	31.60%
≥15 & <20 Mbps	4,824,051	2,032,784	42.14%	1,666,861	34.55%	1,124,407	23.31%
≥20 & <25 Mbps	4,824,051	3,209,873	66.54%	879,053	18.22%	735,126	15.24%
≥25 & <50 Mbps	4,824,051	3,320,450	68.83%	819,424	16.99%	684,177	14.18%
≥50 & <100 Mbps	4,811,895	3,372,958	69.92%	779,212	16.15%	659,725	13.68%
≥100 Mbps & <1 Gbps	4,233,597	2,794,669	57.93%	779,203	16.15%	659,725	13.68%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

110. In Table 17, I provide corresponding information on the availability of competing services at each of the speed tiers in the areas currently being served by pre-merger Charter. Table 18 provides the corresponding information as it applies to Bright House. Bright House is the smallest of the three Joint Applicants, but notably it also faces the least competition among the three merging companies. Finally, Table 19 presents the competitive condition that will confront a post-merger New Charter in the relevant Southern California geographic area that it will come to overwhelmingly dominate.

Table 17

CENSUS BLOCKS AND HOUSEHOLDS PASSED BY PRE-TRANSACTION CHARTER AND BY AT LEAST ONE COMPETING PROVIDER AT EACH DOWNLOAD SPEED SOUTHERN CALIFORNIA

Download Speed	Total Passed by Charter	Passed only by Charter		Passed by Charter and 1 competitor		Passed by Charter and 2 or more competitors	
		Number	Percentage	Number	Percentage	Number	Percentage
	Census Blocks						
≤200 kbps	44,984	7,864	17.48%	25,686	57.10%	11,434	25.42%
>200 & <768 kbps	44,984	7,864	17.48%	25,686	57.10%	11,434	25.42%
≥768 kbps <1.5 Mbps	44,984	7,864	17.48%	25,686	57.10%	11,434	25.42%
≥1.5 & <3 Mbps	44,984	8,377	18.62%	25,173	55.96%	11,434	25.42%
≥3 & <6 Mbps	44,984	10,754	23.91%	23,027	51.19%	11,203	24.90%
≥6 & <10 Mbps	44,984	14,086	31.31%	20,532	45.64%	10,366	23.04%
≥10 & <15 Mbps	44,984	17,326	38.52%	18,288	40.65%	9,370	20.83%
≥15 & <20 Mbps	44,984	22,896	50.90%	14,131	31.41%	7,957	17.69%
≥15 & <25 Mbps	44,984	31,011	68.94%	8,422	18.72%	5,551	12.34%
≥25 & <50 Mbps	44,984	31,927	70.97%	7,851	17.45%	5,206	11.57%
≥50 & <100 Mbps	44,982	32,744	72.79%	7,329	16.29%	4,909	10.91%
≥100 Mbps & <1 Gbps	44,982	32,746	72.79%	7,327	16.29%	4,909	10.91%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%
	Households						
≤200 kbps	1,138,816	30,061	2.64%	694,974	61.03%	413,781	36.33%
>200 & <768 kbps	1,138,816	30,061	2.64%	694,974	61.03%	413,781	36.33%
≥768 kbps <1.5 Mbps	1,138,816	30,061	2.64%	694,974	61.03%	413,781	36.33%
≥1.5 & <3 Mbps	1,138,816	39,490	3.47%	685,545	60.20%	413,781	36.33%
≥3 & <6 Mbps	1,138,816	88,947	7.81%	641,799	56.36%	408,071	35.83%
≥6 & <10 Mbps	1,138,816	149,643	13.14%	602,940	52.94%	386,233	33.92%
≥10 & <15 Mbps	1,138,816	200,994	17.65%	577,347	50.70%	360,475	31.65%
≥15 & <20 Mbps	1,138,816	430,401	37.79%	417,484	36.66%	290,930	25.55%
≥20 & <25 Mbps	1,138,816	674,008	59.18%	251,250	22.06%	213,559	18.75%
≥25 & <50 Mbps	1,138,816	694,504	60.98%	238,134	20.91%	206,178	18.10%
≥50 & <100 Mbps	1,138,753	706,905	62.07%	230,168	20.21%	201,680	17.71%
≥100 Mbps & <1 Gbps	1,138,753	706,923	62.08%	230,150	20.21%	201,680	17.71%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

Table 18

CENSUS BLOCKS AND HOUSEHOLDS PASSED BY PRE-TRANSACTION BRIGHT HOUSE AND BY AT LEAST ONE COMPETING PROVIDER AT EACH DOWNLOAD SPEED SOUTHERN CALIFORNIA

Download Speed	Total passed by BHN	Passed only by BHN		Passed by BHN and 1 competitor		Passed by BHN and 2 or more competitors	
		Number	Percentage	Number	Percentage	Number	Percentage
	Census Blocks						
≤200 kbps	7,014	1,097	15.64%	5,917	84.36%	-	0.00%
>200 & <768 kbps	7,014	1,097	15.64%	5,917	84.36%	-	0.00%
≥768 kbps <1.5 Mbps	7,014	1,097	15.64%	5,917	84.36%	-	0.00%
≥1.5 & <3 Mbps	7,014	1,147	16.35%	5,867	83.65%	-	0.00%
≥3 & <6 Mbps	7,014	1,649	23.51%	5,365	76.49%	-	0.00%
≥6 & <10 Mbps	7,014	1,948	27.77%	5,066	72.23%	-	0.00%
≥10 & <15 Mbps	7,014	2,042	29.11%	4,972	70.89%	-	0.00%
≥15 & <20 Mbps	7,014	4,146	59.11%	2,868	40.89%	-	0.00%
≥20 & <25 Mbps	7,014	6,309	89.95%	705	10.05%	-	0.00%
≥25 & <50 Mbps	7,014	6,735	96.02%	279	3.98%	-	0.00%
≥50 & <100 Mbps	7,014	7,014	100.00%	-	0.00%	-	0.00%
≥100 Mbps & <1 Gbps	7,014	7,014	100.00%	-	0.00%	-	0.00%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%
	Households						
≤200 kbps	207,354	18,293	8.82%	189,061	91.18%	-	0.00%
>200 & <768 kbps	207,354	18,293	8.82%	189,061	91.18%	-	0.00%
≥768 kbps <1.5 Mbps	207,354	18,293	8.82%	189,061	91.18%	-	0.00%
≥1.5 & <3 Mbps	207,354	19,523	9.42%	187,831	90.58%	-	0.00%
≥3 & <6 Mbps	207,354	33,131	15.98%	174,222	84.02%	-	0.00%
≥6 & <10 Mbps	207,354	39,598	19.10%	167,755	80.90%	-	0.00%
≥10 & <15 Mbps	207,354	40,825	19.69%	166,528	80.31%	-	0.00%
≥15 & <20 Mbps	207,354	123,571	59.59%	83,783	40.41%	-	0.00%
≥20 & <25 Mbps	207,354	189,126	91.21%	18,227	8.79%	-	0.00%
≥25 & <50 Mbps	207,354	201,680	97.26%	5,674	2.74%	-	0.00%
≥50 & <100 Mbps	207,354	207,354	100.00%	-	0.00%	-	0.00%
≥100 Mbps & <1 Gbps	207,354	207,354	100.00%	-	0.00%	-	0.00%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

Table 19

CENSUS BLOCKS AND HOUSEHOLDS PASSED BY POST-MERGER NEW CHARTER AND BY AT LEAST ONE COMPETING PROVIDER AT EACH DOWNLOAD SPEED SOUTHERN CALIFORNIA

Download Speed	Total passed by New Charter	Passed only by New Charter		Passed by New Charter and 1 competitor		Passed by New Charter and 2 or more competitors	
		Number	Percentage	Number	Percentage	Number	Percentage
	Census Blocks						
≤200 kbps	202,233	31,333	15.49%	116,936	57.82%	53,964	26.68%
>200 & <768 kbps	202,233	31,333	15.49%	116,936	57.82%	53,964	26.68%
≥768 kbps <1.5 Mbps	202,233	31,333	15.49%	116,936	57.82%	53,964	26.68%
≥1.5 & <3 Mbps	202,233	33,570	16.60%	114,700	56.72%	53,963	26.68%
≥3 & <6 Mbps	202,233	44,039	21.78%	106,101	52.46%	52,093	25.76%
≥6 & <10 Mbps	202,233	60,193	29.76%	95,750	47.35%	46,290	22.89%
≥10 & <15 Mbps	202,233	76,888	38.02%	85,588	42.32%	39,757	19.66%
≥15 & <20 Mbps	202,233	106,869	52.84%	63,826	31.56%	31,538	15.59%
≥20 & <25 Mbps	202,233	146,889	72.63%	35,475	17.54%	19,869	9.82%
≥25 & <50 Mbps	202,233	152,263	75.29%	32,212	15.93%	17,758	8.78%
≥50 & <100 Mbps	201,359	155,905	77.09%	29,286	14.48%	16,168	7.99%
≥100 Mbps & <1 Gbps	180,823	135,372	66.94%	29,283	14.48%	16,168	7.99%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%
	Households						
≤200 kbps	6,127,257	179,690	2.93%	3,715,176	60.63%	2,232,391	36.43%
>200 & <768 kbps	6,127,257	179,690	2.93%	3,715,176	60.63%	2,232,391	36.43%
≥768 kbps <1.5 Mbps	6,127,257	179,690	2.93%	3,715,176	60.63%	2,232,391	36.43%
≥1.5 & <3 Mbps	6,127,257	225,126	3.67%	3,669,756	59.89%	2,232,375	36.43%
≥3 & <6 Mbps	6,127,257	465,964	7.60%	3,479,259	56.78%	2,182,033	35.61%
≥6 & <10 Mbps	6,127,257	800,910	13.07%	3,312,406	54.06%	2,013,942	32.87%
≥10 & <15 Mbps	6,127,257	1,122,117	18.31%	3,189,751	52.06%	1,815,389	29.63%
≥15 & <20 Mbps	6,127,257	2,609,550	42.59%	2,177,037	35.53%	1,340,670	21.88%
≥20 & <25 Mbps	6,127,257	4,104,352	66.99%	1,151,075	18.79%	871,830	14.23%
≥25 & <50 Mbps	6,127,257	4,251,476	69.39%	1,064,060	17.37%	811,721	13.25%
≥50 & <100 Mbps	6,115,037	4,322,870	70.55%	1,009,692	16.48%	782,476	12.77%
≥100 Mbps & <1 Gbps	5,536,739	3,744,598	61.11%	1,009,666	16.48%	782,476	12.77%
≥1 Gbps	-	-	0.00%	-	0.00%	-	0.00%

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

111. If the merger is allowed to go forward, New Charter will overwhelmingly dominate the 10-county Southern California market. It will pass some 82% of all households in this area, and of these 69.39% will have no competitive broadband alternative at the FCC-adopted minimum speed tier of 25 Mbps down and 3 Mbps up. As I discuss in Section V. below, there is little likelihood that any significant additional competitive buildout will be forthcoming any time soon.

V.

THE POST-MERGER SOUTHERN CALIFORNIA BROADBAND MARKET STRUCTURE

A post-merger New Charter will exercise overwhelming dominance of the relevant Southern California high-speed residential broadband access market.

112. Tables 16 through 18 above provide the total number of census blocks and households being served by one or more competitors at any given speed tier separately for each of the three Joint Applicants. Table 19 provides this same breakdown for the expanded area that will be served by post-merger New Charter. The availability of a competitive alternative to New Charter's broadband service is greater at the 10/1 Mbps speed level than at the 25/3 Mbps level. Table 20 below summarizes the extent to which customers within the New Charter footprint will be able to obtain 10/1 or 25/3 broadband service from an alternate provider:

Table 20

COMPETITIVE CHOICES AVAILABLE TO HOUSEHOLDS PASSED BY POST-MERGER NEW CHARTER AT 10/1 AND 25/3 BROADBAND SPEED TIERS SOUTHERN CALIFORNIA

Download Speed	No competitor	Pct with no competitor	One Competitor	Pct with One Competitor	Two or more Competitors	Pct with Two or More Competitors
10 Mbps and above	1,122,117	18.31%	3,189,751	52.06%	1,815,389	29.63%
25 Mbps and above	4,251,476	69.39%	1,064,060	17.37%	811,721	13.25%

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

113. Of the 6,127,257 Southern California households that would be passed by the post-merger New Charter, approximately 5,005,140, or about 81.69%, would have at least one

competitive alternative to New Charter for broadband service *at the 10/1 Mbps level*. However, *at the current FCC benchmark 25/3 Mbps level*, only 1,875,781 Southern California households, or about 30.61% of those passed by New Charter, would be able to obtain the service from an alternate source. The principal source of competitive broadband service within the New Charter service area would come from the incumbent local exchange carrier ("ILEC"), primarily from AT&T or from the former Verizon California that will shortly be transferred to Frontier. However, whereas 100% of the 6,127,257 Southern California households where broadband is available within the New Charter franchise area are being offered broadband at speeds of at least 25/3[132], the situation is quite different in the case of ILECs. Table 21 below provides the relative portion of AT&T and Verizon subscribers that are currently being offered broadband with download speeds of at least 10 or 25 Mbps, respectively. This information is presented in three separate ways.

(1) The total ILEC (AT&T or Frontier) California operating footprint;

(2) The ILEC (AT&T or Frontier) operating areas within the New Charter California franchise area; and

(3) The ILEC (AT&T or Frontier) operating areas within the New Charter California franchise area in Southern California.

132. In addition to the 6,127,257 Southern California households where broadband is available within the New Charter franchise area, broadband is not offered to 267,159 households within the New Charter franchise area.

Table 21

COMPETITIVE BROADBAND SERVICES AVAILABLE FROM CALIFORNIA ILECS AT 10 AND 25 Mbps DOWNLOAD SPEEDS

ILEC	Households passed	Households passed with at least 10/1 availability	Percent with at least 10/1 availability	Households passed with at least 25/3 availability	Percent with at least 25/3 availability
All ILEC operating areas in California					
Frontier (Verizon)	2,752,346	2,201,282	79.98%	1,551,378	56.37%
AT&T	9,139,197	7,759,307	84.90%	265,188	2.90%
All ILEC operating areas within the New Charter California franchise areas					
Frontier (Verizon)	2,308,700	1,915,674	82.98%	1,499,854	64.97%
AT&T	3,819,870	3,216,327	84.20%	96,708	2.53%
All ILEC operating areas within the New Charter California franchise areas in Southern California					
Frontier (Verizon)	2,272,643	1,889,758	83.15%	1,499,332	65.97%
AT&T	3,627,000	3,082,398	84.98%	93,355	2.57%
Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.					

114. The existing geographic extent of ILEC broadband service availability at the 25/3 level is unlikely to be expanded anytime soon. In 2006, Verizon announced plans for an ambitious investment program to deploy fiber-to-the-home (FTTH) broadband to 18-million of its (then) 25.1-million residential wireline subscribers.[133] But after building out to a point where *FiOS* was available to about 15.6-million homes,[134] Verizon in 2010 shut down further *FiOS* investment

133. FCC, ARMIS Report 43-08, USOA Report: Table III: Residential Switched Access Lines–Lifeline plus Residential Switched Access Lines–Non-Lifeline–Primary, Year ending 2006; Available at http://www.fcc.gov/wcb/eafs [accessed July 24, 2015].

134. Verizon Communications Inc. 2010 Annual Report, at 2.

other than that required to complete projects already underway.[135] At the time of the announcement, the company had 3.4-million *FiOS* Internet and 2.9-million *FiOS* TV subscribers[136] – the majority of these had signed up for both services. By the end of 2010, Verizon had spent some $23-billion on *FiOS*.[137] In a 2009 *ex parte* presentation to the FCC, Verizon provided its costs per home *passed* and per home *connected*.[138] There, Verizon put its actual 2006 cost per home passed at $799 and per home connected at $842. At a talk I presented to the CPUC Division of Ratepayer Advocates in June of 2010, shortly after Verizon had announced its plan to cease further *FiOS* investment, I estimated that even assuming a 30% take rate and a $600 per-customer acquisition cost, Verizon's up-front (capital + acquisition cost) outlay was about $4,100 per actual *FiOS* customer being served.[139] I had concluded that *FiOS* was not proving to be profitable in large part because of the relatively small fraction of the 15.6-million homes passed that had by then actually signed up for the service. Apparently Verizon had reached a similar conclusion, as demonstrated by its decision to stop investing in *FiOS*, and/or that it had better uses for the investment capital that was available. As I have noted earlier, the matter of further broadband deployment was a major issue of contention in the recently-completed proceeding that ultimately approved the transfer of Verizon's California

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135. "Verizon to End Rollout of FiOS," *Wall Street Journal*, March 30, 2010. http://www.wsj.com/articles/SB10001424052702303410404575151773432729614 [accessed on July 16, 2015].

136. *Id.*

137. *Id.*

138. Verizon *ex parte* letter to the FCC, GN Docket No. 09-51, *A National Broadband Plan for our Future*, August 27, 2009.

139. Lee L. Selwyn, "The Transition to IP Telecom: Evolution, not Revolution," presentation sponsored by the CPUC Division of Ratepayer Advocates, June 16, 2010, at 23-34.

ILEC operations to Frontier Communications, A.15-03-005, and in a partial settlement that was adopted by the Commission in its decision approving the transactions, Frontier had committed to a substantial expansion of its originally-proposed broadband deployment within the territory to be acquired from Verizon that will provide 25 Mbps download and 2 to 3 Mbps upload speeds to some 400,000 additional households by 2022. But by 2022, the current 25/2-3 service level will be long out-of-date and the minimum standard will by then likely be at 100 Mbps or greater.

115. AT&T has announced plans for broadband build-outs at 100 Mbps and higher speeds, in a limited number of selected markets, including several in California. The potential impact of AT&T's 2015 acquisition of DirecTV upon its wireline broadband plans is not entirely clear. On the one hand, and looking back to Verizon's business model for *FiOS*, a substantial portion of *FiOS* revenues were projected to come from Multichannel Video Program Distribution ("MVPD") linear "cable TV" type services. Verizon had not been in the MVPD business prior to embarking upon the *FiOS* project. However, having acquired DirecTV, AT&T is already in the MVPD business, and is able to offer satellite-based MVPD services throughout its ILEC service areas and beyond. Thus, the incremental revenues available to AT&T through any broadband upgrade or expansion will necessarily be limited to those associated with broadband service only. Inasmuch as Verizon has had difficulty supporting a business model that relied upon both broadband and MVPD revenues, a business model that is limited to broadband revenues only will likely be even more problematic. On the other hand, AT&T's DirecTV does face MVPD competition from cable MSOs that are capable of offering both video and broadband, the latter at speeds that generally exceed those currently available from AT&T's V-

U-verse broadband service. AT&T may feel compelled to build out its Gigabit broadband as a defensive move in order to protect its newly-acquired stream of video revenues.

Even in those areas in which New Charter will confront a single (ILEC) broadband competitor, there is no reason to expect that a broadband market limited to two service providers will function in a manner that produces a competitive outcome for consumers.

116. Generally, in a market with two primary incumbents of roughly equal size, the two firms will find it far more profitable to engage in a (tacit or overt) market allocation strategy than to attempt to aggressively compete against one another, particularly with respect to price. In markets with two large incumbents, smaller rivals with far more limited product lines and/or geographic reach rarely if ever present a meaningful competitive challenge to the larger firms. The ineffectiveness of small firms in constraining the market power of large incumbents was the focus of an action just taken (in December 2015) by the Federal Trade Commission to block, for a second time, the proposed merger of Staples and Office Depot. As the Joint Applicants here have done, in announcing its plans to acquire Office Depot, Staples focussed specifically upon cost savings and other synergies:

> This transaction delivers great value for our shareholders and creates a company ideally positioned to serve our customers and grow over the long term," said Roland Smith, chairman and chief executive officer for Office Depot, Inc. "It is also an endorsement of our many accomplishments and the tremendous success we've had integrating Office Depot and OfficeMax over the past year. We look forward to bringing our experience and knowledge to the new organization.
>
> Staples expects to generate at least $1 billion of annualized cost synergies by the third full fiscal year post-closing. The majority of these synergies would be realized through headcount and general and administrative expense reductions,

efficiencies in purchasing, marketing, and supply chain, retail store network optimization, as well as sharing of best practices. ...[140]

The FTC, however, did not view these potential efficiency gains as sufficient to overcome the potential competitive harms that would result from the transaction. Focussing specifically upon the market for "consumable office supplies [provided] to large 'business-to-business' ('B-to-B') customers (i.e., business customers buying for their own end-use)," the FTC, noting that "Staples' and Office Depot's own documents state that they are the only participants in a 'two player' national market," determined that the two large firms "are the best options for most large B-to-B customers – and the only meaningful options for some large B-to-B customers – particularly those with facilities in multiple regions of the country."[141] The FTC concluded that "[o]ther supply options have significant disadvantages for large B-to-B customers" and that "[l]ocal or regional vendors (including but not limited to W.B. Mason), local or regional consortia, and ad hoc region-by-region networks of suppliers have higher costs and thus higher prices, limited geographic footprints, and/or logistical and coordination challenges for large B-to-B customers. Because of these disadvantages, these other supply options have relatively small shares of sales to large B-to-B customers."[142]

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140. *Staples, Inc. Announces Acquisition of Office Depot, Inc.*, Staples, Inc. Press Release, February 4, 2015. http://staples.newshq.businesswire.com/press-release/corporate/staples-inc-announces-acquisition-office-depot-inc (accessed 12/27/15)

141. Federal Trade Commission, *I/M/O Staples, Inc. and Office Depot, Inc.*, Docket No. 9367 *Complaint* (Public Version), filed December 7, 2015 ("*FTC Staples/Office Depot Complaint*"), at 1.

142. *Id.*, paras. 11-12, at 3.

117. In effectively competitive markets, all firms are price-takers, and the market price moves to marginal cost. In monopoly markets, a single firm is a price-setter, and sets its price above marginal cost at a level that maximizes its economic profits. In a duopoly market, two firms carve up all of the available demand in the market. While each duopoly will exhibit unique characteristics, it is widely acknowledged that firms in duopoly markets will, like a monopoly, charge a price in excess of marginal costs (albeit somewhat lower than might exist under a monopoly). Both firms exercise market power, and both will have the ability to make price-setting decisions. These conditions can and do exist, even in the absence of overt collusion.

118. There is in fact considerable empirical evidence in telecommunications to support the notion that "two is not enough" to achieve a competitive outcome. When the FCC initially authorized Commercial Mobile Radio Service ("CMRS") in 1982, it created two equal sized blocks of spectrum in the 800 MHZ band and granted one of the two blocks to each of two rival providers – an affiliate of a wireline incumbent LEC serving the area (the so-called "B" block) and an applicant with no such affiliation (the so-called "A" block) in each of more than 700 metropolitan and rural service areas nationwide. These initial CMRS licensees were granted without charge, at first through a competitive application process and, ultimately, through lotteries. This duopoly market arrangement in each CGSA persisted well into the 1990s.

119. In 1993, Congress authorized the FCC to issue additional spectrum licenses through an auction process,[143] increasing the number of potential rival providers in each market to four, five or in some cases six. By year-end 2000, there were six major carriers with a nationwide scope (Verizon Wireless, Cingular, AT&T, Sprint PCS, Nextel, and Alltel) and a number of others with more limited geographic presence.[144] Some of the major regional CMRS providers in existence at that time included VoiceStream, US Cellular, Western Wireless, Powertel, and Quest.[145] By the end of 2006, the number of national providers had dwindled to four. AT&T and Cingular had merged (following the mergers of parent companies AT&T, SBC and BellSouth), and Sprint and Nextel had merged. Alltel, Metro PCS, and Leap were still identified as independent companies.[146] By the end of 2010, there were approximately 292.5-million wireless handsets in the US, of which about 266.7-million – roughly 92% – were being served by the four largest carriers.[147] Alltel (which had acquired Western Wireless in 2005) had by then been absorbed into Verizon. Leap, together with its Cricket brand, were still operating independently of any of the "top four," until Leap was acquired by AT&T in 2014. By June 2014, the most recent date for which FCC data is available, there were 356.2-million "connections," of which 350.8-million – about 98.5% – were being provided by four carriers –

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143. *Omnibus Budget Reconciliation Act of 1993*, Pub. L. 103-66, Aug. 10, 1993, 107 Stat. 312, as amended.

144. FCC, Sixth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, rel. July 17, 2001, at p. C-4, Table 3.

145. *Id.*

146. FCC, Twelfth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, rel. February 4, 2008, at p. 132, Table A-4.

147. FCC, Sixteenth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, rel. March 21, 2013, at p. 55, Table 13.

Verizon, AT&T, Sprint and T-Mobile.[148] The FCC has been calculating the Herfindahl-Hirschman Index (HHI), a widely-accepted measure of concentration in competition analysis, for the wireless telecommunications market on an annual basis since 2008. The following chart from the FCC's Seventeenth CMRS Report shows the progression of increases in wireless HHI from 2008 through the end of 2013. The HHI has exceeded 2,500 in each of those years. 2,500 is the threshold level for "Highly Concentrated" markets as specified in the Department of Justice/Federal Trade Commission *Horizontal Merger Guidelines*.[149] Figure 14 below shows the wireless HHI increasing from 2,693 in 2008 to 3,027 in 2013.

148. FCC, Seventeenth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, rel. December 18, 2014, at p. 11, Table II.B.1. The Seventeenth Report uses "connections" instead of "subscribers" to refer to the total number of connected wireless devices, which includes, in addition to handsets and smartphones, tablets and others.

149. The US Department of Justice/Federal Trade Commission's 2010 *Horizontal Merger Guidelines* ("*HMG*") defines a market with an HHI in excess of 2500 as "highly concentrated," and suggests that "[m]ergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power." United States Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines 2010 edition* ("*HMG*"), at §5.3, Market Concentration.

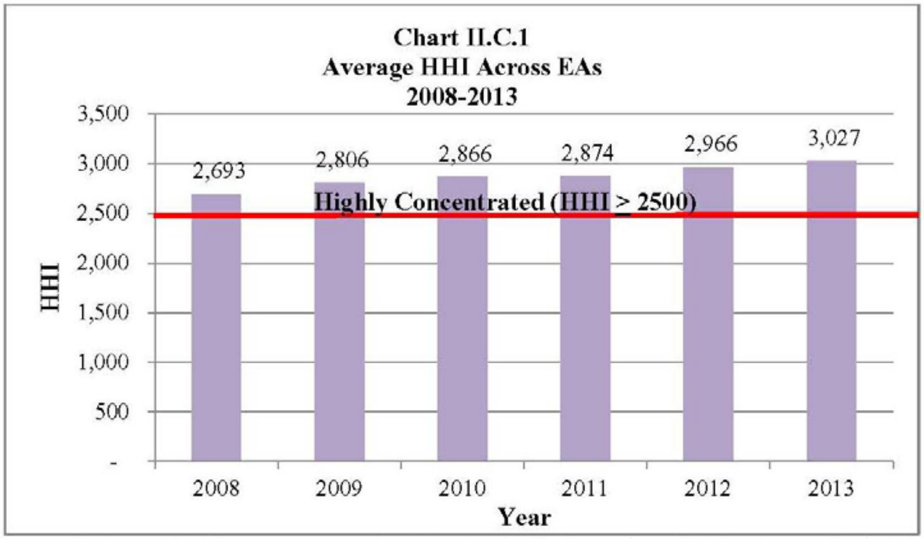

Figure 14. Progression of increases in Commercial Mobile Radio Service HHI over the period 2008-2013. Source: FCC Seventeenth CMRS Report, at p. 17, Chart II.C.1.

The FCC calculated these HHIs separately for each of 146 individual Economic Areas ("EAs"), and then developed a weighted average based upon EA populations.[150] The *Seventeenth Report* also provides the HHIs for each of the studied EAs. Table 22 below provides the FCC 2013 HHIs for the six California EAs that were calculated:

150. Seventeenth CMRS Report, at 17.

Table 22

**WIRELESS HHIs FOR CALIFORNIA ECONOMIC AREAS
2011-2013**

EA No.	Economic Area	2011	2012	2013
162	Fresno	2953	2989	3787
165	Redding (incl. part of OR)	3299	3405	3621
161	San Diego	2581	2637	2913
163	San Francisco-Oakland-San Jose	2720	2742	2899
164	Sacramento-Yolo	2727	2741	2882
160	Los Angeles-Riverside-Orange County	2415	2437	2634

Source: FCC, Seventeenth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, rel. Dec. 18, 2014, at 111-115, Table II.C.1.

The wireless market in all of the California EAs has, like the industry nationally, shown a steady progression of HHI increases over the 2011-2013 period, and all are now "highly concentrated." It was, in fact, this "highly concentrated" character of the US wireless market that was a key driver of the FCC's several actions rejecting wireless mergers that would have resulted in less than four national wireless carriers.

120. There was virtually no price competition between the "A" and "B" block carriers under the duopoly arrangement, and the two wireless carriers resisted the requirement to offer wholesale services for resale, and so stand-alone retail-level competition was minimal. However, once the number of incumbents grew to four or more, price competition developed, and carriers sought out resellers and began aggressively to encourage retail-level competition through so-called "Mobile Virtual Network Operator" ("MVNO") arrangements. The mid-2000s saw some consolidation of CMRS providers, but with four national carriers and more regional competitors, price competition persisted. Over the next decade-plus, disruptive

competitors such as T-Mobile and Metro PCS introduced a variety of new pricing arrangements and forced a precipitous drop in wireless prices overall, as well as the introduction of new services – an evolution that is still underway.

121. In support of its conclusion that the proposed 2011 AT&T/T-Mobile merger would create the potential for serious competitive harms, the FCC Staff addressed the consequences of reducing the number of national facilities-based wireless carriers from four to three:

> 75. Coordinated effects are of particular concern here because the retail mobile wireless services market, being relatively concentrated and hard to enter, appears conducive to coordination. In addition, T-Mobile plays a disruptive role in this market to the benefit of buyers, and, thus, likely constrains coordination. An acquisition eliminating a disruptive firm in markets vulnerable to coordinated conduct is likely to cause adverse coordinated effects.
>
> 76. The retail mobile wireless services market would be more vulnerable to coordination post-transaction. Features of this market make it likely that the remaining three nationwide providers would be able to reach a consensus on the terms of coordination (by identifying a mutually agreeable coordinated price), deter cheating on that consensus (by undercutting the coordinated price to steal high-margin business from its rivals), and prevent new competition in this market. Because these providers offer the same plans and charge the same prices nationwide, increased coordination would most likely take the form of raising the level of prices.
>
> 77. Reaching a consensus would be facilitated by the small number of firms and the use of national prices and service plan offerings by most providers across most geographic markets. ...[151]

151. *Applications of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorizations*, FCC WT Docket No. 11-65, FCC Staff Analysis and Findings, November 30, 2011, at paras. 75-77, footnote references omitted.

Notwithstanding the less-than-enthusiastic reception that the FCC afforded the idea of an AT&T/T-Mobile combination, in 2014 Sprint initiated discussions to acquire T-Mobile for a purported $32-billion, but later abandoned the effort. Following the announcement by Sprint that it would not longer pursue a deal with T-Mobile,[152] FCC Chairman Tom Wheeler issued the following statement: "Four national wireless providers are good for American consumers. Sprint now has an opportunity to focus their efforts on robust competition."[153] While there is no question that the wireless market is far more competitive than the market for wireline broadband access, its highly concentration condition still produces monopolistic conduct, as is evident in the universal adoption by all four national CMRS carriers of certain customer service agreement terms and conditions that would be far more difficult to enforce industry-wide under truly competitive conditions. These include, among other things, limitations on liability, mandatory arbitration and class action waiver provisions.

122. The FCC's 2010 *National Broadband Plan* determined that "[a]n initial universal-ization target of 4 Mbps of actual download speed and 1 Mbps of actual upload speed, with an acceptable quality of service for interactive applications, would ensure universal access."[154] But in stark contrast to the relatively competitive conditions extant in the wireless market, FCC data suggests that as of 2010, for residential broadband access at (by today's standards) these modest

152. "Sprint Abandons Pursuit of T-Mobile, Replaces CEO," *Wall Street Journal*, August 5, 2014, http://www.wsj.com/articles/sprint-abandoning-pursuit-of-t-mobile-1407279448 (accessed 8/19/15)

153. Statement by FCC Chairman Tom Wheeler on Competition in the Mobile Marketplace, August 6, 2014. https://www.fcc.gov/document/chairman-wheeler-statement-competition-mobile-marketplace (accessed 8/19/15).

154. FCC, *Connecting America: The National Broadband Plan*, March 17, 2010 ("*National Broadband Plan*"), at 135.

speed levels, only about 4% of all US households had a choice of three or more providers; 78% had a choice of two providers, and the remaining 18% had either no service at all (5%) or only one provider (13%).[155] Not surprisingly, and as shown in Figure 15, cable and broadband prices have been steadily increasing, while wireless prices have been dropping rapidly.

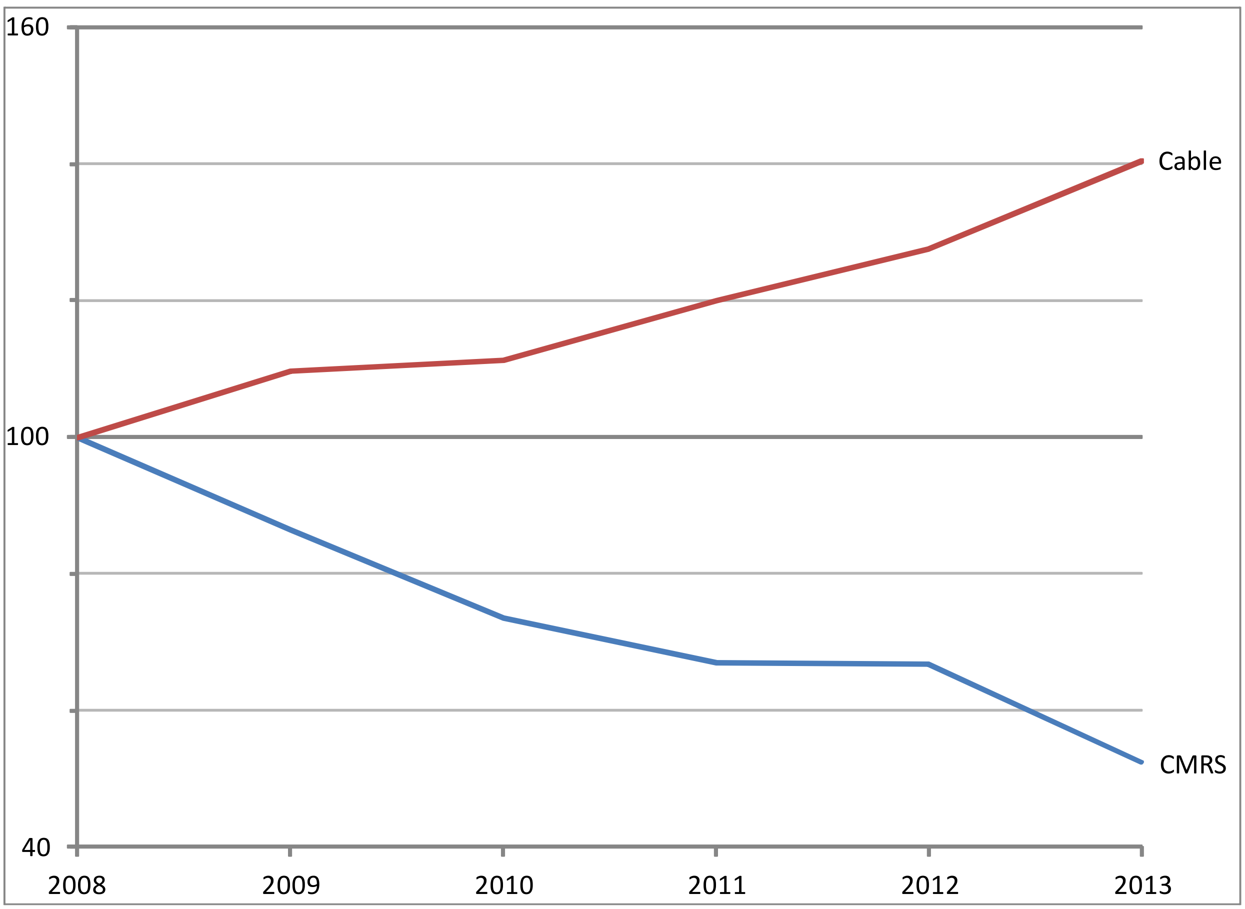

Figure 15. Prices for wireless voice and data services have been steadily decreasing, while Basic Cable prices have steadily risen. Index (2008=100) of Basic Cable average service price and Average Revenue per Mixed Unit for CMRS. Sources: FCC Cable Report; CTIA Semi-Annual Wireless Industry Survey, year end 2013.

155. *Id.*, at 37.

123. As a policy matter, it is simply incorrect to view a telecommunications market with only two principal rivals, such as the market for broadband and MVPD services that will be shared between the post-transaction New Charter and the ILEC (primarily AT&T or Verizon) as being sufficiently competitive to assure that efficiency gains attributable to the proposed transaction will be reflected in prices charged to end users.

124. In determining whether a merger may "be likely to enhance market power," the *Horizontal Merger Guidelines* ("*HMG*") looks to the *increase* in HHI relative to the pre-merger HHI. However, the *HMG* also establishes a threshold condition for "highly concentrated" markets as those whose HHI is in excess of 2500.[156] In that regard, I have calculated a broadband access HHI for the areas of California that would be served by New Charter following its acquisition of Verizon California's operations, utilizing both the current FCC 25/3 definition of "broadband" and well as the lower 10/1 threshold that the FCC has accepted as a minimum service level needed to qualify for Connect America Fund (CAF) support. I have made this calculation utilizing the same methodology that has been employed by the FCC in calculating wireless HHIs as discussed above. However, whereas the FCC's calculations were based upon actual "subscription" or "connection" data, the Commission's Broadband Availability Database contains only "availability" data, not actual subscriptions or customer counts, by census block. Using the most conservative approach for purposes of this calculation, I have assumed that where only one provider offers service at the 25/3 [or 10/1] or greater speed, that provider's market share *in those census blocks* is 100%. Where two providers offer 25/3 [or

156. *Id.*

10/1] or greater speed access, I have assumed that each provider's share is 50%. And where three or more providers offer 25/3 [or 10/1] access, I have assumed that each provider's share *in those census blocks* is 33.3% or 25%, respectively. I then calculated an overall average HHI weighted by the number of households in each census block. I performed this calculation separately for the 25/3 and 10/1 service levels for the 10-county Southern California geographic area within which the vast majority of New Charter service area will be located. The results of this calculation are shown on Tables 23 and 24 below. Note that while the overall weighted average HHI for 25/3 broadband access within the Joint Applicants' combined service area is 8,466, even in the few (0.23% of) census blocks where three providers are offering service, the HHI for those census blocks is still well in excess of the 2,500 "highly concentrated" threshold. For the 30.38% of households where two providers are available (for the most part, New Charter and an ILEC), the HHI is still at 5,000. And for the 69.39% of households that confront only a single broadband provider, the HHI is at 10,000, the absolute maximum. Finally, because I have made the most conservative assumptions regarding HHIs for census blocks where one or more competitors have a presence, my HHI estimate of 8,466 is also highly conservative.

Table 23

WEIGHTED AVERAGE HERFINDAHL-HIRSCHMAN INDEX (HHI) FOR THE 25 Mbps DOWNLOAD/3 Mbps UPLOAD BROADBAND ACCESS MARKET WITHIN THE SOUTHERN CALIFORNIA SERVICE AREAS

Number of Providers offering 25/3 Broadband Access						
Number of Providers	**1**	**2**	**3**	**4**		
Assumed market share per provider	100%	50%	33.33%	25%		
HHIs in individual CBs	10,000	5,000	3,333	2,500		
Company	**Number of Households Passed**					**Weighted Average HHI**
Time Warner	3,320,450	1,482,719	20,882	-	4,824,051	8,434
Charter	694,504	434,929	9,383	-	1,138,816	8,036
Bright House	201,680	5,674	-	-	207,354	9,863
"New Charter"	4,251,476	1,861,761	14,020	-	6,127,257	8,466

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

Table 24

WEIGHTED AVERAGE HERFINDAHL-HIRSCHMAN INDEX (HHI) FOR THE 10 Mbps DOWNLOAD/1 Mbps UPLOAD BROADBAND ACCESS MARKET WITHIN THE SOUTHERN CALIFORNIA SERVICE AREAS

Number of Providers offering 10/1 Broadband Access						
Number of Providers	**1**	**2**	**3**	**4**		
Assumed market share per provider	100%	50%	33.33%	25%		
HHIs in individual CBs	10,000	5,000	3,333	2,500		
Company	**Number of Households Passed**					**Weighted Average HHI**
Time Warner	868,469	3,683,878	266,391	5,150	4,823,889	5,805
Charter	200,994	865,369	70,702	1,588	1,138,654	5,776
Bright House	40,825	166,528	-	-	207,354	5,984
"New Charter"	1,122,117	4,721,506	279,910	3,724	6,127,257	5,838

Source: California PUC Broadband Availability Database, Round 11 data (as of December 31, 2014) as submitted by ISPs.

125. The FTC applied an HHI analysis in reaching its decision to oppose the Staples/Office Depot merger:

> ... Post-Merger, Staples would control more than 70% of the relevant market. The next-largest competitor would possess less than 5% of the relevant market. Under the 2010 U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines ("Merger Guidelines"), a post-merger market-concentration level above 2,500 points, as measured by the Herfindahl-Hirschman Index ("HHI"), and an increase in market concentration of more than 200 points renders a merger presumptively unlawful. Post-Merger market concentration would be more than 4900, and would increase HHIs in an already concentrated market by well over 200 points. Thus, the Merger is presumptively unlawful.[157]

At the 25/3 speed level, the proposed merger exceeds both of these *HMG* criteria for its rejection. Pre-merger Charter's HHI within its current Southern California geographic service area is 8,036; the post-merger New Charter's weighted average HHI would be 8,466, an increase of 430, well in excess of the 200-point *HMG* threshold. And overall, not only is the post-merger New Charter HHI of 8,466 well in excess of the 2,500 "highly concentrated" HMG threshold, it is also considerably higher than the 4,900 post-merger Staples/Office Depot HHI cited by the FTC as one of the bases for its decision to block the transaction.

126. One might argue that a comparison of pre-merger Charter's HHI (8,036) with post-merger New Charter's HHI (8,466) is inappropriate because within the Joint Applicants' combined service areas the pre- and post-merger competitive conditions of individual census blocks or, for that matter, entire service areas of each of the three merging firms, will remain unchanged. If one were to compare pre-merger TWC's HHI (8,434) with post-merger New

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157. FTC *Staples/Office Depot Complaint*, para. 14, at 3-4.

Charter's HHI (8,466), the difference is much smaller. This idea that, since each of the three merging firms start out as near-monopolies anyway and are in any event non-overlapping as to their respective geographic service areas, the merger will have no impact upon market concentration or competition, is a decidedly backward-looking notion in the current context of this industry. It is premised upon the idea that *physical infrastructure* is the sole basis for each firm's activities in the video, broadband, and voice telephony markets. In fact, it is this physical infrastructure and the large body of customers that each firm serves that provides a launching pad for competitive initiatives that can extend well beyond each firm's geographic footprint. It is not a particularly big leap to go from being a pure MVPD to also becoming an OVD; in fact, Dish Networks, a satellite-based MVPD, has already made this move with its introduction of SlingTV. An OVD's potential geographic market is the entire world-wide Internet. Several cable companies, including Comcast, TWC, Charter and BHN, are already offering video streaming to their existing MVPD customers. That limitation, and any geographic limitation that may apply to the streaming service, is entirely administrative in nature and can be readily modified or eliminated altogether. Untethered from any physical infrastructure, Charter, TWC and Bright House are all potential competitors with one another. Their merger materially eliminates this possibility, while at the same time enhances the three firms' bargaining power vis-a-vis content providers, producing a size-related boost in market power than has little if any physical economic basis. For the same reason that the FTC has dismissed the competitive importance of smaller office supply firms insofar as their effect upon the market that Staples and Office Depot dominate, creating fortress MVPD/OVD companies like Comcast and New Charter will also eclipse many smaller and start-up OVDs as serious rivals.

127. In any event, if the merger is consummated, Charter and its management will be the surviving entity, so looking at the 400+ HHI point increase from Charter to New Charter is not unreasonable. TWC's senior management will apparently withdraw from involvement in the merged entity, receiving some $170-million in "golden parachute" compensation.[158] It is entirely appropriate to take this increase in Charter's HHI, which will exceed the *HMG* threshold of 200, into account when considering the economic and public interest impacts of this transaction.

128. The FTC's analysis of and response to the proposed Staples/Office Depot merger has important implications for the transaction at issue here. In both the 2015 and the earlier 1997 merger attempts by these two companies to join forces, the FTC adopted a definition of the relevant product market as consisting specifically of "Office Superstores" – establishments that offered a full and comprehensive line of consumable and other office supplies and products – and thus excluded from the "relevant market" retail entities that carried more specialized or selective product lines. The notion here was that it is the *assemblage* of a broad range of related products under one roof and thus offering customers "one-stop shopping" that distinguishes "office superstores" from other retailers offering some, *but less than all,* of the same products. In other words, the FTC did not view retailers offering similar, but a more limited array of, products as constraining the office superstores' ability to set prices at supracompetitive levels.

129. In opposing the 1997 merger, the FTC's focus was primarily upon *retail* competition between the two merging companies, and on that basis held that "[t]he Relevant Geographic

158. Charter/TWC *Proxy Statement*, at 308.

Markets are the Metropolitan Areas where Office Depot and Staples compete."[159] However, in its analysis of the 2015 version, the FTC's focus was on geographically-dispersed enterprises as B-to-B purchasers of consumable office supplies, and on that basis now considers the relevant geographic market to be national in scope, at least as it pertains to those enterprise B-to-B purchasers:

> 8. Many large B-to-B customers contract with a single office supplies vendor for consumable office supplies. Doing so allows these customers to consolidate their purchases and leverage the bigger purchasing volume to negotiate lower prices and higher discounts, rebates, or other pricing concessions. In addition, contracting with a single office supplies vendor allows large businesses to track and monitor usage of office supplies through one vendor, rather than several different vendors, thereby lowering their costs and improving operational efficiency. Using a single office supplies vendor also provides large B-to-B customers with a single point of contact for problems or concerns, a single IT interface for ordering, and a single payee for administrative purposes. These features are important to many large B-to-B customers because they enhance efficiency, ease of use, and administration, thereby lowering their costs of doing business.
>
> 9. For large B-to-B customers with locations across the United States or in multiple regions of the country, using a single office supplies vendor generally means choosing an office supplies vendor with national or multi-regional distribution capabilities. Staples and Office Depot are the only two office supplies vendors that can provide on their own the low prices, nationwide distribution, and combination of services and features that many large B-to-B customers require.

130. There are a number of strong parallels between the TWC/Charter/BHN merger at issue here and the conditions identified by the FTC in rejecting Staples/Office Depot on two separate occasions, nearly two decades apart:

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159. FTC Staples/Office Depot 1997 Brief, at 22.

- Each of the Joint Applicants here offers a full range of telecommunications products – wireline voice telephone service, wireline broadband Internet access, and multichannel linear video distribution services. Through their plans to develop an extensive network of public wi-fi hotspots, the Joint Applicants also have the potential to compete in the wireless voice and data markets as well. The only source of full product line competition confronting these companies comes from ILECs, and only to the extent that the ILEC offers comparable high-speed broadband access within the Joint Applicants' footprint. As noted, the California ILECs' high-speed coverage is far more limited than that of the three Joint Applicants. While other firms may offer some of these services in certain limited geographic areas, there is no other service provider that offers a range of services and geographic reach even close to what the Joint Applicants can offer.

- Joint Applicants' witness Dr. Scott-Morton asserts that

> New Charter will be able to compete for multi-site businesses that would not be economical for Charter alone to serve. It is my understanding that Charter has identified significant numbers of additional business customer locations that New Charter would be able to serve with its increased footprint, and that the Los Angeles DMA contains the highest number of such potential business customer locations in the country, with significant additional sites in Bakersfield benefiting [sic] as well. Accordingly, based on that analysis, the findings in my FCC statement regarding the benefits arising from New Charter's enhanced ability to compete in the market for enterprise services holds particularly true in California.[160]

160. Scott Morton CPUC decl., at 5.

While portraying this as a "public interest benefit" of the transaction, her testimony underscores precisely the conclusion that the FTC had reached – i.e., that a more extensive geographic footprint will enhance the market power and competitive opportunities of the post-merger New Charter relative to that of any of the three Joint Applicants standing alone, it will have precisely the opposite effect upon smaller rivals that are not able to match the geographic scope of New Charter.

- If the FTC's assessment as to the inability of small, specialized rivals to impose any price discipline upon full product line and geographically extensive incumbents is correct, then the entry of OVDs offering similar content as that available from the Joint Applicants' MVPD services would similarly be expected to have little to no effect upon the market power of a post-merger New Charter. Indeed, the professed lack of interest in out-of-region OVD entry on the part of any of the Joint Applicants[161] would appear to confirm the FTC's assessment. On the other hand, Dr. Scott Morton's claim that New Charter has no incentive to foreclose OVD competition[162] cannot withstand serious scrutiny. New Charter will pass some 82% of all households in Southern California. At the 25/3 broadband speed level, New Charter will confront *no competing provider* at 69.4% of all Southern California households, amounting to 84.6% of the households it will pass. To compete with New Charter's MVPD business at any of those 84.6% of Southern California households, an OVD would be forced to use New Charter broadband to deliver

161. See TWC Response to FCC Staff Information Request 3(d). See also Charter Response to FCC Staff Information Request 3(d).

162. Scott Morton June 25, 2015 FCC Decl., at 12.

its product. Virtually every OVD is offering content that is also available from the Joint Applicants' own MVPD linear video (and associated DVR) offerings, and any customer opting to purchase content from an OVD instead of from New Charter will represent a net revenue loss to New Charter. New Charter can replace that loss by raising the price of its broadband offering overall, and/or by introducing fixed data caps or tiers whose presence will either force OVD customers to pay New Charter for the ability to receive streaming video, and/or forgo the use of the OVD service due to the additional costs of using New Charter broadband. Suggestions that New Charter would lack any incentive to interfere with or foreclose OVD competition because it would somehow threaten New Charter's broadband business defies logic.

Charter's practice of bundling cable modems with its broadband service is anticompetitive and reduces consumer choice.

131. TWC and Bright House – and most other US cable MSOs – provide cable modems or wireless gateways (which combined the functions of a cable modem and a wireless router) on a rental basis to their broadband customers. Charter's policy, on the other hand, is to bundle the wireless modem/router with the broadband Internet access service. All cable companies permit their customers to provide their own cable modem or gateway. Customers electing to do this can avoid paying a monthly rental fee for the equipment, which is typically around $10. However, since Charter does not break out the charge for the cable modem from the charge for the broadband service, a Charter customer electing to provide his or her own device will not experience any reduction in the total monthly Charter broadband bill. The operative effect of

this "bundling" policy is to discourage most customers from providing their own equipment since, in order to do so, they would need to incur a purchase cost with no offsetting cash benefit.

132. Consumer-grade wireless gateways and cable modems are readily available from a number of sources, typically at prices in the $100 to $150 range. Table 25 below provides current prices being offered by Amazon for wireless gateways and cable modems.

Table 25

SAMPLE CABLE MODEM AND WIRELESS GATEWAY PURCHASE PRICES

Manufacturer/Model	Amazon Price
NETGEAR N300 Wi-Fi DOCSIS 3.0 Cable Modem Router (C3000)	$ 94.99
Arris SURFboard SBG6580 Docsis 3.0 Cable Modem and Wi-Fi N Router	$ 103.99
NETGEAR DOCSIS 3.0 High Speed Cable Modem Certified for Comcast XFINITY, Time Warner Cable, Cox, Charter & more(CM500-100NAS)	$ 92.99
ARRIS SURFboard SBG6782AC DOCSIS 3.0 Cable Modem/ Wi-Fi AC1750 Router	$ 149.99
ARRIS SURFboard SB6141 DOCSIS 3.0 Cable Modem	$ 69.95
Linksys Advanced DOCSIS 3.0 Cable Modem, (DPC3008-CC)	$ 59.45
Zoom 5341 DOCSIS 3.0 Cable Modem 5341J	$ 59.99

Source: amazon.com (accessed 1/13/16). "Cable Modems" do not include wireless router functions; a separate wireless router is required.

At a monthly rental price of $8 to $10, a customer electing to provide his own wireless gateway can expect to fully recover the up-front purchase price in about 10 to 15 months. These devices have a useful life of 3, 4 or more years, so the customer can realize a good return on his or her investment.

133. Besides the opportunity to realize a significant cost savings by purchasing one's own wireless gateway device, customers also benefit by protecting themselves from having their wi-fi router being involuntarily commandeered by the cable company for inclusion in a network of public wi-fi hotspots. Comcast started doing this in 2013, and Comcast's actions are now the subject of a class action lawsuit.[163] The Joint Applicants here tout the creation of a network of "home based" public wi-fi hotspots that, among other things, could form the basis of a wireless voice offering that would compete with CMRS carriers.[164] Technically, customers are "advised" when they initiate broadband service that their carrier-provided wireless gateway may be used by the cable operator as a public hotspot. However, this "disclosure" where present is typically buried somewhere in the fine print of a lengthy adhesion contract, or may even exist only on the provider's website that is referenced in the fine print of the adhesion contract. Few if any broadband customers are likely even aware that their home wireless gateway could be used by the broadband provider in this manner. Where the customer is the owner of the wireless gateway, the device is not available to the cable operator for use as a public wi-fi hotspot.

134. The matter of a customer's right to provide his or her own Customer Premises Equipment ("CPE") rather than being forced to rent such devices from the telecommunications service provider dates back to the mid-1950s. In 1969, the FCC ordered that customers be permitted to attach their own CPE to the public telephone network, although at the time customers electing to do so were required to rent a so-called "Protective Connecting

163. *Toyer Grear and Joycelyn Harris v. Comcast Corp.*, Case No. 4:14-cv-05333-JSW, in the U.S. District Court for the Northern District of California.

164. http://corporate.comcast.com/news-information/timeline.

Arrangement" ("PCA") from their local telephone company.[165] In 1977 and 1978, the FCC eliminated the PCA requirement and replaced it with an equipment certification program, in which equipment from manufacturers that had obtained FCC certification for their CPE products could be lawfully attached to the public telephone network without a PCA.[166] At that time, the "primary" telephone handset was typically included (bundled) with basic local telephone service, much as Charter today bundles the wireless gateway with its broadband service. In 1978, the FCC required local telephone companies to unbundle the primary handset from the basic local service, effectively offering customer a lower price if the customer, rather than the telephone company, furnished the primary telephone handset:

> ... we have not been shown any compelling practical reason why telephone service must be linked with a carrier supplied telephone set. There are significant distinctions between the basic utility service and the supply of terminal equipment. ... [T]here have been multiple suppliers of user terminal equipment, including telephone sets, since *Carterfone*. Indeed, the telephone industry concedes that the supply of terminal equipment is not a natural monopoly. Obviously, telephone service cannot be utilized, and in that sense is incomplete, without some kind of terminal equipment. It does not follow, however, that the service must be completed by a carrier-provided set rather than one obtained from an independent supplier. Other basic utility services, such as electricity and gas, are similarly incomplete until connected to some device such as a light bulb or gas furnace which is necessary to make the service useful. However, the customer need not purchase the light bulb or the furnace from the utility unless he chooses to do so. The severability of telephone service from the telephone terminal is further reflected in the telephone industry's statement that there is no technical or economic distinction between a main station, sought to be carrier-supplied, and an extension telephone, which could be independently supplied

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165. *Use of the Carterphone Device in Message Toll Telephone Service*, 13 FCC2d 420 (1968).

166. *Proposals for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) and Wide Area Telephone Service (WATS)*, CC Docket 19528, First Report and Order 56 FCC2d 593 (1975); Reconsideration 57 FCC2d 1216 (1976); Further Reconsideration 58 FCC2d 716 (1976); Second Report and Order 58 FCC2d 736 (1976).

> under PIC [the Primary Instrument Concept]. Either will suffice to make the customer's service complete. The industry comments make no claim that a carrier telephone set is necessarily superior to a customer set provided that the latter is properly maintained. If the telephone companies should cease supplying terminals altogether, the public could still receive complete telephone service through the use of terminals obtained from independent sources.[167]

The principle adopted in that case – the unbundling of *service* from *equipment* – has been a central tenet of US telecommunications policy for nearly four decades. It was extended in the FCC's 1980 *Computer II* ruling,[168] where the FCC determined that new CPE would be deregulated effective January 1, 1983, and that after that date it could no longer be furnished by a Bell operating company, but would instead have to be provided by some other "fully separated subsidiary." That action was taken a step further in the Consent Decree leading to the 1984 break-up of AT&T, which called for the Bell Operating Companies ("BOCs") to transfer their embedded base of rental CPE to AT&T at divestiture (January 1, 1984).[169] Following divestiture, BOCs were permitted to reenter the CPE business but only through fully-separated subsidiaries (notably, none of them did so), and were expressly prohibited from bundling the price of CPE into the price of basic exchange service. There is similarly no justification for Charter's policy of bundling cable modems with broadband service, and it should certainly not be permitted to extend this practice to existing TWC and Bright House customers.

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167. *Implications of the Telephone Industry's Primary Instrument Concept*, CC Docket No. 78-36, *Report and Order*, FCC 78-510, 68 F.C.C.2d 1157; 1978 FCC LEXIS 891; 43 Rad. Reg. 2d (P & F) 1205 Rel. August 2, 1978; Adopted July 13, 1978, at para. 18, footnote references omitted.

168. *Amendment of Section 64.702 of the Commission's Rules and Regulations (The Second Computer Inquiry)*, *Final Decision*, 77 FCC 2d. 384 (1980).

169. *U.S. v. American Telephone and Telegraph Company*, 552 F. Supp. 131 (D.D.C., 1982), *aff'd sub nom. Maryland v. U.S.*, 460 US 1007 (1983); and *Modification of Final Judgment*.

135. The *Los Angeles Times* reports that "Charter said that Time Warner and Bright House customers who want to stick with their existing plans would be allowed to after the acquisition deals are approved. But Charter expects most customers to switch to its plans because of generally faster speeds and competitive pricing."[170] Existing Charter customers would, apparently, continue to be subject to the present bundling policy, as would any new customers in the (former) TWC and BHN service areas. It is also likely that existing TWC and BHN customers who make changes to their service will be required to accept the Charter bundled pricing as well. The Joint Applicants' announcement hardly qualifies as a commitment; indeed, a far more plausible expectation is that, following the merger, New Charter will seek to consolidate all of its territories into a single unified pricing regime. It is difficult to imagine that, under a unified companywide pricing structure, certain legacy TWC and BHN customers would be treated differently. Thus, even if the (former) TWC and BHN customers are grandfathered into the pre-merger pricing plans, New Charter can easily adjust its pricing so as to "encourage" them to migrate to a bundled arrangement. From a policy standpoint, if the merger is allowed to go forward, New Charter should be required to unbundle the CPE for all of its customers, affording them the choice of buying or renting their equipment and benefitting from competition in the manufacture and retailing of such devices.

170. "Time Warner Cable customers who bought modems may have to pay rental fee after Charter takeover ," *Los Angeles Times*, November 17, 2015, available at http://www.latimes.com/business/la-fi-charter-cable-modems-20151117-story.html (accessed 1/14/16)

The presence of mandatory arbitration/class action waiver provisions in the Joint Applicants' existing consumer contracts is yet another indication of the lack of competition in the marketplace for cable TV, broadband Internet access, and voice telephone services.

136. Another example of anticompetitive behavior that will only intensify post-merger is the inclusion of mandatory arbitration clauses and class action waivers in consumer adhesion contracts, where such terms and conditions are non-negotiable. These clauses, in the absence of affirmative regulation, effectively exempt corporations such as Charter, TWC, and the proposed New Charter, from any legal oversight, and prevent reasonable consumers from seeking recourse against illegal or anticompetitive actions.

137. Arbitration clauses stem from the 1925 *Federal Arbitration Act* ("FAA"),[171] which provides for judicial facilitation of private dispute resolution through arbitration. It applies in both state courts and federal courts. The Federal Arbitration Act provides for contractually-based compulsory and binding arbitration, resulting in an arbitration award entered by an arbitrator or arbitration panel as opposed to a judgment entered by a court of law. In an arbitration, the parties give up the right to appeal to a court on substantive grounds. The *Federal Arbitration Act* requires that where the parties have agreed to arbitrate, they must do so in lieu of going to court.

138. Prior to deregulation, most telecommunications services were sold subject to tariff. The tariff would contain all of the relevant rates, terms and conditions of service, and those tariffs would be reviewed and approved by the applicable state or federal regulatory agency,

171. Pub. L. 68–401, 43 Stat. 883, enacted February 12, 1925, codified at 9 U.S.C. § 1 *et seq.*

such as the Commission or the FCC. Post-deregulation, but before widespread use of arbitration clauses, consumers could at lest seek redress from the courts. For most disputes involving residential consumers, the dollar amounts involved were typically small, making it impractical for any individual consumer to bring an action in court against a telecommunications provider. Such disputes were commonly pursued through class action lawsuits such that, in aggregate, the dollar amounts at issue were sufficiently large to justify the legal and expert fees that would be required.

139. Once relatively obscure, arbitration clauses have begun to permeate consumer adhesion contracts for services such as wireline and wireless telephone, Internet access, and cable TV. In many states, including California, courts frequently determined that mandatory arbitration/class action waiver clauses were unconscionable and without effect. However, the US Supreme Court, in a landmark case, *AT&T Mobility v Concepcion*,[172] rules by a 5-4 split that even state law could not preempt the use of arbitration clauses provided for by the FAA. The use of such arbitration clauses surged following the *Concepcion* decision.

140. Charter and TWC both include mandatory arbitration clauses and class action waivers in their consumer and small business adhesion contracts, and there is no indication that New Charter will deviate from this practice.[173] Arbitration clauses are particularly onerous because consumers cannot negotiate the terms of their contract, and in combination these clauses have

172. *AT&T Mobility LLC v. Concepcion*. 563 US 333 (2011).

173. See, generally, Joint Applicants' responses to ORA Data Requests, Set 7.

the practical effect of preventing consumers from seeking legal redress in the courts and joining together with other similarly-situated consumers to litigate similar claims that could not, as a practical matter, be pursued individually. These contract provisions are typically buried in lengthy consumer agreements that consumers are unlikely to read or review, if they are even given the opportunity to do so prior to agreeing to its terms. Also, even if a consumer reviews the arbitration clause language prior to signing an agreement, with the lack of competition in the broadband market (as discussed in Section IV above), the only choices a consumer has are to sign the agreement or not get service. The consumer has zero negotiating power with New Charter with respect to these arbitration clauses.

141. For example, Charter currently asks consumers to agree to its contractual terms and conditions of service by signing a handheld electronic device furnished by the technician at the time that the consumer's service is being installed, without ever being presented with a paper copy of the document. Charter states that:

> When a technician completes installation of residential or commercial services, the customer signs the following written acknowledgment on a handheld electronic device furnished by the technician:
>
>> I represent that the information I have provided Charter is accurate, I acknowledge the Charter Privacy Policy and agree to comply with the terms and conditions of the applicable Charter service to which I am subscribing, copies of which are available at www.charter.com<http://www.charter.com/> under Terms of Service/ Policies and Your Privacy Rights or may be obtained without charge by calling 1 888 Get Charter (1 888 438 2427), and which include a mandatory arbitration requirement with respect to all disputes. I am at least 18 years old; I am the owner or tenant of the premises at the address set forth above; and I am authorized as the Customer or as Customers authorized agent to agree to the terms set forth herein. I agree that my continued use of Charter

> services constitutes my acceptance of any changes to standard terms and conditions of service that Charter may take from time to time.[174]

142. In a recent multi-part feature "Arbitration Everywhere, Stacking the Deck of Justice", the *New York Times*[175] addressed the ill nature of arbitration agreements:

> By inserting individual arbitration clauses into a soaring number of consumer and employment contracts, companies like American Express devised a way to circumvent the courts and bar people from joining together in class-action lawsuits, realistically the only tool citizens have to fight illegal or deceitful business practices.
>
> Over the last few years, it has become increasingly difficult to apply for a credit card, use a cellphone, get cable or Internet service, or shop online without agreeing to private arbitration. The same applies to getting a job, renting a car or placing a relative in a nursing home.
>
> Among the class actions thrown out because of the clauses was one brought by Time Warner customers over charges they said mysteriously appeared on their bills and another against a travel booking website accused of conspiring to fix hotel prices. A top executive at Goldman Sachs who sued on behalf of bankers claiming sex discrimination was also blocked, as were African-American employees at Taco Bell restaurants who said they were denied promotions, forced to work the worst shifts and subjected to degrading comments.
>
> Some state judges have called the class-action bans a "get out of jail free" card, because it is nearly impossible for one individual to take on a corporation with vast resources.

I have provided two of the *New York Times* articles in the series on arbitration clauses in Attachment 2 hereto.

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174. Charter response to ORA 7-4.

175. "Arbitration Everywhere, Stacking the Deck of Justice," October 31, 2015; and "In Arbitration, a Privatization of the Justice System," *The New York Times*, November 1, 2015.

143. Arbitration clauses are a strong deterrent to consumers bringing disputes against large companies because individual legal disputes often involve small sums, but still require major outlays in order to arbitrate (e.g., for attorneys fees or expert witness fees). Charter has identified only BEGIN CONFIDENTIAL <<[redacted]>> END CONFIDENTIAL arbitrations involving California consumers since 2010.[176] TWC has indicated that it has only been a party to BEGIN CONFIDENTIAL <<[redacted] >> END CONFIDENTIAL arbitrations.[177] BHN does not believe it BEGIN CONFIDENTIAL <<[redacted] >> END CONFIDENTIAL in California.[178] These statistics illustrate how implausible it is for consumers to actually resolve a dispute through arbitration.

144. As a matter of optics, both Charter and TWC theoretically allow consumers to "opt out" of arbitration at the time that they initiate service. But these opt-out provisions are nearly as invisible and impenetrable as the arbitration clauses themselves, and contain restrictions such that a very small number of consumers, if any, will be able to take action and opt out of arbitration. TWC allows consumers to opt out in the following manner:

[redacted]

176. Charter response to ORA Data Request Set 7, no. 8.

177. TWC response to ORA Data Request Set 7, no. 8.

178. Bright House response to ORA Data Request Set 7, no. 8(d).

[redacted][179]

145. Charter has a similar procedure. In order to opt out, a consumer would need to read all the way through the adhesion contract terms and conditions, which as I have discussed, are not provided in a usable form prior to the consumer's acceptance of such terms. The consumer must then create a written response within 30 days of the acceptance of the terms, detailing the consumer's intention to opt out. As the *New York Times* article indicates, many consumers are not even aware that they are subject to an arbitration clause (or may not understand its implications), and as such, the consumer will not know that she could (or should) choose to opt out.

146. The existence of these mandatory arbitration clauses and class action waivers is an indication of the lack of competition extant in the marketplace for cable TV, internet and telephone services. There are absolutely no benefits to consumers from mandatory arbitration, whereas arbitration clauses have the practical effect of inoculating the service provider against having to bear any responsibility for its practices. Although the Joint Applicants currently utilize and will, presumably, continue to utilize arbitration provisions in their consumer contracts whether or not the merger goes forward, the substantial increase in concentration and market power inuring to the Joint Applicants in their core Southern California operating areas will only exacerbate these provisions' anti-consumer effects. Certainly one means by which the merger would provide a positive consumer benefit would be for New Charter to agree to discontinue its

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179. TWC response to ORA Data Request Set 7, no. 6.

use of mandatory arbitration/class action waiver provisions in its consumer agreements. Maintaining these provisions in effect in the wake of New Charter's fortress-like control of the Southern California broadband market will simply insulate a much larger company from having to bear any responsibility for its practices.

VI.

CONCLUSION

The Joint Applicants have failed to identify any substantive public benefits that would result from their proposed merger, and such minimal benefits as might result are overwhelmed by the increase in overall concentration and the diminution of competition in the relevant Southern California market.

147. P. U. Code §854(c) requires that the Commission, "[b]efore authorizing the merger, acquisition, or control of any ... telephone utility organized and doing business in this state," affirmatively find, "on balance, that the merger, acquisition, or control proposal is in the public interest." In considering this required finding as to the proposed TWC/Charter/Bright House merger, the Commission must thus balance the purported benefits that the Joint Applicants seek to ascribe to their proposed merger against the significant increase in overall market concentration, market power, and the potential for further diminution of competition in what is already a largely monopolistic market. "On balance," the benefits that the Joint Applicants have identified easily pale when compared with the significant risks that the merger will create for California consumers, content producers, competitors, and state and local economies.

148. At the core of the Joint Applicants' "benefits" theory is what amounts to a "bigger is better" model in which the increased scale of New Charter's operations relative to those of any of the three companies standing alone will create significant efficiency gains, lower marginal costs of inputs, and additional incentives to innovate both for New Charter and for third-party "partners" whose services would utilize the New Charter broadband service platform. A "bigger is better" theory of this type could be applied to virtually any corporate merger or acquisition

since, at the very least, redundancies at the most senior management levels could (presumably) be eliminated. However, the possibility of an increase in efficiency resulting from increased scale is not and must not be the sole consideration in addressing the efficacy and public interest concerns surrounding a transaction of this type. As I have noted earlier in the discussion of the recently rejected Staples/Office Depot merger,[180] similar "bigger is better" and "efficiency" arguments were advanced there as well, but were clearly not seen by the Federal Trade Commission as overcoming its anticompetitive concerns. As I have discussed at considerable length in this testimony, the Joint Applicants' claims as to these "benefits" are highly speculative and are not supported by anything beyond a few limited anecdotal examples that are themselves either of extremely minor economic significance (e.g., the Charter Spectrum Guide example) or that assume the presence of what are in reality nonexistent competitive alternatives to the Joint Applicants' largely monopolistic high-speed (25/3) broadband service offerings. Moreover, even if any such efficiency gains were actually to materialize, the Joint Applicants have failed to demonstrate that market conditions would compel them to flow any portion of such gains through to their customers or to the broader state and/or local economies. In short, the Joint Applicants have failed to show that their proposed transaction will actually provide any substantive "benefits" or otherwise serve the public interest.

149. I have provided an econometric analysis that confirms that the claimed economies of scale and potential for reduced costs to be experienced by a post-merger New Charter are not supported by empirical evidence compiled over a nine-year period for the four largest publicly

180. See paras. 116 *et seq., supra*.

traded US cable MSOs, including two of the three Joint Applicants here. As my analysis demonstrates, each of the principal cost metrics – Total Operating Expenses, total Property, Plant and Equipment, and Total Employees – vary linearly and in direct proportion to the total number of Primary Service Units, a widely-accepted measure of output for firms in this industry. The claimed benefits of increased size and scale simply do not exist and will not arise here.

150. On the other hand, combining TWC, Charter and Bright House will create a broadband entity that will dominate the Southern California market. Using the Commission's Broadband Availability Database, I have determined that New Charter will pass approximately 82% of all households in census blocks within the 10-county Southern California area. 69.4% of those New Charter-passed households will have no other broadband service provider capable of supporting download speeds of at least 25 Mbps.[181] New Charter would serve87% of *cable* video subscribers in the Los Angeles DMA, but only 34% of all MVPD subscribers in that market. Other providers like DirecTV, DISH, Verizon, and AT&T would serve 24%, 16%, 12%, and 9%, respectively.[182] These market share statistics do confirm that New Charter faces competition for the provision of MVPD services, a condition that is not in dispute. Indeed, if MVPD was the only business in which these three companies operated, the presence of satellite TV and OVD rivals might well constrain their ability to extract monopoly rents or engage in other monopolistic practices in the MVPD market. However, the Joint Applicants' business activities are not confined to MVPD services. They are in the voice telephone service and high-speed

181. See para. 112 and Table 20, *supra.*

182. Scott Morton June 25, 2015 FCC Decl., at para. 18; Table 2 (p. 7).

broadband access business as well. The Joint Applicants' two largest MVPD rivals – DirecTV and DISH – do not provide high-speed broadband access at all, and most of AT&T's *U-verse* broadband that is available in California does not meet the current FCC minimum threshold of 25/3.[183] New Charter's dominance of and monopoly over most of the Southern California 25/3 broadband market enables it to successfully offset MVPD revenue losses by shifting revenues (through price increases) to its far more captive broadband customers, which each of the Joint Applicants have been doing regularly at least since 2009. And even where New Charter will confront competition in the MVPD space, its control over certain highly desirable content that it will inherit from TWC – the LA Dodgers – afford it a substantial competitive advantage over MVPD rivals that have thus far been unwilling to accede to TWC's terms for carriage of such content.

151. In the 2014 TWC/Comcast merger proceeding, several parties, including ORA, TURN, the Writers Guild, Greenlining, Common Cause, and Consumers Union, expressed serious misgivings as to the potential *monopsony* power that a combined TWC/Comcast entity would wield in the state, where it would have passed more than 84% of all households statewide.[184] While the statewide concentration of a post-merger New Charter is lower than that which would have existed had the TWC/Comcast combination gone forward (although it is still slightly above 50% in terms of households passed), when considered with respect to the principal service area of the Joint Applicants here – Southern California – the New Charter level of dominance – 82%

183. See Table 21 and para. 113, *supra*.

184. The 84% figure was derived from the Round 10 CPUC Broadband Availability Database. Proprietary data from the Joint Applicants in that proceeding suggested an even higher number.

based upon the CPUC Broadband Availability Database for the 10 counties, and 87% for the Los Angeles DMA per Dr. Scott Morton's testimony – is virtually identical to the 84% that would have resulted from a TWC/Comcast combination. It is critical that the Commission recognize Southern California as the relevant geographic market, and reject the Joint Applicants' attempt to dilute the actual market presence by including extraneous areas in their "relevant geographic market" gambit. The Joint Applicants have only minimal presence outside of these ten counties. Indeed, only about 258,000 out of the 6.4-million total New Charter households passed statewide are *outside* of the ten Southern California counties. Including the remaining 48 California counties in which the Joint Applicants have little or no presence makes no more sense than including the abutting states of Arizona, Nevada or Oregon in the "relevant geographic market" for purposes of evaluating the impact of the proposed merger upon *California* consumers, competitors, content producers, and local and state economies.

152. The Commission should also take note of the provision in the Merger Agreement under which certain senior TWC executives who will not remain with the post-merger New Charter are to receive "golden parachutes" upon closing of the merger. In all, these five individuals will be paid some $170-million upon closing of the transaction.[185] Significantly, the Joint Applicants have failed to demonstrate that the quantifiable economic benefits of their proposed merger are even as large as these contemplated payoffs. At the very least, the Commission should take note of this obvious conflict of interest as between those TWC executives slated to receive these large payments and their putative support for the transaction. That these TWC executives will

185. Charter/TWC *Proxy Statement*, at 308.

individually and collectively derive a large economic benefit from the merger is beyond dispute; that California consumers, competitors, suppliers, content providers, employees, shareholders, and state and local economies will derive any consequential benefits from the merger is at best highly doubtful.

153. For all of the foregoing reasons, it is my considered opinion that the proposed merger of TWC, Charter and Bright House is not in the public interest and would not support the public interest finding that is expressly required by P. U. Code §854(c).

154. Given the short period of time to review Charter's January 8, 2016 motion to supplement the Opening Testimony of Adam Falk, ORA reserves the right to provide supplemental testimony at a later time.

VERIFICATION

I declare under penalty of perjury that the foregoing statements are true and correct to the best of my knowledge, information and belief, and if called to testify thereon I am prepared to do so.

LEE L. SELWYN

Executed at Boston, Massachusetts

this 15th day of January, 2016.

Attachment 1

Statement of Qualifications
Dr. Lee L. Selwyn

Statement of Qualifications

LEE L. SELWYN

Dr. Lee L. Selwyn has been actively involved in the telecommunications field for more than forty years, and is an internationally recognized authority on telecommunications regulation, economics and public policy. Dr. Selwyn founded the firm of Economics and Technology, Inc. in 1972, and has served as its President since that date. He received his Ph.D. degree from the Alfred P. Sloan School of Management at the Massachusetts Institute of Technology. He also holds a Master of Science degree in Industrial Management from MIT and a Bachelor of Arts degree with honors in Economics from Queens College of the City University of New York.

Dr. Selwyn has testified as an expert on rate design, service cost analysis, form of regulation, and other telecommunications policy issues in telecommunications regulatory proceedings before some forty state commissions, the Federal Communications Commission and the Canadian Radio-television and Telecommunications Commission, among others. He has appeared as a witness on behalf of commercial organizations, non-profit institutions, as well as local, state and federal government authorities responsible for telecommunications regulation and consumer advocacy.

He has served or is now serving as a consultant to numerous state utilities commissions including those in Arizona, Minnesota, Kansas, Kentucky, the District of Columbia, Connecticut, California, Delaware, Maine, Massachusetts, New Hampshire, Vermont, New Mexico, Wisconsin and Washington State, the Office of Telecommunications Policy (Executive Office of the President), the National Telecommunications and Information Administration, the Federal Communications Commission, the Canadian Radio-television and Telecommunications Commission, the United Kingdom Office of Telecommunications, and the Secretaria de Comunicaciones y Transportes of the Republic of Mexico. He has also served as an advisor on telecommunications regulatory matters to the International Communications Association and the Ad Hoc Telecommunications Users Committee, as well as to a number of major corporate telecommunications users, information services providers, competitive local exchange carriers, interexchange carriers, wireless services providers, and specialized access services carriers.

Dr. Selwyn has presented testimony as an invited witness before the U.S. House of Representatives Subcommittee on Telecommunications, Consumer Protection and Finance and before the U.S. Senate Judiciary Committee, on subjects dealing with restructuring and deregulation of portions of the telecommunications industry.

In 1970, he was awarded a Post-Doctoral Research Grant in Public Utility Economics under a program sponsored by the American Telephone and Telegraph Company, to conduct research on the economic effects of telephone rate structures upon the computer time sharing industry. This work was conducted at Harvard University's Program on Technology and Society, where he was appointed as a Research Associate. Dr. Selwyn was also a member of the faculty at the College of Business Administration at Boston University from 1968 until 1973, where he taught courses in economics, finance and management information systems.

Dr. Selwyn has been an invited speaker at numerous seminars and conferences on telecommunications regulation and policy, including meetings and workshops sponsored by the National Telecommunications and Information Administration, the National Association of Regulatory Utility Commissioners, the U.S. General Services Administration, the Institute of Public Utilities at Michigan State University, the National Regulatory Research Institute, the Harvard University Program on Information Resources Policy, the Columbia University Institute for Tele-Information, the Massachusetts Institute of Technology Alfred P. Sloan School of Management, the National Association of State Utility Consumer Advocates (NASUCA), the National Conference of Regulatory Attorneys, as well as at numerous conferences and workshops sponsored by individual regulatory agencies. Dr. Selwyn is an elected Town Meeting Member for the Town of Brookline, Massachusetts, and serves on the Town's Advisory and Finance Committee and its Subcommittee on Planning and Regulation, on the Town's Audit Committee, and on its Tax Override Study Committee.

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RECORD OF EXPERT TESTIMONY
BEFORE THE CALIFORNIA PUBLIC UTILITIES COMMISSION

DR. LEE L. SELWYN

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RECORD OF EXPERT TESTIMONY

DR. LEE L. SELWYN

2014-15

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Texas Public Utilities Commission, *Inquiry by the Public Utility Commission of Texas into Certain Cost Studies of Southwestern Bell Telephone Company*, Docket No. 2944, on behalf of Texas Retailers Association, Texas Alarm and Signal Association, Direct Testimony filed June 23, 1980.

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Texas Public Utilities Commission, *Application of Southwestern Bell Telephone Company for a Statewide Rate Increase,* Docket No. 2673, on behalf of Texas Retailers Association, Direct Testimony filed August 27, 1979, cross-examination September 19, 1979.

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Oregon Public Utilities Commission, *Revised Centrex Service Tariff Filed by Pacific Northwest Bell Telephone Company (on the Commissioner's Own Motion),* Docket No. UF 3342; *Introduction of ESSX Telephone Service Schedules and the Elimination of New Centrex-CO Service Filed by Pacific Northwest Bell Telephone Company (on the Commissioner's Own Motion*, Docket No. UF 3343, on behalf of General Electric Company, Georgia Pacific Company, Preliminary Direct filed December 2, 1977, Supplemental Direct filed September 22, 1978, cross-examination October 19, 1978.

New York Public Service Commission, *Proceeding on motion of the Commission as to the rates, charges, rules and regulations of the New York Telephone Company for telephone service.*, Case No. 27350, on behalf of ABC., Inc., CBS, Inc., General Electric Company, New York State Council of Retail Merchants, Direct Testimony filed September 8, 1978, cross-examination September 26, 1978.

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Illinois Commerce Commission, *Illinois Bell Telephone Company Proposed general increase in telephone rates applicable in all exchanges of the Company in Illinois*, Docket No. 78-0034, on behalf of Illinois Retail Merchants Association, Direct Testimony filed June 9, 1978, cross-examination July 10, 1978.

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Illinois Commerce Commission, *Illinois Bell Telephone Company Proposed rates and regulations for Direct Inward Dialing Service for the Company-owned or Customer-provided PBX dial switchboards, applicable to all exchanges of the Company,* Docket No. 77-0511, on behalf of Spiegel, Inc., Sears, Roebuck and Company, Carle Foundation Hospital, Brunswick Corporation, Lord, Bessell & Brook, Direct Testimony filed March 23, 1978, cross-examination April 5, 1978.

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1977

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Nevada Public Service Commission, *Nevada Bell Telephone Company*, Docket No. 1180, on behalf of J C Penney, Direct Testimony filed October, 1977, cross-examination October 6, 1977.

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Missouri Public Service Commission, *Cost of Service Study of Southwestern Bell Telephone Company*, Docket No. 18309, on behalf of Missouri Retailers Association, filed February 16, 1977, cross-examination March 9, 1977.

Illinois Commerce Commission, *Illinois Bell Telephone Company Proposed general increase in telephone rates applicable to all exchanges of the Company in Illinois*, Docket No. 76-0409, on behalf of Illinois Retail Merchants Association, Direct Testimony filed January 1977, cross-examination January 30, 1977.

1976

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California Public Service Commission, *Application of the Pacific Telephone and Telegraph Company, a corporation, for telephone service rate increases to cover increased costs in providing telephone service*, Application No. 55492, on behalf of California Retailers Association, California Manufacturers Association, Direct Testimony filed October 11, 1976, cross-examination October 27, 1976.

Michigan Public Service Commission, *Application of Michigan Bell Telephone Company for Authority to Revise its Schedule of Rates and Charges*, Docket No. U-5125, on behalf of Michigan Business Telephone Users Committee, Direct Testimony filed October 11, 1976, cross-examination November 4-5, 1976.

Illinois Commerce Commission, *Illinois Bell Telephone Company Proposed rate increase for Private Line and Mileage Services, revisions and increases for Telephone Answering Service Equipment and Services applicable to all exchanges of the company in Illinois*, Docket No. 76-0200, on behalf of Illinois Retail Merchants Association, Direct Testimony filed October 1976, cross-examination November 10, 1976.

Missouri Public Service Commission, *Southwestern Bell Telephone Company of St. Louis Missouri for authority to file tariffs reflecting an increase in rates for telephone service provided to customers in the Missouri service area of the Company*, Docket Nos. 18660, 18661, on behalf of Missouri Retailers Association, Direct Testimony filed September 1, 1976, cross-examination October 14, 1976.

New Jersey Public Utilities Commission, *Petition Filed by New Jersey Bell Telephone Company Increasing its Rates, Message Toll Rates and Charges for Certain Items of Equipment, Facilities, and Service in the State of New Jersey*, Docket No. 7512-1251, on behalf of New Jersey Retail Merchants Association, Direct Testimony filed May 17, 1976, cross-examination June 16, 1976.

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Ohio Public Service Commission, *Application of the Ohio Bell Telephone Company for authority to increase and adjust its Rates and Charges and to Change Regulations and Practices Affecting its Rates and Charges in each of its Duly Filed Intrastate Tariffs*, Docket No. 74-761-TP-AIR, on behalf of Ohio Counsel of Retail Merchants, Direct Testimony filed March 5, 1976, cross-examination March 18, 1976.

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New Mexico State Corporation Commission, *Mountain States Telephone and Telegraph Company,* Docket No. 673, on behalf of New Mexico Retail Association, Direct Testimony filed October 30, 1975, cross-examination November 3-4, 1975.

North Carolina Utilities Commission, *Application of Southern Bell Telephone and Telegraph Company for Authority to Increase its Local Exchange Rates and Charges Throughout its Franchised Areas in North Carolina*, Docket No. P-55 Sub 742, on behalf of North Carolina Retail Merchants Association, Direct Testimony filed September 23, 1975, cross-examination October 16, 1975.

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Attachment 2

"Arbitration Everywhere, Stacking the Deck of Justice"
***The New York Times*, October 31, 2015**

"In Arbitration, a Privatization of the Justice System"
***The New York Times*, November 1, 2015.**

The New York Times

DealBook WITH FOUNDER ANDREW ROSS SORKIN

BEWARE THE FINE PRINT | PART I

Arbitration Everywhere, Stacking the Deck of Justice

By JESSICA SILVER-GREENBERG and ROBERT GEBELOFF OCT. 31, 2015

On

Alan Carlson, a restaurant owner and chef, was involved in a 2003 class-action suit against American Express. A decade later, a Supreme Court ruling enabled American Express to prevent merchants from bringing class actions. Jason Henry for The New York Times

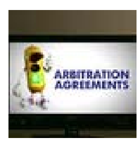
Page 5 of a credit card contract used by American Express, beneath an explainer on interest rates and late fees, past the details about annual membership, is a clause that most customers probably miss. If cardholders have a problem with their account, American Express explains, the company "may elect to resolve any claim by individual arbitration."

Those nine words are at the center of a far-reaching power play orchestrated by American corporations, an investigation by The New York Times has found.

By inserting individual arbitration clauses into a soaring number of consumer and employment contracts, companies like American Express devised a way to circumvent the courts and bar people from joining together in class-action lawsuits, realistically the only tool citizens have to fight illegal or deceitful business practices.

Over the last few years, it has become increasingly difficult to apply for a credit card, use a cellphone, get cable or Internet service, or shop online without agreeing to private arbitration. The same applies to getting a job, renting a car or placing a relative in a nursing home.

RELATED COVERAGE



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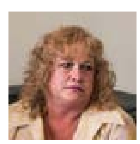

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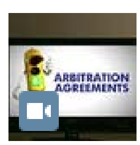


Beware the Fine Print NOV. 1, 2015

BEWARE THE FINE PRINT

This is the first installment in a three-part series examining how clauses buried in tens of millions of contracts have deprived Americans of one of their most fundamental constitutional rights: their day in court.

Read Part II | **Read Part III**

Among the class actions thrown out because of the clauses was one brought by Time Warner customers over charges they said mysteriously appeared on their bills and another against a travel booking website accused of conspiring to fix hotel prices. A top executive at Goldman Sachs who sued on behalf of bankers claiming sex discrimination was also blocked, as were

African-American employees at Taco Bell restaurants who said they were denied promotions, forced to work the worst shifts and subjected to degrading comments.

Some state judges have called the class-action bans a “get out of jail free” card, because it is nearly impossible for one individual to take on a corporation with vast resources.

Patricia Rowe of Greenville, S.C., learned this firsthand when she initiated a class action against AT&T. Ms. Rowe, who was challenging a $600 fee for canceling her phone service, was among more than 900 AT&T customers in three states who complained about excessive charges, state records show. When the case was thrown out last year, she was forced to give up and pay the $600. Fighting AT&T on her own in arbitration, she said, would have cost far more.

By banning class actions, companies have essentially disabled consumer challenges to practices like predatory lending, wage theft and discrimination, court records show.

“This is among the most profound shifts in our legal history,” William G. Young, a federal judge in Boston who was appointed by President Ronald Reagan, said in an interview. “Ominously, business has a good chance of opting out of the legal system altogether and misbehaving without reproach.”

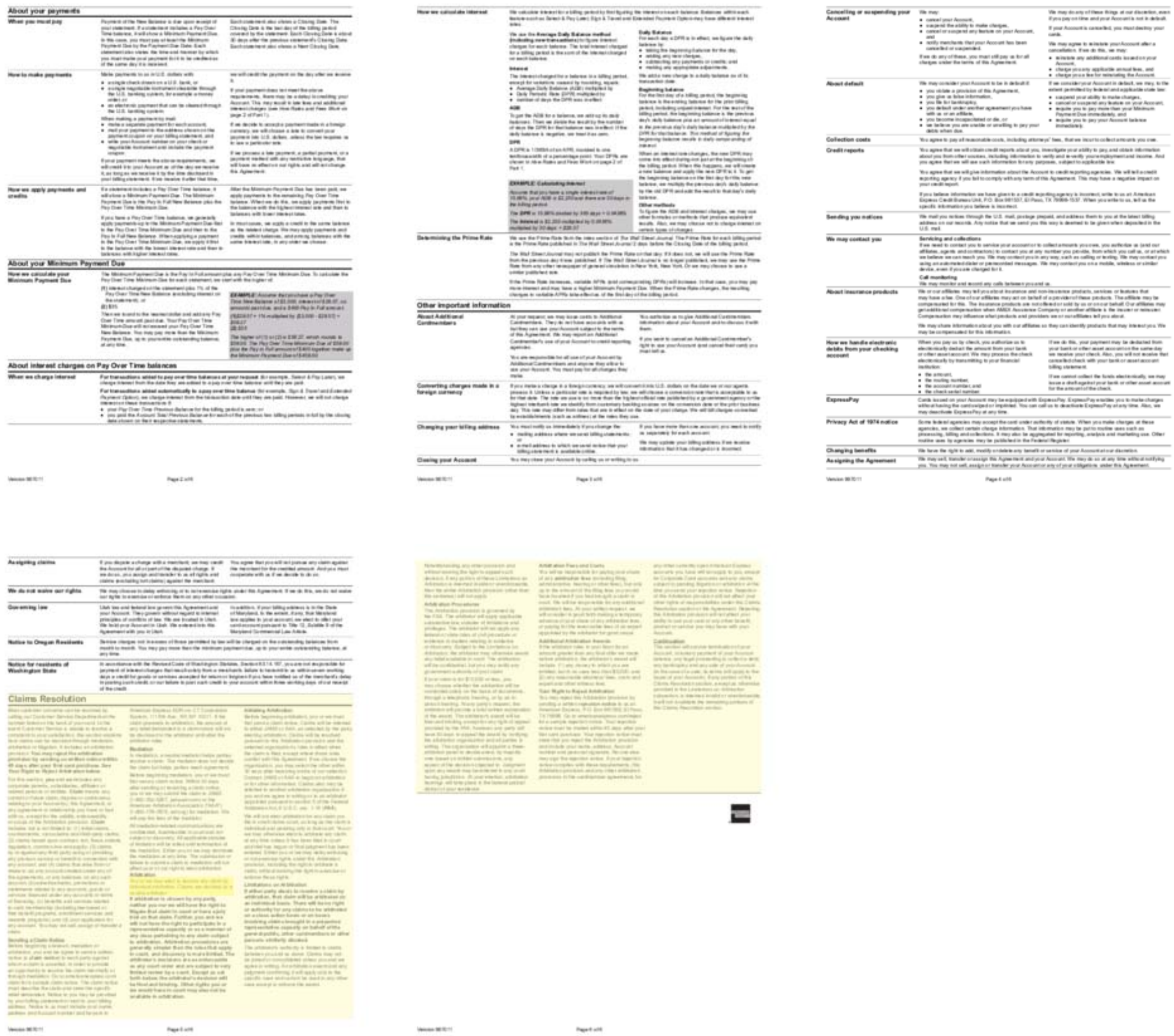
What an Arbitration Clause Looks Like

American Express is one of a growing number of companies that include arbitration clauses in their consumer contracts. The section on arbitration can be found toward the end of the contract, which contains several thousand words of legal language.


Cardmember Agreement: Part 1 of 2


How Rates and Fees Work


Cardmember Agreement: Part 2 of 2



> “You or we may elect to resolve any claim by individual arbitration. Claims are decided by a neutral arbitrator.”
>
> Read the full contract »

More than a decade in the making, the move to block class actions was engineered by a Wall Street-led coalition of credit card companies and retailers, according to interviews with coalition members and court records. Strategizing from law offices on Park Avenue and in Washington, members of the group came up with a plan to insulate themselves from the costly lawsuits. Their work culminated in two Supreme Court rulings, in 2011 and 2013, that enshrined the use of class-action bans in contracts. The decisions drew little attention outside legal circles, even though they upended decades of jurisprudence put in place to protect consumers and employees.

One of the players behind the scenes, The Times found, was John G. Roberts Jr., who as a private lawyer representing Discover Bank unsuccessfully petitioned the Supreme Court to hear a case involving class-action bans. By the time the Supreme Court handed down its favorable decisions, he was the chief justice.

Corporations said that class actions were not needed because arbitration enabled individuals to resolve their grievances easily. But court and arbitration records show the opposite has happened: Once blocked from going to court as a group, most people dropped their claims entirely.

The Times investigation was based on thousands of court records and interviews with hundreds of lawyers, corporate executives, judges, arbitrators and plaintiffs in 35 states.

Since no government agency tracks class actions, The Times examined federal cases filed between 2010 and 2014. Of 1,179 class actions that companies sought to push into arbitration, judges ruled in their favor in four out of every five cases.

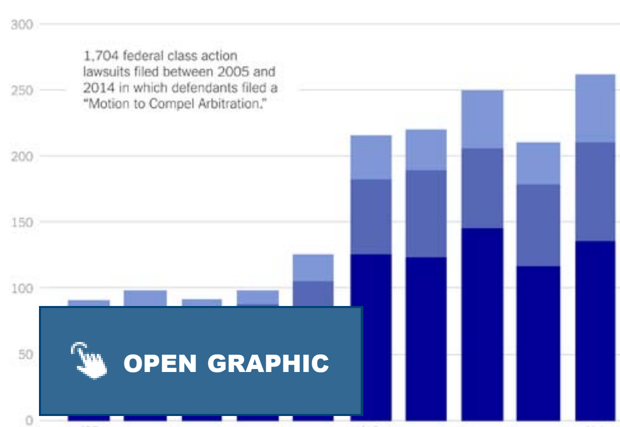
In 2014 alone, judges upheld class-action bans in 134 out of 162 cases.

Some of the lawsuits involved small banking fees, including one brought by Citibank customers who said they were duped into buying insurance they were never eligible to use. Fees like this, multiplied over millions of customers, amount to billions of dollars in profits for companies.

GRAPHIC

Removing the Ability to Sue

A New York Times study of the increasing use of arbitration clauses in contracts, which has effectively forced millions of people to sign away their right to go to court.



The data provides only part of the picture, since it does not capture the people who were dissuaded from filing class actions.

A spokeswoman for American Express said that over the last few years, banking regulators have examined the company's business practices, largely obviating the need for class actions. The regulators "have required significant remediations and large fines to address issues they found, with very little loss in value to the consumer," said the spokeswoman, Marina H. Norville.

Law enforcement officials, though, say they have lost an essential tool for uncovering patterns of corporate abuse. In a letter last year to the Consumer Financial Protection Bureau, attorneys general in 16 states warned that "unlawful business practices" could flourish with the proliferation of class-action bans.

In October, the bureau outlined rules to prevent financial firms from banning class actions. Almost immediately, the U.S. Chamber of Commerce galvanized forces to stop the move.

Andrew J. Pincus, a law partner at Mayer Brown in Washington who has represented companies that use arbitration, said class actions yielded little relief for plaintiffs. "Arbitration provides a way for people to hold companies accountable without spending a lot of money," Mr. Pincus said. "It's a system that can work."

Support for that assertion has been anecdotal, since there is no central database of arbitrations. But by assembling records from arbitration firms across the country, The Times found that between 2010 and 2014, only 505 consumers went to arbitration over a dispute of $2,500 or less.

Verizon, which has more than 125 million subscribers, faced 65 consumer arbitrations in those five years, the data shows. Time Warner Cable, which has 15 million customers, faced seven.

One federal judge remarked in an opinion that "only a lunatic or a fanatic sues for $30."

Daniel Dempsey of Tucson admits he might be both. He has spent three years and $35,000 fighting Citibank in arbitration over a $125 late fee on his credit card. Mr. Dempsey, who previously worked in Citi's investment bank, said the erroneous charge ruined his credit score, and he vowed to continue until he was awarded damages.

The odds are not in his favor. Roughly two-thirds of consumers contesting credit card fraud, fees or costly loans received no monetary awards in arbitration, according to The Times's data.

The Supreme Court's rulings amounted to a legal coup for a group of corporate lawyers who figured out how to twin arbitration clauses with class-action bans. The lawyers represented clients that had paid billions of dollars to resolve class actions over the years. The lawsuits, companies said, were driven by plaintiffs' lawyers who stood to make millions of dollars. They said they had no choice but to settle even those cases that were without merit.

"These lawsuits were not about protecting consumers but about plaintiffs' lawyers," said Duncan E. MacDonald, a former general counsel for Citibank who was part of the group. "These were nuclear weapons aimed at companies."

Who Has Arbitration Clauses?

Many of the companies and brands you interact with have arbitration clauses built into their terms of service. Here are several:

Consumer advocates disagreed. A class action, they argued, allowed people who lost small amounts of money to join together to seek relief. Others exposed wrongdoing, including a case against auto dealers who charged minority customers higher interest rates on car loans.

The consequences of arbitration clauses can be seen far beyond the financial sector. Even lawsuits that would not have been brought by a class have been forced out of the courts, according to the Times investigation. Taking Wall Street's lead, businesses — including obstetrics practices, private schools and funeral homes — have employed arbitration clauses to shield themselves from liability, interviews and arbitration and court records show.

Thousands of cases brought by single plaintiffs over fraud, wrongful death and rape are now being decided behind closed doors. And the rules of arbitration largely favor companies, which can even steer cases to friendly arbitrators, interviews and records show.

The sharp shift away from the civil justice system has barely registered with

Americans. F. Paul Bland Jr., the executive director of Public Justice, a national consumer advocacy group, attributed this to the tangle of bans placed inside clauses added to contracts that no one reads in the first place.

"Corporations are allowed to strip people of their constitutional right to go to court," Mr. Bland said. "Imagine the reaction if you took away people's Second Amendment right to own a gun."

A POWERFUL COALITION FORMS

At Italian Colors, a small restaurant tucked in an Oakland, Calif., strip mall, crayons and butcher paper adorn the tables, and a giant bottle of wine signed by the regulars sits in the entryway.

The laid-back vibe matches that of the restaurant's owner and chef, Alan Carlson, who prides himself on running an establishment that not only serves great food — one crowd-pleaser is the spaghetti Bolognese — but also doesn't take itself too seriously.

"I've been a ski bum, a line cook at a Greek diner and owned restaurants, and it's all been about having fun," Mr. Carlson said.

Somewhat of a libertarian, Mr. Carlson said he used to associate big lawsuits with "ambulance chasers." But that was before he needed one.

In 2003, he sued American Express on behalf of small businesses over steep processing fees. The fees — 30 percent higher than Visa's or MasterCard's — were hurting profits, but the restaurants could not afford to turn away diners who used American Express corporate cards.

It was a classic antitrust case: A big company was accused of using its

Do You Read the Fine Print?

The reporters behind our series on arbitration answered reader questions on The Times's Facebook page on Wednesday.

Go to Facebook

monopoly power to charge unfair prices. But as Italian Colors v. American Express wended its way through the courts over the next 10 years, it became something far more momentous.

When the case was filed, the alliance of corporate interests, including credit card companies, national retailers and carmakers, had already been strategizing on how to eliminate class actions.

The effort was led by a lawyer at Ballard Spahr, a Philadelphia firm that represented big banks. The only thing the lawyer, Alan S. Kaplinsky, had in common with Mr. Carlson was a first name. Laser-focused and admirably relentless, Mr. Kaplinsky preferred his polo shirts buttoned up and tucked in.

Alan Kaplinsky, a corporate lawyer, first brought companies and lawyers together in 1999 to strategize on how to promote the use of individual arbitration clauses in contracts. Stephanie Diani for The New York Times

Among his clients were Alabama money lenders accused of duping customers into taking out credit cards. Settlements were costly; trying the cases in front of sympathetic juries was worse.

Mr. Kaplinsky was searching for solutions when he remembered helping, as a young lawyer, a mutual savings and loan association draft an arbitration clause, he said in an interview. Banks could take it a step further, he thought, by writing class-action bans into the clauses.

“Clients were telling me they were getting killed by frivolous lawsuits and asking me what on earth could be done about it,” Mr. Kaplinsky said.

He soon joined forces with lawyers at WilmerHale, a firm that had represented big banks. The group invited corporate legal teams in July 1999 to the law firm’s New York offices to strategize about arbitration.

Attendees included representatives from Bank of America, Chase, Citigroup, Discover, Sears, Toyota and General Electric. At a subsequent teleconference, participants dialed in remotely using an easy-to-remember code: a-r-b-i-t-r-a-t-i-o-n.

Details of the meetings, and of more than a dozen others over the next three years, were culled from court records filed in a federal lawsuit in Manhattan and corroborated in interviews with lawyers who attended.

The records and interviews show that lawyers for the companies talked about arbitration clauses as a means to an end. The goal was to kill class actions and send plaintiffs’ lawyers to the “employment lines.”

Of the companies participating, only American Express and First USA had adopted an arbitration clause banning class actions; months later, Discover Bank added its own. By the time the meetings concluded, many of the companies had followed suit.

To keep track of whether judges upheld or rejected the class-action bans, Mr. Kaplinsky set up a scorecard. In the positive column were courts in Pennsylvania and Georgia, which upheld a clause used by some companies that gave consumers a small window to opt out of arbitration.

On the negative side were courts in California and one in Massachusetts, which struck down a class-action waiver in a Comcast cable contract. The judge found that the ban would shield the company “even in cases where it has violated the law.”

Many judges across the country did not object to companies’ requiring consumers to use arbitration. But they bridled at preventing those consumers from banding together to bring a case.

State law guaranteed citizens a means to defend their rights, and contracts that tried to take that away were “unconscionable,” many judges said. In other words, class-action bans were unfair.

PETITIONING THE HIGHEST COURT

The push by Mr. Kaplinsky's group coincided with the Chamber of Commerce's own campaign against class actions, which they called a scourge on companies.

In particular, the chamber pointed to an Illinois judge who had ordered Philip Morris to pay more than $10 billion for playing down risks associated with light cigarettes.

At the other end of the spectrum, the chamber also criticized so-called coupon lawsuits that generated big paydays for lawyers and little money for consumers. In one, against a television manufacturer accused of selling sets with fuzzy pictures, plaintiffs each received $25 or $50 coupons while their lawyers collected $22 million.

"It's not like the class-action system is a land of milk and honey," said Matthew Webb, a senior vice president at the Institute for Legal Reform, a chamber affiliate.

Once a state or federal judge certifies plaintiffs as a class, the suits are often unstoppable, the chamber has said — even if no one has been harmed. It has also said that plaintiffs' lawyers have brought cases in jurisdictions that were known to be friendly to class actions.

The chamber scored a victory when Congress passed the Class Action Fairness Act in 2005, which allowed companies to move cases into federal court and out of state courts considered hostile to corporate defendants.

Brian T. Fitzpatrick, a former clerk to Justice Antonin Scalia who teaches law at Vanderbilt University, said criticizing class actions for small awards was misleading. By their very nature, the lawsuits are intended to help large groups of people get back small individual amounts, Mr. Fitzpatrick said.

"Without a class action, if someone loses $500, they will not be able to do anything about it," he said.

Walter Hackett, who worked as a banker until 2007, said the real threat was cases that force companies to abandon lucrative billing practices.

"When banks make mistakes or do bad things, they tend to do them many times and to many people," said Mr. Hackett, who switched sides and became a consumer lawyer.

With state courts still blocking their efforts, Mr. Kaplinsky's group focused on getting a case to the Supreme Court.

Success hinged on the justices' applying the Federal Arbitration Act, a dusty 1925 law that formalized the use of arbitration for disagreements between businesses. Since the mid-1980s, the court had expanded the scope of the law to cover a range of disputes between companies and their employees and customers.

In fact, when Congress passed the act, lawmakers specifically emphasized that it was meant for businesses. Some raised concerns that companies would one day twist the law to impose arbitration on their workers, according to minutes from a congressional hearing.

The Supreme Court had never taken a case that centered on whether the Federal Arbitration Act allowed plaintiffs to form a class action.

A lawsuit in California's courts looked promising. The defendant, Discover Bank, was accused of charging unfair fees. A lower court upheld the bank's class-action ban, but the state's Court of Appeals negated it, accusing Discover of trying to grant itself a "license to push the boundaries of good business practices to their furthest limits."

Discover, one of the companies involved with Mr. Kaplinsky's group, then petitioned the Supreme Court to intervene. Representing the company was John G. Roberts Jr., at the time a prominent corporate defense lawyer.

With much at stake, Mr. Kaplinsky said, he spoke with Mr. Roberts and offered input on the brief Mr. Roberts was drafting to the Supreme Court. "He was a really nice guy," Mr. Kaplinsky said.

As a private lawyer, John G. Roberts Jr. unsuccessfully petitioned the Supreme Court to hear a case involving class-action bans. During his tenure as chief justice, the Supreme Court has ruled in favor of the bans.
Chip Somodevilla/Getty Images

In the subsequent petition, Mr. Roberts wrote that the California appeals court had overstepped its bounds in violation of the Federal Arbitration Act. Allowing consumers to bring a case as a class, he wrote, would violate the "core purpose of the Arbitration Act: to enforce arbitration agreements according to their terms."

In essence, companies were using the law to push disputes out of court, and then imposing conditions that made it impossible to pursue those disputes in arbitration.

The Supreme Court declined to take up the case.

A VICTORY FOR CORPORATIONS

Determined, businesses sweetened the terms of arbitration to try to tempt the Supreme Court to wade into the fray, according to interviews. A clause drafted for AT&T, for example, promised to award certain customers who prevailed in arbitration at least $7,500 and to pay them double their legal fees.

In 2010, the Supreme Court agreed to hear a case. In AT&T v. Concepcion, customers said the company had promised them a free phone if they signed up for service, and then charged them $30.22 anyway.

Once again, the ruling involved the California courts and their rejection of a class-action ban as “unconscionable.” By then, Mr. Roberts was chief justice.

Lawyers for both sides focused on the power of state courts.

Mr. Pincus, the Mayer Brown partner, represented AT&T and said that the Federal Arbitration Act superseded state law. In his main argument, Mr. Pincus accused state courts of making up special rules to discriminate against arbitration.

Deepak Gupta, who at age 34 was already known as a skilled appellate lawyer, worked for the plaintiffs. Mr. Gupta countered that the state courts should be free to enforce their own laws.

“We thought we had a fighting chance if we argued the case was about the importance of states’ rights,” Mr. Gupta said in an interview.

Sitting in the gallery during opening arguments, Mr. Kaplinsky had a different take on the Roberts court, which seemed to favor arbitration. “We were pretty sure we had his vote,” Mr. Kaplinsky said.

When the court ruled 5-4 in favor of AT&T, it largely skipped over Mr. Pincus’s central argument.

“Requiring the availability of classwide arbitration,” Justice Scalia wrote for the majority, “interferes with fundamental attributes of arbitration.” The main purpose of the Federal Arbitration Act, he wrote, “is to ensure the enforcement of arbitration agreements according to their terms.”

It was essentially the same argument Mr. Roberts had made as a lawyer in the Discover case.

With the Supreme Court marginalizing state law, the only option left for consumer advocates was to use a federal law to fight back.

Enter Mr. Carlson, the owner of Italian Colors, who was still fighting with American Express. After the company won the first round, Mr. Carlson’s lawyers appealed, saying the class-action ban prevented merchants from exercising their federal rights to fight a monopoly.

“In a contest between just me — a restaurant in Oakland — and American Express, who do you think wins?” Mr. Carlson said.

Individually, none of the merchants could pay for a case that could cost more than $1 million in expert analysis alone.

The United States Court of Appeals for the Second Circuit, which included Sonia M. Sotomayor, ruled in the plaintiffs’ favor in 2009.

American Express appealed again, and the case ultimately went to the Supreme Court. By the time the court heard it, in 2013, Ms. Sotomayor was a justice and recused herself.

The case centered on the Sherman Act, a muscular antitrust law that empowered citizens to take on monopolistic entities. Conservatives and liberals on previous Supreme Courts had consistently found that Americans should be guaranteed a way to exercise that right.

On June 20, 2013, the justices abandoned the precedent and ruled in favor of American Express.

Arbitration clauses could outlaw class actions, the court said, even if a class action was the only realistic way to bring a case. “The antitrust laws do not guarantee an affordable procedural path to the vindication of every claim,” Justice Scalia wrote.

Within hours, critics from across the political spectrum registered their disbelief on legal blogs. “No one thinks they got it right,” Judge Young of Boston wrote later in a decision.

The most withering criticism came from Justice Elena Kagan, who wrote the dissenting opinion. “The monopolist gets to use its monopoly power to insist on a contract effectively depriving its victims of all legal recourse,” she wrote. She went on to say that her colleagues in the majority were effectively telling those victims, “Too darn bad.”

Back in Oakland, Mr. Carlson got the news from his lawyer. The restaurateur said he had no choice but to continue accepting American Express. About a third of his customers use it, including many who run up bigger tabs because the cards are tied to expense accounts.

“In a contest between just me — a restaurant in Oakland — and American Express, who do you think wins?” Mr. Carlson said. Jason Henry for The New York Times

Mr. Carlson did make one change, though. He added a special bourbon cocktail to the menu. “I call it the Scalia,” he said. “It’s bitter and tough to swallow.”

A CLAUSE FOR ALL OCCASIONS

Signs posted in a theater in Los Angeles and a hamburger joint in East Texas informed guests that, simply by walking in, they had agreed to arbitration. Consumer contracts with Amazon, Netflix, Travelocity, eBay and DirecTV now contain arbitration clauses. Even Ashley Madison, the online site for adulterers, requires that clients agree to them.

It is virtually impossible to rent a car without signing an agreement like Budget’s, which reads, “Arbitration, No Class Actions.” The same goes for purchasing just about anything online, which makes adding the clauses even easier.

The “birth of a thousand clauses,” as one corporate lawyer put it, has caught millions of Americans by surprise.

James Pendergast had no idea he had agreed to arbitration until a class-action suit he filed on behalf of Sprint customers in Miami was thrown out of court. They had sued the company after noticing that their monthly bills contained roaming charges incurred in their homes.

The cost of arbitration was far more than the $20 charges Mr. Pendergast was contesting. And his lawyer, Douglas F. Eaton, advised him that winning would require high-tech experts at a six-figure bill.

If he lost, Mr. Pendergast might even have to pay for Sprint's lawyers. "Why would anyone risk that?" Mr. Eaton said.

The data on consumer arbitration obtained by The Times shows that Sprint, a company with more than 57 million subscribers, faced only six arbitrations between 2010 and 2014.

"Just imagine how many customers Sprint can take money from because of arbitration," Mr. Pendergast said.

Sprint declined to comment.

Few industries more keenly understood the potential of arbitration clauses than financial firms. A particularly bruising set of lawsuits starting in 2009 revealed an accounting device that more than a dozen banks employed on debit card transactions. Customers accused the banks of deducting big payments like monthly rent before taking out smaller charges like those for a pack of gum — even if the customer bought the gum first.

Changing the order of transactions, the lawsuits said, allowed the banks to increase the number of times they could charge overdraft fees, typically $35 a pop. Forced into court, the banks settled the cases for more than $1 billion.

At least seven of the banks in the overdraft cases have since added arbitration clauses, The Times found.

A lot is at stake. Since regulations prompted by the 2008 financial crisis crimped profits from trading and other risky activities, revenue from fees has become crucial to banks' profits.

Together, the three largest banks in the country — JPMorgan Chase, Bank of America and Wells Fargo — made more than $1 billion through overdraft fees in the first three months of 2015, according to the Federal Deposit Insurance Corporation.

In interviews, corporate executives and defense lawyers predicted that consumers would use arbitration once it became more familiar. They added that people could also get relief in small claims court, an option often not covered by arbitration clauses. But much like arbitration, few people go to small claims court, according to court data and interviews with judges.

While many companies also include an opt-out provision on arbitration — typically between 30 and 45 days — few consumers take advantage of it because they do not realize they have signed a clause to begin with, or do not understand its consequences, according to interviews with lawyers and plaintiffs.

Companies noted in interviews that arbitration incentivized them to resolve many customer disputes informally.

Matthew Kilgore, of Rohnert Park, Calif., had no such luck.

A bread truck driver, Mr. Kilgore had dreamed of being a helicopter pilot ever since his father, who was in the Navy, took him to an air show when he was a child.

At 28, after his first daughter was born, he enrolled at Silver State Helicopters, a for-profit school in Oakland, taking out a $55,950 loan from Key Bank to pay for the program.

Matt Kilgore, pictured with his wife and daughters. Jason Henry for The New York Times

Less than halfway into training, Mr. Kilgore got a call from his flight instructor, who said Silver State was bankrupt. In disbelief, he drove to Oakland the next day to find the school's doors padlocked.

Key Bank and Student Loan Xpress, the school's preferred lenders, demanded that students pay back their loans for degrees they never received. About 2,700 students, including Mr. Kilgore, joined in class actions against the two lenders, accusing them of ignoring financial signs that the school was in trouble.

Student Loan Xpress, whose contracts did not have an arbitration clause, agreed to settle and forgave more than $100 million in student loans. Key Bank, whose contracts did, used the clause to get Mr. Kilgore's lawsuit dismissed in 2013.

Key Bank declined to comment on Mr. Kilgore's case, but said the bank had forgiven a portion of many students' loans.

Mr. Kilgore has not been able to pay back his loan, which with interest has swelled to $110,000. With his credit ruined, he and his wife cannot buy a house and he has abandoned his dream of becoming a pilot.

"It's the worst decision I ever made," he said.

BARGAINING POWER FADES

A hunter whose trophies are mounted on the walls of his chambers in Philadelphia's federal courthouse, Judge Berle M. Schiller prefers to use a bow to catch his prey. He has stalked deer through the Pennsylvania woods, tracked caribou in Quebec and pursued fleet-footed impala through South Africa.

Judge Berle Schiller reluctantly enforced a class-action ban in Applebee's employment contracts in 2013, noting the "lamentable" state of legal affairs.
Mark Makela for The New York Times

Hunting with a rifle is “not a fair fight,” said Judge Schiller, 71, who applies the same philosophy to his courtroom. Or at least he did until December 2013, when he had to rule on a lawsuit against the owner of 39 Applebee’s restaurants in Pennsylvania.

The class action was brought by a former waiter on behalf of other low-wage employees. The waiter, Charles Walton, said Applebee’s made workers sweep floors, stock silverware, scrub booths and empty trash cans, but did not pay them a fair wage for the extra tasks. The Applebee’s employees, who relied on tips, often ended up making less than minimum wage. Employment lawyers said these practices were widespread in the restaurant industry.

The Rose Group, which owned the restaurants, defended its practices and urged Judge Schiller to dismiss the lawsuit since Mr. Walton signed an employee contract that included “a mutual promise to resolve claims by binding arbitration.”

The request troubled Judge Schiller. “It is just these kinds of cases where it’s important to have a jury,” he said.

Applebee's franchises, run by different owners, have faced similar class actions in Alabama, Florida, Illinois, Kentucky, Missouri, New York, South Carolina and Rhode Island.

In 2014, Ronnie Del Toro brought a case while working as a waiter in the Bronx. Once again, Applebee's sought to have it thrown out.

In the meantime, Mr. Del Toro said the restaurant's owner and two hulking men, including one who went by "Big Drew," confronted him on the job. They warned him to "stop being a little bitch" and withdraw his lawsuit, according to an application for a restraining order that Mr. Del Toro filed in a Bronx court.

"I didn't wait to hear anymore," said Mr. Del Toro, who moved to Brooklyn and got the restraining order.

Ronnie Del Toro brought a case against Applebee's while working as a waiter for the company in the Bronx. Applebee's sought to have it thrown out.
Uli Seit for The New York Times

Apple-Metro Inc., which owns the Bronx Applebee's, did not return requests for comment.

Mr. Del Toro now works at P.F. Chang's, another restaurant chain. He had to sign an employment contract with an arbitration clause to get the job.

Class-action bans are also widely included in the employment policies of retailers, including Macy's, Kmart and Sears.

Even some N.F.L. cheerleaders have had to agree to them. When a group of cheerleaders sued the Oakland Raiders over working conditions, they discovered that Roger Goodell, the N.F.L. commissioner, would preside over the arbitration. The Raiders later agreed to use someone else.

The use of class-action bans is spreading far beyond low-wage industries to Silicon Valley and Wall Street, where banks like Goldman Sachs require some executives to sign contracts containing the clauses.

Civil rights experts worry that discriminatory labor practices will go unchecked as class actions disappear.

Cases brought by African-American employees against Nike in 2003 and Walgreens in 2005, for example, led the companies to change their policies. The drug company Novartis paid $175 million to settle a class action brought by female employees over promotions and pay.

Jenny Yang, chairwoman of the Equal Employment Opportunity Commission, said arbitration allowed "root causes" to persist. Part of the problem, Ms. Yang said, is that arbitration keeps any discussion of discriminatory practices hidden from other workers "who might be experiencing the same thing."

The point was not lost on Judge Schiller in Philadelphia, who has handled many employment cases in his 15 years on the bench. Once an arbitrator himself for disputes between companies, the judge said he had nothing against the forum, as long as both sides wanted to go.

Among thousands of employees at Applebee's franchises, only four took the company to arbitration between 2010 and 2014, according to The Times's review of arbitration data.

When lawyers for Applebee's argued before Judge Schiller to have the lawsuit thrown out, they assured him that Mr. Walton, who brought the suit, could have turned down the job and not agreed to the arbitration clause.

Judge Schiller was not persuaded. "To suggest that he had bargaining power because he could wait tables elsewhere ignores reality," the judge wrote in court papers. The Applebee's workers, the judge wrote, must "chew on a distasteful dilemma" of whether to "give up certain rights or give up the job."

Despite his own objections, Judge Schiller said he was bound by the Supreme Court decisions. In his ruling, he noted the "lamentable" state of legal affairs and dismissed the case.

With no other option, Mr. Walton took his case to arbitration. In April, he lost.

Michael Corkery contributed reporting.

A version of this article appears in print on November 1, 2015, on page A1 of the New York edition with the headline: Arbitration Everywhere, Stacking Deck of Justice .

The New York Times

DealBook WITH FOUNDER ANDREW ROSS SORKIN

BEWARE THE FINE PRINT | PART II

In Arbitration, a ‘Privatization of the Justice System’

JESSICA SILVER-GREENBERG and MICHAEL CORKERY NOV. 1, 2015

When she bought her car, Tinker Martin-Bowen signed a contract with an arbitration clause that took away her right to a jury trial. Only later did she realize just what she had given up. By JESSICA NAUDZIUNAS and POH SI TENG on November 1, 2015. Photo by J.D. Byrider. Watch in Times Video »

Deborah L. Pierce, an emergency room doctor in Philadelphia, was optimistic when she brought a sex discrimination claim against the medical group that had dismissed her. Respected by colleagues, she said she had a stack of glowing evaluations and evidence that the practice had a pattern of denying women partnerships.

She began to worry, though, once she was blocked from court and forced into private arbitration.

Presiding over the case was not a judge but a corporate lawyer, Vasilios J. Kalogredis, who also handled arbitrations. When Dr. Pierce showed up one day for a hearing, she said she noticed Mr. Kalogredis having a friendly coffee with the head of the medical group she was suing.

During the proceedings, the practice withheld crucial evidence, including audiotapes it destroyed, according to interviews and documents. Dr. Pierce thought things could not get any worse until a doctor reversed testimony she had given in Dr. Pierce's favor. The reason: Male colleagues had "clarified" her memory.

RELATED COVERAGE

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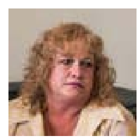


Beware the Fine Print | Part III: In Religious Arbitration, Scripture Is the Rule of Law NOV. 2, 2015

When Mr. Kalogredis ultimately ruled against Dr. Pierce, his decision contained passages pulled, verbatim, from legal briefs prepared by lawyers for the medical practice, according to documents.

"It took away my faith in a fair and honorable legal system," said Dr. Pierce, who is still paying off $200,000 in legal costs seven years later.

If the case had been heard in civil court, Dr. Pierce would have been able to appeal, raising questions about testimony, destruction of evidence and potential conflicts of interest.

But arbitration, an investigation by The New York Times has found, often bears little resemblance to court.

Over the last 10 years, thousands of businesses across the country — from big corporations to storefront shops — have [used arbitration to create an alternate system of justice]. There, rules tend to favor businesses, and judges and juries have been replaced by arbitrators who commonly consider the companies their clients, The Times found.

BEWARE THE FINE PRINT

This is the second installment in a three-part series examining how clauses buried in tens of millions of contracts have deprived Americans of one of their most fundamental constitutional rights: their day in court.

Read Part I | **Read Part III**

The change has been swift and virtually unnoticed, even though it has meant that tens of millions of Americans have lost a fundamental right: their day in court.

"This amounts to the whole-scale privatization of the justice system," said Myriam Gilles, a law professor at the Benjamin N. Cardozo School of Law. "Americans are actively being deprived of their rights."

All it took was adding simple arbitration clauses to contracts that most employees and consumers do not even read. Yet at stake are claims of medical malpractice, sexual harassment, hate crimes, discrimination, theft, fraud, elder abuse and wrongful death, records and interviews show.

The family of a 94-year-old woman at a nursing home in Murrysville, Pa., who died from a head wound that had been left to fester, was ordered to go to arbitration. So was a woman in Jefferson, Ala., who sued Honda over injuries she said she sustained when the brakes on her car failed. When an infant was born in Tampa, Fla., with serious deformities, a lawsuit her parents brought against the obstetrician for negligence was dismissed from court because of an arbitration clause.

Even a cruise ship employee who said she had been drugged, raped and left unconscious in her cabin by two crew members could not take her employer to civil court over negligence and an unsafe workplace.

For companies, the allure of arbitration grew after a 2011 Supreme Court ruling cleared the way for them to use the clauses to quash class-action lawsuits. Prevented from joining together as a group in arbitration, most plaintiffs gave up entirely, records show.

Still, there are thousands of Americans who — either out of necessity or on principle — want their grievances heard and have taken their chances in arbitration.

Little is known about arbitration because the proceedings are confidential and the federal government does not require cases to be reported. The secretive nature of the process makes it difficult to ascertain how fairly the proceedings are conducted.

Some plaintiffs said in interviews that arbitration had helped to resolve their disputes quickly without the bureaucratic headaches of going to court. Some said the arbitrators had acted professionally and without bias.

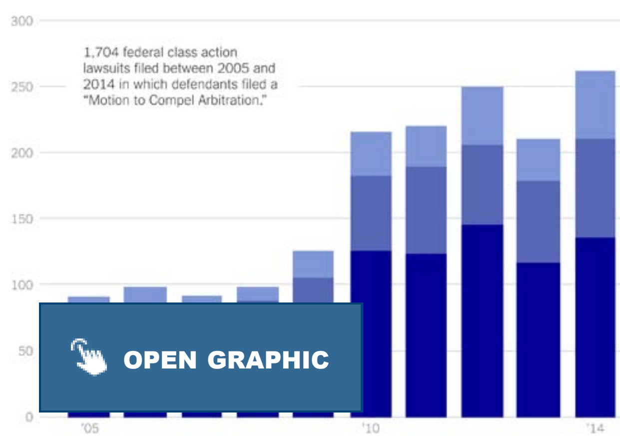
But The Times, examining records from more than 25,000 arbitrations between 2010 and 2014 and interviewing hundreds of lawyers, arbitrators, plaintiffs and judges in 35 states, uncovered many troubling cases.

Behind closed doors, proceedings can devolve into legal free-for-alls. Companies have paid employees to testify in their favor. A hearing that lasted six hours cost the plaintiff $150,000. Arbitrations have been conducted in the conference rooms of lawyers representing the companies accused of wrongdoing.

GRAPHIC

Removing the Ability to Sue

A New York Times study of the increasing use of arbitration clauses in contracts, which has effectively forced millions of people to sign away their right to go to court.



Winners and losers are decided by a single arbitrator who is largely at liberty to determine how much evidence a plaintiff can present and how much the defense can withhold. To deliver favorable outcomes to companies, some arbitrators have twisted or outright disregarded the law, interviews and records show.

“What rules of evidence apply?” one arbitration firm asks in the question and answer section of its website. “The short answer is none.”

Like the arbitrator in Dr. Pierce’s case, some have no experience as a judge but wield far more power. And unlike the outcomes in civil court, arbitrators’ rulings are nearly impossible to appeal.

When plaintiffs have asked the courts to intervene, court records show, they have almost always lost. Saying its hands were tied, one court in

California said it could not overturn arbitrators’ decisions even if they caused “substantial injustice.”

Unfettered by strict judicial rules against conflicts of interest, companies can steer cases to friendly arbitrators. In turn, interviews and records show, some arbitrators cultivate close ties with companies to get business.

Some of the chumminess is subtler, as in the case of the arbitrator who went to a basketball game with the company’s lawyers the night before the proceedings began. (The company won.) Or that of the man overseeing an insurance case brought by Stephen R. Syson in Santa Barbara, Calif. During a break in proceedings, a dismayed Mr. Syson said he watched the arbitrator and defense lawyer return in matching silver sports cars after going to lunch together. (He lost.)

Stephen R. Syson, who lost an insurance case in arbitration.
Jeff Clark for The New York Times

Other potential conflicts are more explicit. Arbitration records obtained by The Times showed that 41 arbitrators each handled 10 or more cases for one company between 2010 and 2014.

“Private judging is an oxymoron,” Anthony Kline, a California appeals court judge, said in an interview. “This is a business and arbitrators have an economic reason to decide in favor of the repeat players.”

With so much latitude, some organizations are requiring their employees and customers to take their disputes to Christian arbitration. There, the proceedings can incorporate prayer, and arbitrators from firms like the Colorado-based Peacemaker Ministries can consider biblical scripture in determining their rulings.

The firms that run the arbitration proceedings say the process allows plaintiffs to have a say in selecting an arbitrator who they think is most likely to render a fair ruling.

The American Arbitration Association and JAMS, the country's two largest arbitration firms, said in interviews that they both strived to ensure a professional process and required their arbitrators to disclose any conflicts of interest before taking a case.

The American Arbitration Association, a nonprofit, said it allowed plaintiffs to reject arbitrators on the ground of potential bias.

Who Has Arbitration Clauses?

Many of the companies and brands you interact with have arbitration clauses built into their terms of service. Here are several:

NETFLIX

at&t

TimeWarner

T · ·Mobile·

ebay

JAMS, a for-profit company, said it did the same and put extra protections in place for consumers and employees. "Their core value is neutrality — their business depends on it," Kimberly Taylor, chief operating officer of JAMS, said of its arbitrators.

But in interviews with The Times, more than three dozen arbitrators described how they felt beholden to companies. Beneath every decision, the arbitrators said, was the threat of losing business.

Victoria Pynchon, an arbitrator in Los Angeles, said plaintiffs had an inherent disadvantage. "Why would an arbitrator cater to a person they will never see again?" she said.

Arbitration proved to be devastating to Debbie Brenner of Peoria, Ariz., who believes she did not get a fair shake in her fraud case against a for-profit school chain that nearly left her bankrupt. In a rambling decision against Ms. Brenner that ran to 313 pages, the arbitrator mused on singing lessons, Jell-O and Botox.

“It was a kangaroo court,” Ms. Brenner said. “I can’t believe this is America.”

FROM CRADLE TO GRAVE

An ob-gyn’s office in Tampa, Fla., now informs expectant mothers that if problems arise — a botched vaginal delivery, a flawed C-section — the patients cannot take their grievances to court. Neither can the families of loved ones who are buried at Evergreen Cemetery outside Chicago, which also requires disputes to be resolved privately.

From birth to death, the use of arbitration has crept into nearly every corner of Americans’ lives, encompassing moments like having a baby, going to school, getting a job, buying a car, building a house and placing a parent in a nursing home.

The first contact point can arise prenatally, when obstetricians seek to limit liability by requiring patients to sign agreements containing arbitration clauses as a condition of treating them.

Leydiana Santiago of Tampa was devastated when her baby was born in November 2011 with vision and hearing loss and thumbs that needed to be amputated. Ms. Santiago blamed her doctor at Lifetime Obstetrics and Gynecology for the problems. She said her doctor mistakenly determined that she had miscarried, court records show. As a result, Ms. Santiago resumed taking medication for lupus — medication that can cause birth defects.

Women’s Care Florida, which owns Lifetime, declined to comment on the case.

In April 2014, a Florida appeals court upheld a decision to force Ms. Santiago into arbitration. “I obey what appears to be the rule of law without any enthusiasm,” wrote one of the judges, Chris Altenbernd, adding that he feared “I have disappointed Thomas Jefferson and John

Adams.”

Students from high school to graduate school can likewise find themselves caught in the gears. Lee Caplin discovered this when he enrolled his 15-year-old son at Harvard-Westlake, a private school in Los Angeles.

His son said he was bullied and harassed, and received graphic and profane death threats, including some that came from school computers. Among the threats, court records show, were, “I’m going to pound your head with an ice pick” and “I am looking forward to your death.”

Harvard-Westlake declined to comment on the case, but said that it “takes allegations of bullying very seriously.”

Afraid for his life, the teenager dropped out and the family relocated. When Mr. Caplin sued the school for failing to protect his son, he learned that even civil rights cases can be blocked from court.

The arbitrator ruled in favor of Harvard-Westlake, saying the plaintiff did not sufficiently prove that the school was “negligent.”

“It’s not a system of justice; it’s a rigged system of expediency,” Mr. Caplin said.

Many companies give people a window — typically 30 to 45 days — to opt out of arbitration. Few people actually do, either because they do not realize they have signed a clause, or do not understand its consequences, according to plaintiffs and lawyers.

Cliff Palefsky, a San Francisco lawyer who has worked to develop fairness standards for arbitration, said the system worked only if both sides wanted to participate. “Once it’s forced, it is corrupted,” he said.

Graduates entering the job market can confront even more challenging terrain. For many people, when the choice is between giving up the right to go to court or the chance to get a job, it is not a choice at all.

That is why a housekeeper in suburban Virginia said she had to sign an employment agreement with an arbitration clause that her employer had printed from the Internet. She said she regretted it later when he sexually harassed her and she had no legal recourse in court.

Circumstances are not any easier on the

home front, where residents like Jordan and Bob Fogal of Houston can become stuck with a construction nightmare.

Do You Read the Fine Print?

The reporters behind our series on arbitration answered reader questions on The Times’s Facebook page on Wednesday.

Go to Facebook

Not long after they moved into their townhouse, more than 100 gallons of water crashed through their dining room ceiling.

The couple won when they took their builder to arbitration, but they ended up with only $26,000, about a fifth of what they needed to make repairs. Unable to come up with the rest of the money and sickened from pervasive mold, the Fogals moved out.

The perils of using a secretive system can be even more acute in old age, as illustrated by numerous cases involving nursing homes.

Daniel Deneen said he was incredulous when he got a fax from a nursing home in McLean, Ill., about a client for whom he was a legal guardian.

The client, a 90-year-old woman with dementia, needed prompt care for bed sores. Unless Mr. Deneen agreed to arbitration, he said, doctors working at the nursing home would not treat her there.

“It was the most obnoxious, unfair document I have ever been presented with in over 30 years of practicing law,” Mr. Deneen said.

Once contracts with arbitration clauses are signed, nursing homes can also use them to force civil cases involving sexual assault and wrongful death out of the courts.

In May 2014, a woman with Alzheimer’s was sexually assaulted twice in two days by other residents at the Bella Vista Health Center, a nursing home in Lemon Grove, Calif., according to an investigation by the state’s department of public health. The investigation also found that the nursing home “failed to protect” the woman.

From the California Department of Public Health Investigation

A lawyer for Bella Vista, William C. Wilson, said the company disputed the state’s findings and that the staff “makes the health and safety of its patients their top priority.”

After unsuccessfully fighting to have the

"The facility staff demonstrated a pattern of inadequate resident supervision for Resident 1 who was dependent on staff for personal safety."

View the Full Report »

arbitration clause in their agreement voided, the woman's family settled with Bella Vista.

Between 2010 and 2014, more than 100 cases against nursing homes for wrongful death, medical malpractice and elder abuse were pushed into arbitration, according to The Times's data.

Roschelle Powers said she found her mother, Roberta, who had diabetes and dementia, vomiting and disoriented one day in May 2013 at a Birmingham, Ala., nursing home. Ms. Powers said she alerted the home, Greenbriar at the Altamont, specifically mentioning pills she had found in her mother's hand, according to a deposition.

A few days later, Roberta Powers's son, Larry, said he called 911 after finding her alone and unresponsive.

A day after the ambulance took his mother to the hospital, she was dead. An autopsy showed that the 83-year-old Mrs. Powers had more than 20 times the recommended dose of metformin, a diabetes medication, in her blood.

During arbitration, the nursing home acknowledged the blood test results but said they had been the result of renal dysfunction. The arbitrator ruled in favor of Greenbriar. "There was no evidence to support the allegation that Ms. Powers somehow gained access to, and then took, more than her prescribed amount of metformin," Joseph L. Reese Jr., a lawyer for the nursing home, said.

Perry Shuttlesworth, the family's lawyer, said that "it was only because of forced arbitration that the nursing home got away with this." He added that "a jury would not have let this happen. "

Even when plaintiffs prevail in arbitration, patterns of wrongdoing at nursing homes are kept hidden from prospective residents and their families.

Recognizing the issue, 34 United States senators have asked the federal government to deny Medicare and Medicaid funding to nursing homes that employ arbitration clauses. "All too often, only after a resident has suffered an injury or death," the senators wrote in a letter in September, "do families truly understand the impact of the arbitration agreement they have already signed."

Sometimes, even death provides no escape.

Willie K. Hamb stands in the cemetery where she wanted her husband to be buried in a simple plot. David Kasnic for The New York Times

Willie K. Hamb was at the funeral for her husband at Evergreen Cemetery outside Chicago when she discovered that his coffin would not be buried in the shady plot she said she had requested.

Instead, the cemetery informed Mrs. Hamb that it would place the coffin in a wall crypt until the more than $56,000 marble mausoleum they said she had agreed to in a contract was complete.

Mrs. Hamb, 72 and retired, said all she could afford for her husband, known to his friends as Pudden, was the simple plot and service she had already paid $12,461 to arrange.

Mrs. Hamb’s husband, known to his friends as Pudden.
David Kasnic for The New York Times

Service Corporation International, one of the nation’s largest providers of funeral services and the owner of Evergreen Cemetery, declined to comment.

The dispute will be resolved in a coming arbitration. Mrs. Hamb’s lawyer, Michelle Weinberg, said she was not optimistic that her client would prevail, especially since the arbitrator is a bank compliance officer.

A CRASH COURSE

Debbie Brenner enrolled in the surgical technician program at Lamson College near Phoenix in her 40s with high hopes of reinventing herself. She spent hours learning about the tools used in surgical procedures as if mastering the movements of the waltz, each handoff in graceful succession: scalpel, retractor, clamp, sutures.

Whether the instruments featured in lessons were real, or just depictions in photographs, depended on what teachers could round up on any given day. Lamson students became accustomed to empty surgical trays and anatomical mannequins missing their plastic replicas of organs. One enterprising instructor fashioned hearts, livers and kidneys out of felt and string.

Students considered that instructor to be one of Lamson’s better faculty members, more than a dozen of them said in interviews. Some teachers routinely disappeared from class, leaving tests conspicuously on the desks to be copied, they said.

Ms. Brenner, a devout Christian, said she prayed that the program’s shortcomings would not diminish her job prospects. She said the enrollment officer who persuaded her to sign up for the $24,000-a-year program had promised her she would easily find a job after graduation.

Debbie Brenner, whose fraud case against a for-profit school chain was forced into arbitration and left her nearly bankrupt. Nick Cote for The New York Times

When Ms. Brenner completed the program with high marks in 2009, she said, Lamson failed to find her an internship. She was volunteering at Maricopa County Hospital when, she said, a surgical technician told her that most hospitals refused to hire Lamson students because they were so poorly trained. According to students, some did not even know how to properly sterilize their hands before surgery.

“It was a joke,” Ms. Brenner said. “The school’s brochure was all about making our dreams come true, but this was a nightmare.”

Soon after, Lamson shut down the program when it was unable to place enough of its students in internships. In March 2011, Ms. Brenner and other students filed a lawsuit against the school and its owner, Delta Career Education Corporation, accusing them of fraud. The case was promptly dismissed because of an arbitration clause in the students’ enrollment agreements.

Ms. Brenner, confident she could prevail in arbitration, persuaded her husband to withdraw $12,000 from his retirement account to put toward legal fees.

By the time her case was heard in March 2013, the attorney general of Arizona had sued another Delta school for defrauding students in a criminal justice program. And a federal class-action lawsuit in Michigan had accused a Delta school of defrauding students out of millions of dollars in student loans. The company did not admit wrongdoing, but settled both lawsuits for a total of more than $8 million.

Arbitration would prove to be more advantageous for the company, records and interviews show.

Ms. Brenner’s case was conducted in the Phoenix office of Gordon & Rees, one of two big law firms defending Lamson and Delta. The arbitrator, Dennis Negron, was a corporate lawyer and real estate broker who had written papers on how to limit liability because “last on your list of desires is to be sued.”

As in most arbitrations, lawyers for both sides chose Mr. Negron from a list provided by an arbitration firm, in this case the American Arbitration Association.

Lawyers for Ms. Brenner and four other students grouped into the same arbitration said they anticipated victory because they believed that the evidence was overwhelmingly in their favor.

Even the school’s former head of admissions, Jeff Bing, testified that he had been instructed by his superiors at Delta to increase enrollment at all costs.

Mr. Bing said it was widely known that the admissions staff, whose compensation was tied to the number of students recruited, was “overpromising” on jobs. He testified that the job placement rate for graduates was around 20 percent.

To keep the enrollment numbers up, Mr. Bing said, virtually anyone who applied was accepted. He added in an interview that the only qualification was "a pulse."

Mr. Bing and other former employees recounted in interviews with The Times how profits drove most of the decision-making at Lamson.

As administrators were pressured to increase enrollment, instructors were drilled on the importance of student retention — which factored into federal aid disbursements.

Penny Philippi and Karen Saliski, two former teachers, said they were directed not to flunk anyone, including a student who skipped classes to "chase U.F.O.s."

An Excerpt From Ms. Brenner's Arbitration Decision

> "If the Students were ignorant of important facts it was through their less than diligent behavior in failing to read the Contracts. A commitment of approximately $24k and a 1 1/2 years of one's life is no small commitment, yet each of the Students dealt with this in the most cavalier manner, almost as if they were buying a Snickers at the local market."
>
> —Dennis Negron, arbitrator

Delta declined to comment.

During the arbitration proceedings, even a witness for the defense expressed concerns about Lamson. Kelly Harris, who headed the school's surgical technician program, defended the quality of education offered at Lamson but said the school enrolled too many students.

Ms. Harris, in an interview with The Times, said she warned school executives that the practice would dilute the quality of training, flood the job market and make the Lamson degree worthless. They scoffed, she said.

"It broke my heart to see these kids treated as dollar signs," Ms. Harris said.

She was one of only two people who testified for the defense. Lawyers for Lamson and Delta denied that enrollment officers guaranteed jobs, adding that they were hard to come by during the recession.

In the end, Mr. Negron ruled in favor of Lamson and Delta.

Mr. Negron found that the defense had presented the "two most credible witnesses” and praised for-profit education, according to his decision, a copy of which was obtained by The Times. Mr. Negron did not return repeated calls and emails seeking comment.

“There is little doubt that for-profit technical or specialty schools, like the college, serve an invaluable service to the public,” he wrote in his decision.

Mr. Negron found that the college did not make job promises during the enrollment process but may have engaged in “puffery, which each of the adult students should have known and recognized as puffery.” Chiding Ms. Brenner for not being a savvier shopper, he said she had approached her decision to enroll in a “most cavalier manner” as if “buying a Snickers at the local market.”

An Excerpt From Ms. Brenner’s Arbitration Decision

> “It is my experience that explaining our court system or arbitration to sophisticated transaction attorneys and businessmen is in many circumstances as difficult as building a hurricane proof home with Jell-O.”
>
> —Dennis Negron, arbitrator

His opinion was not shared by arbitrators who ruled in favor of students in two nearly identical cases against Lamson, documents obtained by The Times show.

If the cases had played out in court, legal experts said, Ms. Brenner could have referred to those decisions to appeal Mr. Negron’s.

As it stands, Ms. Brenner lost far more than the case.

Mr. Negron decided that she and the other students should pay the defense’s $354,210.77 legal bill because of the “hardship” the students had inflicted on Lamson and Delta.

“I felt like I had been sucker-punched,” Ms. Brenner said.

REPEAT BUSINESS

Fearful of losing business, some arbitrators pass around the story of Stefan M. Mason as a cautionary tale. They say Mr. Mason ruled in favor of an employee in an age discrimination suit, awarding him $1.7 million, and was never hired to hear another employment case.

While Mr. Mason’s experience was rare, more than 30 arbitrators said in interviews that the pressure to rule for the companies that give them business was real.

Companies can even specify in contracts with their customers and employees that all cases will be handled exclusively by one arbitration firm. Big law firms also bring repeat business to individual arbitrators, according to documents and interviews with arbitrators. Jackson Lewis, for example, had 40 cases with the same arbitrator in San Francisco over a five-year period.

The JAMS arbitrator in an employment case brought by Leonard Acevedo of Pomona, Calif., against the short-term lender CashCall simultaneously had 28 other cases involving the company, according to documents disclosed by JAMS during the proceedings.

“This whole experience burst my bubble,” said Mr. Acevedo, a 57-year-old veteran, who lost his case in October 2014. His lawyer, James Cordes, offered a more critical take. “It clearly appears that the arbitrator was working for the company,” Mr. Cordes said. “And he disregarded evidence to hand a good result to his client.”

JAMS denied that its arbitrator had been influenced by CashCall.

Linda S. Klibanow, an employment arbitrator in Pasadena, Calif., acknowledged the potential for conflicts of interest but said she thought most arbitrators, many of whom are retired judges, could remain fair.

“I think that most arbitrators put themselves in the place of a jury as the fact finder and try to render a fair decision,” Ms. Klibanow said.

Elizabeth Bartholet, an arbitrator in Boston who has handled more than 100 cases, agreed that many arbitrators had good intentions, but she said that the system made it challenging to remain unbiased. Ms. Bartholet recalled that after a company complained that she had scheduled an extra hearing for a plaintiff, the arbitration firm she was working with canceled it behind her back.

A year later, she said, she was at an industry conference when she overheard two people talking about how an arbitrator in Boston had almost cost that firm a big client. “It was a conference on ethics, if you can believe it,” said Ms. Bartholet, a law professor at Harvard.

Deborah Pierce, the doctor in Philadelphia, said she did not expect to confront in arbitration the very problem she was suing her employer over: an uneven playing field.

Dr. Pierce decided to go to arbitration after learning that another female doctor had been denied a partnership by her employer, Abington Emergency Physician Associates, under similar circumstances. She also had the backing of the Equal Employment Opportunity Commission, which found that there was probable cause that Dr. Pierce had been discriminated against.

The practice is now under different management.

Dr. Pierce needed to prove the partners' states of mind when they dismissed her, or debunk whatever reason the company gave for letting her go. Both required access to the practice's records and witnesses.

Once in arbitration, she and her lawyers said, the arbitrator gave them a weekend to review hundreds of records the defense originally withheld.

Vasilios J. Kalogredis, the arbitrator, said he could not comment on details of the proceedings because they were confidential, though he emphasized that "everything was handled properly."

For Dr. Pierce, the most astounding moment came when her lawyers asked Mr. Kalogredis to impose sanctions on the defense for breaking the rules of discovery and destroying evidence. He fined the defense $1,000 after investigating the matter, then billed Dr. Pierce $2,000 for the time it took him to look into it.

"I kept thinking, 'I'm not a lawyer, but this can't be right,' " said Dr. Pierce, who had to take out a second mortgage to cover her legal expenses, which included a $58,000 bill from Mr. Kalogredis.

After the ruling, Dr. Pierce's lawyers wrote to Mr. Kalogredis's arbitration firm questioning his qualifications. The firm, American Health Lawyers Association, responded that it was not its responsibility to verify the "abilities or competence" of its arbitrators.

Robert Gebeloff contributed reporting.

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Attachment 3

Glossary of Acronyms Used in this Report

Attachment 3 GLOSSARY OF ACRONYMS USED IN THIS REPORT	
ARPU	Average Revenue Per Unit
BLS	United States Department of Labor, Bureau of Labor Statistics
CBA	CPUC California Broadband Availability Database
CB	Census Block
CBG	Census Block Group
CDN	Content Delivery Network
CGSA	Cellular Geographic Service Area
CLEC	Competitive Local Exchange Carrier
CMRS	Commercial Mobile Radio Service
Edge Provider	Also referred to as a "content provider," an "edge provider" delivers content typically requested by end users to the "edge" of the ISP's local broadband distribution network.
"Eyeball"	Industry jargon, refers to an end user consumer viewer of video or other content
FCC	Federal Communications Commission
FTTH	Fiber-to-the-Home (e.g., Verizon *FiOS*, Google Fiber)
ILEC	Incumbent Local Exchange Carrier
IBP	Internet Backbone (network) Provider (e.g., Level 3, Cogent)
IP	Internet Protocol
ISP	Internet Service Provider
IXC	Interexchange Carrier (long distance carrier)
LEC	Local Exchange Carrier
Mbps, Gbps, Tbps	Refers to data transmission speeds – Megabits per second, Gigabits (billions) per second, Terabits (trillions) per second
MB, GB, TB	Refers to quantities of data – Megabytes, Gigabytes, Terabytes. A "byte" contains eight (8) bits. So-called "data caps" – i.e., the quantity of data that an end user customer may send and receive per month without incurring "overage" charges, is typically designed in terms of Megabytes or Gigabytes.

MSO	Multi-System [cable] Operator, a term commonly used in the cable industry to describe a company that owns and operates two or more cable TV systems (e.g., Comcast, Time Warner Cable).
MVPD	Multichannel Video Program Distributor (e.g., cable TV operator, satellite TV service)
NANP	North American Numbering Plan
OBRA	Omnibus Reconciliation Act of 1993
OTA	Over-the-Air (i.e., broadcast television station)
OTT	Over-the-top (an application provided over the Internet, e.g., VoIP, streaming video)
OVD	Online Video Distributor (e.g., Netflix, Amazon Prime, Hulu)
PSTN	Public Switched Telephone Network
PBX	Private Branch eXchange
RSN	Regional Sports Network
SIP	Session Initiation Protocol
TA96	Federal Telecommunications Act of 1996
TVE	Television Everywhere (ability to access video programming on various consumer devices, such as tablets and smartphones)
TWC	Time Warner Cable, Inc.
TWCIS	Time Warner Cable Information Services (California), LLC
UNE	Unbundled Network Element (per 47 U.S.C. §§ 251, 252)
VOD	Video On Demand
VoIP	Voice-over-Internet-Protocol
VPN	Virtual Private Network
WISP	[Fixed] Wireless Internet Service Provider
WISPA	Wireless Internet Service Providers Association
WLNP	Wireless Local Number Portability