Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Applications of Charter Communications, Inc.,	)	MB Docket No. 15-149
Time Warner Cable Inc., and	)	
Advanced/Newhouse Partnership	)	
For Consent to Assign or Transfer	)	
Control of Licenses and Authorizations	)	

PETITION TO DENY OF FREE PRESS

S. Derek Turner, Research Director
Matthew F. Wood, Policy Director
Free Press
1025 Connecticut Avenue, N.W.
Suite 1110
Washington, D.C. 20036
202-265-1490

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Executive Summary

With this Application, Charter seeks to gain in more major population centers the local broadband monopoly it already enjoys in various markets, and to gain additional market power in the national market for content delivery. The transaction would result in New Charter equaling Comcast's current size, creating a national broadband duopoly. That is an outcome that should gravely concern the Commission. Turning the national broadband market into a duopoly will confer additional market power not only on New Charter, but also on Comcast.

Yet these coordinated effects would be but one source of public interest harm were the deal approved. Though existing Charter, Time Warner Cable and Bright House Networks customers would not lose a potential choice among local ISPs based on this consolidation of ownership, they would be subjected to a firm with greater unilateral market power and substantially increased incentives to exercise it. The deal itself creates this heightened incentive through the creation of more than $27 billion in new debt not for the purpose of investing in better services, but simply to pay off and enrich Time Warner Cable shareholders.

Creating massive debt for no good reason would not be tolerated in any industry subject to competition, because it would not be sustainable. Here, New Charter would emerge with an unfathomable $66 billion in debt, a 70 percent increase above what these firms currently collectively hold. This price tag could only be justified to investors if it came with the expectation that New Charter would exercise market power, substantially raise rates and stifle new online video competitors. Indeed, the price tag and financial structure of this deal strongly indicate that it was put together for the sole purpose of leveraging Applicants' monopoly power in the broadband markets, in part to protect their position as the leading distributor of video content in their local markets.

At its core this deal is a combination of an already debt-laden cable monopoly with another one known for its poor customer service. It offers customers no merger-specific benefits, only a myriad of merger-specific harms. It would substantially increase concentration in the national broadband market, likely harming the already slow introduction of competition into the adjacent video market. If approved, this transaction would create an unstoppable cable broadband monopoly that would raise consumer's rates and crush online video competition.

This deal is no less harmful than Comcast's previously and rightly rejected attempt to acquire Time Warner Cable. It would produce the same unilateral harms, and the same coordinated harms by creating a new nationwide broadband duopoly. Charter's acquisition of Time Warner Cable and Bright House Networks would give it control over 20 million broadband customers, more than one-quarter of the national market for truly high-speed broadband. The combined firm would pass nearly 50 million locations, or about 35 percent of the country (and 40 percent of the area where broadband is available). New Charter would face fiber-enabled broadband and video multi-play competition in only 40 percent of its territory, and full fiber-to-the-home competition in just 10 percent. If the transaction were approved, New Charter and Comcast together would form a national broadband duopoly controlling nearly two-thirds of current customers and the telecommunications wires connected to nearly 8 of every 10 homes.

The motivation for this wasteful deal is clear: leveraging monopoly power. The deal's primary architect, John Malone, is a familiar face from cable's original pay-TV monopoly days. He left the U.S. market when competition from satellite companies ate into his monopoly profits, but now he's back because he knows that cable's last-mile advantages are insurmountable. Just a few short years ago, Malone rightly noted that in "broadband, other than in the [Verizon] FiOS area, cable is pretty much a monopoly now."

This monopoly threatens not only the customers of the ISPs involved in this deal, but all video consumers and innovators. Further consolidation of the vertically integrated multichannel video programming distribution market would enhance each distributor's market power and their ability to utilize that market power to stifle competition from online video distributors. This transaction's resulting concentration at the top of the combined broadband and traditional video distribution market would frustrate progress towards potential, eventual disintermediation of video services and their separate offering from the underlying transmission services.

As we demonstrate in this Petition, the parties to this transaction have completely failed to meet their burden of showing that the transaction would serve the public interest and enhance competition. They offer no merger-specific benefits whatsoever, and their flippant dismissal of the transaction's likely harms is wholly insufficient. That the transaction would impose a new $27 billion debt burden upon millions of consumers trapped in a broadband monopoly is reason enough for the Commission not to grant the Applications. The fact that it would create the very same national broadband market duopoly that the Commission sought to prevent when it correctly signaled disapproval of the Comcast-Time Warner Cable merger provides additional justification for telling these Applicants "no thanks."

Table of Contents

I. Summary and Introduction

Applicants seek Commission approval to merge the nation's second, third and sixth largest cable multiple system operators ("MSOs"), which would give just two companies control of nearly two-thirds of America's broadband market. While this transaction is not quite as large in terms of subscribers controlled by a single company that would have come from Comcast's failed bid for Time Warner Cable ("TWC"), it is substantially more expensive. The price tag would be $14.4 billion more than TWC's market capitalization prior to Comcast's 2014 bid, with Charter taking on more than $27 billion in new debt (for $66 billion in total debt for the combined entity), all for a company with virtually the same assets and subscribers it had then.[1]

In order to gain the Commission's approval to reduce competition in the national broadband telecommunications services market, and to saddle 20 million captive customers with the burden of paying back tens of billions of dollars in new debt, Applicants must demonstrate that the transaction would serve the public interest and enhance competition. They have failed to meet this burden. As we detail herein, these acquisitions would seriously harm competition, consumers, and the public interest. They would increase Charter's unilateral market power in the

[1] Charter is offering $195.71 per share to TWC shareholders, compared to Comcast's offer of $158 per share. The day prior to Comcast's offer, TWC was trading at $144.80 per share. This equates to a market capitalization (less debt) of $41 billion on February 12, 2014 at the time of the Comcast bid, compared to a market capitalization of $55.4 billion at $195.71 per share from Charter. At the end of 2013, TWC's reported assets stood at $48.3 billion, compared to $48.9 billion as of June 30, 2015. At the end of 2013 TWC passed 29.9 million customer locations, compared to 30.6 million as of June 30, 2015. TWC had 15 million customer relationships at the end of 2013, increasing to 15.5 million at the end of June 2015. If we assume TWC's stock price would have increased at the percentage observed in the broader market during this period, Charter is still paying a near $10 billion premium for TWC. *See* Time Warner Cable Inc., Form 10-K, For the annual period ended December 31, 2013; Time Warner Cable Inc., Form 10-Q, For the quarterly period ended June 30, 2015; *see also* "Charter to Merge with Time Warner Cable and Acquire Bright House Networks; Combinations Benefit Shareholders, Consumers and Cable Industry," Charter Communications, Time Warner Cable and Bright House Networks Investor Presentation, at 13 (May 26, 2015) ("May 2015 Investor Presentation").

national broadband market, and confer additional market power on Comcast and other carriers in this national market too. These transactions, with their resulting market concentration and massive debt, also would reduce Charter's incentives and ability to innovate and compete in a market already trending towards monopoly.

Applicants fail to identify any merger-specific benefits. They only offer a few tissue paper-thin, ephemeral conditions, many of which amount to nothing more than promises to follow the law, in a doomed effort to ameliorate the transaction's merger-specific harms. The Commission should not grant the applications for transfer of licenses, it should instead reject this transaction.

II. Statement of Interest

Free Press is a national nonpartisan organization with nearly 900,000 members. We work to reform the media and increase informed public participation in crucial communications policy debates. Free Press has participated in numerous merger proceedings before the Federal Communications Commission.[2] In each, Free Press has advocated for policies that promote competition and serve the public interest.

As such, Free Press constitutes a "party in interest" within the meaning of Section 309(d) of the Communications Act of 1934, as amended, and has standing to participate in this proceeding. Our mission is to promote diversity of viewpoints and content in the media and online, and to ensure open and affordable broadband choices for telecommunications customers and Internet access users. Free Press has members that reside in areas served by the Applicants.

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[2] For example, Free Press filed petitions to deny in *Applications of AT&T, Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorizations*, WT Docket No. 11-65; *Applications of Comcast Corp. and Time Warner Cable Inc. For Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 14-57; *Applications of AT&T Inc. and DIRECTV For Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 14-90.

We also have members who purchase telecommunications and video services who do not reside in the areas served by Applicants, but who would be harmed by the transaction's coordinated effects on these national markets. Grant of the applications therefore would harm Free Press and its members by decreasing the competitiveness and affordability of broadband offerings available to them.

III. The Proposed Transaction Would Not Serve the Public Interest Because It Would Enhance Applicants' Market Power and Greatly Increase Their Incentives to Exercise This Market Power

Applicants bear the burden of demonstrating that the transaction would promote the public interest.[3] It is not enough to wave their hands about potential synergies that may or may not be real, and likely would not trickle down to customers even if they were genuine.

In reviewing transfer applications, the Commission determines if the transaction would violate any statute,[4] violate Commission rules,[5] or frustrate the Commission's implementation and/or enforcement of the Communications Act, the Act's objectives, or the objectives of other statutes.[6] Importantly, the Commission also must determine whether the transaction would produce *affirmative* public interest benefits.[7]

[3] *See, e.g.*, *Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.,* CC Docket No. 97- 211, Memorandum Opinion and Order, 13 FCC Rcd 18025, ¶ 10 n.33 (1998).

[4] *Applications of Ameritech Corp., Transferor, and SBC Communications Inc., Transferee, for Consent To Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commission's Rules*, CC Docket No. 98-141, Memorandum Opinion and Order, 14 FCC Rcd 14712, ¶ 48 (1999).

[5] *Id.*

[6] *Id.*

[7] *Id.*

Consideration of a transaction's competitive effects is a core area in the Commission's public interest analysis.[8] This analysis "is informed by, but not limited to, traditional antitrust principles."[9] Therefore, to find that a merger is in the public interest, it is not enough for the Commission to find that the transaction will not harm competition; the Commission also must "be convinced that [the combination] will *enhance* competition."[10]

These transactions would negatively impact the public interest primarily in the broadband telecommunications market. They also would stunt the slow but sure march towards greater competition in the video market. These impacts are ample enough reason for the Commission to reject the Application.[11] Applicants have not met their burden to show that the transaction would enhance competition and produce affirmative public interest benefits. The analysis of these transactions leads to the same conclusion as the analysis of the most recent attempt to acquire TWC: the massive and wildly expensive consolidation of the national broadband market would dramatically decrease competition, enhance the merged entity's market power, and produce numerous unilateral harms and coordinated effects. The instant transaction raises serious antitrust and public interest concerns, and therefore the Commission should not grant the Application but should designate it for hearing instead.

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[8] *News Corporation and DIRECTV Group, Inc., Transferors, and Liberty Media Corporation Transferee*, Memorandum Opinion and Order, 23 FCC Rcd 3265, ¶¶ 23-24 (2008).

[9] *Id.* ¶ 24; *see also Northeast Utilities Service Co. v. FERC*, 993 F.2d 937, 947-48 (1st Cir. 1993) (explaining that public interest standard does not require agencies "to analyze proposed mergers under the same standards that the Department of Justice . . . must apply").

[10] *Applications of NYNEX Corp., Transferor, and Bell Atlantic Corp., Transferee*, Memorandum Opinion and Order, 12 FCC Rcd 19985, ¶ 2 (1997) (emphasis added).

[11] *Application of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership For Consent to the Transfer of Control of Licenses and Authorizations* (filed June 25, 2015) ("Application").

A. Approval of the Application Would Enhance Applicants' Market Power in the Local and National Broadband Telecommunications Service Markets, the Primary Relevant Product Markets Impacted by This Transaction

i. Impacts on the Advanced Broadband Services Market, and on the National Market for Delivery of Content via Advanced Broadband Services

Just a few months ago, the Commission was prepared to reject a transaction very similar to the one before it in this proceeding. The analysis undergirding the Commission's review of Comcast's proposed acquisition of Time Warner Cable focused primarily on concerns about concentration in the national broadband market, and on how Comcast's resulting market power in that national broadband market would impact consumers in local retail broadband markets.[12] In this Petition, we focus on both the national and local markets, demonstrating that the merger of advanced telecommunications monopolies on the local level would create additional market power and additional incentive to exercise that market power locally and nationally – ultimately causing irreversible harm to consumers, competition, and the public interest.

The proposed combination of Charter, Time Warner Cable and Bright House Networks would be a horizontal merger in a national broadband market that is already "moderately concentrated."[13] Combining these three companies would present a textbook violation of the Department of Justice's and Federal Trade Commission's Horizontal Merger Guidelines.[14] Furthermore, the local broadband telecommunications market is increasingly a monopoly market

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[12] *See, e.g.*, Remarks of Jon Sallet, Federal Communications Commission General Counsel, As Prepared for Delivery, Telecommunications Policy Research Conference: "The Federal Communications Commission and Lessons of Recent Mergers & Acquisitions Reviews," at 11 (Sept. 25, 2015) ("Simply put, the core concern came down to whether the merged firm would have an increased incentive and ability to safeguard its integrated Pay TV business model and video revenues by limiting the ability of OVDs to compete effectively, especially through the use of new business models.").

[13] *See* U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines" (Aug. 19, 2010) ("*Merger Guidelines*").

[14] *Id.* at 19.

controlled by incumbent cable companies. This transaction would increase concentration in the national market to an alarming level, and thus subject the Applicants' subscribers and other carriers' subscribers to harms from its coordinated effects. This further expansion of local monopoly power in markets across the country would substantially harm all consumers, but would inflict particular harm on consumers in the merged entity's service area, as their primary (or only) option for broadband telecommunications services would be a debt-saddled monopoly eager to recoup its massive outlay for this deal by charging higher prices and engaging in other market power abuses.

ii. The Local Market for Broadband Telecommunications Services is Uncompetitive and Trending Towards Monopoly, Meaning That This Deal Would Harm the Public Interest Whatever Speed Threshold The Commission Uses to Demarcate the Relevant Product Market

Charter's acquisition of TWC and Bright House Networks ("BHN") would give it control over 20 million Internet access customers and 17 million pay-TV subscribers. The combined firm would pass 48 million locations, or about 35 percent of the country (rising to 40 percent of the country if we include only areas where broadband currently is available).

Charter would only face telco fiber (to the node or to the home) competition in approximately 40 percent of its territory, a smaller percentage than Comcast would have faced if its deal had been approved. Most of this telco competition would come from AT&T's slower U-verse service, with New Charter competing against Verizon FiOS in only 10 percent of its service area.[15] New Charter would be almost as large as Comcast (which currently has 22.4 million Internet and pay-TV subscribers from 55 million passings). Depending on the speed threshold, New Charter would have between 22 and 30 percent of the national broadband market,

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[15] *See* Chris Young and Kamran Asaf, "MSOs defend more of their footprints against telco overbuilds," *SNL Kagan*, Jan. 28, 2015.

with Comcast and New Charter combined controlling as much as two-thirds of all subscribers (see Figure 1).

The data in Figure 1 are our best estimates of each ISP's national market share for the respective speed tiers. Our estimates indicate that New Charter would control approximately one-quarter of the broadband market, at both 10 megabits per second ("Mbps") or 25 Mbps downstream speed. This is an admittedly imperfect estimate, as each company differs in how it reports its subscribers by tier. If anything though, the numbers are conservative. Charter itself describes its national share of the 25 Mbps market as "less than 30%."[16] The primary reason the data is both difficult to estimate precisely, and different from the public data disclosed during the Comcast-TWC merger review,[17] is that cable companies (and Verizon FiOS too) can turn up their speeds at will. That occurred on many instances during 2014.

Applicants argue that their deal should be approved because New Charter would control "less than 30%" of the national broadband market, less than the 57-percent share Comcast would have held if its deal had been approved.[18] But this is an overly simplistic analysis, and it fails to recognize the facts that led the Commission and the Department of Justice to reject the prior deal.

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[16] Application at 6.

[17] *See* Letter to Marlene H. Dortch, Secretary, Federal Communications Commission, from Francis M. Buono, Counsel for Comcast Corporation, *In the Matter of Applications of Comcast Corp., Time Warner Cable Inc., Charter Communications, Inc., and SpinCo for Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 14-57, at Exhibit B, pp. 7-10 (Dec. 23, 2014) ("The share of the post-merger firm (accounting for the divestitures occurring as part of the three-way Comcast-TWC-Charter transaction) is: [. . .] For the 25 Mbps threshold: 56.8 percent . . . with Comcast's national share only increasing by *one percent* due to the transaction under this definition of broadband . . . ." (emphasis in original). This data was based on estimates for December 31, 2013.

[18] Application at 6.

Figure 1:
National Broadband Market Shares by Downstream Speed
Estimates as of June 30, 2015

Company	Share of Subscribers by Downstream Speed*				
	Any Speed	> 3 Mbps	> 10 Mbps	> 25 Mbps	> 50 Mbps
Comcast	23%	24%	29%	40%	41%
Time Warner Cable	13%	14%	15%	13%	14%
Charter	5%	6%	7%	10%	12%
Cox	5%	5%	5%	8%	9%
Cablevision	3%	3%	4%	2%	3%
Bright House Networks	2%	2%	2%	2%	1%
Suddenlink	1%	1%	1%	2%	1%
Mediacom	1%	1%	1%	1%	1%
Wide Open West	1%	1%	1%	1%	1%
Cable ONE	1%	1%	1%	1%	0%
RCN	0%	0%	0%	1%	0%
Other Cable MSOs	4%	4%	5%	4%	4%
Verizon	9%	9%	9%	12%	11%
AT&T	16%	16%	12%	2%	0%
Century Link	6%	5%	4%	1%	0%
Frontier	2%	2%	1%	0%	0%
Windstream	1%	1%	1%	0%	0%
Fairpoint	0%	0%	0%	0%	0%
Cincinatti Bell	0%	0%	0%	0%	0%
Other Local Exchange Carrier	4%	3%	1%	1%	0%
All Cable MSO	59%	63%	71%	82%	88%
All Local Exchange Carrier	41%	37%	29%	18%	12%

* Figures reflect estimated market shares as of June 30, 2015, and include residential and business lines. Excludes mobile wireless, fixed wireless and satellite connections. Some values round to zero. *Source: Free Press estimates based on company reports and statements, and on FCC High-Speed Internet reports*.

Comcast controlling 57 percent of the national market was of course a bridge too far. But this was an outdated figure largely reported in the press, not data that the Commission relied upon solely when it conducted its review. The 57-percent figure was important of course, but it was more than 15 months old in a rapidly shifting cable Internet access market. Most people didn't notice when Comcast pointed out the data underlying that oft-quoted stat, which showed that Comcast already enjoyed almost as large a share of the market – 56 percent – at that speed prior to adding any TWC customers. (Comcast's correct point – *i.e.*, that it already was a giant with control over massive numbers of broadband subscribers – was, in isolation, cold comfort to regulators.)

In sum, the oft-quoted 57-percent statistic was an oddity. It stemmed from the reality that at the time the data behind that figure was collected (in December 2013), Comcast had bumped its customers' speeds up before most of the other cable companies had done so, including Time Warner Cable. If the December 2013 data had been the sole argument for rejecting the Comcast deal, the Commission would have approved that transaction, because based on those out-of-date numbers it would not have caused a substantial change in the market concentration.

Fortunately, Commission staff reviewing the Comcast-TWC merger apparently recognized that the most important factor in measuring market share was not what that share had been in December 2013, but what it was likely to be in the months and years following consummation of the proposed Comcast-TWC deal. The Department of Justice and the Commission certainly understood that the 2013 data was dated, and that the lack of change in concentration Comcast touted was artificial. Those numbers reflected the state of the industry at the start of the DOCSIS 3.0 rollout, for which Comcast was at the leading edge due to its heavy overlap with Verizon FiOS. What likely mattered most to regulators when measuring the impact of that prior failed proposal, and what *should* matter most in this current review, are the capabilities of the cable systems and the capabilities of the networks with which they compete.

As of the end of the second quarter of 2015, we estimate that Comcast controls 40 percent of broadband subscribers at the 25 Mbps threshold. This translates to potential control of just under 50 percent of all such lines had Comcast received approval to acquire TWC and spun off systems to Charter and Greatland Communications as planned. Comcast's *pro forma* control of the national market had the Commission approved its application was therefore a figure in flux, as TWC and other MSOs were and are still in the midst of DOCSIS 3.0 deployments.

About half of TWC's subscribers can receive speeds at 25 Mbps today, while nearly all of Comcast's can.

It is reasonable to assume that the Commission's Comcast-TWC Transaction Team was well aware of the fluid nature of these numbers. Staff likely was not swayed by outdated estimates of existing market share. It presumably analyzed instead the general trend of the market towards cable broadband and away from slow DSL, and the fact that Comcast would have controlled the cable wire attached to 6 of every 10 homes.[19] Regulators understood that post-merger Comcast would have been the only provider of 25 Mbps-level service available to nearly half the nation's broadband homes, and one of only two such providers for another fifth.[20]

The 25 Mbps downstream/3 Mbps upstream threshold is instructive, because it helps indicate broadband providers' level of control over conduits robust enough to transmit and receive high-quality content. Analyzing market shares and availability at this threshold illustrates the emerging monopoly nature of last-mile broadband – a characterization shared and previously articulated by John Malone himself, the architect of the Charter-TWC deal. Malone said in 2011 that "[in] broadband, other than in the FiOS area, cable is pretty much a monopoly now."[21]

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[19] *See* Petition to Deny of Free Press, *In the Matter of Applications of Comcast Corp. and Time Warner Cable Inc. For Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 14-57, at 19 (Aug. 25, 2014).

[20] *Id.* at 20, Figure 3 (showing that a post-divestiture Comcast-TWC would have passed 59 percent of all U.S. housing units where at least one wired high-speed Internet service was available; and that the merged firm would have been the only available provider of 25 Mbps and higher-level service to 46 percent of housing units where such service was deployed, and one of only two providers to another 22 percent of such housing units).

[21] Comments of John C. Malone, Chairman, Liberty Media Corp. Capital, Q1 2011 Earnings Call (May 6, 2011) ("I think cable is very strong on the broadband side. And I think the threat of wireless broadband taking away high speed connectivity is way overblown. There just is not enough bandwidth on the wireless side to substantially damage cable's unique ability to deliver very high speed and activity. So I think everybody is going to do well in this mix. And certainly in the video area, the big issue is margin squeeze, strictly coming out of sports. It's probably the biggest issue that cable operators face on the video side. Over-the-top cuts both ways. I think for

This obviously true and otherwise benign admission is something he's trying to explain away now that he seeks approval for this deal. In a recent Liberty Global shareholder meeting, Malone opined that the FCC's 25 Mbps broadband definition was "really designed I think by the government to be able to say no to Comcast."[22] Malone went on to suggest that cable does in fact compete with first generation DSL, analogizing to Ferrari competing with Bentley. Malone argued that nothing "prohibits" incumbent telephone companies from investing in their networks enough to compete on a level playing field with cable ISPs.

Flip-flop as he may on his earlier and correct assertion of cable's monopoly position outside of FiOS markets, Malone is not completely wrong to question 25 Mbps as a product market boundary. The Commission has chosen 25 Mbps for the purpose of defining "advanced telecommunications capability," based on its interpretation of the language in Section 706 of the 1996 Telecommunications Act. The Commission's focus on this line of demarcation is largely forward-looking. Yet in terms of measuring *current* broadband market share, the focus on 25 Mbps to the exclusion of all other data can be misleading, as every cable company customer currently subscribing to a speed tier less than 25 Mbps can be bumped up to that threshold for essentially zero cost to the provider. However, the same cannot be said for DSL subscribers.

What matters most for purposes of a competitive market analysis is the broadband service's capabilities, as viewed by consumers. Almost equally important is whether or not that service is available in a bundle with pay-TV (and, for some, phone), because if it is, consumers are far more likely to buy that service than they are to put together Internet access and TV from

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the cable guys, over-the-top will really drive broadband penetration. *And broadband, other than in the FiOS area, cable is pretty much a monopoly now*. I don't want to use that word.") (emphasis added).

[22] Comments of John C. Malone, Chairman, Liberty Media Corporation, at the Liberty Media Corporation Annual Shareholder Meeting (June 2, 2015).

separate providers. Thus, what matters is not whether the cable provider in question faces competition above 25 Mbps, but the extent to which its service area contains competition from networks currently offering double- or triple-play services, and the upgrade trajectory of those competitor networks.

The fiber-to-the-node VDSL services offered by AT&T and other phone companies are only capable in many instances of speeds just below the FCC's 25Mbps/3Mbps level. These fiber-to-the-node ("FTTN") networks are inferior to cable in other ways as well. It is clear that – for now – a sizable chunk of consumers view bundled FTTN offerings as similar enough to what cable offers to place the two technologies in the same product market for purposes of antitrust analysis. This is true for the Commission's review of the Charter-TWC, just as it was for the Comcast-TWC deal, which failed that antitrust analysis. It is important to note, however, that even if 18 Mbps VDSL service were considered to be in the same product market as cable modem today, a large number of consumers already perceive limitations in VDSL services. To these consumers, the cable company's services are the only available product. This gives cable ISPs some additional pricing power even now, over and above what they already have in a duopoly market. And cable will grow its technological lead over VDSL with its cheap-to-the-provider DOCSIS 3.1 upgrades, which will see mass deployment in 2016.[23]

What Malone gets wrong, in his effort to paint cable broadband as something short of the monopoly he correctly identified a few years ago, is his notion that incumbent phone companies can upgrade their networks as easily as the cable companies did. As we document further below, cable's upgrade path from DOCSIS 1.0 to DOCSIS 3.1 was relatively inexpensive. A telco's upgrade path is costly, even for stopgap U-verse style VDSL deployments. Charter's monopoly

[23] *See e.g.* Alan Breznick, "DOCSIS 3.1 Seen Taking Off," *Light Reading*, July 28, 2015.

position exists not because it offers 60 Mbps service, but because its telco competitors in 90 percent of New Charter's footprint could never match that speed without first building fiber to the home – something that is unlikely to occur.

As the Commission examines the state of broadband competition today and over the near-term, especially when it comes to the issue of gatekeeper market power over the platform for receiving over-the-top content and services, it should focus on infrastructure capabilities and cost structures. To that end, the data shows the national U.S. broadband (and broadband/TV bundle) market is already very concentrated. The *local* market remains a cable/ILEC duopoly for about half the country – and that's the good half. It's a cable monopoly for the other half. The Commission must conduct its antitrust and public interest analyses with a full understanding of the degree to which cable enjoys cost-advantages over ILECs. In reality, the threat of an ILEC upgrade is hollow in the face of New Charter's potential to exercise market power.

B. Charter Can Only Justify The High Price of This Transaction to its Shareholders and Bondholders Through Future Exercise of Its Increased Market Power

The transaction ultimately fails the public interest test because Charter's purchase of TWC and BHN is only possible if it takes on massive new debt – debt that its shareholders and bondholders are willing to risk only because they are confident that New Charter will exercise substantial monopoly power. Indeed, the inflated price tag and debt-ridden financial structure of this mega-deal strongly indicate that it was put together for the sole purpose of leveraging cable's monopoly power in the broadband markets, in part to protect Charter-TWC-BHN's position as leading distributors of video content. Charter is willing to pay a near-40 percent premium for Time Warner Cable above the price at which the company was valued prior to Comcast's offer (itself an inflated valuation based on months of merger speculation). This means a $14.4 billion premium over Comcast's price for essentially the same assets and customers, and an unnecessary cost that ultimately would be shouldered by New Charter's captive broadband customers.

New Charter would emerge with an unfathomable $66 billion in debt, taking more than $27 billion in new debt for this deal alone.[24]

Let's pause here to marvel at that total, since it can be far too easy to gloss over such figures when discussing transactions of this magnitude. The amount of *new* debt Charter would take on for this deal is more than 12-times its existing annual capital expenditures.[25] Put another way, for the amount of *new debt* that Charter is willing to take on for this transaction, it could pass nearly 40 million homes with fiber. That would cover an area three times larger than its existing footprint, and 1.25 times as large as TWC's. This figure represents an *additional* debt burden of $1,142 for each New Charter customer, on top of the existing $39 billion debt of the three companies combined.[26] But this $27 billion in new debt is not going to buy New Charter's captive customers *anything*. As hostages of Charter's broadband monopoly, these customers are merely pawns in a massive wealth transfer scheme that benefits moguls like John Malone and golden parachute holders like TWC executive Robert Marcus, whose exit package would fetch him more than $100 million.[27] If the Commission is serious about enforcing its public interest

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[24] *See* May 2015 Investor Presentation at 13, note 6. This presentation assumed that the merged entity would emerge with $65.7 billion in debt, of which $27.3 billion would be new debt; *see also, e.g.*, "Charter's Ambitions Leave It on Razor's Edge of Junk Market," *Bloomberg Business*, July 20, 2015 ("The Time Warner Cable purchase may leave Charter saddled with as much as $66 billion in debt. The company is spreading these borrowings in a capital structure that will leave about $48 billion with investment-grade ratings and the rest in the form of speculative-grade obligations, according to Stephen Flynn, a Bloomberg Intelligence analyst.").

[25] Charter's 2014 capital expenditures totaled $2.188 billion.

[26] New Charter would have 23.9 million customer relationships. *See* May 2015 Investor Presentation at 17.

[27] *See, e.g.*, Daniel Frankel, "TWC's Marcus will net more than $100M if Charter merger goes through," *Fierce Cable*, June 29, 2015.

mandate, it has to ask itself how this $27 billion "investment" in nothing but an expensive payout to TWC shareholders can possibly improve service to New Charter's customers.

The Commission has extra reason to be wary, as Charter has a history of bankruptcy. In early 2009, after it took on too much debt to grow through consolidation, Charter filed for Chapter 11 bankruptcy. It ended the year prior (2008) with a total debt of $21.7 billion, or approximately $3,978 of debt per customer relationship. New Charter would emerge from this transaction with $66 billion in debt, amounting to $2,749 per customer relationship. While this would be lower than the level Charter had when it previously sought bankruptcy protection, it is still alarmingly high relative to its peers. TWC's current debt per customer relationship is $1,513. Bright House's is $800. At the end of the second quarter of 2015, Comcast carried $48.5 billion in total debt over 27.3 million customer relationships, or $1,777 per such relationship.

By any rational account, the price Charter is paying to quadruple its size is unfathomably high. On paper, this deal just doesn't make financial sense – unless there is an expectation for substantial increases in future earnings reaped from monopoly rents. According to analysis from *The Economist*, even though New Charter would pay no taxes for years, the merged company's return on capital would be 5.6 percent based on existing cash flows.[28] Wall Street investors still

[28] *See* "Cable deals in America: Malone wolf – What a giant deal says about America's media and internet industries," *The Economist*, May 30, 2015:

> What makes the deal unusual for Mr. Malone is its stretched valuation. At 9.1 times gross operating profits he is paying at least a fifth more for TWC than he typically does. He is offering 23% more for it than Comcast did in its bid last year, which was scuppered by antitrust regulators. Based on last year's cash-flow figures the deal will make a pitiful 5.6% return on capital, assuming no tax is paid. Like most cable firms TWC has a stagnant top line, with growing broadband sales being offset by declining TV and telephony revenues. So fast growth will not bail out Mr. Malone. How might he justify this price? The most obvious explanation is that Mr. Malone thinks the world has not changed much since the 1990s and that the cable industry remains a collection of local monopolies from which ever more juicy profits can be squeezed. America's cable firms have poor service and high prices: the average Charter customer pays at least 50% more per month than one of Mr.

like this deal, despite the fact that this return on capital would be approximately one-third of that currently enjoyed by Time Warner Cable and other cable companies.[29] This strongly suggests that the market expects New Charter to exercise market power and raise rates substantially. How else could investors justify the premium Charter is paying, and a resulting per-customer debt load that's double most other ISPs?

The Applicants attempt to weave a nice tale together to justify this expensive transaction. They point to Comcast's size in the apparent hope that the Commission will forget the basic tenets of antitrust analysis.[30] Applicants point to Time Warner Cable's broadband offerings and promise to improve them, apparently hoping the Commission ignores the reality that these upgrades come cheap and that Time Warner Cable's reluctance to make them quickly enough is simply a reflection of its business strategy to make itself an acquisition target.[31] They dangle the prospect of entry into the wireless market, in the apparent hope that regulators ignore the fact that the cable industry has thus far eschewed such a move based on market realities that won't change because of this transaction.[32] Applicants even try a tale about how this deal would

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Malone's customers in Britain or the Netherlands. In Europe cable firms face tough competition in broadband from telecoms operators; in America the telecoms firms have rolled out fixed-line broadband to perhaps just half of homes or fewer. So, Mr. Malone's master plan may simply be to squeeze both customers and suppliers.

[29] For 2014, Time Warner Cable's return on invested capital was 14 percent, Comcast's was 15 percent and Cablevision's was 19 percent. Among incumbent phone companies, AT&T's return on invested capital in 2014 was 13.6 percent, Verizon's was 17.8 percent, CenturyLink's was 7.9 percent, and Cincinnati Bell's was 13.5 percent. Charter's 2014 return on invested capital was a low 5.4 percent, in part because of its already-existing heavy debt load and non-existing equity. Charter is currently carrying $21 billion in debt, with a paltry $77 million in equity. Charter's debt load amounts to $3,300 per customer. By comparison, Comcast holds $47 billion in debt and $53 billion in equity, with a debt load around $1700 per customer. TWC has $23 billion in debt and $8 billion in equity, with a debt load just over $1500 per customer.

[30] Application at 5.

[31] *Id.* at 21.

[32] *Id.* at 27.

enhance over-the-top video competition,[33] forgetting John Malone's intent to use the transaction to "get TV Everywhere up in the US, in Europe and in Latin America before subscription video-on-demand distributors come in with their content."[34]

What Malone and TWC's golden parachute-holding executives will not commit to is lowering prices, improving customer service, or any other tangible customer benefits. They cannot and did not acknowledge the fact that the transaction confers additional market power on New Charter, giving it enhanced ability to stave off that threat of online video competition.

The Commission must not let this deal's size relative to Comcast's prior deal blind them to this one's threats. This is a marriage between Time Warner Cable – America's worst-rated[35] cable company – and John Malone, a monopolist famously referred to as the "Darth Vader" of the cable industry.[36] Malone left the U.S. cable market when satellite competition took hold. But he's back because, as his earlier statements make abundantly clear, he sees that the U.S. broadband market is now a cable monopoly.

What should the Commission expect from the combination of one debt-laden cable monopoly with another cable monopoly known for its poor customer service and unwillingness to improve its network, with a combined firm that would reach 40 percent of the market? If the Commission takes anything from the lessons learned in its Comcast-TWC review, it should expect an unstoppable cable broadband monopoly that would raise rates and stunt the growth of

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[33] *Id.* at 51.

[34] *See* Claire Atkinson, "Malone's on a mission to beat back Netflix," *New York Post*, May 26, 2015.

[35] *See, e.g.*, "ACSI: Customers Loathe Pay TV and ISPs, Love Their Smartphones," American Customer Satisfaction Index, June 2, 2015. ("The ACSI reports huge drops in customer satisfaction for Comcast and Time Warner Cable, following their failed merger. Already one of the lowest-scoring companies in the ACSI, Comcast sheds 10 percent to a customer satisfaction score of 54. Meanwhile, Time Warner Cable earns the distinction as least-satisfying company in the Index after falling 9 percent to 51.").

[36] *See, e.g.*, Mark Lewis, "Cable's Darth Vader Is Back," *Forbes*, July 11, 2001.

online video competition. The Commission should also expect coordinated effects that would produce additional market power for Comcast, which would benefit from the consolidation and Malone's desire to reintroduce the worst behaviors the cable industry was notorious for in the 1990s.

C. This Transaction Would Not Result in Significant Programming Fee Savings Relative to Present Trends, and There Are No Scale-Related Synergies to Be Found in the Broadband Market, Meaning the Only Justification for Its Excessive Price Tag is Future Exercise of Market Power

Applicants do not claim in any specific fashion that the transaction's increased scale would result in savings on programming to be passed along to New Charter's video customers.[37] This absence is noteworthy, as this is usually a central feature of MVPD merger applications. Applicants likely do not make any claims about future programming savings because all available evidence indicates any such merger-specific savings would be miniscule.

According to SNL Kagan, while Charter's per-sub programming costs are 16 percent higher than Time Warner Cable's (as of the second quarter of 2015), this gap is closing. (*E.g.*, in the second quarter of 2014 the gap was 18 percent). Charter's per-subscriber programming costs increased 12.2 percent from the second quarter of 2014 to the second quarter of 2015, while TWC's increased 13.9 percent. In the second quarter of 2014, Charter's programming costs were 54.7 percent of its video revenues compared to 50.9 percent for TWC. However, just a year later programming costs accounted for 58.4 percent of Charter's video revenues compared to 57.1

[37] Applicants' discussion of scale-related savings is confined to operational efficiencies, and to claims that increased scale would result in lower marginal costs for its broadband segment. There is only one vague and brief mention, by an outside consultant in an Exhibit, of possible programming fee savings. *See* Application at 31; *see also* Application, Exhibit D, Statement of Fiona Scott Morton at 8.

percent for TWC. Factoring all video segment costs,[38] we see that Charter's operating margin for this segment declined from 13.4 percent in the second quarter of 2014 to 10.3 percent in the second quarter of 2015. Yet Time Warner Cable's video segment margin reached a low of 6.1 percent in the most recent financial quarter, down from 12.4 percent in the second quarter of 2014. Scale is simply not delivering the video segment cost-savings it once did. Even Comcast, the largest traditional MSO which is also vertically integrated into programming, reported a second quarter 2015 video segment operating margin of 18.2 percent.

While Applicants do not specifically claim scale-related benefits in the form of reduced programming costs, they do claim there would be scale-related savings in broadband.[39] But instead of offering any evidence or quantifying these savings, they offer only general economic theory that is applicable to markets with perfect competition. This is not such a market, and the Commission should value evidence that contradicts such theory over the theory itself.

Charter is, by its own account, already outperforming the far larger TWC in its broadband offerings. This should come as no surprise given the economic realities of the coaxial network. The expenditures that could benefit from scale comprise such a tiny fraction of an MSO's overall expenditures that any marginal cost savings here would be insignificant. As we discuss herein, last-mile capital expenditures comprised just 12 percent of the MSO industry's total capital investments in 2014, amounting to just 2 percent of the industry's revenues. In 2014, Charter's investments in line extensions, upgrades and rebuilds totaled just $343 million, or just 4 percent of its communications service revenues.

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[38] These include, in addition to programming fees, costs such as franchise and regulatory fees, marketing expenses, operating expenses, technical support, etc.

[39] Application, Exhibit D, at 8 ("The post-merger firm's marginal cost will decrease because it will be purchasing higher volumes of inputs like co-axial cable, construction services, set-top boxes, and modems.").

There is ample evidence that scale is not needed for an ISP to deploy high-quality broadband services. Indeed, Charter's smaller footprint made it *easier* for the company to complete its DOCSIS 3.0 transition before Time Warner Cable. And there is no evidence that Charter's cost structures for doing this were lower than TWC's would have been, nor that the transition to DOCSIS 3.1 is less costly for companies with greater scale. For example, Suddenlink is deploying DOCSIS 3.x technology across 94 percent of its footprint over a three year period, and has in just 12 months managed to cover 87 percent of its territory at a cost of $27 per passing.[40] While Applicants specifically claim the increased scale would result in lower costs for modems[41] and that this savings would trickle down to subscribers, TWC currently charges $8 per month[42] for modem rental while Charter charges $0.[43] So much for scale.

Broadband generally does have economies of density (*i.e.*, deploying to a certain number of homes in a neighborhood is less costly than deploying to that same number of homes scattered across 10 different neighborhoods). But there are numerous examples of small ISPs well ahead

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[40] *See* "Quarterly Report for the Quarter Ended June 30, 2015, Cequel Communications Holdings I, LLC ("Once fully phased in, the plan calls for our flagship Internet speed to increase from 15 to 200 Mbps and our top Internet speed to increase from over 100 Mbps to 1 Gbps in a vast majority of our markets. In 2014 and the first six months of 2015, we completed the initial phases of Operation GigaSpeed in 88 markets, which serve approximately 87% of our residential high-speed Internet customers. Those investments allowed us to increase the flagship Internet speed from 15 Mbps to 50 Mbps and to increase our top Internet speed to up to 150 Mbps in most markets, with top speeds in five markets increasing to 1 Gbps in July 2015. . . For the three and six months ended June 30, 2015, we incurred $9.9 million and $39.6 million in capital expenditures related to this initiative."); *see also* "Annual Report for the Year Ended December 31, 2014, Cequel Communications Holdings I, LLC ("For the year ended December 31, 2014, we spent approximately $35.2 million of the total capital expenditures related to Operation GigaSpeed in the second half of 2014."). Suddenlink's territory encompasses 3.2 million customer locations, thus assuming proportional distribution of subscribers across its territory it has covered approximately 2.78 million locations with DOCSIS for $74.8 million, or $27 per passing. This cost is extremely small when compared to the typical $500–$800 per-passing cost for fiber-to-the-home projects.

[41] Application, Exhibit D, at 8.

[42] *See* Time Warner Cable Internet FAQs, *available at* http://goo.gl/tf4eX0.

[43] Application at 8.

of large carriers in deploying next generation broadband services, and they collectively provide ample reason to be extremely skeptical of Applicants' vague promises about benefits from scale.

In sum, the arguments Applicants make about the merger's supposed benefits for broadband deployment stem not from observed economics, but from unsupported promises. Given the history the cable broadband market's development, and its extremely low cost structure relative to all other broadband platforms, there's good reason to expect that the benefits claimed by petitioners would arise absent the transaction. Charter made its all-digital deployments without massive scale, as did Cablevision and several small MSOs such as BendBroadband.[44] While TWC has lagged behind other MSOs, it's clear this is due to the company positioning itself for acquisition, and it is not a response to external market factors. And in the absence of this merger, TWC would complete its all-digital migration if for no other reason than to reduce expenditures and offer a more lucrative suite of services. The Commission should know well that investment promises and predictions made by parties seeking approval for mergers are always self-interested pleas disconnected from reality. In the instances in which the Commission has rejected similarly expensive consolidations, the parties have each independently followed that rejection with increased deployments and investment – at or above the level promised in the transfer applications.[45] There's no reason to expect differently here.

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[44] *See* SNL Kagan, Multichannel Industry Benchmarks, Top Cable MSOs (as of June 2015).

[45] *See e.g.* "AT&T to Invest $14 Billion to Significantly Expand Wireless and Wireline Broadband Networks, Support Future IP Data Growth and New Services," AT&T Press Release, November 7, 2012. T-Mobile's capital spending (both in absolute amounts and as a percentage of revenues) also increased following the rejection of the AT&T merger. Comcast's capital investments are higher following their failed attempt to acquire TWC compared to the prior year's reporting period (second quarter 2015 Comcast capital expenditures totaled $1.971 billion, up from $1.798 billion in the second quarter of 2014).

The companies involved in this transaction have a combined enterprise value of $130 billion. Yet their claimed operational synergies amount to a mere $800 million.[46] Despite this pittance,[47] the Applicants are willing to take on an additional $27 billion in debt. The only way to make this calculus acceptable to New Charter's investors is substantial growth in future earnings from the combined company's exercise of market power. "Higher revenue per customer" is what Charter promises,[48] so the Commission should expect exactly that: higher prices.

D. This Transaction Would Substantially Increase Concentration in the National Broadband Market, Creating Coordinated Effects That Harm Consumers, Competition and the Public Interest

At its core, the Charter-TWC-BHN deal is about a local monopoly gaining market power in the national market for content origination and delivery. The transaction would result in New Charter almost equaling Comcast's current size, and that is the precise outcome that should deeply concern the Commission. Turning the national broadband market into a duopoly would confer additional market power not only on New Charter, but also on Comcast. This is due to what antitrust authorities label "coordinating effects."[49] And such effects are the basis for the Department of Justice's history of blocking mergers in concentrated markets, even when the transactions do not create a new leading firm but still increase concentration to an alarming level.

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[46] See Transcript of "Charter Announces Transactions with Time Warner Cable and Bright House Networks M&A Call," May 26, 2015.

[47] Applicants also would receive a tax benefit from the deal, meaning that U.S. taxpayers get the "benefit" of helping Charter and Time Warner Cable avoid about $2 billion in payments to the government. *See Id.*

[48] *Id*., Remarks of Chris Winfrey, Charter Communications, Inc., CFO ("The plan here is to grow the pro forma business fast, and that means we'll invest in high quality products and service with our own employees, sell superior product at attractive prices and grow customer relationships with more sales and less churn, and higher revenue per customer and higher revenue per passing as a result.").

[49] *See Merger Guidelines* § 7.

The one-way video delivery and two-way telecommunications services markets have become intertwined in the broadband era. Broadband networks have ample capacity to deliver a complete substitute for traditional multichannel video programming distribution ("MVPD") services. But the providers of broadband are also the providers of these MVPD services. Broadband is a near-monopoly market, with utility-level demand and insurmountable entry barriers, while video is a market increasingly subject to disruption – and that disruption is causing a decline in demand for legacy video delivery services and platforms. These factors combine to create complex incentives for the MSOs that are the primary broadband providers and MVPD service providers. Third-party, over-the-top ("OTT") or online video delivery ("OVD") services boost demand for higher-capacity broadband, but they also threaten MSOs' MVPD business, and video still serves as the primary source of MSO revenues and helps reduce churn.

As concentration in the national broadband market increases, it heightens the incentives and exacerbates the ability of the largest MSOs to harm *direct* OVD competition. And increased consolidation at the top facilitates the ability of all MSOs to ensure that OVD services remain a complementary product rather than a substitute for traditional MVPD services. This is the primary coordinated effect from this transaction that should concern the Commission.

i. Over The Top Video Competition is Materializing, but MSOs Maintain Enough Market Power to Slow its Development, and This Transaction Would Enhance Market Power at New Charter and Other Large MSOs

Cord-cutting, cord-shaving, cord-nevering, skinny bundles – whatever form of cord "grooming" you prefer, it is clear that a shift is happening in how Americans view television. Exactly what that shift is, however, is the subject of much debate.

What we do know is this: people love TV, but they hate the bloated and expensive pay-TV experience that cable and satellite companies offer.[50] Viewers have grown quite fond of the "time-shifting" capabilities enabled by DVRs and streaming services, as well as freedom from the commercial bombardment of linear pay-TV. People also like the "place-shifting" capabilities that streaming services offer, even if for many of them that place is just somewhere else in the house other than the couch in the den.

The rapid adoption of streaming services is nothing short of amazing, particularly considering the programming industry's ingrained hostility to stepping outside of the very profitable linear pay-TV model. More than half of U.S. homes with broadband are customers of a subscription online video service like Netflix, Hulu Plus or Amazon.[51] Netflix alone has more than 42 million U.S. streaming subscriptions, a figure that nearly doubled in the past three years. As of the end of 2014, 48 percent of U.S. broadband homes subscribed to Netflix, 17 percent to of those homes subscribed to Amazon Prime, and 9 percent subscribed to Hulu Plus.

These figures tell a very interesting story. First, nearly one-third of OTT-subscribing homes are paying for two or more such services. Second, the data shows that for most people, OTT is something they're buying in addition to a traditional pay-TV package. Thus it appears that the portion of people using paid or free OTT services in lieu of traditional pay TV remains small, despite the fact that a far larger proportion of consumers report strong desire to completely "cut the cord."[52] Reliable and up-to-date figures on this trend are hard to come by, but using

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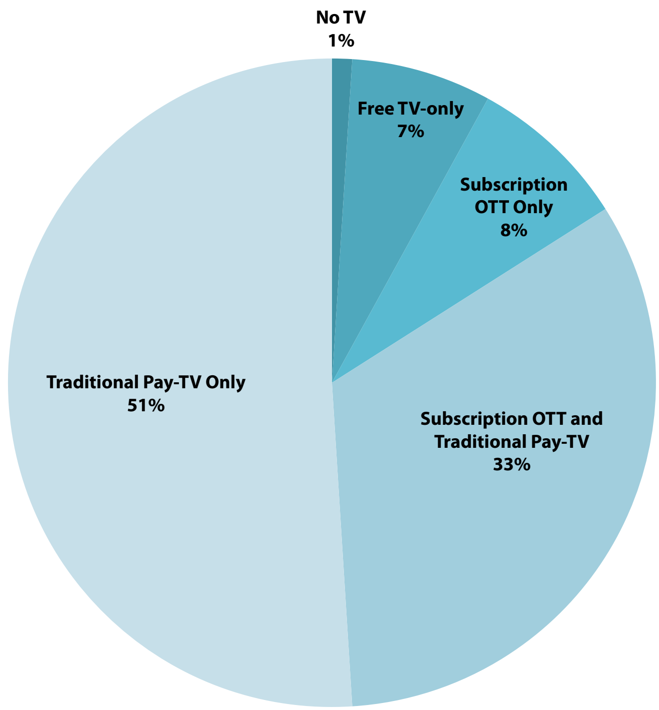
[50] *See, e.g.*, Jennifer Saba, "Americans prefer picking TV channels to buying bundles: Reuters/Ipsos," *Reuters*, May 7, 2015 ("A vast majority of Americans would prefer to assemble their own pay TV channels rather than subscribe to packages that include dozens or hundreds of networks, a new Reuters/Ipsos poll found in a challenge to traditional television distribution.").

[51] "The Total Audience Report: Q4 2014," Nielsen N.V., March 11, 2015.

[52] *See, e.g.*, Benny Evangelista, "Pay TV cord cutting accelerates as Netflix, Hulu rise, study says," *San Francisco Chronicle,* Sept. 16, 2015 ("Television viewers are now more likely than

various data sources we estimate that the percentage of U.S. households that subscribes to an OTT service but *not* to a traditional cable or satellite pay-TV service is approximately 8 percent. Another 33 percent of U.S. households subscribe to traditional pay-TV and one or more of these subscription OTT services. (See Figure 2).

Figure 2:
How U.S. Households Get Their TV



Source: Free Press Research estimates based on data from Experian Marketing, Nielsen Media Research, SNL Kagan and U.S. Census Bureau

Now, this data in no way suggests that substitution of traditional pay-TV with online services isn't growing at an impressive or meaningful rate. It is, particularly among younger households. A report from Experian last year found that cord-cutting or cord-nevering among households headed by a person younger than 35 occurred at nearly twice the overall average, and

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ever to cut their cable and satellite TV subscriptions because of Internet services like Netflix, according to a study released Wednesday. The study by research firm Frank N. Magid Associates found that the number of people likely to cancel their pay TV subscriptions in the next 12 months is still relatively small, but steadily increasing.").

that half of such households were likely to cut the cord in the near future.[53] The change in the number of pay-TV subscribers and in overall pay-TV adoption also suggests that the cord-cutting trend is primarily driven by the young. In 2009, pay-TV adoption peaked at 88 percent of households, declining to 84 percent by the end of 2014.[54] However, during this period the number of pay-TV subscriptions grew by about one-quarter million. The reason the adoption level declined is that the number of households grew by 5.3 million, dwarfing the quarter million new pay-TV subscribers. This suggests, in context with the other data, that as young people form their own households they do not sign up for traditional pay-TV services at the rate they would have a decade ago.

But while the cord-cutting data gets the most attention, the fact that four-fifths of OTT-subscribing homes still subscribe to pay-TV – despite continually escalating rates and reported frustration with the service – is very telling. That people are willing to pay even more for OTT in addition to their already expensive traditional service suggests a strong barrier to full OTT competition with MVPD services – and that barrier could end the dream of Internet-delivered TV giving consumers the choice and freedom they've long wanted but can't get from the traditional providers.

That barrier to pay-TV competition is a familiar one: the lack of broadband competition. In the past decade the MSO business model has transformed from one primarily focused on video delivery to one primarily focused on telecommunications. But despite the fact that cable MSO's MVPD subscriber-base is in decline, demand for video content is growing. Thus the pay-TV bundle remains an indispensable part of all ISPs' product offerings.

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[53] "Cross-device video analysis," Experian Marketing Services (2015), *available at* http://goo.gl/tpcb9u.

[54] Free Press estimates based on subscriber and occupied household totals supplied by SNL Kagan.

Take Charter for example. Even though it now has one million more broadband subscribers than pay-TV subscribers, telecommunications accounted for just 34.5 percent of the company's revenues in 2014, down slightly from the year prior.[55] The same trend is seen at smaller cable ISPs. Some 41 percent of Cablevision's 2014 revenues came from telecommunications, with just 22 percent coming from its high-speed data services. The company's CEO James Dolan noted the continued importance of pay-TV by analogizing his business to that of a bodega. "[W]e think that video is akin to the eggs and the milk in a convenience store," Dolan told investors. "You have to have it, but you don't make a lot of money on it. Now, connectivity is a whole other basket; it's more like the soda and chips aisle. And if you provide great connectivity because it provides great value to the consumer, you can differentiate yourself. And you can charge more. And the margins are good on it."[56]

The last part is an admission that policymakers would be wise to heed, as it is an admission of market failure. It's well known to investment analysts that the broadband business is essentially a license to print money. Dolan himself estimated that the profit margins for broadband are some 7-times higher than those for pay-TV.[57] And while margins for pay-TV are in decline as programmers increase the fees they demand from cable companies, margins for broadband continue to grow. SNL Kagan recently noted that the operating profit margins for

[55] In 2014, Charter brought in $9.108 billion in total revenues, of which $3.151 billion came from voice and data services. In 2013 Charter brought in $8.155 billion in total revenues, of which $2.83 billion came from voice and data services.

[56] Comments of Jim Dolan, Cablevision Systems Corporation, Director and CEO, Q1 2015 Cablevision Systems Corp. Earnings Call, May 4, 2015.

[57] *See* Rob Pegoraro, "Big Cable CEOs Insist Viewers Like Their Bundles, but the Tide Is Turning," *Yahoo! Tech*, May 7, 2015.

broadband at the top cable companies are at an astronomical 61 percent, while margins for pay-TV continue to decline, hovering near 14 percent.[58]

These are not surprising results considering the realities of the cable industry's ISP and pay-TV businesses. On the ISP side, they have very low capital costs because they're offering broadband over networks that were largely constructed and paid for more than a decade ago.[59] Their marginal costs on the ISP-side are nearly non-existent. And most important, cable broadband providers face almost no competitive pressures from other ISPs. Things are different on the pay-TV side, where cable providers face competition from two satellite TV providers, as well as telco TV competition in about half the country.[60] In pay-TV, the content owners hold substantial power, reaping the lion's share of the profits that once belonged to the cable distributors.[61]

Cablevision's admission of the industry's monopoly pricing power in broadband is important, but Dolan's eggs and milk analogy for pay-TV suggests correctly that consumers still

[58] Tony Lenoir, "Cable video margin stuck in lower teens despite uptick," *SNL Kagan*, Aug. 11, 2015.

[59] *See* Comments of Free Press, *In the Matter of Protecting and Promoting the Open Internet*, GN Docket No. 14-28, at 106-110 (July 17, 2014) ("Actual plant investments (line extensions and upgrades/rebuilds) comprised 67 percent of the industry's capital investments in 1996. This peaked at 71 percent in 1999, and then declined sharply.").

[60] In the one-quarter of the country where AT&T offers U-verse TV service, the number of potential multichannel competitors is three (DISH, the combined DirecTV/AT&T, and the incumbent MSO, excluding small pockets of overbuilding) compared to a potential of four where the ILEC (*e.g.*, Verizon FiOS, CenturyLink Prism) offers multichannel services.

[61] According to SNL Kagan, the video segment margin for the top 3 cable distributors (Comcast, TWC, Charter) was 32 percent in 2007, falling by half to less than 17 percent in 2014. During this time the total amount of affiliate fees paid by cable distributors to basic cable channel owners nearly doubled, with cash flow margins for that industry increasing to nearly 40 percent (the industry total masks the impressive growth seen at the leading networks. For example, Fox News' cash flow margin has increased by two-thirds since 2007; ESPN's has increased by 14 percent; TNT's by 18 percent). The fees that cable distributors pay local broadcast stations (retransmission fees) also grew substantially during this time. In 2007 cable distributors paid the top 16 station group owners approximately $300 million in retransmission fees; by 2014 this had increased more than 12-times over to $3.8 billion.

demand video, and they're far more likely to buy it from their broadband ISP in a bundle. Dolan's statement also reflects the reality that even though it is in decline, pay-TV is a must-offer service for ISPs. This is not simply because consumers are conditioned to buy their communications and media services in bundles. It is because pay-TV still brings in substantial revenues and cash-flow, something providers need to maintain their overall cash flows and stock valuations (and, for those companies that make them, dividend payments).

Furthermore, the pay-TV part of the bundle helps reduce churn, increasing the value of the customer to the ISP and lowering its costs.[62] The bundle forms an inherent barrier to switching, and that matters more and more to providers, because an appreciable number of consumers are thinking broadband first and TV second whereas before it was bundle only.[63]

Just as some grocers are willing to take a low profit on milk in order to get customers in the door and gouge them on other prices, so too are cable providers willing to take leaner profits on TV in order to monopolize the broadband market. This not only harms broadband customers, but also ultimately creates a nearly insurmountable barrier to pay-TV competition.

Cable companies like Charter thus remain in the catbird seat. Cord cutting is a misnomer, because the "cord" cannot be cut. Even if you want to get all your TV online, you still need broadband, and your cable company is likely the only one offering that service. This is

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[62] *See, e.g.*, Jeffrey Prince and Shane M. Greenstein, "Does Service Bundling Reduce Churn?" (April 2013), *available at* http://ssrn.com/abstract=1966221.

[63] Verizon CFO Fran Shammo noted this trend in a description of a trial the company conducted. "[W]e did a broadband test where we gave apartment goers – you could get much more speed and less TV, or a lot of TV and less speed. And the majority of the people took as much speed as they could get with less TV. So people want the speed of broadband to be able to consume their content through over-the-top or through the Web or through wireless. But they still enjoy watching certain programs; but they don't want to pay for all the channels if they are only watching 17 on average. And sometimes they are only willing – people only want sports. That's all they want." *See* Comments of Fran Shammo, Verizon Communications Inc., Chief Financial Officer, JPMorgan Global Technology, Media and Telecom Conference, May 19, 2015.

particularly true for New Charter, which would face no ILEC fiber competitor in more than 60 percent of its service territory.

ii. Large MSOs Can Stave Off OTT Competition By Using Their Market Power In Broadband To Cross-Subsidize Their Video Services, and This Transaction Would Enhance Charter and Other Large MSO's Ability to Harm OVD Competition in This Way

As many customers fed up with traditional pay-TV have discovered, going over-the-top often offers little to no savings over the cable company's bundle. This is in part due to the MSO's ability to use monopoly-level broadband profits to cross-subsidize their video services, reducing the ability of OVDs to compete on a fair basis. This ability to cross-subsidize is greatest at the largest MSOs, and they also have the greatest incentives to do so. Take for example Verizon's recent offering of so-called "skinny bundles," a slimmed down version of the typical MVPD package that offers a small degree of user choice. Executives at Comcast, Time Warner Cable and AT&T (the three largest pay-TV providers in the country) – all expressed skepticism about Verizon's Custom TV service. But smaller pay-TV operators embraced the move. This is further evidence that national scale in pay-TV and broadband combine to perpetuate the old bloated pay-TV bundle model, where consumers are not able to express demand, and are forced into a system of hidden cross-subsidies that ultimately reduce innovation and competition.

These anticompetitive cross-subsidies become quite apparent as consumers interested in dropping their traditional MVPD services in favor of an OTT alternative compare the price of a traditional bundle with that of a "synthetic" bundle made up of standalone broadband and OVD services. For most customers, adding their broadband company's TV package to their Internet service won't cost much more. It may in fact cost less to take the ISP's TV service. For example, Comcast markets its standalone 25 Mpbs downstream "Performance" Internet service at $67 per month. But for $45 per month, a customer can get the 25 Mbps Internet service *plus* a TV package that includes HBO, local channels, and access to "Streampix," Comcast's online video service. This is a promotional rate, but according to the fine print the price for year two is $65, still lower than the cost of standalone Internet access at the same speed. If the customer wants the popular cable channels, she can purchase Comcast's 140-channel TV+Internet "Starter" package for $80 per month, just $13 more than the price for broadband alone.[64]

At these price points, it's hard to fathom how a pure over-the-top multichannel competitor like DISH's $20 per month Sling TV can be a viable competitor to the traditional cable companies. The company that owns the broadband pipe has an advantage that no over-the-top competitor can match: it can charge a high price for broadband, since it faces almost no competition, and use those supra-competitive profits to cross-subsidize its low-margin pay-TV service. This means that even if a new OTT entrant is willing to operate at a near-altruistic profit margin, it still won't be able to beat the traditional cable company's pay-TV prices. OTT providers may be able to capture a small share of consumers fed up with bloated bundles, but the fact that major providers are offering similar packages for less than the cost of standalone broadband suggests the incumbents can fend of competition at the low-end too.

The ability of ISPs to cross-subsidize TV with broadband profits, and offer an "always-on" no-hassle pay-TV service, is a near-insurmountable barrier to true video competition – a fact increasingly recognized by those who want to take on the traditional cable providers. Former DirecTV CEO Mike White told analysts asking about the future of satellite TV companies and their prospects in the OTT market that "[i]t's not at all clear to me that just an over the top

[64] Offers available for new Xfinity customers, as shown on Comcast's website, accessed September 2015.

product is going to be all that attractive financially a proposition, if you're not selling broadband . . . ."[65]

White's statement reflects the reality that the lack of competition in the broadband market hurts not just broadband customers, but competition in the video market too. This lack of last-mile competition not only distorts competition and investment in the adjacent pay-TV market, but it also results in the classic monopoly behavior of reduced output and above-cost pricing. Charter offers an interesting example of this. It only offers one tier of broadband service, a 60 Mbps package that has a 12-month promotional rate of $39.99 per month, increasing by $10 per month in the second year and by $20 per month in month 25.[66] Less than two years ago Charter's sole offering was a 30 Mbps tier for a promotional rate of $29.99 per month. Prior to paring down its offerings to a single tier, Charter offered a range of standalone broadband tiers, with its entry-level service starting at $19.99 per month. But during this time when it moved away from serving all parts of the demand curve, it managed to increase its overall broadband segment operating margin from 55 percent in 2011 to 63 percent in the first half of 2015.[67] Thus Charter now apparently has the ability to serve only a fraction of the demand curve, eschewing those customers that would prefer a less robust offering at a lower monthly price. That Charter can grow its already high broadband margins while increasing prices and reducing the number of service tiers is a clear manifestation of its market power.

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[65] Comments of Mike White, The DIRECTV Group, President and CEO, Q1 2015 DIRECTV Group Earnings Call, May 5, 2015.

[66] Offers for new Charter Spectrum customers, as shown on Charter's website, accessed October 2015. Charter's promotional rate increases to $49.99 for months 13-24, and to $59.99 or more ($59.99 is the current "standard" rate) after that.

[67] *See* Tony Lenoir, "Cable video margin stuck in lower teens despite uptick," *SNL Kagan*, Aug. 11, 2015; *see also* "Cable MSO Margin Analysis by Product - Historical Benchmarks," *SNL Kagan*, Mar. 26, 2013.

And approval of this transaction would only make things worse for consumers. Much of the success of OTT providers like Netflix and Sling is due to the fact that the traditional cable TV distributors have been slow or unwilling to give consumers what they demand: lower prices, time-shifting, place-shifting, library content, and user-friendly interfaces untethered to expensive set-top-boxes. The cable TV industry's OTT effort, TV Everywhere, is largely regarded as a failure not just because you have to purchase linear pay-TV service to access it online, but also because it's a fragmented, tech-unsavvy offering. But cable's catching on, and can make a few additional cosmetic gestures to keep customers in the traditional bundle. Indeed, the New York Post reported that Charter's John Malone "wants to fix this and get TV Everywhere up in the US, in Europe and in Latin America before subscription video-on-demand distributors come in with their content."[68]

If regulators continue to ignore the broadband competition problems, fail to confront the cross-subsidy issue, and make matters worse by approving this transaction, Malone and his industry will get their wish. They can use their captive broadband customers to subsidize their TV services, driving OTT players out of the market and keeping the cozy cable cabal intact.

Applicants argue that new entrants like Google Fiber and telco-TV companies like AT&T and Verizon will offer enough broadband competition to halt the cable industry's march to monopoly.[69] This is the familiar refrain from cable monopolists when speaking to regulators. But the economic realities are undeniable. When our nation became a broadband duopoly a decade ago or more, consumers were given hope in the form of competition from a wireless "third pipe." This competition never came. Now that we're trending towards a cable monopoly, consumers are

[68] Claire Atkinson, "Malone's on a mission to beat back Netflix," *New York Post*, May 26, 2015.

[69] *See, e.g.*, Application at 60.

told to hold out hope for a *second* truly high-speed pipe in the form of fiber overbuilding by new entrants or ILECs. But this hope is misplaced too. The economics are clear: for the majority of the country, the cable MSO will now and for the foreseeable future be the only option for advanced telecommunications services, and that combined with the MSO's ability to cross-subsidize frustrates meaningful competition in the video market.

iii. The Broadband Market is a Natural Monopoly, and Further Consolidation Will Not Promote Network Investment Above Present Trends

For the better part of the 20th century, telecommunications networks and cable television networks were viewed as a natural monopoly.[70] Advances in optical switching and wireless technologies necessitated some changes in that view. Microwave technology lowered the cost of signal transmission, opening the door to competition in the long-distance telephony market. One-way satellite technology enabled competition in the pay-TV market that was once monopolized by cable. Advances in fiber optics enabled new competition in the transmission of voice and data communications between cities and by large businesses. Many Americans replaced their landline phone with a cell phone.

What hasn't changed, however, is the fact that most Americans have at most one or two telecommunications wires attached to their homes. One is a wire owned by the longtime monopoly phone incumbent, and the other is a wire owned by the longtime monopoly cable company. Technology did enable the cost-effective transformation of the one-way cable wire into a high-capacity two-way telecommunications system. But technology has yet to solve the

[70] "[Natural monopoly] does not refer to the actual number of sellers in a market but to the relationship between demand and the technology of supply. If the entire demand within a relevant market can be satisfied at lowest cost by one firm rather than by two or more, the market is a natural monopoly, whatever the actual number of firms in it." Richard A. Posner, Natural Monopoly and its Regulation, at 1 (30th Anniversary Ed., 1999).

distance-related capacity limitations inherent in the phone company's copper wire, or the challenging natural monopoly economics of replacing this copper wire with fiber.

The subject of broadband investment is much discussed, but rarely well understood. What often goes unmentioned is the fact that the overwhelming majority of capital expenditures made by retail Internet service providers today are not investments in their last-mile networks, but purchases of consumer premise equipment ("CPE") or network operation equipment located in the headend (*e.g.*, modems, Wi-Fi routers, set-top boxes, cable modem termination systems, cloud DVR servers, etc.). In other words, very little of the investment in retail telecommunications networks goes to the natural monopoly portions of the network.

Market power in the last-mile also distorts competition and investment in the portions of the network outside of that last-mile – *e.g.*, the CPE and network operation segments. This market power leads to an inefficient allocation of resources, reduces competition, and harms innovation across the communications ecosystem.

The MSO industry offers an instructive example on these investment ratios. All publicly traded cable companies report their capital investments to the SEC, broken down by segment, per an industry-agreed upon standard set more than a decade ago. These categories of capital spending include amounts allocated to the last-mile (labeled as "line extensions"[71] and

[71] In its SEC filings, Time Warner Cable describes capital expenditures for line extensions as "costs incurred to extend TWC's distribution network into a geographic area previously not served. These costs typically include network design, the purchase and installation of fiber optic and coaxial cable and certain electronic equipment." Charter defines them as "costs associated with entering new service areas (e.g., fiber/coaxial cable, amplifiers, electronic equipment, make-ready and design engineering)." When Comcast last reported for this category, it defined line extensions as "costs of extending our distribution system into new service areas. These costs typically include network design, the purchase and installation of fiber-optic and coaxial cable, and certain electronic equipment."

"upgrades/rebuilds"[72]), capital for network operation (termed "scalable infrastructure"[73]), and non-network expenditures (called "support capital"[74] and "consumer premise equipment"[75]).

As we show below in Figure 3, the portion of cable industry capital expenditures devoted to the last-mile has declined ever since the early 2000s, when cable providers finished the initial upgrades of their systems from a satellite-coaxial architecture to a hybrid fiber-coaxial structure. In 2003, last-mile capital expenditures accounted for more than a third of the capex of the top-four cable firms, but that figure was down to 12 percent in 2014. SNL Kagan estimates that last-

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[72] In its SEC filings, Time Warner Cable describes capital expenditures for upgrades and rebuilds as "costs incurred to upgrade or replace certain existing components or an entire geographic area of TWC's distribution network. These costs typically include network design, the purchase and installation of fiber optic and coaxial cable and certain electronic equipment." Charter defines them as "costs to modify or replace existing fiber/coaxial cable networks, including betterments." When Comcast last reported for this category, it defined upgrades and rebuilds as "costs to enhance or replace existing portions of our distribution system, including recurring improvements."

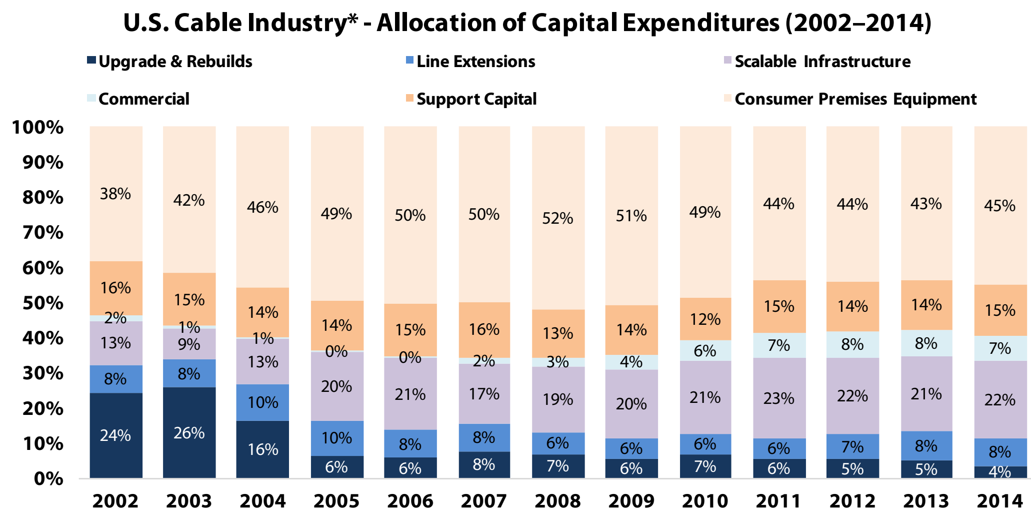
[73] In its SEC filings, Time Warner Cable describes capital expenditures for the scalable infrastructure category as "costs incurred in the purchase and installation of equipment that controls signal reception, processing and transmission throughout TWC's distribution network, as well as controls and communicates with the equipment residing at a customer's home or business. Also included in scalable infrastructure is certain equipment necessary for content aggregation and distribution (video-on-demand equipment) and equipment necessary to provide certain video, high-speed data and voice service features (voicemail, email, etc.)." Charter defines them as "costs not related to consumer premise equipment, to secure growth of new customers and revenue generating units, or provide service enhancements (e.g., headend equipment)." When Comcast last reported for this category, it defined scalable infrastructure as "costs incurred to secure growth in customers or revenue units or to provide service enhancements, other than those related to CPE. Scalable infrastructure includes equipment that controls signal reception, processing and transmission throughout our distribution system, as well as equipment that controls and communicates with the CPE residing within a customer's home. Also included in scalable infrastructure is certain equipment necessary for content aggregation and distribution (video on demand equipment) and equipment necessary to provide certain video, high-speed Internet and phone service features (e.g., voice mail and e-mail)."

[74] In its SEC filings, Charter defines capital expenditures for support capital as "costs associated with the replacement or enhancement of non-network assets due to technological and physical obsolescence (e.g., non-network equipment, land, buildings and vehicles)."

[75] In its SEC filings, Charter defines capital expenditures for consumer premise equipment as "costs incurred at the customer residence to secure new customers and revenue generating units, including customer installation costs and consumer premise equipment (e.g., set-top boxes and cable modems)."

mile investment (*i.e.*, line extensions, upgrades and rebuilds) comprised 67 percent of the cable industry's capital investments in 1996, peaked at 71 percent in 1999, and then declined sharply.

Figure 3:



* Data for Comcast, Time Warner Cable, Charter, Cablevision, as well as historical data for acquired systems of Adelphia and Insight Communications. *Source: Free Press estimates based on company SEC filings and data from SNL Kagan*

Figure 4 below shows the growth rates for each of these segments. After adjusting for inflation, we see that the commercial segment (which is only reported by Comcast and Cablevision, reflecting their investments targeted strictly at enterprise customers) is growing sharply, even though it accounts for just 7 percent of the industry's top-four firms' total capital spending. This comes as no surprise, given the ability of cable providers to leverage and extend their existing infrastructure into dense business districts, and the quick returns on these investments. The high revenues earned from enterprise customers combine with lower deployment costs in high-density areas to reduce the natural monopoly economic advantages of the ILECs' last-mile networks in these special geographic and commercial product markets. As discussed below, outside of this specialized context, cable's investment in broadband networks and especially in last-mile connections has dropped sharply.

Figure 4:
U.S. Cable Industry* Investment:
Growth Rates by Segment (2002–2014)

Segment	Compound Annual Growth Rate
Upgrade & Rebuilds	-13.3%
Line Extensions	1.4%
Scalable Infrastructure	6.5%
Commercial	15.3%
Support Capital	1.2%
Consumer Premises Equipment	3.1%
All Cable Industry Capital Expenditures	1.7%

* Data for Comcast, Time Warner Cable, Charter, Cablevision, as well as historical data for acquired systems of Adelphia and Insight Communications. *Source: Free Press estimates based on company SEC filings and data from SNL Kagan*

The next largest area of growth is in scalable infrastructure – the cloud DVR servers and other network operation equipment located in the system's headend or other non-last-mile facility. Though this category includes investment in network operations, investments in scalable infrastructure are not investments in the natural monopoly portion of the network. While incumbent cable system owners are the only firms investing in scalable infrastructure to connect directly to the cable network, this is merely a reflection of the vertical integration between the last-mile and the services it enables. Certainly if cable companies typically offered wholesale last-mile access and co-location in the headend for the networking equipment of third-party ISPs, over-the-top video providers, VoIP providers and other information service providers, the incumbent's needs for the scalable infrastructure segment would look different. And such third-party investment would be economically efficient, unlike overbuilding the last-mile itself.

Consumer Premise Equipment continues to account for the overwhelming majority of cable industry capital investments, despite policies designed to decouple this potentially highly-competitive segment of the market from the monopoly network services. From 2002 to 2014, CPE expenditures by the top four cable companies grew from \$4.1 billion to \$6 billion, accounting for 45 percent of the sector's capital investments. The return on these investments is quite good. For example, Comcast recently increased the rental fee for its home Wi-Fi gateway from $7 per month to $9.95 per month. Similar devices can be purchased at retail for less than $130. Thus Comcast recovers its equipment investment in a year's time (or less), with the total return on invested capital exceeding 100 percent in the device's second year of use.[76]

Major U.S. cable companies spent just over $1 billion in line extensions in 2014, up from $860 million in 2002. Investment in new lines tracks general economic and housing unit growth, rising to $1 billion in 2007 and declining to less than $600 million in 2011 before growing again. The overall compound annual growth rate since 2002 for this segment is 1.4 percent. This rate is nearly identical to the compound annual growth rate in the number of customer locations passed (1.5 percent), and largely reflects the fluctuation in new housing starts as well as the enterprise-targeted deployments of cable providers who do not separately report investments in the commercial segment.

By contrast, the amount of capital spent on upgrading existing lines declined nearly six-fold over the last dozen years, from $2.6 billion in 2002 to just $480 million in 2014. This equates to a compound annual growth rate of negative 13.3 percent.

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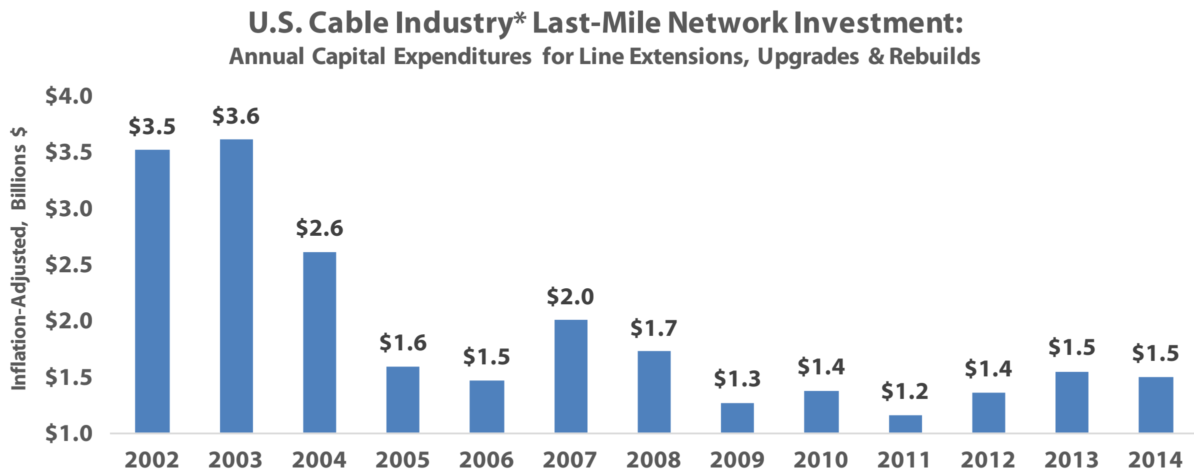
[76] The same is true for CPE used for pay-TV. *See, e.g.*, *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992*, Report on Cable Industry Prices, MM Docket No. 92-266, ¶ 22 (May 16, 2014). This annual Federal Communications Commission survey noted that "most equipment prices increased on an annual basis. Increases in the overall price for the most commonly leased equipment ranged from 4.4 percent for basic service, to 4.2 percent for expanded basic, to 3.9 percent for the next most popular service." These increases come despite the massive decline in the costs seen in every other consumer electronics market, suggesting the cable industry's historic vertical integration and control over set-top boxes has created a market failure – one not seen in the retail market for broadband CPE (*e.g.*, the retail market for modems and Wi-Fi equipment is highly competitive, while the retail price for set-top boxes is not).

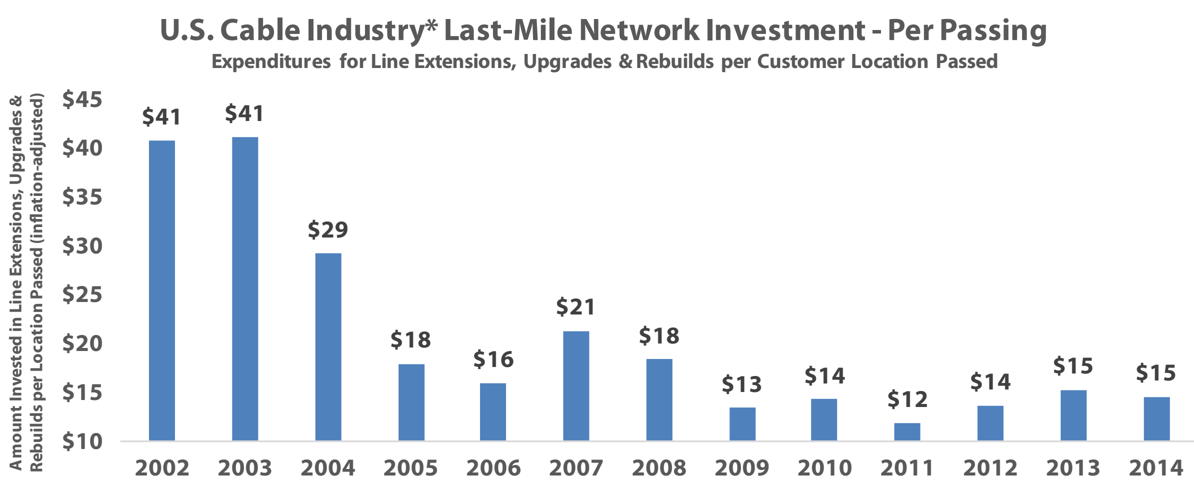
Overall investment in the last-mile (i.e., line extensions, upgrades and rebuilds) by the leading firms declined from $3.5 billion in 2002 to $1.5 billion in 2014 (see Figure 5). On a per-location passed basis, last-mile investment declined from $41 per passing in 2002 to $15 per passing in 2014 (see Figure 6).

Figure 5:



* Data for Comcast, Time Warner Cable, Charter, Cablevision, as well as historical data for acquired systems of Adelphia and Insight Communications. *Source: Free Press estimates based on company SEC filings and data from SNL Kagan.*

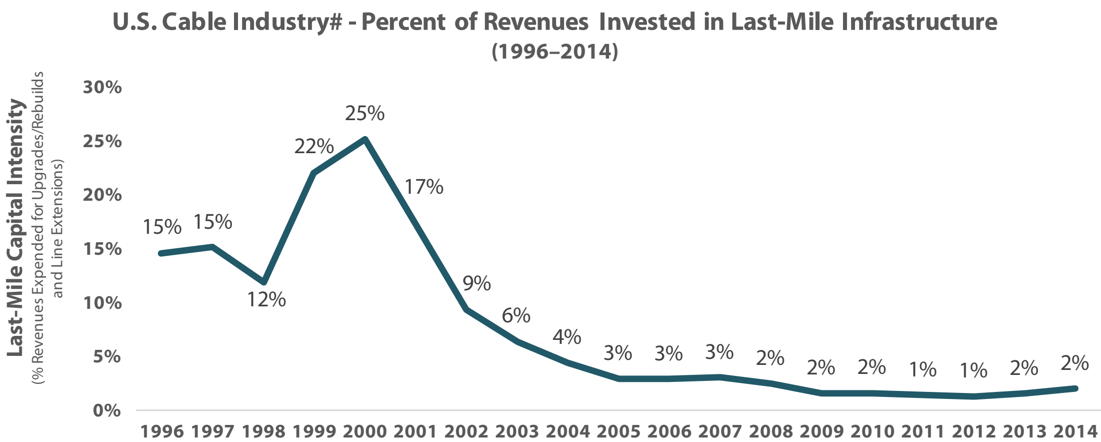
Figure 6:



* Data for Comcast, Time Warner Cable, Charter, Cablevision, as well as historical data for acquired systems of Adelphia and Insight Communications. *Source: Free Press estimates based on company SEC filings and data from SNL Kagan.*

The U.S. cable industry's revenues however, are decidedly not in decline. The revenues of the top four firms have seen a compound annual growth rate of nearly 8 percent since 2002, increasing from $33.6 billion to $82.2 billion last year. This increase in revenues and the decrease in line extension and upgrade investments combined to reduce dramatically cable's last-mile "capital intensity," or percentage of revenues re-invested in the physical plant. In 2000 cable companies invested 25 percent of revenues in the last-mile. In 2014, only 2 cents of every dollar in revenue was invested back into the physical plant (see Figure 7).

Figure 6:



Data in this figure are based on estimates for entire cable industry. *Source: Free Press estimates based on data from SNL Kagan, company SEC filings*.

These data reflect a simple fact of network economics that rarely receives attention in telecommunications policy discussions: once an advanced hybrid fiber-coaxial network is built, it does not need to be continually rebuilt. Deployment of additional capacity is a matter of upgrading the electronics at the ends of the wires, which is something that can be done with little incremental investment, but enables substantial additional revenue generation. Indeed, even when including the scalable infrastructure spending with investment in upgrades, rebuilds and line extensions (together "total network investment"), we still see an inflation-adjusted decline in annual capital investment over the past 12 years, from $4.9 billion to $4.4 billion. This decline in total network investment is remarkable given that it occurred as cable providers deployed

DOCSIS 3.0 cable modem technology, converted systems to all-digital, deployed fiber to greenfield housing, and made other network improvements.

The cable industry's cheap upgrade path stands in stark contrast to that of the incumbent phone companies or other new entrants. This is primarily because of the substantial distance-related limitations in the phone company's twisted-pair copper wire used in the last-mile. Copper can be used to deliver DSL with speeds that are sufficient for pay-TV delivery and Internet access, but only if the phone company deploys fiber very close to the customer. This "fiber-to-the-node" (FTTN) strategy (exemplified by AT&T's U-verse service), while cheaper than full fiber-to-the-home (FTTH) deployment, is nothing more than a stopgap strategy. Phone companies must deploy FTTH in order to compete effectively with cable. But while full fiber deployment would preserve the telcos' competitive market position, any such investment on a meaningful scale would be punished by the Wall Street hive mind, which punished Verizon when it first announced its FiOS expansion plans. Institutional investors would rather the phone companies exploit their market power in the high-margin wireless sector, not spend capital to compete with cable's emerging broadband monopoly.

Charter provides a good example of the declining upgrade cost curve enjoyed by cable providers. Starting in 2013-2014, Charter upgraded its entire network to all-digital systems, doubling the speed of its only broadband tier. And it accomplished this increase in network capacity while decreasing its network investments each year (its spending on line extensions and upgrades/rebuilds was $404 million in 2012, $402 million in 2013, and $343 million in 2014).

Because Charter charged more for its only broadband tier, the percentage of its communications revenues spent on the network declined from 6 percent to 4 percent during this time.[77]

The ability to offer more speed and charge more money, while spending less to do it, is unique to the cable industry. Cable is able to pull off this feat because of the inherent advantages in the existing hybrid fiber-coaxial network, which was largely built during the 1990s. Unlike the telephone companies, who need to dig up the streets before they can offer fast broadband, cable companies just need to change out the electronics at the ends of their existing coaxial wires. This cost, when spread out across an entire customer base, is very low. As a Comcast executive said in 2007 prior to the start of the company's upgrade, "Cable can go deploy DOCSIS 3.0 for a couple billion dollars – It's the kind of money we can find in the sofa cushions."[78]

In the era of streaming video, which accounts for about half of all U.S. traffic,[79] slow DSL services simply can't compete with cable's speed and network cost advantages. Since the beginning of 2008, telcos have lost more than 14 million first-generation DSL subscribers (i.e., asymmetric or "aDSL," which typically maxes out at 3 to 6 Mbps downstream). And it is no surprise why. If a customer lives in an area where her choice is between a 3 Mbps DSL for $30 per month or a 60 Mbps cable modem service for $40 per month, she's likely to choose the latter.

This performance gap, and the cable companies' ability to offer TV+Internet access bundles, is why their broadband growth numbers remain so impressive despite the fact that cable Internet access services are usually priced higher than aDSL. In the second quarter of 2015, cable MSOs accounted for 142 percent of U.S. broadband growth, with telcos' stagnation driven by the

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[77] In 2012, Charter's communications service revenues were $6.991 billion, increasing to $8.587 billion in 2014.

[78] *See* Karl Bode, "DOCSIS 3.0 Can Be Funded By 'Couch Change'," DSL Reports, May 9, 2007.

[79] Global Internet Phenomena, Latin America & North America, Sandvine, May 2015.

decline in subscription to their slow DSL services. First-generation DSL services now account for less than 13 percent of the broadband market, down from 41 percent in early 2008.[80]

Some telcos have deployed fiber services (FTTH or FTTN), which are now available to about half the country. Where these triple-play-capable services are available, broadband customers are still just about evenly split between the incumbent telco and cable providers. But this partial duopoly may be ephemeral, as true fiber-the-the-home telco services are available in less than 20 percent of the country; the other 30 percent have the telco's stopgap fiber-to-the-node VDSL ("vectored digital subscriber line") service, which in most cases is only capable of delivering downstream speeds below 25 Mbps – speeds that decline substantially if the TV is on while the customer uses the Internet.

Contrary to Applicants' assertions, the consumers that live in what would become New Charter's broadband monopoly service area (including the 29 million customer locations it would serve that have no FTTN or FTTH alternatives), and those that would lack true fiber competition (the 43 million customer locations it would serve that have no FTTH alternatives), should not hold their breath waiting for the telcos or Google Fiber to bring competitive relief. Verizon has repeatedly said it's not expanding its FiOS FTTH service beyond its existing 20-million location footprint.[81] AT&T and CenturyLink, the other two major telcos, will never deploy true fiber in any substantial amounts beyond their existing geographically limited plans, and their FTTN footprints are largely complete. Google and muni fiber get plenty of press attention, but they are still a tiny blip on the map.

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[80] Free Press estimates based on publicly reported company data.

[81] *See, e.g.*, Comments of Fran Shammo, Verizon Communications Inc., Chief Financial Officer, Q4 2014 Verizon Communications Inc. Earnings Call, Jan. 22, 2015. ("I have been pretty consistent with this in the fact that we will spend more CapEx in the Wireless side and we will continue to curtail CapEx on the Wireline side. Some of that is because we are getting to the end of our committed build around FiOS, penetration is getting higher.").

Given Verizon's success with FiOS and the decline of DSL, it begs the question why the other telcos don't upgrade to compete (or outcompete) cable? The answer is Wall Street and its institutional loathing of capital investment.

Angst over FiOS's capital cost pushed Verizon's stock down 25 percent in 2005, and it dropped again in the Fall of 2006 when the company announced its final goal of 18 million passings.[82] Even though today Verizon's all-fiber investments are a clear market winner compared to AT&T's FTTN U-verse investments, investors haven't changed their thinking. (Where Verizon FiOS TV services are available, the company has 36 percent of the market, compared to just 22 percent for AT&T's U-verse TV in its service areas).[83] This aversion to future-proofing is especially odd when the same institutional investors have no problem with the massive debt these companies ring up to finance their expensive merger appetites.

Consider that Wall Street investors punished Verizon for its plans to spend a total of $18 billion over eight years on FiOS (which turned out to be less than $15 billion, and has lead to fiber-related cost-savings and substantial new revenues that Verizon continues to enjoy).[84] But investors reacted positively when Verizon spent $60 billion in cash (plus another $70 billion in stock/debt) to acquire Vodafone's 45-percent ownership share of Verizon Wireless. Wall Street also had no problem with the near-$70 billion price tags of the Comcast-Time Warner Cable and AT&T-DirecTV deals, and reacted positively to the near-$90 billion total price tag (counting cash, stock and debt) of Charter's latest consolidation effort at issue in this docket.

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[82] *See, e.g.*, Ken Belson, "Verizon Loses Some Edge Atop the Bells," *New York Times*, Dec. 28, 2005; *see also, e.g.*, Jim Duffy, "Verizon provides FiOS update," *Networkworld*, Sept. 27, 2006.

[83] *See* AT&T Inc. Q1 2015 10-Q; *see also* Verizon Communications Inc. Q1 2015 10-Q.

[84] In 2006, Verizon estimated the total net cost of the FiOS project at $18 billion. However, the marginal change in the company's wireline segment spending from the 2003 baseline during the 2003–2010 period was under $15 billion. *See* Verizon Communications Inc. FiOS Briefing Session, Sept. 27, 2006, at slide 40.

This aversion to investment, and the resulting lack of last-mile investment on the part of the telcos, comes despite the low interest rates for capital resulting from Quantitative Easing (QE), and the bonus depreciation tax policies implemented as a part of the 2009 economic stimulus. QE and bonus depreciation combine to reduce the effective cost of last-mile fiber deployment, which shortens the time it takes for a firm to recover its invested capital. Despite this favorable investment climate, we've seen little telco FTTH deployment (outside of what Verizon committed to in 2005, and AT&T's cherry-picking of high value areas), no incumbent cable company network expansion outside of their existing footprints, nor any meaningful third-party overbuilding.

Broadband is a very profitable service, with operating income margins for cable ISPs currently above 60 percent and rising. Despite this, despite access to low-interest capital, and despite the tax benefits of bonus depreciation, last-mile investment is in decline, as is competition.

So even though the telcos are literally leaving money on the table in the long-run by avoiding fiber deployments, unless there are major public policy changes that change the investment calculus for the better, there will not be any appreciable last-mile deployment other than targeted upgrades. Verizon's CFO made this clear, telling investors last year that "[o]utside of FiOS where I only have copper to compete against cable, I am not going to win that battle. We can't compete on speed and we made a strategic decision not to invest in that copper plant so now it's trying to maintain that and keep customers as long as we can."[85]

The consequences of the telcos' forfeit, the cable providers' unwillingness to compete outside of their incumbent service territories, the continued dearth of third-party overbuilding,

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[85] Comments of Fran Shammo, Verizon Communications Inc., Chief Financial Officer, at UBS Global Media and Communications Conference, Dec. 8, 2014.

and policymaker's lack of interest in cable's monopoly broadband position, will be felt by users in the form of higher prices and continued poor customer service. Cable ISPs have market power and are likely to use it.[86] This transaction would enhance Charter's market power, and the massive amount of new and high interest debt it is taking on provides substantial incentives for it to exercise that market power, both unilaterally on its customers and alongside other MSOs as they take measures to frustrate OVD competition.

IV. Applicants' Claimed Public Interest Benefits Are Non-Merger Specific, Non-Cognizable, and Would Not Outweigh the Adverse Competitive Impact of This Transaction

Applicants fail to establish that the transaction would create any merger specific benefits. All they offer are vague claims of scale-related savings that, they claim, economic theory suggests would be passed along to consumers. They do not quantify these supposed savings in the Application itself, because if they did exist they would be insignificant in size, and dwarfed by the transaction's massive additional debt. Applicants also do not confront the fact that the transaction is occurring in a largely monopoly market. This means that any scale-related efficiencies would accrue to the Applicants, not their customers. And it also means that customers of New Charter would be forced to pay a "debt premium" well above what a competitive market price would be for its services.

Applicants make no claims that the transaction would lead to lower prices, or even that future price increases would be less than what present trends would produce in the absence of the merger. The best they offer is a general claim from an outside consultant that because there is minimal geographic overlap between the parties, "there can be no change in the post-merger

[86] "Prior to late 2014, our positive view on the US cable industry was driven by the belief that the capabilities of their 'pipes' into consumers' homes were far superior to DSL, essentially enabling a largely unregulated monopoly." *See* Richard Greenfield, BTIG, Jan. 14, 2015.

firm's incentives to unilaterally increase prices to subscribers."[87] This conclusion does not factor in the merger's massive new debt. The new debt itself changes the firm's post-merger incentives to unilaterally increase prices, and the lack of local competition makes it easy to do so. Furthermore, the merger's concentration of the national broadband market makes it easier for the firm to increase prices indirectly, in coordination with other ISPs.[88]

The only concrete claims of a benefit Applicants offer are extremely short commitments to "submit" interconnection disputes to the Commission, adhere to a portion of the Commission's Open Internet rules in the event they are vacated on appeal, and continue to forgo use of the practice known as "zero-rating," which involves an ISP exempting certain content from a customer's monthly data allotment.

But none of these promises are merger-specific. Applicants are already subject to the full scope of the Commission's Open Internet rules, and more importantly, are telecommunications carriers obliged to offer their broadband Internet access services on a reasonable and non-discriminatory basis. What a court may or may not do matters as little to this transaction review as what Congress or a future Commission may or may not do. All that matters is that the Commission classified Applicants' broadband services as Title II services, and based on that classification imposed a few specific prohibitions on certain forms of discriminatory behavior.

Applicants portray their time-limited commitment to submit interconnection disputes to the Commission and to forgo zero-rating as a generous concession that improves the welfare of consumers above what it would be in the "but for" world. But these commitments are nothing more than a promise to do what Applicants are already required to do, and what they would

[87] Application, Exhibit D, at 5.

[88] These include practices that Applicants have said they will temporarily forgo, such as leveraging terminating access fees on carriers delivering traffic to Applicants' networks, as well as practices not mentioned above such as selling customer data.

continue to do absent any merger. Applicants' legal duties as telecommunications carriers already make any interconnection disputes subject to Commission review, and the plain language of Title II and Commission precedent likely precludes Applicants from engaging in discriminatory practices (such as imposing terminating access fees for content their own broadband customers themselves request, or zero-rating affiliated content). Applicants fail to recognize that the transaction review does not occur in a vacuum. It accounts for marketplace developments and likely future developments. While interconnection disputes were more common prior to the Commission's reclassification of broadband as a telecommunications service, they have dwindled in the following months. Of the three parties to the Application, only Time Warner Cable was involved in a prominent interconnection dispute.[89] And just as other ISPs involved in similar disputes swiftly reached resolutions following the adoption of the Open Internet Order,[90] so too did Time Warner Cable.[91] Therefore in the absence of the merger, if

[89] *See, e.g.*, Sam Gustin, "Here's Why Your Netflix Is Slowing Down," *Time*, Feb. 19, 2014.

[90] *See, e.g.*, Comments of Dave Schaeffer, CEO Cogent Communications, at Deutsche Bank Leveraged Finance Conference, Sep. 29, 2015.

> So the issue was a group of eight ISPs globally about three years ago in unison worked together. It sounds an awful lot like a cartel; and they unilaterally stopped upgrading their connections to the rest of the Internet. So this problem did not only impact Cogent, it impacted our competitors as well. We've seen two independent studies over the past year conclude that aggregate global Internet traffic growth decelerated by 20%. So it went from growing at 30% year-over-year to growing only 25% year-over-year. Remember that's against the backdrop of the average price per megabit falling at about 23% a year. The second issue was more quantifiable and specific to Cogent and was the direct port congestion caused by those ISPs refusing to upgrade their peering connections to Cogent. That resulted in about a 200 basis point headwind to our NetCentric growth. So we saw two things happen. The aggregate market slowed down its growth rate and then specifically for 18% of the traffic trying to exit Cogent's network, the physical locations where that traffic was destined were congested, were clogged. The ports were not open. And with the adoption of the Internet order, those four principles I mentioned and Title II jurisdictional authority, and these regulations were mirrored in the EU and on June 30, the European Commission adopted a set of regulations that were passed by the Council and the parliament that mirrored the US regulations. As a result of that, we've seen significant port augmentations on our connections to Comcast to become

present trends continue, it is unlikely that Time Warner Cable, Bright House Networks or Charter would move to adopt unilateral terminating access fees; and if they did, the Commission has the authority to remedy any such discriminatory behavior.

The commitment to forgo zero-rating is similarly non-transaction specific, and offers nothing different than what should be the expected outcome if present trends continue. Charter moved away from the practice of imposing even a soft data cap, much less a hard cap with overage penalties. Time Warner Cable long ago received an enormous backlash to a mere proposal to implement data caps, and has never come close to reintroducing the idea in the same form. Furthermore, as these MSOs implement the inexpensive upgrades to DOCSIS 3.x technology, their ability to impose caps and overage penalties in a manner that is not considered an “unjust or unreasonable” rate would be in question. And were any of the Applicants to make the unprecedented move to be the first wireline ISP to zero-rate affiliated content, it is almost certain that this behavior would be subject to Commission review and found to be unlawful.

There’s simply nothing to indicate to the Commission that in the next three years, any of the parties to the Application would impose zero-rating. However, were the Commission to approve the merger it would substantially increase concentration in the national broadband market, increasing the incentive and ability of all ISPs to impose caps and attempt to push the boundaries of the law with zero-rating schemes.[92] The coordinated effects of the merger would

> completely uncongested. We continue to add capacity to AT&T and Verizon where we have signed agreements. They are nearly congestion-free and will be completely congestion-free probably sometime in the fourth quarter. We are in active negotiations with Time Warner Cable and CenturyLink. We believe we will get deals done with them based on the threat of litigation under the current regulatory rules.

[91] “Joint Statement from Time Warner Cable and Cogent Communications,” October 8, 2015.

[92] We note that ISPs have a rich history of engaging in near metaphysical distinctions to evade the spirit of telecommunications carrier law. For example, while Comcast was subject to

make any Applicant-specific promise here cold comfort, as the transaction would boost other ISPs' ability to engage in the very practices Applicants have temporarily sworn off.

In sum, these promises are not only non-merger specific, they don't come close to offsetting the merger's harm. And the time-limited nature of these conditions means that whatever reprieve is offered would not last. Three years is far too short a period to have any measurable impact. And Applicants' promises amount to nothing more than a promise to follow the law.

Also notable in Applicants' offer is what they're not willing to agree to. They commit to letting the Commission play a role in any interconnection dispute, but they do not commit to accepting all incoming traffic destined for their customers on a reasonable basis, without any requirement to pay a terminating access fee. Applicants refuse to adhere to the Open Internet Order's "general conduct" rule. And they also refuse to offer their services on a common carrier basis in the event the Commission's declaratory ruling classifying broadband Internet access services as telecommunications services were vacated. These omissions strongly suggest that Applicants wish to leave open all future options to leverage their enhanced national market power in a discriminatory manner.

Thus, Applicants' voluntary conditions – in addition to being laughably brief – are far too narrow and leave giant loopholes for Charter to leverage its market power to, among other things, harm online video competition. Indeed, what these conditions fail to capture is the fact that Applicants already have the ability to offer a higher-quality, "zero-rated" video service: their Title VI cable TV services. As discussed above, facilities-based cable providers' efforts to stifle

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the Commission's 2010 Network Neutrality rules, it zero-rated its own OTT service delivered via the X-Box. It's ever-changing description of where this service fit under the law is an illustration of how carriers can attempt to evade prohibitions on discriminatory practices. *See* Matt Wood, "Comcast has some Xplaining to do," *CNET*, April 5, 2012.

over-the-top competition will not be based in zero-rating, which the market long ago moved past. Cable companies with market power at the local and national level simply need to cross-subsidize their video services with their monopoly broadband profits in order to keep OVD a niche, complementary product.[93] Zero-rating is an ongoing concern primarily in wireless markets. In wired markets like cable broadband, a provider zero-rating its own or affiliated content would be blatantly "unreasonable," and it would be very straight-forward case to bring to the Commission as an unreasonable practice under Title II.

Put simply, as we learned in the Comcast-TWC review, there are major concerns about cable discriminating against online video, and this merger enhances those concerns. This harm would not come through zero-rating, but through Charter's ability to cross-subsidize its video services (linear and TV Everywhere) with its high-margin broadband services, and through its potential to evade direct, effective oversight of its interconnection practices after any conditions expire or through challenges to Commission implementation of the Open Internet rules.

Applicants also suggest that the merged firm would improve customer welfare, arguing that it would expand Charter's practices to more customers, practices which are implicitly characterized as superior to TWC's.[94] But there's ample evidence to question this characterization, in addition to the likelihood that letting present trends continue in the absence of a merger would obviate any of these claimed differences.

First, Charter is demonstrably inferior on price to Time Warner Cable. Consider the Los Angeles area, where both Charter and TWC own systems. In this market, TWC's double-play package with 200 channels of video and 50 Mbps Internet access service is priced at $89.99 per

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[93] The Commission chose to forbear from Section 254(k)'s prohibition on such cross-subsidy practices. This absence of any legal prohibition on this form of monopoly behavior therefore heightens the concerns about the coordinated effects this transaction would produce.

[94] *See generally* Application at 21-26.

month for new customers. Charter's introductory price in Los Angeles for a double-play package with the same number of video channels and 60 Mbps Internet service is $129.98 per month. Charter has made no indications that it would be lowering rates, which raises the question: Should Time Warner Cable customers view a potential 44 percent rate hike as an improvement over the status quo?

Charter also has a history of increasing prices at a higher annual rate (and to a higher absolute level) than TWC. From the second quarter of 2014 to the second quarter of 2015 Charter's revenue per residential customer relationship increased from $110.81 to $113.56, a 2.5 percent increase. During the same period TWC's revenue per residential customer relationship increased from $106.98 to $107.41, a 0.4 percent increase.

Second, while Applicants paint Charter's plans to "bring base speed tiers from 15 Mbps to Charter's current standard minimum of 60 or 100 Mbps at uniform pricing in Time Warner Cable and Bright House Networks' territories" as a benefit, it actually is an example of a merger-specific harm.[95] This is because Charter is committing to reduce output in order to increase price, by refusing to serve all parts of the demand curve. Indeed, Applicants note that "Time Warner Cable's most popular speed tier, however, remains 15 Mbps."[96] This is not merely because it is the mid-level tier in TWC's non-"Maxx" markets, but because consumers likely find the price point (promotional and non-promotional) appropriate. And this is likely the case even in TWC's DOCSIS 3.0 Maxx markets. Again, consider Los Angeles, a market served by both Charter and TWC. TWC customers here have a choice between 3 Mbps standalone service for a non-promotional monthly price of $14.99, a 10 Mbps standalone service for $29.99 per month (promotional rate), a 50 Mbps standalone service for $34.99 per month (promotional rate), a 100

[95] *Id.* at 21.

[96] *Id.* at 21, note 51.

Mbps standalone service for $44.99 per month (promotional rate), a 200 Mbps standalone service for $54.99 per month (promotional rate), and a 300 Mbps standalone service for $64.99 per month (promotional rate). But in Los Angeles, Charter only offers its 60 Mbps standalone broadband tier for $39.99 per month, which increases substantially in price after the promotional period expires.[97] Thus, this transaction would harm those customers who place a higher valuation on price than speed, and harm those who find high utility in TWC's fastest speed tiers.

Finally, Applicants completely ignore the largest pre-existing failure in the broadband market: the near total absence of a functioning resale or wholesale residential broadband market. They've made no mention of how the few remaining arrangements between TWC and third-party ISPs like Earthlink would be impacted by this transaction. And they've certainly made no commitment to offset the potential for unilateral market power abuses by offering resale to third-party ISPs on a reasonable basis.

[97] Data collected by SNL Kagan, as of mid-2015.

VI. Conclusion

This proposed transaction's most impressive feature is its audacious wastefulness. Approving it would in essence light $27 billion on fire. Charter is willing to pay this $27 billion to TWC's shareholders only because it knows it can exercise monopoly power over all of its customers after a merger in order to repay this debt. Charter also knows that its increased market power in the national market would aid it in fending off further OVD competition.

Bigger monopolies bring bigger problems. This deal is bad for competition, consumers and the public interest, and the Commission should deny the Application.

Respectfully submitted,

______/s/_____________

S. Derek Turner
Matthew F. Wood
Free Press
1025 Connecticut Avenue N.W., Suite 1110
Washington, D.C. 20036
202-265-1490