

leased from third parties).³⁶⁵ The satellites used by DIRECTV and DISH Network provide a nationwide footprint, such that almost every home has access to DBS MVPD service.³⁶⁶

121. DIRECTV offers a “whole home” DVR, which distributes video content to multiple televisions throughout the house from a single DVR.³⁶⁷ DISH Network says that its whole home DVR is coming soon.³⁶⁸ Because DBS technology is a one-way transmission service, DIRECTV and DISH Network provide their VOD service over the Internet. Thus, DBS subscribers must also subscribe to Internet access service to receive DBS VOD service. Both DIRECTV’s and DISH Network’s VOD service offer thousands of movies and television programs.³⁶⁹

122. In 2010, DIRECTV stated that its TV Everywhere strategy was to deliver the best anytime, anywhere video experience, in and out of the home.³⁷⁰ DIRECTV now offers shows, movies, sports, and NFL SUNDAY TICKET To-Go, which is available on the iPad.³⁷¹ DIRECTV also offers movies and television shows from HBO and Cinemax on cell phones, iPads, or online.³⁷² In 2010, DISH Network promoted a suite of products designed to make it convenient and easy to watch television anytime and anywhere.³⁷³ DISH Network’s TV Everywhere uses online access and Slingbox placeshifting technology.³⁷⁴ The service enables customers to watch live television on computers, iPads, iPhones, or Android devices; or access thousands of on-demand movies and shows from a computer at Dish Online or on an iPad using a DISH remote access application.³⁷⁵

123. DIRECTV notes that its advertising revenue per subscriber trails many of its competitors because it does not have the ability to target advertising at the local level due to its national satellite infrastructure.³⁷⁶ Using new technology, DIRECTV anticipates being able to insert advertisements into individual DVR set-top receivers. This will enable advertisers to target subscribers in local regions and

³⁶⁵ DISH Network 6/8/11 Comments at 5.

³⁶⁶ In addition to the contiguous 48 states, DIRECTV states that it provides the same programming packages for the same prices to customers in Alaska and Hawaii. DIRECTV 6/8/2011 Comments at 13-14. DISH Network also appears to offer the same programming packages to the contiguous 48 states and Alaska and Hawaii. See SatelliteSales.com, <http://www.satellitesales.com/ak-fairbanks-dish-network.html>; D&M Satellite Solutions, <http://www.dishtvhawaii.com/> (visited Mar. 14, 2012).

³⁶⁷ DIRECTV 6/8/2011 Comments at 4.

³⁶⁸ DISH Network, <http://www.dish.com/technology/receivers-dvrs/> (visited Feb. 29, 2012).

³⁶⁹ DIRECTV 6/8/2011 Comments at 2; DISH Network, <http://www.dish.com/entertainment/vod/> (visited Feb. 29, 2012).

³⁷⁰ DIRECTV, *2010 Annual Report*, Message to Shareholders.

³⁷¹ *Id.* See also DIRECTV, http://www.directv.com/DTVAPP/content/technology/mobile_apps?footernavtype=-1&lpos=header (visited Mar. 2, 2012).

³⁷² DIRECTV, http://www.directv.com/entertainment/watch_online/ (visited Mar. 5, 2010).

³⁷³ DISH Network, *2010 Annual Report*, Letter to Shareholders.

³⁷⁴ *Id.*

³⁷⁵ DISH Network, <http://www.dish.com/testdrive/> and <http://www.dish.com/technology/tv-everywhere/> (visited Mar. 2, 2010).

³⁷⁶ DIRECTV 2010 Form 10-K at 5-6.

eventually in the individual home. With this new technology, DIRECTV expects to increase its advertising revenues significantly.³⁷⁷

124. *Bundling.* DBS MVPDs rely on cooperative arrangements with telephone companies to offer a “synthetic bundle” of video, Internet access, and telephone service.³⁷⁸ DIRECTV explains that cable and telephone MVPDs have advantages over it because they have been able to upgrade their facilities to bundle their video service with two-way high-speed Internet access and telephone service over the same wire, which DIRECTV cannot do.³⁷⁹ DIRECTV also expresses concern that telephone companies that upgrade their networks with fiber optic technology to provide their own MVPD service have less incentive to bundle with DIRECTV.³⁸⁰ DISH also partners with telephone companies to bundle DISH Network video programming with Internet access and telephone service on a single bill.³⁸¹

125. *Marketing.* The marketing of DIRECTV and DISH Network is focused on delivered video programming, with less emphasis on bundles.³⁸² DISH Network markets its video programming packages as providing better “price-to-value” than those available from other MVPDs.³⁸³ DIRECTV compares its video services with those offered by DISH Network and also with those offered by cable and telephone MVPDs.³⁸⁴ DISH Network takes a similar approach, stating that it competes directly with DIRECTV in the market for the delivery of video programming, but also faces competition from cable and telephone MVPDs.³⁸⁵ Both DIRECTV and DISH Network assert that cable and telephone MVPDs have a competitive advantage in the provision of video, Internet access, and telephone service bundles.

(iii) Telephone MVPD Business Models and Competitive Strategies

126. In the last report, we explained that some telephone companies offered video service through cooperative arrangements with DBS MVPDs, although Verizon and AT&T were upgrading their networks to provide their own, facilities-based, wireline video service.³⁸⁶ At the time, some analysts were skeptical of Verizon and AT&T’s plans to build their own facilities-based video service and pointed to the

³⁷⁷ *Id.*

³⁷⁸ DIRECTV 6/8/11 Comments at 16; DISH Network 2010 Form 10-K at 3.

³⁷⁹ DIRECTV 2010 Form 10-K at 17.

³⁸⁰ *Id.* DIRECTV has cooperative arrangements with telephone companies that use DSL technology to offer Internet access and telephone services. When telephone companies (e.g., AT&T and Verizon) upgrade their systems and begin offering their own MVPD service, they may end their cooperative arrangements with DIRECTV. One analyst explains that DBS MVPDs remain “enormously dependent” on the telephone companies’ legacy DSL as their partner for broadband. Craig Moffett, *The Long View: Cord Cutting, Household Formation, and the Long Road to a New Pay TV Video Equilibrium*, BERNSTEIN RESEARCH, Nov. 10, 2011, at 15.

³⁸¹ DISH Network 2010 Form 10-K at 3.

³⁸² DIRECTV’s and DISH Network’s main websites market video programming, with no mention of Internet access or telephone services. DIRECTV, <http://www.directv.com/DTVAPP/index.jsp> (visited Feb. 29, 2012); DISH Network, <http://www.dishnetwork.com/> (visited Jan. 25, 2012). See also DIRECTV 6/8/11 Comments at 3.

³⁸³ DISH Network 2010 Form 10-K at 1.

³⁸⁴ DIRECTV, <http://www.directv.com/DTVAPP/content/directv/competition?footernavtype=-1&lpos=header> (visited Feb. 29, 2012).

³⁸⁵ DISH Network 2010 Form 10-K at 3.

³⁸⁶ *13th Report*, 24 FCC Rcd at 604-5, ¶ 131.

slower-than-projected rollout, the high capital costs, and the lack of differentiation from cable MVPD video and bundle offerings.³⁸⁷ Much has changed in the intervening years, and by the end of 2010, Verizon and AT&T were the seventh and ninth largest MVPDs. More recently, CenturyLink began upgrading its systems and offering its own MVPD service.

127. Verizon began offering video on its FiOS network in 2005. By the end of 2006, Verizon passed 2.4 million homes with 207,000 subscribers.³⁸⁸ By the end of 2010, Verizon passed 15.6 million homes with approximately 3.5 million video subscribers.³⁸⁹ Verizon recently stated that it plans to reach 18 million homes, but has no current plans to build out further.³⁹⁰ AT&T U-verse entered the market in late 2006 and by 2010 passed approximately 27 million homes and had approximately three million video subscribers.³⁹¹ In 2010, CenturyLink began offering Prism TV video service in Fort Myers, Florida, and Las Vegas, Nevada.³⁹² Subsequently, CenturyLink extended its Prism TV video service to Jefferson City, Missouri; Columbia, Missouri; La Crosse, Wisconsin; Tallahassee, Florida; Central Florida; and Raleigh, North Carolina.³⁹³ Prism TV service is now available to one million homes.³⁹⁴ Verizon, AT&T, and CenturyLink have no significant ownership interests in video programming networks.

128. *Programming Tiers.* Verizon's FiOS TV offers 530 all-digital video channels, 130 HD channels, and claims to offer more children's sports, and premium movie channels than cable MVPDs.³⁹⁵ AT&T's U-Verse TV offers a basic package with local channels only, a range of additional channel packages with anywhere from 130 to 470 video channels, and 170 HD channels.³⁹⁶ Prism TV offers over 230 channels and HD channels.³⁹⁷

129. *Technology and Advanced Video Services.* Verizon has deployed an all-digital fiber-to-the-premises network, which offers FiOS TV and FiOS Internet.³⁹⁸ FiOS offers 35,000 VOD titles each

³⁸⁷ Kagan Research, LLC., *Cable TV Investor: Deals & Finance*, Sept. 30, 2006, at 1, 6.

³⁸⁸ Verizon, *2006 Annual Report* at 19. The 207,000 subscribers in 2006 included both video and Internet subscribers. Verizon is organized into a Domestic Wireless and Wireline segment. FiOS is included in the Wireline segment. Verizon, *2010 Annual Report* at 14, 22.

³⁸⁹ Verizon 6/8/11 Comments at 5-6; Verizon, *2010 Annual Report* at 14-15.

³⁹⁰ In an interview with UBS analyst John Hodulik, Lowell McAdam, Verizon President & CEO, stated, "With FiOS we are about 16 million POPs at this point and we want to get to about 18 million. If we built out the whole footprint, we would be more in the 21 million, maybe a little bit more, range . . . But for now the bottom line is we are going to build out what we said and not any more." See *VZ-Verizon Communications Inc at UBS Media and Communications Conference*, Final Transcript, THOMSON STREETEVENTS, Dec. 7, 2011, http://www22.verizon.com/idc/groups/public/documents/adacct/event_1012_trans.pdf (visited Feb. 10, 2012).

³⁹¹ AT&T 6/8/11 Comments at 2-3. AT&T has four operating segments: Wireless, Wireline, Advertising Solutions, and Other. U-verse is included in the Wireline segment. AT&T, *2010 Annual Report*, at 33.

³⁹² CenturyLink, <http://www.centurylink.com/home/> (visited Jan. 26, 2012).

³⁹³ CenturyLink, <http://www.centurylink.com/prismtv/#prismChannelLineup.html> (visited Nov. 15, 2011).

³⁹⁴ CenturyLink, Inc., *CenturyLink Reports Strong Third Quarter 2011 Earnings* (press release), Nov. 2, 2011.

³⁹⁵ Verizon, <http://www22.verizon.com/home/fiosTV/> (visited Jan. 26, 2012).

³⁹⁶ AT&T, <http://www.att.com/u-verse/explore/tv-landing.jsp?wtSlotClick=1-0069UB-0-1&WT.svl=calltoaction> (visited Oct. 26, 2011).

³⁹⁷ CenturyLink, <http://www.centurylink.com/prismtv/#index.html> (visited Nov. 15, 2011).

³⁹⁸ Verizon, *2010 Annual Report*, at 46.

month and a multi-room DVR receiver.³⁹⁹ AT&T's U-verse uses an all-digital fiber-to-the-premises technology, which includes fiber-optic cable all the way to the home, or fiber-to-the-node technology, which includes fiber-optic cable to the node and copper wire from the node to the home.⁴⁰⁰ AT&T's IP technology sends only the video program selected by the subscriber to the set-top receiver.⁴⁰¹ AT&T U-verse offers a large library of VOD titles and a "Total Home" DVR receiver.⁴⁰² CenturyLink is in the process of deploying additional fiber and transitioning to an all-digital IP-based network.⁴⁰³ CenturyLink's Prism TV offers VOD and a whole home DVR that records four programs at once and holds 230 hours of video programming.⁴⁰⁴

130. For TV Everywhere, Verizon's states that its FlexView service is a "go-everywhere, watch-anywhere, mobile entertainment technology" that enables customers to view over 10,000 video titles.⁴⁰⁵ FiOS FlexView gives customers streaming video to televisions, computers, tablets, and smartphones.⁴⁰⁶ Verizon says customers can start watching a movie on one device and finish watching it on another device.⁴⁰⁷ With respect to TV Everywhere, AT&T stated in 2010 that it was increasingly focused on delivering video across networks and platforms so that customers could simply and seamlessly access video programming without giving a thought to whether they happened to be on a wired or a wireless network.⁴⁰⁸

131. *Bundling.* Although FiOS TV and U-verse TV can be purchased on a stand-alone basis, both Verizon and AT&T typically market video services in a bundle that includes video, Internet access, and telephone service.⁴⁰⁹ Verizon marketing focuses on bundles and states that its bundled pricing strategy allows it to provide competitive offerings to subscribers and potential subscribers.⁴¹⁰ AT&T states it uses a bundling strategy that "rewards customers who consolidate their services (e.g., local and long-distance telephone, high-speed Internet, wireless and video)."⁴¹¹ Verizon and AT&T contend that their most significant competitors are the incumbent cable operators that offer bundles of video, Internet

³⁹⁹ Verizon, <http://www22.verizon.com/home/fiosTV/> (visited Jan. 26, 2012).

⁴⁰⁰ AT&T, http://www.att.com/Common/about_us/files/pdf/HowUverseIsDelivered_2-22.pdf (visited Oct. 26, 2011). A node is a communications control unit in a video system that interconnects traditional coaxial cable and fiber-optics. It is the place where an optical signal is converted to a radio frequency (RF) signal, or vice versa.

⁴⁰¹ AT&T, http://www.att.com/Common/about_us/files/pdf/IPTV_background.pdf (visited Jan. 26, 2012).

⁴⁰² AT&T, <http://www.att.com/shop/tv/index.jsp?wtSlotClick=1-0056C5-0-4#fbid=dEBRF88Fm3S> (visited Jan. 26, 2012).

⁴⁰³ CenturyLink, *2010 Review and CEO's Message*, at 4, <http://ir.centurylink.com/phoenix.zhtml?c=112635&p=irol-reportsannual> (visited Nov. 15, 2011).

⁴⁰⁴ CenturyLink, <http://www.centurylink.com/prismtv/#index.html> (visited Nov. 15, 2011).

⁴⁰⁵ Verizon, <http://www22.verizon.com/home/fiosTV/#connect> (visited Mar. 2, 2012).

⁴⁰⁶ Verizon, *2010 Annual Report*, at 6.

⁴⁰⁷ *Id.*

⁴⁰⁸ AT&T, *2010 Annual Report*, at 4.

⁴⁰⁹ Verizon, *2010 Annual Report*, at 25; AT&T, <http://www.att.com/shop/u-verse/#fbid=dEBRF88Fm3S> (visited Jan. 26, 2012).

⁴¹⁰ Verizon, *2010 Annual Report*, at 25.

⁴¹¹ AT&T, *2010 Annual Report*, at 44.

access, and voice services in virtually every area that they provide service.⁴¹² Verizon and AT&T also state that their MVPD services experience significant video competition from DBS MVPDs.⁴¹³ CenturyLink states that 70 percent of Prism TV customers subscribe to a video, Internet access, and telephone services bundle.⁴¹⁴

132. Although bundling by cable MVPDs has generally involved triple-play offerings of video, Internet access, and telephone service, MVPDs have also added wireless telephone service through partnerships.⁴¹⁵ For example, Verizon Wireless and SpectrumCo, which is a joint venture among subsidiaries of Comcast, Time Warner Cable, and Bright House, have requested consent to assign 122 Advanced Wireless Services licenses to Verizon Wireless from SpectrumCo.⁴¹⁶ In a second application, Verizon Wireless and Cox have requested consent to assign 30 Advanced Wireless Services Licenses to Verizon Wireless from Cox.⁴¹⁷ The Commission consolidated consideration of the applications and issued a Public Notice.⁴¹⁸ In addition to acquiring spectrum from the cable companies, Verizon Wireless and the Applicants report that they have entered into agreements under which the cable companies and Verizon Wireless will sell one another's products and services.⁴¹⁹

133. *Marketing.* Verizon describes its all-fiber FiOS network as the fastest, highest-quality broadband network in the country.⁴²⁰ Verizon asserts that its networks differentiate it from its competitors.⁴²¹ Verizon markets FiOS TV as a premium service, although it also offers a less-promoted low-price, basic video service.⁴²² AT&T maintains that "U-verse uses fiber optic technology and computer networking to bring you better digital television, faster Internet, and a smarter phone."⁴²³

⁴¹² Verizon 6/8/11 Comments at 7; AT&T 6/8/11 Comments at 4; AT&T, *2010 Annual Report*, at 43-44.

⁴¹³ Verizon 6/8/11 Comments at 5; AT&T 6/8/11 Comments at 5.

⁴¹⁴ CenturyLink, <http://www.centurylink.com/prismtv/#index.html> (visited Nov. 15, 2011).

⁴¹⁵ See *13th Report*, 24 FCC Rcd at 578, ¶ 69.

⁴¹⁶ See Application and Public Interest Statement of SpectrumCo., LLC, transferor, to Celco Partnership d/b/a Verizon Wireless, transferer (Dec. 16, 2011) ("Verizon Wireless-SpectrumCo- Application"). See also Verizon, Comcast, Time Warner Cable, and Bright House Networks Sell Advanced Wireless Spectrum to Verizon Wireless for \$3.6 Billion (press release), Dec. 2, 2011.

⁴¹⁷ See Application and Public Interest Statement of Cox TMI Wireless, LLC, transferor, to Celco Partnership d/b/a Verizon Wireless, transferer (Dec. 21, 2011) ("Verizon Wireless-Cox Application"). See also Verizon, Cox Communications Announces Agreement to Sell Advanced Wireless Spectrum to Verizon Wireless (press release), Dec. 16, 2011.

⁴¹⁸ See *Cellco Partnership D/B/A Verizon Wireless, SpectrumCo, LLC and Cox TMI Wireless, LLC Seek FCC Consent to the Assignment of AWS-1 Licenses*, WT Docket No. 12-4, Public Notice, 27 FCC Rcd 360 (WT 2012).

⁴¹⁹ Verizon Wireless-SpectrumCo Application, Public Interest Statement, at 1; Verizon Wireless-Cox Application, Public Interest Statement, at 1.

⁴²⁰ Verizon, *2010 Annual Report*, at 2-3.

⁴²¹ *Id.* at 8, 15. Verizon states that "Current and potential competitors for network services include other telephone companies, cable companies, wireless service providers, foreign telecommunications providers, satellite providers, electric utilities, Internet service providers, providers of VoIP services, and other companies that offer network services using a variety of technologies." *Id.* at 37.

⁴²² See Verizon, http://www2.verizon.com/home/aboutfios/?CMP=DMC-CVS_ZZ_ZZ_E_TV_N_X001 (visited Jan. 26, 2012).

⁴²³ AT&T, http://www.att.com/shop/u-verse/#fbid=OmA4InkA_TN (visited Mar. 5, 2012).

CenturyLink markets Prism TV as “TV worth switching for,” and “one of the most advanced TV services in the world,” which “will change the way you experience TV forever.”⁴²⁴

4. MVPD Performance

134. The structural and behavioral characteristics of a competitive market are desirable not as ends in themselves, but rather as a means of bringing tangible benefits to consumers such as lower prices, higher quality, and greater choice of services. To determine if the market for the delivery of video programming is producing these kinds of positive outcomes, we look at video prices and provide current prices for a sample of video packages offered by some MVPDs. We also examine competition in the market for the delivery of video programming from an investor perspective, including how the various types of MVPDs are doing relative to one another. As such, we report on video subscribers and penetration, revenue, investment, and profitability.

a. Video Programming Pricing

135. Section 623(k) of the Act of 1934, as amended by the Cable Act,⁴²⁵ requires the Commission to publish annually a statistical report on the average rates that cable operators charge for basic service, other cable programming, and cable equipment.⁴²⁶ Table 3 uses data from the Commission’s most recent report on cable industry prices to show prices for basic service, expanded basic service, and the next most popular service (plus equipment) for the years 2006 to 2010.⁴²⁷ Table 3 shows that prices for basic service, expanded basic service, and the next most popular service (plus equipment) increased over the period 2006 to 2010.⁴²⁸

⁴²⁴ CenturyLink, <http://www.centurylink.com/prismtv/#index.html> (visited Mar. 2, 2012).

⁴²⁵ See 47 U.S.C. § 543(k).

⁴²⁶ The 1992 Cable Act requires operators to offer an entry-level basic service, which must include, at a minimum, all commercial and noncommercial local broadcast stations entitled to carriage under the must-carry provisions of the Communications Act of 1934, 47 U.S.C. §§ 534-35. Basic service must also offer any other local broadcast station provided to any subscriber, as well as public, educational, and governmental access channels that the local franchise authority (LFA) may require the operator to carry. See 47 U.S.C. § 543(b)(7). Cable programming refers to a tier of video channels for which the operator charges a separate rate, other than the basic service channels and channels for which per-channel or per-program charges apply. See 47 U.S.C. § 543(k)(1)(2). Cable equipment refers to a converter box and other customer premises equipment for accessing cable services. See 47 U.S.C. § 543(b)(3).

⁴²⁷ See *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Service, and Equipment*, MM Docket No. 92-266, Report on Cable Industry Prices, 27 FCC Rcd 2427, 2435, Table 3 (MB 2012) (“2010 Cable Price Survey Report”).

⁴²⁸ The next most popular service package generally includes all the programming channels included in the expanded basic service package and at least seven additional cable network channels. *Id.* 2432, at ¶ 10.

Table 3: Historical Average Monthly Prices

Year	Basic Service Price	Expanded Basic Service Price	Next Most Popular Service & Equipment Price
2006	\$14.59	\$45.26	\$59.09
2007	\$15.33	\$47.27	\$60.27
2008	\$16.11	\$49.65	\$63.66
2009	\$17.65	\$52.37	\$67.92
2010	\$17.93	\$54.44	\$71.39

136. Table 4 provides examples of prominently displayed video packages from MVPD websites. Table 4 does not show all of the video packages offered by the MVPDs. For example, the cable MVPDs included in Table 4 offer basic and expanded basic video packages. These video packages, however, were not prominently displayed on their websites. Table 4 shows the name of the video package, the advertised price, and the number of channels.⁴²⁹ The advertised video packages are often promotional prices for new customers. At the end of the promotional time period, the price for services rises to the “normal” price. It is important to note that some of the video packages shown in Table 4 include advanced video services (e.g., DVR service), some include equipment (e.g., an HD/DVR set-top receiver), and some include premium channels (e.g., HBO). Even where the number of channels is the same, each package contains a different mix of channels.⁴³⁰ Many services and features that affect the value of a video package are not shown in Table 4. Therefore, at best, this information provides only a starting point for comparing video packages since there is no standard video package for making direct price comparisons. For these reasons, Table 4 contains only a sample of advertised prices for prominently displayed video package offerings.

⁴²⁹ When MVPDs advertise the number of channels, they usually include both video channels and music channels. The video channels in Table 4 include those found on the basic and expanded basic service and a range of digital channels.

⁴³⁰ For example, some MVPDs include all of the premium movie channels in their most expensive advertised video package while other MVPDs include fewer premium movie channels in their most expensive advertised video package.

Table 4: Examples of MVPD Video Package Prices

Cable				
Comcast ⁴³¹	Digital Starter \$29.99 (80 channels)	Digital Preferred \$39.99 (160 channels)	Digital Premier \$84.99 (200 channels)	
Cox ⁴³²	TV Essential \$57.99 (95 channels)	Advanced TV Preferred \$67.99 (236 channels)	Advanced TV Premier \$76.99 (270 channels)	
BendBroadband ⁴³³	Essentials \$46.99 (159 channels)	Preferred \$54.99 (196 channels)	Gold Package \$98.47 (295 channels)	
DBS				
DIRECTV ⁴³⁴	Choice \$29.99 (150 channels)	Choice Extra \$34.99 (210 channels)	Choice Ultimate \$39.99 (225 channels)	Premier \$83.99 (285 channels)
DISH Network ⁴³⁵	America's Top 120 \$29.99 (120 channels)	America's Top 200 \$39.99 (200 channels)	America's Top 250 \$44.99 (250 channels)	America's "Everything" Pak \$79.99 (315 channels)
Telephone				
AT&T U-verse ⁴³⁶	U100 TV \$34 (210 channels)	U200 TV \$44 (270 channels)	U300 TV \$59 (360 channels)	U450 TV \$92 (430 channels)
Verizon FiOS ⁴³⁷	Prime HD \$64.99 (195 channels)	Extreme HD \$74.99 (285 channels)	Ultimate HD \$89.99 (350 channels)	

⁴³¹ Comcast, <http://www.comcast.com/Corporate/Learn/DigitalCable/digitalcable.html> (visited Nov. 9, 2011).

⁴³² Cox Communications, https://secure.cox.com/Service/Store/OrderNow.aspx?SO=W&campcode=satv_1_special-offers (visited Nov. 9, 2011).

⁴³³ BendBroadband, http://www.bendbroadband.com/residential/dc_index.asp?pageID=dc#Essentials (visited Nov. 9, 2011).

⁴³⁴ DIRECTV, http://www.directv.com/DTVAPP/new_customer/base_packages.jsp?footernavtype=-1 (visited Nov. 9, 2011).

⁴³⁵ DISH Network, <http://www.dishnetwork.com/packages/programming/default.aspx> (visited Nov. 9, 2011).

⁴³⁶ AT&T, <http://www.att.com/u-verse/shop/index.jsp?shopFilterId=100004&wtSlotClick=2-005THH-903422-2-2&rel=nofollow#fbid=wqVQ02ViVNz> (visited Nov. 9, 2011).

⁴³⁷ Verizon, <http://www22.verizon.com/Residential/FiOSTV/Overview#plans> (visited Nov. 9, 2011).

b. Video Subscribers and Penetration

137. *Video Subscribers.* Table 5 shows the number of video subscribers for cable, DBS, and telephone MVPDs. Between 2006 and 2010, the number of subscribers to MVPD video service has grown from 95.8 million in 2006 to 100.8 in 2010, a net increase of five million subscribers.⁴³⁸ Over that period, however, cable MVPDs lost video subscribers and market share. At the end of 2006, cable MVPDs had 65.4 million video subscribers (68.3 percent of the 95.8 million MVPD video subscribers).⁴³⁹ By year-end 2010, the number of cable MVPD subscribers had declined to 59.8 million (59.3 percent of the MVPD subscribers), a loss of 5.6 million subscribers.⁴⁴⁰ Table 5 shows that from 2006 to 2010, large cable MVPDs accounted for the majority of the cable MVPD video subscriber losses. For example, Comcast lost 1.4 million video subscribers, Time Warner Cable lost one million video subscribers, Cox lost 500,000 video subscribers, and Charter lost 900,000 video subscribers.

138. SNL Kagan explains that competition continues to reduce cable's share of the U.S. video market and that cable MVPDs are expected to continue losing basic video subscribers to competing MVPDs.⁴⁴¹ According to SNL Kagan, cable video subscriptions have been eroded by competition from new telephone MVPDs and established DBS MVPDs.⁴⁴² Another analyst says that a weak economy is a contributing factor but increased competition from DBS and telephone MVPDs is the main reason that cable MVPDs are losing video subscribers.⁴⁴³

139. Table 5 shows that DBS MVPDs and telephone MVPDs gained video subscribers and market share during the period 2006 to 2010. In 2006, DBS MVPDs had 29.1 million video subscribers (30.4 percent).⁴⁴⁴ By 2010, the number of DBS MVPD video subscribers had increased to 33.4 million (33.1 percent), a gain of 4.3 million subscribers.⁴⁴⁵ DIRECTV credits its increase in subscribers and market share to taking customers primarily from cable.⁴⁴⁶ Similarly, in 2006, telephone MVPDs had approximately 300,000 video subscribers (0.3 percent).⁴⁴⁷ Five years later, the number of telephone MVPD video subscribers had increased to 6.9 million (6.8 percent of MVPD video subscribers), a gain of 6.6 million subscribers. According to SNL Kagan, the subscriber gains of telephone MVPDs come at the

⁴³⁸ SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 21, 2011).

⁴³⁹ *Id.*

⁴⁴⁰ *Id.*

⁴⁴¹ SNL Kagan, *Broadband Cable Financial Databook*, 2010 Edition, at 6.

⁴⁴² SNL Kagan, *Cable TV Investor: Deals & Finance*, Jan. 29, 2010, at 10.

⁴⁴³ Marguerite Reardon, *Competition and a Weak Economy Plague Cable TV*, CNET NEWS, Nov. 3, 2011, http://news.cnet.com/8301-30686_3-57316511-266/competition-and-a-weak-economy-plague-cable-tv/ (visited Apr. 6, 2012). The article cites statements from Craig Moffett, an analyst with Sanford Bernstein.

⁴⁴⁴ SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 21, 2011).

⁴⁴⁵ *Id.*

⁴⁴⁶ DIRECTV, *2010 Annual Report*, Message to Shareholders.

⁴⁴⁷ SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 21, 2011).

expense of cable and DBS MVPDs, rather than from a larger percentage of homes subscribing to MVPD video services.⁴⁴⁸

Table 5: MVPD Video Subscribers (in millions)

Year	2006	2007	2008	2009	2010
MVPD Total ⁴⁴⁹	95.8	97.7	98.9	100.7	100.8
Cable ⁴⁵⁰	65.4	64.9	63.7	62.1	59.8
Comcast	24.2	24.1	24.2	23.6	22.8
Time Warner	13.4	13.3	13.1	12.9	12.4
Cox	5.4	5.4	5.3	5.2	4.9
Charter	5.4	5.2	5.0	4.8	4.5
Cablevision	3.1	3.1	3.1	3.1	3.3
Bright House	2.3	2.3	2.3	2.3	2.2
Suddenlink	1.4	1.3	1.3	1.2	1.2
Mediacom	1.4	1.3	1.3	1.2	1.2
All Other Cable ⁴⁵¹	8.8	8.9	8.1	7.8	7.3
DBS ⁴⁵²	29.1	30.6	31.3	32.6	33.3
DIRECTV ⁴⁵³	16.0	16.8	17.6	18.5	19.2
DISH Network ⁴⁵⁴	13.1	13.8	13.7	14.1	14.1

⁴⁴⁸ SNL Kagan, *Broadband Technology*, June 19, 2009, at 1.

⁴⁴⁹ SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 21, 2011). Table 5 does not include subscribers to PCO, HSD, OVS, and wireless cable MVPDs, which had fewer than one million subscribers between 2006 and 2010. In addition, the number of video subscribers for individual companies in Table 5 is rounded to the nearest 100,000. Because some types of MVPDs are not included and because of rounding, the sum of the individual entries does not equal the MVPD totals.

⁴⁵⁰ *Id.* Individual cable company data come from SNL Kagan, *Top Cable MSOs*, <http://www.snk.com/interactivex/TopCableMSOs.aspx> (visited Dec. 21, 2011).

⁴⁵¹ All other cable subscribers are estimated by subtracting the subscribers of the eight largest cable MVPDs from total cable subscribers.

⁴⁵² SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 21, 2011).

⁴⁵³ DIRECTV subscriber numbers come from DIRECTV, *SEC Form 10-K for the Year Ended December 31, 2006*, at 3 (“DIRECTV 2006 Form 10-K”); DIRECTV, *SEC Form 10-K for the Year Ended December 31, 2007*, at 3 (“DIRECTV 2007 Form 10-K”); DIRECTV, *SEC Form 10-K for the Year Ended December 31, 2008*, at 3 (“DIRECTV 2008 Form 10-K”); DIRECTV, *SEC Form 10-K for the Year Ended December 31, 2009*, at 3 (“DIRECTV 2009 Form 10-K”); DIRECTV 2010 Form 10-K at 2.

⁴⁵⁴ DISH Network subscriber numbers come from EchoStar, *SEC Form 10-K/A for the Year Ended December 31 2006*, at 1; DISH Network, *SEC Form 10-K for the Year Ended December 31, 2007*, at 1; DISH Network, *SEC Form 10-K for the Year Ended December 31, 2008*, at 1 (“DISH Network 2008 Form 10-K”); DISH Network, *SEC Form 10-K for the Year Ended December 31, 2009*, at 1; DISH Network 2010 Form 10-K at 1.

Table 5: MVPD Video Subscribers (in millions) (continued)

Year	2006	2007	2008	2009	2010
Telephone ⁴⁵⁵	0.3	1.3	3.1	5.1	6.9
AT&T U-verse	0	0.2	1.0	2.1	3.0
Verizon FiOS	0.2	0.9	1.9	2.9	3.5
All Other Telephone ⁴⁵⁶	0.1	0.1	0.2	0.1	0.4

140. Consumers watch delivered video programming that appeals to them even when the programming is not provided by MVPDs.⁴⁵⁷ From 2006 to 2010, an increasing number of consumers streamed an increasing amount of video content directly from the Internet to computers, television sets, tablets, and smartphones.⁴⁵⁸ Although some consumers may consider online video to be a substitute for MVPD video, other consumers may consider online video to be a complement to MVPD video. According to Nielsen, during the second quarter of 2011, Americans watched each week on average 32 hours and 47 minutes of traditional television, two hours and 21 minutes of time-shifted television, 27 minutes of Internet video, and seven minutes of smart phone video.⁴⁵⁹ Reports suggest that some consumers are dropping their MVPD video services (“cutting-the-cord”) or eliminating subscriptions for some video services such as premium channels (“cord-shaving”) in favor of video services delivered over the Internet.⁴⁶⁰ According to one estimate, 13 percent of consumers with a broadband connection “cord-shaved” in the past year.⁴⁶¹ However, there are also indications that increased viewing of video

⁴⁵⁵ SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 21, 2011). Individual telephone company data come from SNL Kagan, *Broadband Cable Financial Databook*, 2008 Edition, at 48; 2009 Edition, at 50; 2010 Edition, at 44; 2011 Edition, at 42.

⁴⁵⁶ All other telephone MVPD subscribers are estimated by subtracting the subscribers of the two largest telephone MVPDs from total telephone MVPD subscribers.

⁴⁵⁷ NCTA 6/8/11 Comments at 19-21.

⁴⁵⁸ We discuss online video distributors in Section III. C. of this Report.

⁴⁵⁹ Nielsen, *The Cross-Platform Report*, Quarter 2, 2011, at 5.

⁴⁶⁰ See Ian Olgeirson & Deana Myers, *Over-the-top Substitution Forecast to Erode Multichannel Penetrations*, SNL Kagan, July 15, 2011, <http://www.snk.com/interactivex/article.aspx?id=13029656&KPLT=6> (estimating that nearly 4 percent of occupied U.S. households will employ Internet video in lieu of subscribing to a multichannel video package at year-end 2011); Terrence O’Brien, *Netflix Users More Likely to Cut the Cord*, SWITCHED, Jan. 5, 2011, <http://www.switched.com/2011/01/05/netflix-users-more-likely-to-cut-the-cable-cord/> (citing a JP Morgan survey that 28 percent of cable subscribers would consider cutting the cord, but that 47 percent of Netflix customers would do so); Andy Plesser, *Roku Owners are “Cutting the Cord” in Substantial Numbers*, Beet.TV, May 10, 2011, <http://www.beet.tv/2011/05/roku-owners-are-cutting-dcord-in-substantial-numbers-.html> (citing interview with Jim Funk of Roku that “[s]ome 15-20 percent of Roku owners are cancelling their cable or satellite services agreement and are relying solely on a broadband connection to get their television programming”).

⁴⁶¹ *High-speed Broadband May Accelerate Cord Cutting*, Parks Associates, Aug. 24, 2011, <http://www.parksassociates.com/blog/article/high-speed-broadband-may-accelerate-cord-cutting>. One commenter explains that viewing Internet content on a television set can be relatively simple, as “simple as connecting a cable between the HDMI output of a computer and the HDMI input of a television set” though not many consumers may be inclined to view television programming in this manner. Nonetheless, such direct PC-to-TV connections are deemed infrequent and restricted to tech-savvy consumers, with approximately one-third of broadband users connecting a PC to their TV specifically to enjoy PC or online video on “the big screen” at least once a year. See NCTA 6/8/2011 Comments at 24 (citing The Diffusion Group, *PC-to-TV Connectivity More Widespread Than* (continued....))

programming delivered over the Internet does not necessarily translate into decreased MVPD subscriptions.⁴⁶²

141. *Video Penetration.* Because a large part of all MVPD video delivery systems represents fixed costs (costs that do not vary with the number of subscribers), higher levels of video penetration (the number of video subscribers divided by the number of homes passed by the MVPD) typically translate into lower costs per subscriber and increased profit.⁴⁶³ Comparing the video penetration of one type of MVPD with the video penetration of another type of MVPD can be problematic, however, because the different types of MVPDs have different fixed costs.⁴⁶⁴ For instance, the fixed costs of offering cable MVPD service to every home in the United States is much higher than the fixed costs of offering DBS MVPD service to every home in the United States.⁴⁶⁵ As such, a DBS MVPD may be on solid financial footing with lower video penetration, relative to a cable MVPD with higher video penetration. Regardless of technology, however, every MVPD seeks higher levels of video penetration.

142. Table 6 shows MVPD video penetration for the years 2006 through 2010. Over the five-year period, cable MVPD video penetration decreased from 53.8 percent of all homes passed by cable MVPDs to 46.5 percent. This is consistent with our finding that cable MVPDs lost subscribers over the same period. In contrast, DBS MVPD video penetration increased from 22.9 percent of all homes in 2006 to 25.5 percent in 2010. Over the same period, telephone MVPDs built new video delivery systems and signed subscribers, increasing their video penetration from 3.3 percent to 15.2 percent of all homes. To the extent that telephone MVPDs incur fixed and operating costs similar to those incurred by cable MVPDs, telephone MVPDs will have to increase video penetration to realize financial returns similar to those earned by cable MVPDs.⁴⁶⁶

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Perceived, Mar. 1, 2011, <http://tdgresearch.com/blogs/press-releases/archive/2011/03/01/pc-to-tv-connectivity-more-widespread-than-perceived.aspx>).

⁴⁶² Frank N. Magid Associates, Inc., *Magid Study: Consumers More Connected to TV Sets Than Ever – TV Purchase Intentions Climb to Pre-Recession Levels, Demand for Smart TVs Impressive* (press release), Nov. 22, 2011.

⁴⁶³ Harold L. Vogel, ENTERTAINMENT INDUSTRY ECONOMICS 339-43 (Cambridge University Press) (8th ed. 2011) (“Vogel”).

⁴⁶⁴ *Id.* at 344-46.

⁴⁶⁵ DIRECTV explains that its satellite-based service provides many advantages over ground-based cable television services including the ability to distribute video programming to millions of recipients nationwide with minimal incremental infrastructure cost per additional subscriber. Satellites also provide comprehensive coverage to areas with low population density. DIRECTV 2010 Form 10-K at 4.

⁴⁶⁶ *Hazlett on Verizon FiOS Project*, George Mason University School of Law, http://www.law.gmu.edu/news/2010/hazlett_fios (visited Jan. 16, 2012).

Table 6: MVPD Video Penetration

Year	2006	2007	2008	2009	2010
Cable⁴⁶⁷	53.8%	52.4%	50.7%	48.9%	46.5%
Comcast	51.0%	49.8%	47.8%	45.5%	43.9%
Time Warner	51.4%	50.0%	48.8%	47.0%	45.2%
Cox	58.3%	57.1%	54.8%	52.5%	49.5%
Charter	46.3%	44.8%	43.1%	40.4%	38.4%
Cablevision	68.5%	66.7%	65.7%	63.4%	59.9%
Bright House	57.8%	57.4%	56.1%	54.1%	51.6%
Suddenlink	49.7%	49.5%	48.8%	46.4%	45.4%
Mediacom	48.8%	46.7%	46.3%	44.1%	42.4%
DBS⁴⁶⁸	22.9%	23.8%	24.2%	25.0%	25.5%
DIRECTV	12.6%	13.1%	13.6%	14.2%	14.7%
DISH Network	10.3%	10.7%	10.6%	10.8%	10.8%
Telephone⁴⁶⁹	3.3%	6.4%	9.8%	13.2%	15.2%
AT&T U-verse	N/A	2.5%	5.9%	9.3%	11.0%
Verizon FiOS	3.3%	9.7%	15.0%	18.8%	22.4%

143. *Digital Video, Internet, and Telephone Subscription and Penetration.* SNL Kagan reports that cable MVPDs have been losing video subscribers at an increasing rate over the last five years. At the same time, however, the remaining cable customers added subscriptions to digital video service or

⁴⁶⁷ Estimates are derived by dividing all cable basic subscribers by all cable homes passed. Because cable MVPDs rarely offer video service in the same geographic areas, video penetration for all cable MVPDs is a weighted average of the video penetration of all cable MVPDs. SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 23, 2011). Individual cable company data come from SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 5.

⁴⁶⁸ Estimates are derived by dividing all DBS MVPD subscribers by the number of homes in the United States. Because DIRECTV and DISH Network offer MVPD service to all homes in the United States, DBS video penetration can also be derived by summing the video penetration of DIRECTV and DISH Network. SNL Kagan, *U.S. Multichannel Industry Benchmarks*, <http://www.snk.com/interactivex/MultichannelIndustryBenchmarks.aspx> (visited Dec. 23, 2011). Individual DBS company estimates are derived by dividing the company's subscribers (as reported in their annual reports) by the number of homes in the United States.

⁴⁶⁹ Estimates are derived by summing Verizon and AT&T MVPD subscribers and dividing by the number of Verizon FiOS and AT&T U-verse homes passed. Because Verizon and AT&T do not offer MVPD service in the same geographic area, video penetration is a weighted average of the video penetration of these two telephone MVPDs. Verizon and AT&T estimates are derived by dividing a company's MVPD subscribers (as reported in their annual reports) by the number of homes passed by the company's MVPD system (as reported in their annual reports).

subscribed to cable bundles that include video, Internet access, and telephone services.⁴⁷⁰ While cable MVPD video subscribers decreased from 65.4 million in 2006 to 59.8 million in 2010, the number of cable customers that subscribed to digital video service grew from 32.6 million to 44.7 million, and digital video penetration rose from 49.8 percent to 74.8 (*i.e.*, the number of digital video subscribers divided by the number of basic cable subscribers).⁴⁷¹ In addition, the number of cable Internet access subscribers grew from 31.1 million in 2006 to 44.4 million in 2010, increasing Internet penetration (*i.e.*, the number of Internet subscribers divided by the number of cable homes passed) from 25.0 percent to 34.8 percent.⁴⁷² In addition, the number of telephone subscribers grew from 9.4 million in 2006 to 23.9 million in 2010, with telephone penetration (*i.e.*, the number of telephone subscribers divided by the number of homes passed) increasing from 11.1 percent to 19.2 percent.⁴⁷³

c. Revenue

144. The varied business models of the different types of MVPDs complicate any discussion of revenue. Specifically, cable and telephone MVPDs, which have two-way systems, offer video, Internet, and telephone services and earn revenue from each of these services. Thus, data regarding total revenue for cable and telephone MVPDs reflect an aggregation of revenue from multiple services. In contrast, DBS MVPDs, have one-way systems and earn almost all of their revenue from delivered video services. Although we report MVPD total revenue, because the focus of this Report is the delivery of video programming when data are available we also report the revenue earned from video services. Providing both total revenue and video revenue facilitates a comparison regarding how much of a specific MVPD's business is related to the delivery of video services.

145. Table 7 shows MVPD total revenue. Total revenue for cable MVPDs derives from video, Internet access, and telephone services sold to both residential units and businesses. Total revenue for cable MVPDs increased from \$71.9 billion in 2006 to \$93.8 billion in 2010. Revenue from video accounted for 63 percent of cable MVPD total operating revenue in 2010, Internet access accounted for 21 percent, telephone accounted for approximately 10 percent, and commercial services accounted for approximately 6 percent.⁴⁷⁴ Table 7 also provides total revenue for a sample of cable MVPDs.⁴⁷⁵ Each of the large cable MVPDs in our sample increased total revenue over the period 2006 to 2010. Total revenue for DBS MVPDs increased from \$24.6 billion in 2006 to \$36.7 billion in 2010, and almost all of the revenue comes from the video services.⁴⁷⁶ Table 7 shows total revenue for AT&T and Verizon. Total

⁴⁷⁰ SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 2.

⁴⁷¹ *Id.* at 7.

⁴⁷² *Id.* at 8.

⁴⁷³ *Id.* at 10.

⁴⁷⁴ SNL Kagan, *Broadband Cable Financial Databook*, 2011 Edition, at 8. We include local advertising revenue and "miscellaneous" revenue in our estimates of video revenue. Miscellaneous revenue includes installation fees, home shopping, equipment charges, home networking, pay-per-view and VOD, DVRs, and HD.

⁴⁷⁵ Total revenue estimates for individual cable MVPDs comes from SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 13.

⁴⁷⁶ For DISH Network, subscriber-related revenue accounted for over 99 percent of total operating revenue in 2010. DISH explains that subscriber-related revenue consists of revenue from basic, premium movie, local, HD and pay-per-view programming, as well as Latino and international subscription television services, equipment rental fees and other hardware related fees, including fees for DVRs, equipment upgrade fees and additional outlet fees from subscribers with multiple receivers, advertising services, fees earned from in-home service operations, and other subscriber revenue. DISH Network 2010 Form 10-K at 45, 48. DIRECTV explains that it earns revenues mostly from the monthly fees it charges subscribers for subscriptions to basic and premium channel programming, HD (continued....)

revenue for AT&T combines revenue from its wireless segment, which accounted for 47 percent of its total operating revenue in 2010; its wireline segment (that includes U-verse), which accounted for 49 percent of its total operating revenue in 2010; and two other segments, which together accounted for four percent of its total operating revenue.⁴⁷⁷ Total revenue for Verizon combines revenue from its domestic wireless segment and its wireline segment (that includes FiOS). The wireless segment contributed approximately 60 percent of Verizon's total operating revenue in 2010 and the wireline segment contributed approximately 40 percent.⁴⁷⁸

Table 7: MVPD Total Revenue (in billions)

Year	2006	2007	2008	2009	2010
Cable⁴⁷⁹	\$71.9	\$78.9	\$85.2	\$89.5	\$93.8
Comcast	\$26.5	\$30.3	\$32.6	\$33.9	\$35.4
Time Warner	\$14.8	\$16.0	\$17.2	\$17.9	\$18.9
Charter	\$5.5	\$6.0	\$6.4	\$6.7	\$7.0
Cablevision	\$4.1	\$4.5	\$5.0	\$5.2	\$5.5
Suddenlink	\$0.9	\$1.3	\$1.5	\$1.6	\$1.7
Mediacom	\$1.2	\$1.3	\$1.4	\$1.5	\$1.5
DBS⁴⁸⁰	\$24.6	\$28.3	\$31.3	\$33.3	\$36.7
DIRECTV⁴⁸¹	\$14.8	\$17.2	\$19.7	\$21.6	\$24.1
DISH Network ⁴⁸²	\$9.8	\$11.1	\$11.6	\$11.7	\$12.6
Telephone⁴⁸³	\$150.7	\$211.8	\$220.8	\$230.3	\$230.9
AT&T ⁴⁸⁴	\$62.5	\$118.3	\$123.4	\$122.5	\$124.3
Verizon ⁴⁸⁵	\$88.2	\$93.5	\$97.4	\$107.8	\$106.6

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programming and access fees, pay-per-view programming, and seasonal and live sporting events. DIRECTV also earns revenues from monthly fees that it charges subscribers for leased set-top receivers and DVR service. DIRECTV 2010 Form 10-K at 38.

⁴⁷⁷ AT&T, *2010 Annual Report*, at 33.

⁴⁷⁸ Verizon, *2010 Annual Report*, at 13.

⁴⁷⁹ SNL Kagan, *Broadband Cable Financial Databook*, 2011 Edition, at 8. The estimates shown are based on all cable MVPDs, not just the cable MVPDs listed in Table 7.

⁴⁸⁰ Total revenue for DBS is the sum of total revenue for DIRECTV and DISH Network.

⁴⁸¹ DIRECTV 2010 Form 10-K at 30.

⁴⁸² DISH Network 2010 Form 10-K at 41.

⁴⁸³ The estimates shown are the sum of total revenue for AT&T and Verizon and do not include other telephone companies that offer MVPD service. As such, the estimates understate total revenue for telephone MVPDs.

⁴⁸⁴ AT&T, *2010 Annual Report*, at 30.

⁴⁸⁵ Verizon, *2010 Annual Report*, at 13.

146. Table 8 shows available data on MVPD revenue from video services alone. Cable MVPD video revenue increased from \$51.8 billion in 2006 to \$59.0 billion in 2010.⁴⁸⁶ Although the number of basic cable MVPD subscribers decreased from 2006 to 2010, the remaining subscribers purchased an increasing number of subscriptions to advanced video services (e.g., digital programming tiers and HD and DVR services). The increased number of subscriptions to advanced video services and increases in the prices charged for cable MVPD services resulted in an increase in cable MVPD revenue during the period 2006 to 2010.⁴⁸⁷ DBS MVPD video revenue increased from \$23.5 billion to \$32.9 billion. Table 8 also shows video revenue for a select number of publicly-traded cable MVPDs. AT&T and Verizon do not report video revenue separately.⁴⁸⁸

⁴⁸⁶ SNL Kagan, *Broadband Cable Financial Databook*, 2011 Edition, at 8. Estimates for cable MVPD video revenue were derived by summing basic cable revenue, total pay revenue, total digital tier revenue, net local advertising revenue, and miscellaneous revenue (which include revenues from installation and equipment rentals, VOD, DVR, and HD).

⁴⁸⁷ *Id.* at 2, 12.

⁴⁸⁸ Within AT&T's wireline segment, the company aggregates video revenue into "Data" revenue, which includes video service, Internet access service from both U-verse and DSL, and VoIP telephone service from U-verse. AT&T asserts that it expects revenue from U-verse to expand as revenue from traditional, circuit-based services continues to decline. AT&T, *2010 Annual Report*, at 37-38.

Within Verizon's wireline segment, video revenue is aggregated into "Mass Markets" revenue, which includes video service, Internet access service from both FiOS and DSL, and traditional landline and VoIP telephone service. Verizon explains that increases in Mass Markets revenue from 2009 to 2010 are driven by the expansion of consumer and business FiOS services, which is partially offset by a decline of local exchange revenue stemming from a decline in legacy landline telephone service. Verizon, *2010 Annual Report*, at 25.

Table 8: Video Revenue (in billions)

Year	2006	2007	2008	2009	2010
Cable	\$51.8	\$54.3	\$56.6	\$57.4	\$59.0
Comcast ⁴⁸⁹	\$15.1	\$17.7	\$19.2	\$19.4	\$19.5
Time Warner ⁴⁹⁰	\$7.6	\$10.2	\$10.5	\$10.8	\$11.0
Charter ⁴⁹¹	\$3.3	\$3.4	\$3.7	\$3.7	\$3.7
Cablevision ⁴⁹²	\$2.6	\$2.8	\$3.0	\$3.1	\$3.2
DBS⁴⁹³	\$23.5	\$26.6	\$28.9	\$30.4	\$32.9
DIRECTV ⁴⁹⁴	\$13.7	\$15.5	\$17.3	\$18.7	\$20.3
DISH Network ⁴⁹⁵	\$9.8	\$11.1	\$11.6	\$11.7	\$12.6

147. *Average Revenue Per Unit.* Average revenue per unit (“ARPU”) is a performance metric that estimates the value of a single unit by dividing a company’s total revenue by the total number of units. In this case a unit is a single subscriber. The metric includes revenue from all services. Therefore, for those MVPDs that provide video, Internet access, and telephone service, this metric includes revenue from all of these services and associated equipment such as set-top boxes and modems. Since this Report, however, is focused on video, when data are available, we also report ARPU for video services alone, which is estimated by dividing video revenue by the total number of video subscribers.

148. Table 9 shows monthly ARPU for all services for the five-year period from 2006 to 2010. Cable MVPDs’ per-subscriber monthly revenue has risen steadily over this period due to a combination of growth in the number of subscribers to cable bundles, growth in the number of subscribers to advanced services, and price rate increases.⁴⁹⁶ Monthly ARPU for cable MVPDs was \$87.70 in 2006, and increased to \$122.20 in 2010. DBS MVPDs generally receive smaller ARPU compared to cable MVPDs.⁴⁹⁷

⁴⁸⁹ Comcast 2010 Form 10-K at 39; Comcast, *SEC Form 10-K for the Year Ended December 31, 2007*, at 24.

⁴⁹⁰ Time Warner Cable, *2010 Annual Report*, at 69; Time Warner Cable, *SEC Form 10-K for the Year Ended December 31, 2007*, at 89.

⁴⁹¹ Charter, *SEC Form 10-K for the Year Ended December 31, 2010*, at 43; Charter, *SEC Form 10-K for the Year Ended December 31, 2007*, at 24.

⁴⁹² Cablevision, *SEC Form 10-K for the Year Ended December 31, 2010*, at 68; Cablevision, *SEC Form 10-K for the Year Ended December 31, 2008*, at 67; Cablevision, *SEC Form 10-K for the Year Ended December 31, 2007*, at 63.

⁴⁹³ DBS MVPD video revenue is the sum of DIRECTV U.S. and DISH Network video revenue.

⁴⁹⁴ DIRECTV video revenue is less than total revenue because we report video revenue from DIRECTV U.S. and exclude video revenue from DIRECTV Latin America. DIRECTV 2010 Form 10-K at 35; DIRECTV 2007 Form 10-K at 40.

⁴⁹⁵ DISH Network 2010 Form 10-K at 41.

⁴⁹⁶ SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 14.

⁴⁹⁷ Whereas cable MVPDs receive revenue from video, Internet access, and telephone services, DBS relies almost exclusively on revenue from video services.

Although AT&T and Verizon estimate ARPU for their Wireless segments, they do not make similar estimates for their Wireline segments, which include their video services, so data are not available to calculate this performance metric.⁴⁹⁸

Table 9: Monthly ARPU for All MVPD Services

Year	2006	2007	2008	2009	2010
Cable ⁴⁹⁹	\$87.70	\$95.30	\$105.40	\$113.70	\$122.20
Comcast	\$91.30	\$101.60	\$111.10	\$118.20	\$127.10
Time Warner Cable	\$91.70	\$94.10	\$102.50	\$110.30	\$118.60
Charter	\$84.60	\$94.10	\$105.10	\$114.70	\$125.70
Cablevision	\$110.40	\$121.20	\$132.70	\$140.40	\$143.00
Suddenlink	\$78.00	\$81.80	\$93.20	\$103.20	\$114.40
Mediacom	\$72.00	\$79.70	\$88.40	\$95.20	\$102.80
DBS					
DIRECTV ⁵⁰⁰	\$73.70	\$79.10	\$83.90	\$85.50	\$89.70
DISH Network ⁵⁰¹	\$62.80	\$65.80	\$69.30	\$70.00	\$73.30

149. Table 10 shows monthly ARPU for video services alone. Despite losses in cable subscribers, cable MVPDs achieved increased ARPU for video services from 2006 to 2010 by raising prices and increasing subscriptions from the remaining customers for advanced video services (e.g., digital video, DVR, VOD, and HD).⁵⁰² Video ARPU for cable MVPDs increased from \$52.20 in 2006 to \$66.40 in 2010. Table 10 also includes video ARPU estimates for a sample of cable companies. The results show consistent growth in video ARPU for each of these cable companies. Because DBS MVPDs earn almost all of their operating revenue from subscription video services, we estimate monthly ARPU for video services to be the same as monthly ARPU for all services. As noted above, AT&T and Verizon do not provide estimates of ARPU for their Wireline segments, which include their video services, so data are not available to calculate this performance metric.

⁴⁹⁸ One reason for telephone MVPDs not providing ARPU estimates for their wireline segments may be that the wireline segment contains an amalgamation of two systems (an older system using traditional copper wire and circuit switches and the newer using fiber and IP technology) with a migration of customers and services from one system to the other.

⁴⁹⁹ Monthly ARPU data for cable MVPDs and individual cable companies come from SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 14.

⁵⁰⁰ ARPU data are for DIRECTV's U.S. Segment (i.e., excluding the Latin America Segment). DIRECTV 2006 Form 10-K at 48; DIRECTV 2007 Form 10-K at 47; DIRECTV 2008 Form 10-K at 49; DIRECTV 2009 Form 10-K at 55; DIRECTV 2010 Form 10-K at 42.

⁵⁰¹ DISH Network 2010 Form 10-K at 41.

⁵⁰² SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition at 14.

Table 10: Monthly ARPU for Video Services

Year	2006	2007	2008	2009	2010
Cable ⁵⁰³	\$52.20	\$57.20	\$61.40	\$64.10	\$66.40
Comcast	\$60.10	\$65.60	\$68.40	\$71.00	\$73.20
Time Warner Cable	\$47.40	\$63.60	\$66.20	\$68.90	\$72.30
Charter	\$50.20	\$55.40	\$63.20	\$65.90	\$69.20
Cablevision	\$69.80	\$74.00	\$79.20	\$83.20	\$84.60
Suddenlink	\$33.10	\$45.20	\$51.70	\$54.50	\$57.20
Mediacom	\$52.40	\$55.00	\$58.70	\$61.40	\$62.90
DBS					
DIRECTV ⁵⁰⁴	\$73.70	\$79.10	\$83.90	\$85.50	\$89.70
DISH Network ⁵⁰⁵	\$62.80	\$65.80	\$69.30	\$70.00	\$73.30

d. Investment

150. For the five-year period from 2006 to 2010, cable MVPDs invested \$67.3 billion in infrastructure.⁵⁰⁶ For cable MVPDs, capital expenditures peaked from 2000 to 2002 when many cable MVPD system upgrades occurred.⁵⁰⁷ Cable MVPD capital spending has fallen since then and has fluctuated within the \$10 billion to \$12 billion range over the past five years as capital investments have shifted from upgrades to capital tied to increased revenue streams (e.g., providing upgraded set-top receivers to new subscribers of advanced services) and capital tied to expansion of MVPD services to businesses.⁵⁰⁸ According to NCTA, cable MVPD infrastructure expenditures were \$12.4 billion in 2006, \$14.6 billion in 2007, \$14.6 billion in 2008, \$13.3 billion in 2009, and \$12.4 billion in 2010.⁵⁰⁹ DBS MVPDs needed to construct and launch new satellites to expand their offerings of new programming and services.⁵¹⁰ DISH Network expanded its channel capacity by launching two more satellites in 2010.⁵¹¹

⁵⁰³ Monthly video ARPU data for cable MVPDs and individual cable companies come from SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 14.

⁵⁰⁴ ARPU data are for DIRECTV's U.S. Segment (i.e., excluding the Latin America Segment). DIRECTV 2006 Form 10-K at 48; DIRECTV 2007 Form 10-K at 47; DIRECTV 2008 Form 10-K at 49; DIRECTV 2009 Form 10-K at 55; DIRECTV 2010 Form 10-K at 42.

⁵⁰⁵ DISH Network 2010 Form 10-K at 41.

⁵⁰⁶ NCTA 6/8/11 Comments at 10.

⁵⁰⁷ SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 16.

⁵⁰⁸ *Id.* at 12, 16; SNL Kagan, *Broadband Cable Financial Databook*, 2011 Edition, at 83.

⁵⁰⁹ NCTA 6/8/11 Comments at 10.

⁵¹⁰ DIRECTV 2010 Form 10-K at 21.

⁵¹¹ DISH Network, *2010 Annual Report*, Letter to Shareholders.

Between 2006 and 2010, Verizon and AT&T invested billion of dollars upgrading their systems enabling them to provide MVPD video service. Verizon expected to invest \$23 billion from 2004 to 2010 deploying its FiOS network.⁵¹²

e. **Profitability**

151. In reporting profitability, MVPDs often combine revenues and costs from multiple services.⁵¹³ For example, cable MVPDs that offer video, Internet access, and telephone services often combine the revenues and costs of these services to estimate profitability. As such, for cable MVPDs we are not able to separate out profitability metrics for video services only. In contrast, DBS MVPDs focus on video services and derive the vast majority of their revenue and profits from video services. Thus, estimates of DBS profitability can be interpreted as profits from video services. Telephone MVPDs, especially the two largest telephone MVPDs that account for the overwhelming majority of telephone MVPD video subscribers, combine revenues and costs from video, Internet access, and telephone services from both their upgraded wireline systems and their legacy wireline systems.⁵¹⁴ Because they combine a range of services from two systems, we cannot estimate any meaningful metric for telephone MVPD profits that relate to video services only.

152. SNL Kagan reports that, despite cable MVPDs continued losses in video subscribers, all the advanced service segments (*e.g.*, digital cable, Internet, and telephone) continue to grow.⁵¹⁵ The result, according to SNL Kagan, has been higher per-subscriber revenues and strong overall financial results for cable MVPDs over the past five years from 2006 to 2010.⁵¹⁶ Comcast reports that it has had “terrific momentum in our operating and financial performance. In 2010, we had solid growth in consolidated revenue, operating cash flow, and operating income.”⁵¹⁷ Comcast explains that its free cash flow climbed 22 percent – its third straight year of 20 percent-plus free cash flow growth.⁵¹⁸ DIRECTV states, “We had a terrific year in 2010, as we excelled in every important category, beating our plans for subscriber growth, revenue and cash flow.”⁵¹⁹ DIRECTV explains that it is now a \$24 billion business with free cash flow for the full year at \$2.8 billion, growing at 18 percent, and its operating profit before depreciation and amortization grew 20 percent, finishing 2010 at \$6.4 billion.⁵²⁰

153. The conventional measure of financial performance for cable MVPDs has been operating cash flow, defined as earnings before interest, taxes, and depreciation and amortization expense (EBITDA).⁵²¹ Estimates of operating cash flow for a sample of MVPDs are shown in Table 11. SNL

⁵¹² Verizon 5/20/09 Comments at 6.

⁵¹³ Profit is defined as revenue minus costs, although its measurement may vary in different contexts. See Donald S. Watson & Mary A. Holman, *PRICE THEORY AND ITS USES* 144 (Houghton Mifflin Company) (4th ed. 1977). See also Brian Butler, *A DICTIONARY OF FINANCE AND BANKING* 280-81 (Oxford University Press) (2nd ed. 1997) (stating that it is not always possible to derive one single figure for profit for an organization from an accepted set of data). See also Vogel at 336, Table 8.3 (showing select cable MVPD operating revenues and expenses).

⁵¹⁴ Verizon, *2010 Annual Report*, at 25.

⁵¹⁵ SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 2.

⁵¹⁶ *Id.*

⁵¹⁷ Comcast, *2010 Annual Review*, Letter to Shareholders.

⁵¹⁸ *Id.*

⁵¹⁹ DIRECTV, *2010 Annual Report*, Message to Shareholders.

⁵²⁰ *Id.*

⁵²¹ Vogel at 339-43. See also SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 12.

Kagan explains that from 2006 to 2010, despite basic video subscriber losses and weaker subscriber trends during the housing downturn, a combination of price increases and growth in subscriptions to digital video services and Internet access and telephone services have enabled cable MVPDs to maintain operating margins (defined as operating cash flow divided by revenue) in the upper 30 percent range.⁵²² According to SNL Kagan, Cablevision and Comcast have led their peers with operating margins averaging about 40 percent from 2006 to 2010.⁵²³ Over the same period, Verizon reported for its Wireline segment an operating margin (EBITDA margin) averaging about 22 percent.⁵²⁴ Although DIRECTV exhibited steady growth in operating cash flow from 2006 to 2010, DISH Network's numbers grew from 2006 to 2008, declined in 2009, then rebounded in 2010. AT&T did not report EBITDA and Verizon only reported EBITDA for its Wireline segment for 2008, 2009, and 2010.

Table 11: MVPD Operating Cash Flow (in billions)

Year	2006	2007	2008	2009	2010
Cable ⁵²⁵					
Comcast	\$10.6	\$12.2	\$13.2	\$13.7	\$14.6
Time Warner	\$5.2	\$5.8	\$6.2	\$6.5	\$6.9
Charter	\$1.9	\$2.1	\$2.3	\$2.5	\$2.6
Cablevision	\$1.6	\$1.8	\$2.0	\$2.1	\$2.2
Suddenlink	\$0.3	\$0.4	\$0.5	\$0.6	\$0.6
Mediacom	\$0.4	\$0.5	\$0.5	\$0.5	\$0.5
DBS					
DIRECTV ⁵²⁶	\$3.2	\$3.6	\$3.9	\$4.4	\$5.2
DISH Network ⁵²⁷	\$2.4	\$2.8	\$2.9	\$2.3	\$3.0
Telephone					
Verizon ⁵²⁸	NA	NA	\$11.3	\$9.8	\$9.2

⁵²² SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 12.

⁵²³ *Id.*

⁵²⁴ Verizon reported a wireline segment EBITDA margin of 25.4 percent in 2008, 23.1 percent in 2009, and 22.4 percent in 2010. Verizon, *2010 Annual Report*, at 27.

⁵²⁵ EBITDA estimates for individual cable companies come from SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 13.

⁵²⁶ DIRECTV does not provide EBITDA estimates, so we report net cash provided by operating activities. DIRECTV 2010 Form 10-K at 33; DIRECTV 2008 Form 10-K at 41. Estimates for DIRECTV include both DIRECTV U.S. and DIRECTV Latin America.

⁵²⁷ EBITDA estimates for DISH Network come from DISH Network 2010 Form 10-K at 48, 53; DISH Network 2008 Form 10-K at 44, 50.

⁵²⁸ Verizon reported EBITDA for its wireline segment in 2008, 2009, and 2010, but did not report EBITDA in 2006 and 2007. Verizon, *2010 Annual Report*, at 27.

154. In recent years, however, analysts have favored estimating free cash flow, *i.e.*, the cash that is available to the company for purposes other than new system construction.⁵²⁹ Free cash flow has emerged as an increasingly relevant metric for financial health as the capital investments of cable MVPDs have shifted from system upgrades to capital expenditures (*e.g.*, set-top boxes with HD and DVR features) tied to increased revenue streams.⁵³⁰ Table 12 shows free cash flow for a sample of MVPDs. AT&T did not report free cash flow. Verizon reported free cash flow for 2008, 2009, and 2010 but its estimates include both its wireless and wireline segments, so the numbers shed little light on the financial performance of its FiOS video services.

Table 12: MVPD Free Cash Flow (in billions)

Year	2006	2007	2008	2009	2010
Cable ⁵³¹					
Comcast	\$2.6	\$2.3	\$3.7	\$4.4	\$4.9
Time Warner	\$0.7	\$1.0	\$1.7	\$1.9	\$2.3
Charter	(\$0.8)	(\$0.9)	(\$0.9)	(\$0.6)	\$0.7
Cablevision	\$0.0	\$0.2	\$0.5	\$0.8	\$0.9
Suddenlink	(\$0.1)	\$0.0	\$0.1	\$0.1	\$0.0
Mediacom	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1
DBS					
DIRECTV ⁵³²	\$1.2	\$1.0	\$1.7	\$2.4	\$2.8
DISH Network ⁵³³	\$0.9	\$1.2	\$1.2	\$1.2	\$0.9
Telephone					
Verizon ⁵³⁴	NA	NA	\$10.3	\$14.5	\$16.9

⁵²⁹ Vogel at 340. SNL Kagan defines free cash flow as EBITDA less capital expenditures, cash paid for interest and taxes, and changes in working capital. SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 12.

⁵³⁰ *Id.*

⁵³¹ Free cash flow estimates for individual cable companies come from SNL Kagan, *Benchmarking Cable MSO Financial Statistics*, 2011 Edition, at 13.

⁵³² Free cash flow estimates for DIRECTV come from DIRECTV 2010 Form 10-K at 33; DIRECTV 2008 Form 10-K at 41. Estimates for DIRECTV include both DIRECTV U.S. and DIRECTV Latin America.

⁵³³ Free cash flow estimates for DISH Network come from DISH Network 2010 Form 10-K at 58; DISH Network 2008 Form 10-K at 54.

⁵³⁴ Verizon reported free cash flow for 2008, 2009, and 2010, but did not report free cash flow for 2006 and 2007. Verizon's free cash flow estimates include all segments (*i.e.*, both wireless and wireline). Verizon, *2010 Annual Report*, at 31.

B. Broadcast Television Stations

1. Introduction

155. This Report considers broadcast television stations as a separate group. Broadcast stations package video programming and deliver it directly over the air to those consumers who do not subscribe to an MVPD as well as MVPD subscribers who own television sets that are not connected to an MVPD service. Broadcast television station programming is also an input for MVPD services.

156. Broadcast stations cater to two distinct sets of customers: audiences and advertisers.⁵³⁵ They seek to provide desirable content to attract and maximize their audiences. In turn, they primarily derive revenues by selling time during their broadcasts to advertisers based on the size and demographic characteristics of the audiences they reach.⁵³⁶ Individual commercial stations compete primarily with other commercial broadcast stations within their local markets (DMAs)⁵³⁷ for audiences and advertising revenue. Noncommercial stations, while not relying on advertising revenues, compete with commercial stations for viewers. Other media, including daily newspapers, local and national cable networks, and the Internet earn advertising revenues by attracting audiences within the geographic areas they serve.⁵³⁸ Broadcast stations' advertising revenues depend on viewership of their television programs, whether received by consumers over the air or via an MVPD. Today, broadcast stations are turning to additional revenue sources, including retransmission consent fees, ancillary digital television revenues, and advertising sold on their web sites.⁵³⁹ Noncommercial broadcast stations rely on underwriters, viewer donations, and government funding for their operations, and also seek to attract audiences as a way to increase their revenues from these sources.

157. On June 12, 2009, full-power television stations completed a transition from analog to digital service pursuant to a statutory mandate.⁵⁴⁰ Digital broadcasting gives broadcast stations greater flexibility. Instead of sending one analog program signal, broadcast stations can use digital technology to offer high definition ("HD") programming, provide multiple streams of programming, and/or distribute

⁵³⁵ Advertisers and audiences are mutually dependent. Television stations need to attract audiences in order to earn money from advertising. They need advertising revenues in order to make investments in programming that will attract audiences. See David S. Evans & Richard Schmalensee, *The Industrial Organization of Markets with Two-Sided Platforms*, COMPETITION POL'Y INT'L 151, 155-56 (2007) (discussing the economics of two-sided platforms and its application to competition policy issues especially as it relates to advertising-supported media).

⁵³⁶ "[B]roadcasting in any and all of its forms is an audience aggregation business." See Vogel, *supra*, n. 463, at 288.

⁵³⁷ Under Commission rules, broadcast television stations serve a community of license. See *supra*, n. 148.

⁵³⁸ See, e.g., Nexstar Broadcasting Group, Inc., *SEC Form 10-K for the Year Ended December 31, 2010*, at 1, 5 ("Nexstar 2010 Form 10-K"); Sinclair Broadcast Group, Inc., *SEC Form 10-K for the Year Ended December 31, 2010*, at 4, 21 ("Sinclair 2010 Form 10-K").

⁵³⁹ Gray Television, Inc., *SEC Form 10-K for the Year Ended December 31, 2010*, at 3-4 ("Gray 2010 Form 10-K"); Sinclair 2010 Form 10-K at 4-5; LIN Television Corp., *SEC Form 10-K for the Year Ended December 31, 2010*, at 8-10 ("LIN 2010 Form 10-K").

⁵⁴⁰ 47 U.S.C. §309(j)(14)(A). Full-power analog television service therefore has terminated. See, e.g., *Pending Applications and Pleadings Related to Proceedings for New Analog Full-Power Television Stations for Communities in Several States*, Order, 26 FCC Rcd 14301, ¶ 1 (Video Div., MB 2011). Low-power stations are not required to complete their digital conversion until September 1, 2015. See *Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations*, MB Docket No. 03-185, Second Report and Order, 26 FCC Rcd 10732, 10733, ¶ 2 (2011).

programming to mobile devices. With multicasting,⁵⁴¹ stations can provide a diverse array of programming to the audience within a DMA.⁵⁴² In addition, stations may affiliate their multicast streams with established networks to give viewers in smaller markets more over-the-air viewing options.

2. Broadcast Television Industry Structure

158. Consistent with our discussion of the MVPD industry, a key element of our analysis of video competition in the broadcast television industry includes industry structure. In this section of the Report, we describe critical elements of the broadcast television industry. We then explain horizontal concentration and vertical integration in the market. Next, we describe conditions effecting market entry during the relevant period, including an overview of existing regulations and market conditions that might influence entry decisions. Finally, we describe recent entry in the market.

159. The broadcast television station group consists of commercial and noncommercial, full-power, Class A, and low-power stations.⁵⁴³ The Commission licenses broadcast television stations to both individual and group owners to serve local communities within DMAs.

160. Nationally, the number of broadcast stations has changed little since the last report, although the relative mix of VHF and UHF stations has changed due in large part to the transition to digital television. As of December 31, 2010, there were 1,022 commercial UHF stations and 368 commercial VHF stations in the United States. In addition, there were 284 noncommercial educational UHF stations and 107 noncommercial educational VHF stations. There were also 7,240 television translators, Class A stations, and low power television stations.⁵⁴⁴

⁵⁴¹ Multicasting allows broadcast stations to offer digital streams or channels (*i.e.*, digital multicast signals) of programming simultaneously, using the same amount of spectrum previously required for analog programming. See FCC, *DTV.gov: What is DTV?*, <http://www.dtv.gov/whatisdtv.html>.

⁵⁴² For example, Bounce TV is a network targeting African Americans and Retro Television features classic television programs. See Bounce Media, LLC, *FAQs: What is Bounce TV?*, <http://www.bouncetv.com/faq/bounce-tv/what-is-bounce-tv.html> (visited Feb. 27, 2012); Retro Television, Inc., *RTV Shows*, <http://myretrotv.com/shows.html> (visited Feb. 27, 2012). Under Commission rules, digital stations asserting must-carry rights are entitled to carriage only of a single programming stream and other programming-related content on that stream. See *Carriage of Digital Television Broadcast Signals*, CS Docket No. 98-120, First Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 2598, 2622, ¶ 57 (2001).

⁵⁴³ In this Report, we focus on commercial, full-power broadcast stations because of their impact on competition in the market for the delivery of video programming and the limitations on available data for other types of stations.

⁵⁴⁴ A television translator station rebroadcasts the programs of a full-power television broadcast station. Television translator stations typically serve communities that cannot receive the signals of free over-the-air television stations because they are too far away from a full-power television station or because of geographic limitations. See, e.g., FCC Consumer Advisory: The DTV Transition and LPTV/Class A and Translator Stations, <http://www.fcc.gov/cgb/consumerfacts/DTVandLPTV.html>. In 2000, the Commission established the Class A television service to implement the Community Broadcasters Protection Act of 1999. See *Community Broadcasters Protection Act of 1999*, Pub. L. No. 106-113, § 5008, 113 Stat. 1501, 1501A-594-98 (1999) (codified as amended at 47 U.S.C. § 336(f)). Thus, certain qualifying low-power television (LPTV) stations are accorded Class A status, which indicates that these stations have “primary” status as television broadcasters and have a measure of interference protection from full service television stations. Pursuant to Commission rules, stations eligible for this status must provide locally originated programming, often to rural and certain urban communities that have little or no access to such programming. See *Establishment of a Class A Television Service*, MM Docket No. 00-10, Report and Order, 15 FCC Rcd 6355, 6357, ¶ 1 (2000). Created by the Commission in 1982, low-power television service has been a secondary spectrum priority. See *Inquiry Into the Future Role of Low-power Television Broadcasting and Television Translators in the National Telecommunications System*, Report and Order, BC Docket No. 78-253, (continued....)

Table 13: Total Full Power Broadcast Television Stations by Year⁵⁴⁵

Station Type	Date				
	12/31/06	12/31/07	12/31/08	12/31/09	12/31/10
UHF Commercial	789	796	796	1,019	1,022
VHF Commercial	587	583	582	373	368
Total	1,375	1,379	1,378	1,392	1,390
UHF Noncommercial	252	252	252	283	284
VHF Noncommercial	128	128	129	107	107
Total	380	380	381	390	391
Grand Total	3,512	3,518	3,518	3,564	3,562

161. Since the last report, the broadcast television industry completed its transition to digital service in 2009. Broadcast television stations have begun offering more programming than ever before, including both HD signals and standard-definition (SD) multicast signals.⁵⁴⁶ NAB states that at the end of 2008, about one-third of broadcast television stations delivered programming on a secondary channel.⁵⁴⁷ After the switch to digital television in 2009, the majority of full-power stations were multicasting – more than 60 percent.⁵⁴⁸ As of December 2010, about 71 percent of the 1,196 total commercial stations SNL Kagan surveyed were multicasting, representing an increase of 1,240 multicast signals since 2009, for a total of 2,518 multicast signals as of 2010.⁵⁴⁹ In addition, SNL Kagan analyzed 349 noncommercial stations and found that approximately 83 percent were multicasting as of December 2010.⁵⁵⁰ To continue to receive over-the-air broadcasting, viewers had to obtain a digital converter box for their analog television set or purchase a digital television set. Nielsen estimates that as of August 2009, about 0.6 percent of U.S. households with television sets were unable to receive digital television signals, either over-the-air or via MVPD service.⁵⁵¹

162. The geographic area applicable for competition among broadcast television stations is the DMA because consumers view alternative stations that are available to them in the areas where they live. The level of broadcast television station competition within a DMA varies. While the size of television markets and number of stations that Nielsen assigns to each DMA are not directly correlated, larger

(Continued from previous page) _____
51 Rad. Reg. 2d (P & F) 476, 486 (1982), *aff'd sub nom. Neighborhood TV Co. v. FCC*, 742 F.2d 629 (D.C. Cir. 1984).

⁵⁴⁵ See FCC, *Licensed Broadcast Station Totals*, <http://transition.fcc.gov/mb/audio/BroadcastStationTotals.html>.

⁵⁴⁶ See, e.g., Comcast 6/8/11 Comments at 3; NAB 6/8/11 Comments at 5.

⁵⁴⁷ NAB 6/8/11 Comments at 21 (citing SNL Kagan). See also SNL Kagan, *TV Stations Deals Databook*, 2011 Edition, at 7 (2011) (“2011 SNL Kagan TV Stations Databook”).

⁵⁴⁸ 2011 SNL Kagan TV Stations Databook at 7.

⁵⁴⁹ *Id.* at 6-7. See also Justin Nielson, *TV Stations Multiplatform Analysis '11 Update: Multicasting Expands Programming Options, Mobile TV Goes Live*, SNL Kagan, Jan. 28, 2011, at 3-4. Moreover, as of year-end 2010, 60 commercial mobile digital television (“mobile DTV”) stations were broadcasting more than 80 live video channels in several major cities. For a more detailed discussion of mobile DTV, see *infra*, Sec. III.B.3.b.

⁵⁵⁰ See also 2011 SNL Kagan TV Stations Databook at 7. Of those total digital noncommercial stations covered, 262 are affiliated with PBS. *Id.*

⁵⁵¹ *The Digital Transition: Update on the Digital Readiness of U.S. Households*, Nielsen, Sept. 8, 2009, at 1. Nielsen stopped tracking the readiness of U.S. television households after the digital transition was completed.

markets tend to have more full-power stations than smaller markets. For example, Los Angeles, the number-two ranked DMA by number of television households, has 23 full-power television stations, more than any other market.⁵⁵² Nine television markets, including Harrisonburg, Virginia, ranked 177, have only one full-power television station.⁵⁵³

163. Programming is a critical input for broadcast television stations to effectively compete in the industry. Stations combine local programming, either produced in-house or acquired from independent sources, syndicated programming and/or network programming. The mix of programming varies by station, and depends on whether the station is affiliated with a network or operates as an independent station.⁵⁵⁴ Whether or not a station is affiliated with one of the four major networks (ABC, CBS, FOX, or NBC) has a significant impact on the composition of the stations' revenues, expenses, and operations.⁵⁵⁵

164. In 2011, most full-power commercial stations (about 1,145 out of 1,196 total full-power commercial stations) got at least some of their programming from broadcast networks on their primary signals.⁵⁵⁶ Commercial broadcast networks generally fall into five main categories: English-language (e.g., ABC, CBS, FOX, NBC, The CW, and MyNetworkTV); Spanish-language (e.g., Univision, Telemundo, and TeleFutura); shopping (e.g., HSN), religious (e.g., TBN and CTN), and regional specialty networks (e.g., Memorable Entertainment Television). Three of the major networks (ABC, CBS, and NBC) generally provide their affiliates with about 22 hours per week of prime time programming.⁵⁵⁷ FOX, MyNetworkTV, and The CW supply affiliates with up to 15 hours per week of prime time programming.⁵⁵⁸ In addition, these networks may supply affiliates with daytime programming, e.g., morning news programs, game shows, talk shows (including Sunday public affairs),

⁵⁵² BIA Financial Network, Inc. ("BIA"), *Broadcast Television Station* database. The Los Angeles DMA had 5.7 million television households as of the 2010-2011 television season. See *Local Television Market Universe Estimates*, Nielsen, Sept. 25, 2010 ("Nielsen 2010-11 Local Market Estimates"). Estimates were effective as of January 1, 2011, and used throughout the 2010-2011 television season. Nielsen estimates several measurements, including the number of television households within each DMA, by broadcast television seasons, which run from September through August.

⁵⁵³ BIA, *Broadcast Television Station* database. The Harrisonburg DMA had 94,700 television households as of the 2010-2011 television season. See Nielsen 2010-11 Local Market Estimates. The other eight markets with one full-power television station are: Alpena, Michigan; Glendive, Montana; Lafayette, Indiana; Mankato, Minnesota; North Platte, Nebraska; Parkersburg, West Virginia; Presque Isle, Maine; and Zanesville, Ohio.

⁵⁵⁴ The Commission defines broadcast television networks as "any person, entity, or corporation which offers an interconnected program service on a regular basis for 15 or more hours per week to at least 25 affiliated television licensees in 10 or more states; and/or any person, entity, or corporation controlling, controlled by, or under common control with such person, entity, or corporation." 47 C.F.R. § 73.3613(a)(1). Stations affiliated with a network may be owned and operated by the network (O&Os) or owned by other entities that have agreements with a network for distribution of the network's programming.

⁵⁵⁵ Nexstar 2010 Form 10-K at 5; Gray 2010 Form 10-K at 7. Station groups differ in the importance they ascribe to network affiliation contracts with respect to their broadcast licenses. See *infra*, n. 601.

⁵⁵⁶ FCC staff analysis based on 2011 data from BIA, *Broadcast Television Station* database.

⁵⁵⁷ Nexstar 2010 Form 10-K at 14.

⁵⁵⁸ *Id.*