LONG CHTR US EQUITY | May 2022
Value Investing with Legends

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Investment Thesis – May 2022

Charter Communications, Inc. ("Charter," "CHTR") is a leading cable company with best-in-class capital allocation operating in a rational duopoly market structure. Since 2010, CHTR has compounded >20% annually, but recently has pulled back nearly 50% from all-time highs in September 2021 coming under pressure from macro headwinds plus the fear of new competition entering the broadband market. However, I believe these fears are overblown and the long-dated structure of the broadband market with traditional cable having a leadership position with the best offering and widest coverage remains unchanged. Further, I believe Charter has underappreciated business segments that will drive substantial growth and free cash flow on top of their cash-cow cable business that the company can use to continue returning cash to shareholders. As a result, I am LONG CHTR US for 26% IRR with a four-year price target of $1009 based on 8.0x 2026 FCF of ~$13 billion:

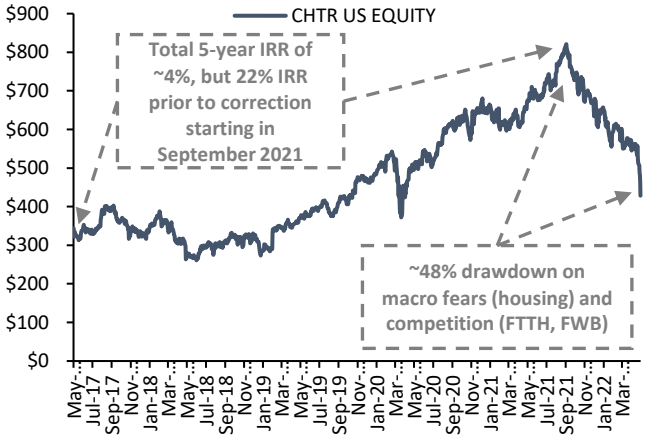
- Fears over fiber-to-the-home ("FTTH") and fixed wireless broad ("FWB") taking share from cable's Internet offering are overblown given the massive size of the industry, the limited footprint overlap, and the superior capabilities of cable. I believe Charter and Comcast will maintain in their rational cable duopoly and Charter can add an average of ~600k residential Internet customers per year from 2022 to 2026. As bundling with Video and Voice loses popularity, Charter will also continue to exhibit pricing power in their broadband segment given the historically low churn and stickiness of their Internet offering. Further, the mix shift to higher Internet as a percentage of total relationships will be margin-accretive given high programming costs per Video subscriber.
- The current housing environment with low moving rates and tough comparisons from the COVID-19 pandemic has dampened normal Internet net add rates; and as the housing environment returns to normal over the next few years there will be increased availability for new customer wins fueling a consistent stream of new customer additions for Charter to capture.
- Charter's Mobile segment is underappreciated, growing at an astonishing CAGR of 174% from FY18 to FY21, with total Mobile subscribers growing at a faster rate of 198% over the same time period from 134k subscribers in 2018 to 3.6 million in 2021. The Mobile segment not only provides a cost-saving value proposition for customers, but also will be cash flow accretive in future years as segment losses are declining and on the brink of profitability.
- On a fully diluted (including RSUs, options, and partnership units in share count), fully-loaded (including leases, noncontrolling interest, and pension liabilities in debt) basis CHTR is trading at ~10x 2022 FCF and ~8.5x 2022 EBITDA for a business that is projected to compound FCF at ~12% from FY22-FY26 and increase ROIC by nearly 50% over the same time period. Assuming slight multiple compression exiting at 8x plus share count being cut in half by 2025 with Charter maintaining buybacks at a similar pace to historical levels generates an attractive IRR well north of 20% for multiple years to come as cable starts posting stabilizing net new Residential Internet additions and the rapid growth FTTH and FWB are seeing today moderate after a few quarters of robust growth off a base of practically zero.

Capitalization	
Price	$428
FDSO	194
Market Cap	$82,985
(+) Debt	$91,561
(+) Leaes	$1,451
(+) NCI	$4,106
(+) Pension	$3,457
(-) Cash	($601)
Enterprise Value	**$182,959**

Multiples on Current Capitalization	2020A	2021A	2022E	2023E	2024E	2025E	2026E
EV / Revenue	3.8x	3.5x	3.4x	3.2x	3.1x	2.9x	2.8x
EV / Adj. EBITDA	9.9x	8.9x	8.5x	8.0x	7.5x	7.0x	6.5x
EV / UFCF	16.7x	14.4x	14.6x	13.2x	12.2x	11.2x	10.3x
P / E	27.8x	17.8x	14.0x	10.0x	7.2x	5.4x	4.1x
P/ FCF	11.7x	9.6x	10.1x	9.0x	8.0x	7.2x	6.4x
Net Debt/EBITDA	4.5x	4.4x	4.6x	4.5x	4.3x	4.1x	3.8x

Returns	
2026 FCF	$13,027
Multiple	8.0x
Market Cap	$104,214
2025 Shares	103
Share Price	**$1,009**
MoM	**2.36x**
IRR	**26%**
Exit Date	*12/31/25*
Date	*4/29/22*

- Business description: Charter is a leading broadband connectivity company and cable operator severing over 32 million customers (as of FY21) in 41 states through their Spectrum brand. Charter offers state-of-the-art residential and business services including Spectrum Internet, TV, Mobile, and Voice, plus Spectrum Business for small and medium-sized companies ("SMB") and Spectrum Enterprise providing customized fiber-based solutions for larger businesses and government entities. The Company's Spectrum Reach segment delivers tailored advertising and production, and the company through Spectrum Networks and Spectrum Originals distributes award-winning news coverage, sports, and originally programming to customers. To give an idea of Charter's scale, the Company's network passes over 54 million households and SMBs across the US, or nearly ~40% of all US households. Charter estimates over 400 million devices are wirelessly connected to their network through WiFi.



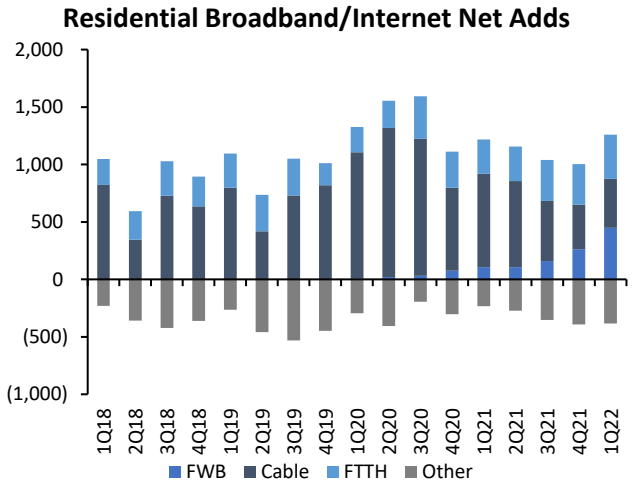
  - 78% Residential Revenue – While Charter has slightly diversified away from traditional Residential exposure, which has declined as a percentage of total revenue ~330bps on a pro-forma basis since 2014, this is still the core cash generating segment of the business. As other segments (i.e. Mobile) outgrow the consolidated company, I project Residential will decline to ~73% of revenue in 2026. The 3 main segments of residential revenue are Internet, Voice, and Video. The mix shifts dramatically over time, with Voice being 10% of pro forma residential revenue in 2014, down to 4% in 2021 and is projected to be 2% in 2026. Video mix increased from 35% in 2014 to 49% in 2019 but has since started declining from the increasing popularity of streaming services to 44% of revenue in 2021. I project Video mix will continue to decline to 34% by 2026. The most important component of Residential – Internet – has been holding steady at roughly ~50% of Residential revenue but

that is projected to increase to >60% based on the dynamics described above. Importantly, Internet is the most profitable Residential segment and the highest generator of FCF for Charter. As of FY21, Charter had 28.3 million Internet customers, 15.1 million Video customers, and 8.5 million Voice customers with 29.9 million total relationships given ~33% of customers have two-product bundles and ~20% have three-product bundles.
    - 13% Commercial – Charter's two main Commercial segments are Small and Medium Business and Enterprise. The SMB segment has 2.2 million customer relationships with 2.0 million Internet relationships, 0.6 million Video relationships, and 1.3 million Voice relationships. Unlike the Residential segment, all three of the components of SMB have been steadily growing in the MSD% per year. Charter's Enterprise segment, roughly 60% of the size of the SMB segment, has 272k service units that have been steadily growing at LSD% per year.
    - 4% Mobile – While a small part of the business today, Mobile has been growing rapidly from 0.2% of revenue in 2018 to 4.2% in 2021. Mobile is in hyper-growth mode – for any industry – with subscribers growing at nearly 200% per year since Charter launched the business. Mobile is currently EBITDA negative but has a pathway to profitability in the next 2-3 years.
    - 5% Advertising and Other – A minor part of Charter's business in aggregate, with the Advertising segment roughly flat since 2014 in terms of dollar amounts, and Other following a similar flat trend with similar projections going forward.
- Profitability and Financial Profile: While CHTR is not necessarily a "fast growing" business with revenue increasing at a 5.5% CAGR from 2014 to 2021, they have grown EBITDA over 7% p.a. over the same time period, expanding margins on average 60bps per year. However, given the company generates substantial cash flow and has grown EBITDA to increase their debt capacity, Charter has decreased share count by nearly 30% from 2015 to 2021 – and EPS has grown at a remarkable CAGR of 86% from 2015 to 2021 on a pro-forma basis.
- Acquisitions and Corporate Structure: Charter became one of the largest broadband operators in the US after achieving national scale via acquisition of Time Warner Cable ("TWC") and Bright House Networks in 2016. Charter took on a significant amount of debt (~$27bb raised, another ~$21bb assumed from TWC) taking pro-forma leverage levels to ~4.5x net-debt-to-EBITDA. However, the company has a history of operating with leverage and is comfortable today operating at the high end of their target range of 4.0-4.5x net-debt-to-EBITDA. Further, according to the 2022 proxy, Liberty Broadband run by the [in]famous John Malone, owns ~28% of the company providing cable and financial expertise to Charter helping them navigate what may be considered high leverage to non-cable companies without significant asset value from infrastructure built over countless years and a highly sticky subscriber base with an approximately 1% monthly churn rate.
- Charter's Moat: Charter exhibits economies of scale given the fixed-cost nature of the business. FTTH competitors, for example, must build out fiber passings before they can acquire a customer. Given CHTR's massive existing footprint, not only is upgrading to higher-speed services easier, but new passings are building off existing infrastructure creating a cost advantage relative to a potential new competitor who is essentially starting from scratch (or by acquiring). Further, the Company exhibits network effects in a sense that many markets are local monopolies – and once CHTR establishes a presence, they often provide broadband to entire neighborhoods, towns, and cities. Charter's scale advantage is exhibited by the fact that today there are only two pureplay "cable" operators of scale: Comcast and Charter. There are also switching costs for customers, not just from upfront fees associated with getting a new broadband service (that competitors will try to wave), but given not every broadband provider can service every house in the country, customers are often locked in with their existing providers (i.e. local monopolies) and it would be an unnecessary hassle to switch services.

Thesis Support

Competitive fears are overblown, and near-term performance should not be extrapolated to multi-year market share:

- The rough annual run-rate of net broadband (Internet) adds per year is estimated to be ~3.5 million, and in 1Q22, FWB was annualizing ~1.8 million net adds and FTTH was annualizing ~1.5 million net adds, leaving what would appear to be only ~200,000 net adds left for cable. However, the key component here is "net" – and legacy broadband products such as DSL, VDSL and copper are churning at a rate of ~1.5 million annualized. While there is no doubt cable share is declining, with relative share being >100% from 2018-2020, declining to ~75% in 2021 and as low as ~50% in 1Q22 while FWB and FTTH have grown to be ~50% of relative net adds each, respectively, the numbers do not reflect the true market dynamics. The share loss is not particularly surprising given the aggressiveness of new entrants with T-Mobile offering discounts for bundled customers (i.e. as if they were adding another phone line) and giving away free products, plus FTTH players trying to recoup their high spending (Lumen notes that FTTH capital expenditures are $1,000 per homes passed, with a target of ~40% penetration implies that it costs >$2,500 per new relationship). Note, the chart and numbers referenced only include major public companies based on selective disclosure.



- However, this cable share capture dynamic is not as simple as it seems – and the impact that competition is having on cable is overblown. First, for FWB, the "latest and greatest" –T-Mobile's FWB subscriber vs. footprint penetration shows that 33% of subscribers are in rural areas despite this only being ~6% of homes passed (Appendix). Why this is important is because cable historically does not compete in rural areas – and generally speaking, the per capita income in rural areas is less vs. suburban and urban areas, playing to T-Mobile's low-price strategy. For Verizon, the other major FWB player, in the latest earnings report, it was disclosed for the first time that ~42% of Verizon's net adds and ~50% of total subscribers for FWB are SMBs. While the chart above still shows strong Residential FWB growth, Verizon's pace of SMB net adds is growing at 1.75x the rate of Residential net

adds implying Verizon's fixed wireless strategy is broad, not just targeted at capturing the Residential market likely calling into question the projected ROI of FWB for going after just the Residential market alone. The most compelling argument against FWB is that it has capacity and speed limitations. Right now, as shown in the Appendix, 88% of T-Mobile's fixed wireless subscribers are in "under-utilized" zip codes where T-Mobile has a prominent network with a very low number of networks tests (<5%) exhibiting signs of capacity stress corroborating with the comments made at the May 2022 T-Mobile Un-carrier event that they are rolling out FWB in less utilized areas around the country. **Even operating primarily on underutilized networks, T-Mobile admitted that speeds for FWB are ~140 megabits per second vs. cable's ~165 megabits per second**. This speed gap may not be a material concern now, but the sheer increase in household broadband consumption is up ~9x from 2014 to 2020 to 344gb month and further to ~434gb in 2021 that is only expected to accelerate plus the number of household smart appliances projected to increase by 2.3x over the next 5 years will make speed a problem for FWB in the near future as they do not have the same levers to pull for increasing speed given cable today has caps on speed their existing infrastructure (that often has capacity with speed caps in place). The limitations on capacity for FWB is also a real concern – as the risk for both Verizon and T-Mobile is that in order to provide adequate speed for all Internet customers, they may have to do this at the risk of lowering the speed for their bread-and-butter Mobile customers given they share the same cell sites. Assuming the same growth rates of historical increases in household broadband data usage, or about ~35% per year, and that households use ~40x more gb than the average wireless customer, T-Mobile's 7-8 million FWB subscriber goal by 2025 would be the equivalent of adding roughly ~300 million+ Mobile customers vs. T-Mobile's ~70 million post-paid Mobile customers today – with only a ~4% higher monthly ARPU for FWB potentially sacrificing the quality of the telco's legacy cash cow business.

> ***Former Charter Employee:*** *"Fixed wireless was not big deal when I was there [because of the product limitations] – cable companies can increase speed and constantly keep up with competition from a speed perspective without adjusting the price."*

- With regards to FTTH, the rollout of fiber is still in early stages, but signs show today's growth is likely the best that we will see. A fiber player Lumen has set targets to achieve ~40% penetration of homes passed, which is currently at ~29% today vs. Frontier who is at ~33% and AT&T at ~37%. It is still early, and more homes are being passed – with AT&T alone targeting 17 million more passings by 2025 and a total of ~40 million new fiber passings for the major FTTH players over this time for overbuilds alone. However, as shown in the Appendix, Verizon, AT&T, and Lumen – the leading fiber players, have cherrypicked current fiber passings for the densest geographies today to capture the best ROI on the expensive buildout and get as many new subscribes as possible. Because these companies are entering the "best" geographies first – with the least cannibalization and competitive overlap – it is unsurprising that FTTH net adds in recent periods have been strong. However, because the best markets have been "front loaded," the next phase of fiber passings is likely to be less robust than the original acceleration we are seeing with particularly Lumen and Frontier who are in relatively earlier stages. Interestingly, industry experts noted that for Lumen (formerly CentuyLink) and Frontier, their bad reputation from a legacy broadband standpoint (fines for lying about speed, bad customer services, etc.) interferes with the customer's perception of their new products and it is expected to take years of strong service to mend these relationships and change the public's view of their services. The other intersting component of this is that T-Mobile's FWB footprint for homes passed has overlap with AT&T for 44% of passings, Verizon 24% of passings, Lumen 18% of passings, and Frontier 9% of passings – showing that FWB and Fiber are going after the same geographies despite the fact that FWB is the significantly cheaper option. Verizon's Fiber rollout overlaps with AT&T 73% of the time, in this case showing strong fiber vs. fiber competitive dynamics. Lastly, a former Cox employee noted that even though fiber is generally perceived to have better speed, in the current rollout the best speed options are not offered everywhere – dampening the "high speed" value proposition of fiber.

> ***Former Cox Employee:*** *[Fiber] bandwidth is increasing and catching up to the cable side. I believe the cable side has their structure laid out for many years to come. We're talking 25 years now from when I started. I can easily see another 20, 25 years continuing on the cable side where their speeds are just going to increase and more capacity and bandwidth versus the fiber side as a 1-1 node connection. Their infrastructure is rolling out and getting close to the speeds with cable but they're not offering that 100% and their capacity is nowhere near that initially right now."*

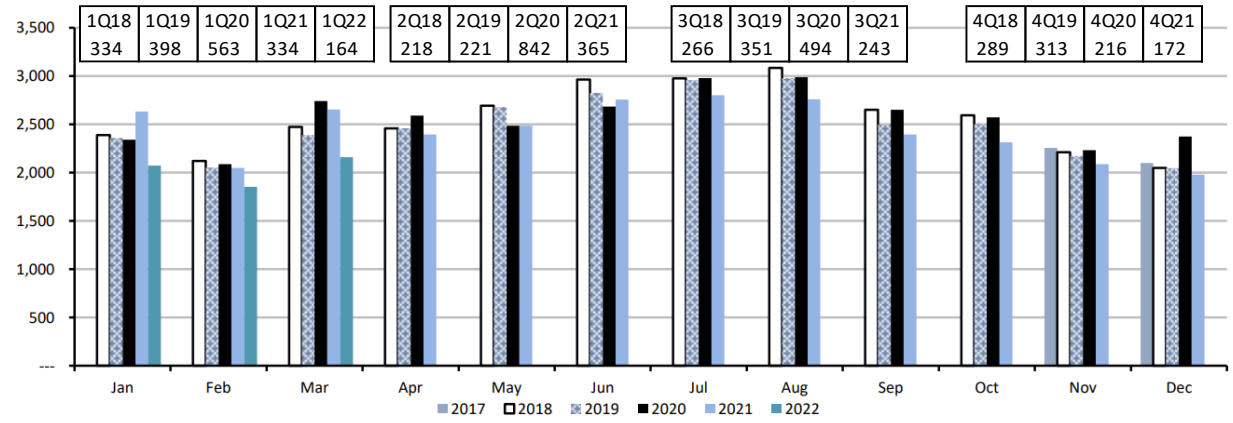
Current housing environment is dragging down new customer acquisition opportunities which is being falsely extrapolated to a lower future run-rate of new Residential Internet net adds:

- Charter historically generates a majority of new adds from people moving – either through customer inbounds or through e-tail channels where customers move and search for cable and internet providers.

> ***Former Charter Employee:*** *"The #1 channel [for acquiring customers] was a close tie between inbound sales and e-tail sales. E-tail was good when you move to a certain area and Google 'internet' or 'cable' [Charter] popped up first. Inbound sales were historically #1, but e-tail took a bite out of inbound as [digital] evolved over time. The [broadband market is mature], and mover activity generates adds – even when we went after new greenfield, [it was not a huge contributor]."*

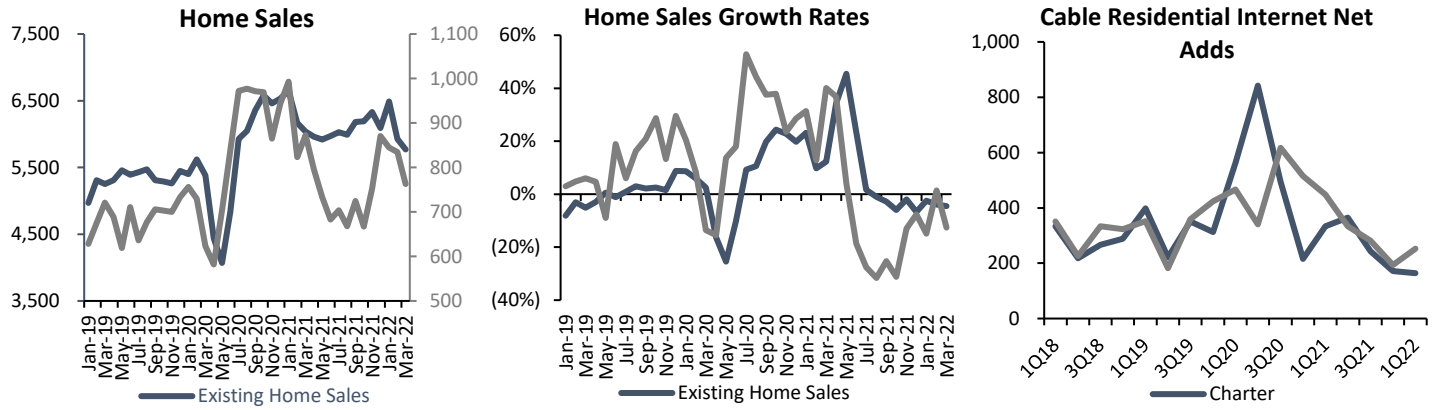
- The below chart, taken from Evercore ISI Research, shows the USPS address change requests by month comparing 2018 vs. 2019 vs. 2020 vs. 2021, and the start of 2022. What is notable about this chart is it validates Charter's recent commentary that they have reduced selling opportunities given low move rates. The data shows that 2018 and 2019 had roughly similar address change requests, which is reflected in roughly similar net Residential Internet adds (CHTR does not report churn, so Internet adds are the best proxy for new wins). In 2020, there were some periods of increased address changes relative to 2018 and 2019 (i.e. March, April, and toward the end of the year) when net Internet subscribers adds took a step up. The more notable trend is 2021, which is a clear leg down from 2018-2020 for a majority of months (February, April, July, August, September, October, November, and December) and that this trend has continued in 2022 – with Charter's worst 1Q of net Residential Internet adds in 5+ years going hand-in-hand with even more dramatic declines in address change rates in January, February, and March of this year.

Figure 5: Permanent Change of Address Requests by Month, 2017-22 (000s)



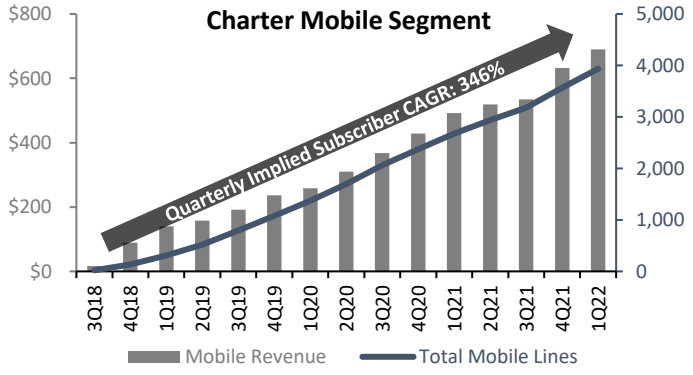
Source: USPS, Evercore ISI Research

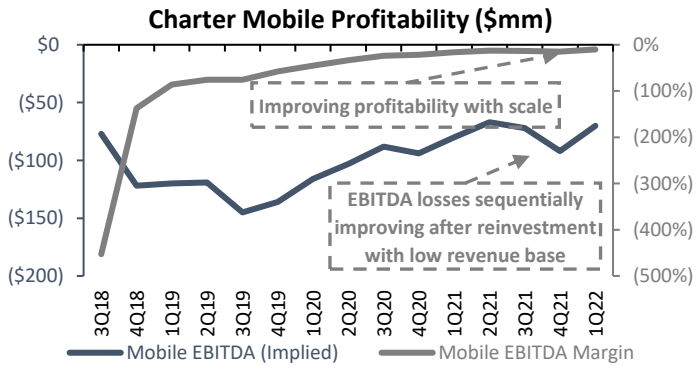
- While more difficult to quantify, there is also an argument to be made that there was a significant "pull forward" in demand during COVID-19 when move rates were elevated. Prior to 2020, CHTR was adding on average ~1.3 million net new Residential Internet subscribers – a number that accelerated dramatically to ~2.1 million in 2020. Elevated new and existing home sales as shown below relative to 2019 show there was a clear spike in activity in 2020 and into the beginning of 2021, followed by sharp declines both in absolute and year-over-year growth rates of existing and new home sales with recent steeper declines and negative growth rates into 2022. Even with my <600k net Residential Internet subscriber adds estimate in FY22, on a rolling three-year basis, CHTR has been consistently adding between ~1.2-1.5 million subscribers from FY15-FY17 through FY22-FY20.
- Validating this hypothesis is the fact that Comcast and Charter – the two legacy cable players that are not engaging in massive rollouts adding millions of passings a year for new FTTH and FWB builds – are both seeing similar trends outside of lumpiness experienced during COVID-19: with relatively stable net adds throughout 2019, large increases in net adds in 2020, and sharp declines starting in 2H21 when moving rates declined and turned negative on a year-over-year basis.



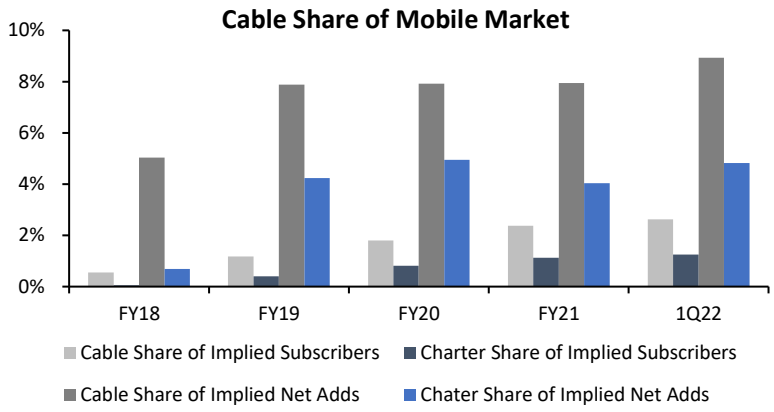
CHTR's Mobile segment potential is currently underappreciated, and arguably not factored into today's price given recent de-rating in current multiple giving Charter very limited credit for future growth:

- While only representing ~4% of Charter's total revenue today, the Company's Mobile segment has been growing robustly. Since launched in 3Q18, through a mobile virtual network operator partnership agreement with Verizon, Charter has grown quarterly revenue from ~$17mm in the first quarter of the soft launch to ~$690mm only 3.5 years later and total mobile lines – for both Residential and SMB – from 21 thousand to 3.9 million over the same period.
- The Mobile segment is currently loss-making but has potential to be highly profitable shown by AT&T's separately reported Mobile-comparable EBITDA of ~40% margins. CHTR has reduced the Company's implied Mobile EBITDA losses from a peak of ~($145mm) to nearly break-even today, with sequential improvements seen consistently since 4Q19 after peak losses.





- While there are many ways to make a market model for the Mobile market, the takeaways are largely the same: (1) the market is massive, (2) cable is starting to chip away at legacy Telco share slowly but surely, and (3) cable's portion of net adds are increasing. The chart to the right is not perfect – for example it includes total subscribers and connections for AT&T plus postpaid, prepaid, and reseller, business and consumer wireless customers for Verizon, a pro-forma for T-Mobile/Sprint, and only Charter and Comcast for cable. Despite the difficulty in making a true apples-to-apples comparison, Charter specific-data in blue shows CHTR is gaining share across the board, outpacing the total subscriber base growth rate of the market relative to Comcast and having more net adds in 1Q22 vs. Comcast.



- The goal of CHTR's Mobile segment is to essentially earn a higher share of monthly household communication spend by offering customers Mobile plans that will save them money. Per former employees, Charter is also going to start bundling Internet/Broadband and Mobile together – with Double Play options and Triple Play options in the future with Charter's streaming service that was recently launched in a JV with Comcast, which will help with churn and incentivize customers to save money given Charter is able to offer lowest-in-industry pricing for comparable speeds given their favorable agreement with Verizon to provide services at low costs. Spectrum (Charter's mobile brand) has unlimited wireless plans that are ~40% lower than AT&T, Verizon, and T-Mobile.

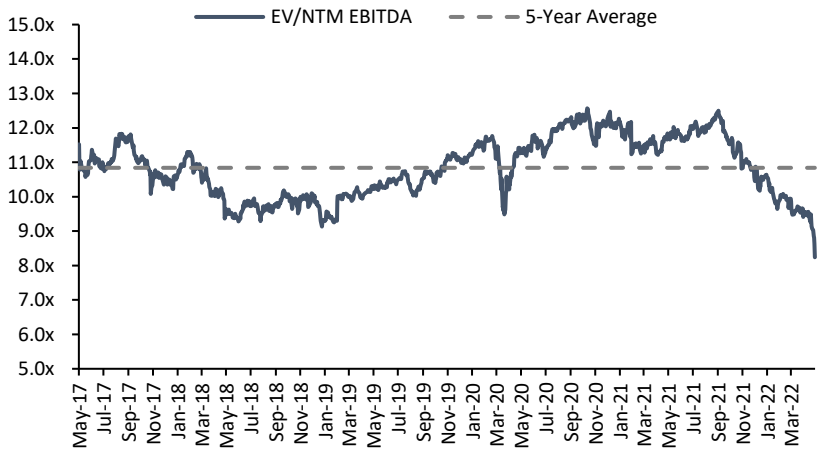
> ***Former Charter Employee:*** *"Charter is aggressively building [mobile] retail locations, and heavily incentivizing the [mobile] salesforce. [Charter] has aggressive goals for capturing a large share of the mobile market in their existing footprint. My understanding is the MVNO agreement [with Verizon] is such a good agreement, [Charter] is able to go lower on price and create customer stickiness and even take customers away from AT&T and Verizon."*

- In the medium-term, I project that CHTR will have a total of ~11.6 million mobile lines by 2026, which would only represent ~4% of today's market size using the same metrics as described above. On a net adds basis, the 2026 estimated net adds of ~1.7 million would only be ~6% of 2021 net adds for the industry. To reach this scale, CHTR will only need to penetrate <20% of their existing footprint (passings). Qualitatively, I believe cable (both Charter and Comcast) will be a real threat to the market that is currently owned by Verizon, AT&T, and T-Mobile/Sprint given the share capture and the customer value proposition described above.

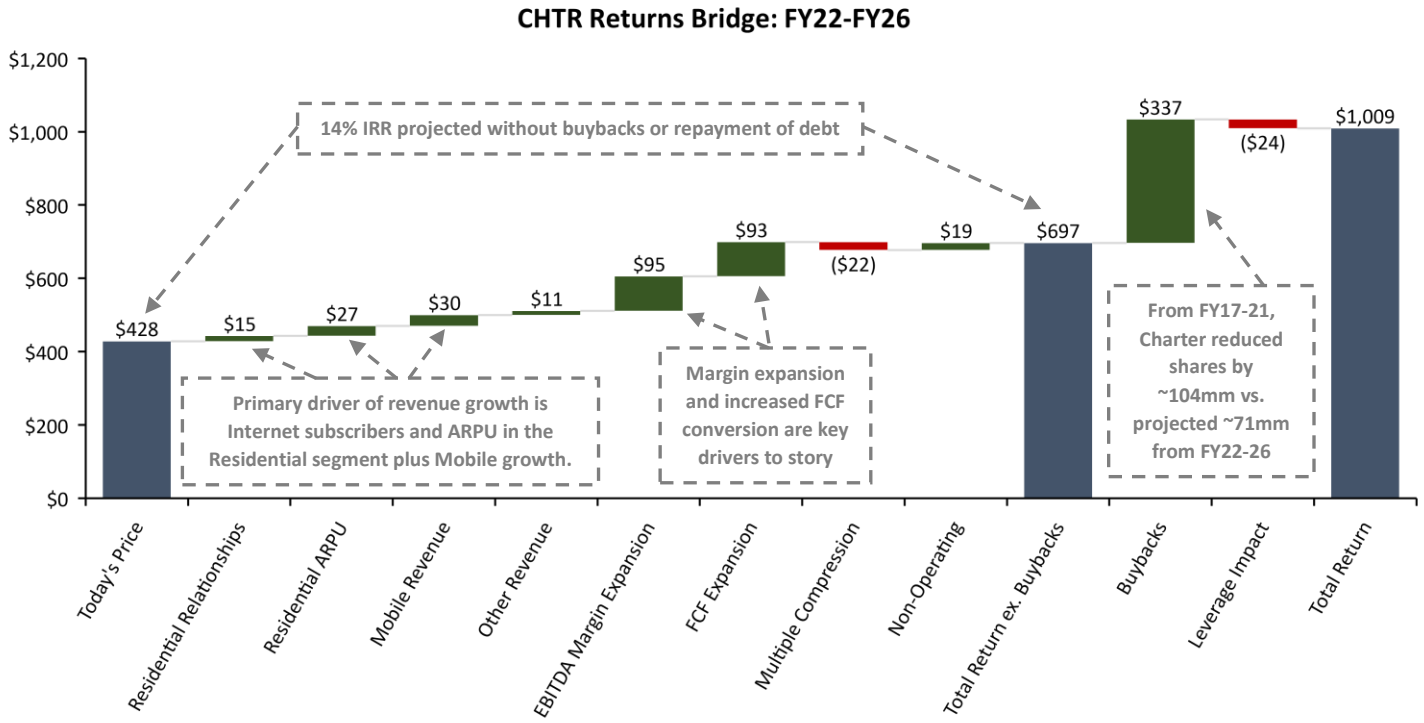
Mobile Segment	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Total Mobile Lines	134	1,082	2,375	3,564	5,039	6,587	8,195	9,863	11,591
% of CHTR Passings	*0%*	*2%*	*4%*	*7%*	*9%*	*12%*	*14%*	*17%*	*19%*
Mobile Device Revenue	$96	$488	$658	$909	$1,165	$1,248	$1,322	$1,399	$1,478
% yOy		*408%*	*35%*	*38%*	*28%*	*7%*	*6%*	*6%*	*6%*
Mobile Service Revenue	$10	$238	$706	$1,269	$1,906	$2,649	$3,469	$4,365	$5,341
% yOy		*2,280%*	*197%*	*80%*	*50%*	*39%*	*31%*	*26%*	*22%*
Mobile Monthly ARPU	$6.22	$32.62	$34.04	$35.61	$36.92	$37.97	$39.11	$40.28	$41.49
% yOy		*425%*	*4%*	*5%*	*4%*	*3%*	*3%*	*3%*	*3%*
Total Mobile Revenue	**$106**	**$726**	**$1,364**	**$2,178**	**$3,071**	**$3,896**	**$4,790**	**$5,763**	**$6,819**
% yOy		*585%*	*88%*	*60%*	*41%*	*27%*	*23%*	*20%*	*18%*
Total Mobile EBITDA	**($240)**	**($520)**	**($401)**	**($311)**	**($275)**	**($175)**	**($13)**	**$239**	**$586**
% yOy		*(117%)*	*23%*	*22%*	*12%*	*37%*	*92%*	*1,907%*	*146%*
% EBITDA Margin	*(226%)*	*(72%)*	*(29%)*	*(14%)*	*(9%)*	*(4%)*	*(0%)*	*4%*	*9%*

Valuation

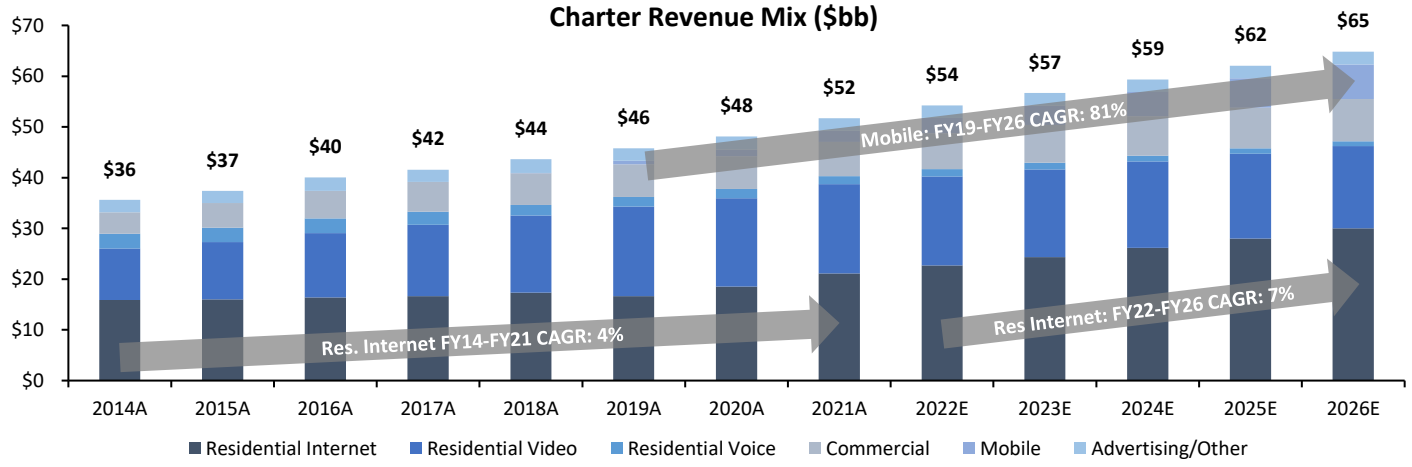
- Charter is current trading at a 24, or 2.6x discount to its 5-year average EV/NTM EBITDA. Historically, Charter has traded in a tight range, from only a low of 8.2x (today's level) to a high of 12.6x EV/NTM EBITDA.
- Exiting at 8x P/2026 FCF on a 1-year forward basis implies a forward EV/EBITDA multiple of 7.7x, which assumes a ~30% discount to the 5-year historical average of 10.8x, and below the currently depressed multiple of 8.2x today. I believe given the current market conditions with the S&P 500 down ~14% from November 2021, the macro environment for CHTR, and the competitive fears, we are reaching a point where the "worst case" is starting to be factored into CHTR's forward earnings multiple.



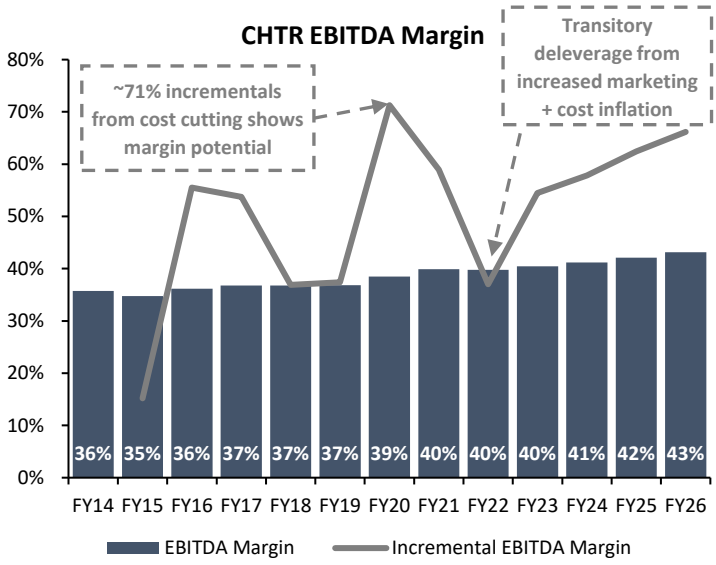
- The below bridge shows the components of the projected increase in CHTR's share price from FY22-FY26. The contributions from total revenue (~$83), EBITDA margin expansion (~$95), and FCF conversion (~$93) are roughly equal, penalized by slight multiple compression that is largely offset by non-operating items (i.e. below EBITDA items such as D&A and SBC being a smaller part of EBITDA over time). Regarding the increases in revenue, the Residential segment is the true driver to the CHTR story despite only being 1.4x the contribution of the small Mobile segment today. However, the Residential segment commands the highest margins, has a highly sticky customer base, and ultimately a small amount of topline growth allows CHTR to have significant margin expansion. The Mobile segment is projected to grow revenue at a 22% CAGR from FY22-FY26, nearly 5x as fast as consolidated CHTR with increasing profitability as detailed above. Lastly, while the implied 14% IRR without considering capital allocation is attractive in itself, buybacks have been a large part of the CHTR story, and the IRR increases to 26% when factoring in buybacks + the impact of increased interest expense from CHTR using both FCF and increasing debt staying within their net leverage target of 4.0-4.5x to repurchase shares. At a minimum, CHTR is projected to generate a cumulative of >$50bb of FCF from FY22-FY26, which could be used to reduce their interest expense (and as a result increase future FCF) resulting in a higher IRR than 14% without the modeled share repurchases from deleveraging.

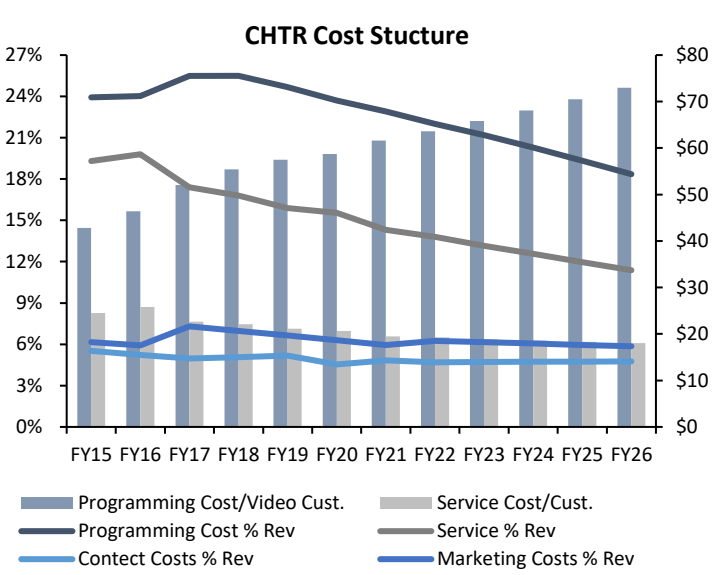


- The chart below shows the change in CHTR's revenue mix over the projection period. There is assumed to be some acceleration in Residential Internet revenue relative to the CAGR for FY14-FY21, however it is important to note that the projections assume a deceleration from the growth rates of ~11% in FY20 and ~14% in FY21. Further, total Residential revenue growth is offset by a projected (2%) decline p.a. in Video and a (10%) p.a. decline in Voice over the projection period. This results in a total Residential CAGR of ~3% from FY22-FY26, relative to total growth of ~5% from FY14-FY21. Mobile revenue, a key driver of revenue growth, is projected to grow at ~22% from FY22-FY26, decelerating from the triple-digit CAGR from FY18-FY21 when CHTR launched the segment. Commercial and Advertising/Other are projected to growth at MSD% and LSD%, respectively, consistent with historical growth rates.

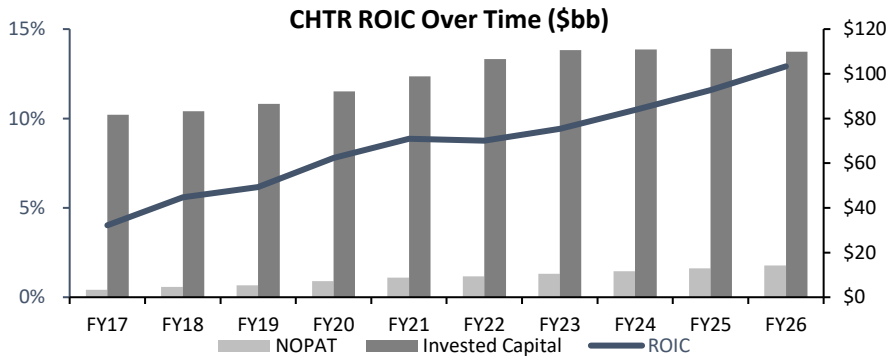


- Regarding margin expansion, it is first worthy to note that during COVID-19 when CHTR cut costs – even with wage increases during COVID – through self-installation programs that hit record highs during COVID-19 (and continued going forward), better payment trends from customers (less bad debt), and ROI-based deployments of radio access networks CHTR was able to generate record incremental EBITDA margins and expand margins by nearly ~170bps. In 2022, margins are expected to reset from increased programming costs per user from a more normal sports season (that was previously cut short by COVID-19), some inflation and supply chain impacts – from both fuel and labor – partially offset by the fact that CHTR already raised minimum wages to $20/hour in 2020, and higher marketing expense to deal with difficult new add environment (that should ease over time). As shown below, the structural benefits to CHTR's are continued efficiencies in monthly service cost per customer, declining video subscribers due to expensive programming costs, and leverage from fixed content costs. Service cost per customer has declined at ~(4%) p.a. from FY15-FY21, vs. my projected ~(2%) from FY22-FY26 – while decreasing from a high of >25% of total revenue to slightly below ~20% revenue. Programming costs, while expected to continue growing on a per subscriber basis as shown below, are margin dilutive to CHTR's EBITDA margin of ~40% given on average given monthly Programming costs per Video subscriber are roughly ~70% of monthly Video ARPU, and churn of Video subscribers will be margin accretive for CHTR going forward. The most "stable" variable cost for CHTR is expected to be marketing expense, which is projected to remain at a similar % of revenue given the difficult environment for new adds as described above.





- For FCF conversion and repurchases, while EBITDA margin is projected to expand roughly ~340bps from FY22-FY26, FCF margin is expected to expand by ~490bps with FCF/EBITDA conversion increasing from approximately ~40% to ~47%. The main drivers of increased FCF conversion are interest expense growing significantly slower that EBITDA plus CapEx rationalization. Cash interest expense declines from ~20% of EBITDA in FY21 to ~7% by FY26, and even as leverage increases, CHTR is able to grow EBITDA faster than they are taking on additional debt. This is shown by net debt/EBITDA decreasing from ~4.4x in FY21 to ~3.7x in FY26 even as total finance debt grows from ~$92bb to ~$106bb. Further, given ~70% of CapEx for CHTR is "success-based" – as new adds start to taper to my estimated average ~338k net new Residential relationships added per year from FY22-FY26 vs. >1 million net new Residential relationship adds from FY15-FY21, core Residential and Commercial CapEx declines moderately (~10bps / year) as a % of total revenue, slightly offset by increased Mobile CapEx – which keeps dollar CapEx higher vs. historical years, but lower as a % of revenue. Given the projected cumulative >$50bb in FCF generated from FY22-FY26 plus an increase of ~$15bb in net debt over the same time period keeping CHTR well within their leverage targets, the company is able to purchase roughly ~$62bb of in shares – or at today's price, **75% of the Company's current fully diluted market capitalization.**
- CHTR's revenue growth, margin expansion, improved FCF conversion, and capital allocation ultimately results in an algorithm that dramatically increases the Company's ROIC – following a similar path from the increase from ~4% in FY17 to ~9% in FY21 to ~13% in FY26.



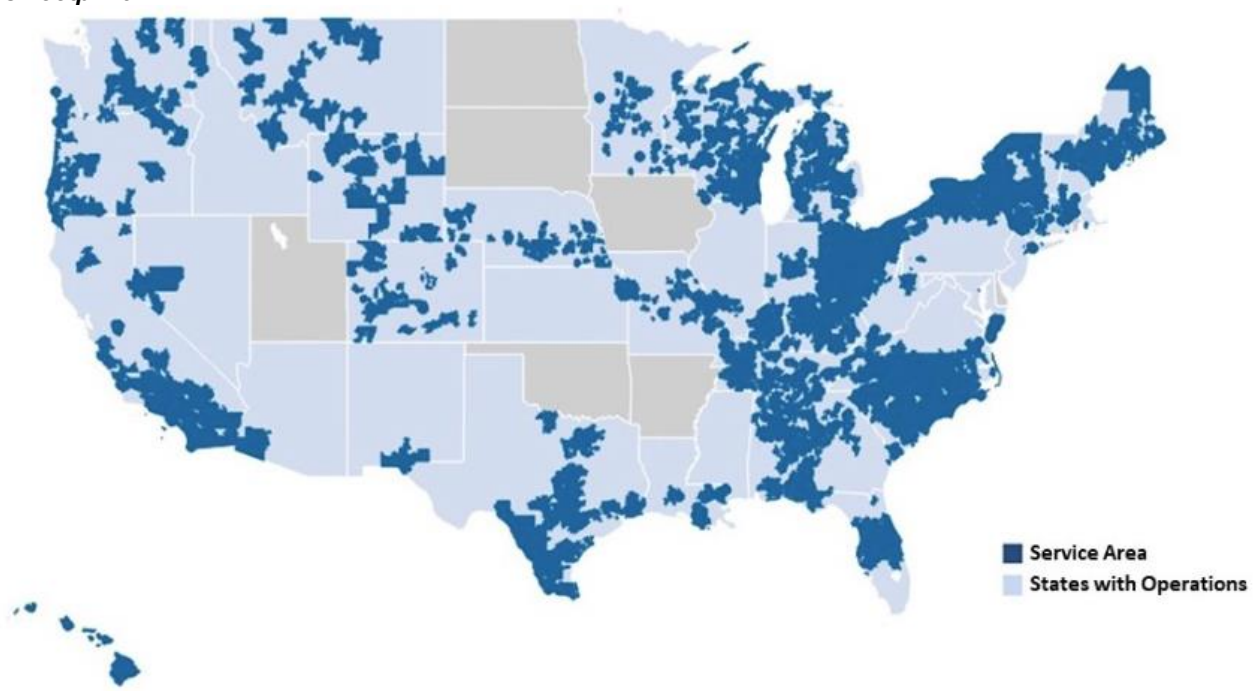
CHTR FCF and Repurchases	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Revenue	**$41,581**	**$43,634**	**$45,764**	**$48,097**	**$51,682**	**$54,208**	**$56,685**	**$59,333**	**$62,041**	**$64,811**
% yOy	*4%*	*5%*	*5%*	*5%*	*7%*	*5%*	*5%*	*5%*	*5%*	*4%*
Adjusted EBITDA	**$15,301**	**$16,059**	**$16,855**	**$18,518**	**$20,630**	**$21,565**	**$22,914**	**$24,446**	**$26,135**	**$27,968**
% yOy	*6%*	*5%*	*5%*	*10%*	*11%*	*5%*	*6%*	*7%*	*7%*	*7%*
% EBITDA Margin	*37%*	*37%*	*37%*	*39%*	*40%*	*40%*	*40%*	*41%*	*42%*	*43%*
Cash Taxes	($41)	($45)	($71)	($123)	($157)	($132)	($156)	($182)	($210)	($242)
Cash Interest	($3,421)	($3,865)	($3,963)	($3,866)	($4,043)	($4,268)	($4,562)	($4,665)	($4,756)	($4,733)
Pension/Working Capital	$115	($382)	($1,073)	$33	($191)	($725)	($217)	($206)	($196)	($188)
CFFO	**$11,954**	**$11,767**	**$11,748**	**$14,562**	**$16,239**	**$16,440**	**$17,980**	**$19,392**	**$20,972**	**$22,805**
Cash/Accrued CapEx	($7,861)	($9,595)	($7,140)	($7,492)	($7,555)	($8,188)	($8,732)	($9,081)	($9,430)	($9,778)
FCF	**$4,093**	**$2,172**	**$4,608**	**$7,070**	**$8,684**	**$8,252**	**$9,248**	**$10,310**	**$11,542**	**$13,027**
% yOy		*(47%)*	*112%*	*53%*	*23%*	*(5%)*	*12%*	*11%*	*12%*	*13%*
% FCF Margin	*10%*	*5%*	*10%*	*15%*	*17%*	*15%*	*16%*	*17%*	*19%*	*20%*
% FCF/EBITDA Converstion	*27%*	*14%*	*27%*	*38%*	*42%*	*38%*	*40%*	*42%*	*44%*	*47%*
FCF/Share	**$13.79**	**$9.22**	**$20.59**	**$33.78**	**$44.98**	**$50.82**	**$68.06**	**$87.32**	**$111.80**	**$143.34**
% yOy		*(33.1%)*	*123.3%*	*64.1%*	*33.2%*	*13.0%*	*33.9%*	*28.3%*	*28.0%*	*28.2%*
Multiple on Current Price	*31.1x*	*46.5x*	*20.8x*	*12.7x*	*9.5x*	*8.4x*	*6.3x*	*4.9x*	*3.8x*	*3.0x*
Beginning Cash	**$1,535**	**$621**	**$551**	**$3,483**	**$1,001**	**$601**	**$727**	**$741**	**$881**	**$891**
FCF	$4,093	$2,172	$4,608	$7,070	$8,684	$8,252	$9,248	$10,310	$11,542	$13,027
Change in Debt	$8,658	$3,022	$6,273	$3,535	$8,728	$7,565	$4,767	$2,329	$968	($418)
Repurchases	($11,715)	($4,399)	($6,873)	($11,217)	($15,431)	($13,833)	($12,000)	($12,000)	($12,000)	($12,000)
NCI/Other	($1,950)	($865)	($1,076)	($1,870)	($2,381)	($1,859)	($2,000)	($500)	($500)	($500)
Ending Cash	**$621**	**$551**	**$3,483**	**$1,001**	**$601**	**$727**	**$741**	**$881**	**$891**	**$1,000**
Gross Debt/EBITDA (finance)	4.6x	4.5x	4.7x	4.5x	4.4x	4.6x	4.5x	4.3x	4.1x	3.8x
Net Debt/EBITDA (finance)	4.5x	4.5x	4.5x	4.4x	4.4x	4.6x	4.5x	4.3x	4.0x	3.7x
EBITDA/Interest	5.0x	4.5x	4.4x	4.8x	5.1x	4.7x	4.7x	4.9x	5.1x	5.5x
Total Change in basic shares	(13)	(24)	(13)	(16)	(20)	(25)	(26)	(17)	(15)	(12)

Key Risks

- The key risks to the thesis are that (1) Internet net adds continue to decelerate, and going hand-in-hand with that, there is no stabilization in Video and Voice net churn – as it is assumed that even though these are declining segments, there will be some Double Play and Triple Play customers added over the projection period in the base case negating some of the impact of the Video and Voice churn, (2) that the Mobile segment materially decelerates and never gains true traction, and (3) that CHTR is unable to expand their margins and margins remain roughly flat from 2022 levels. Based on the factors described above, I believe this scenario to be a "worst case" for CHTR. Other risks worth noting are competitive threats from Starry or SpaceX, however Starry has yet to gain traction with ~60k total relationships (a fraction of what Charter and Comcast add per quarter) and SpaceX's Starlink has seen material slowdowns in recent periods with monthly net adds outside of use cases – that are valid – on a global basis or where individuals do not have internet access. Starlink also has a similar issue as FWB, where satellites have maximum capacity, shown by Starlink having upload speeds ~38% slower vs. broadband and download speeds ~20% slower.
- This modeled risk scenario in the appendix assumes that not only do Internet net adds deceleration material, but actually churn and turn negative starting in FY25 on top of accelerating Video net churn and consistent Voice net churn. Further, in the residential segment, there is also assumed to be negative pricing in Internet starting in FY24 from the idea of increased competition and CHTR having to offer discounts to retain customers. The other key assumption assumes that the Mobile segment essential gains no traction, with net adds in 2023 that are roughly in line with 2019 net adds, when subscribers were growing triple-digits. Lastly, regarding profitability, Charter is assumed to have no expansion in their business ex-Mobile and Mobile is projected to continue generating losses resulting in a consolidated 2026 EBITDA margin that is in line with FY17 levels. As a result, Charter is unable to repurchase the amount assumed in the base case (projected in the risk case to be ~50% of FCF from FY23-FY26) and share count only declines by ~23% from FY22-FY26.
- Exiting at 6x 2026 free cash flow, or ~7.4x EV/2026 EBITDA – a level that CHTR has not seen since early 2013 – would result in a total loss of (18%) per share making a highly attractive risk/reward given a **floor** price of what I believe is ~$350/share.

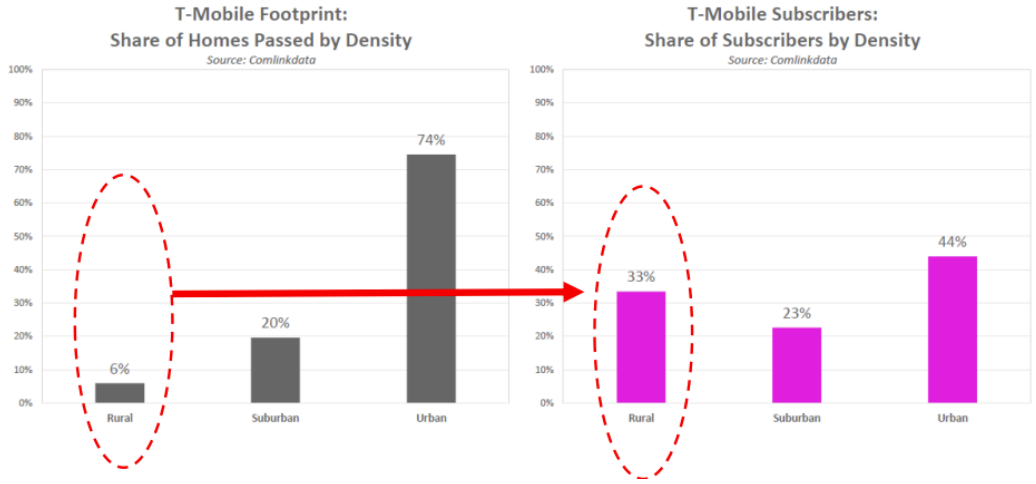
Appendix

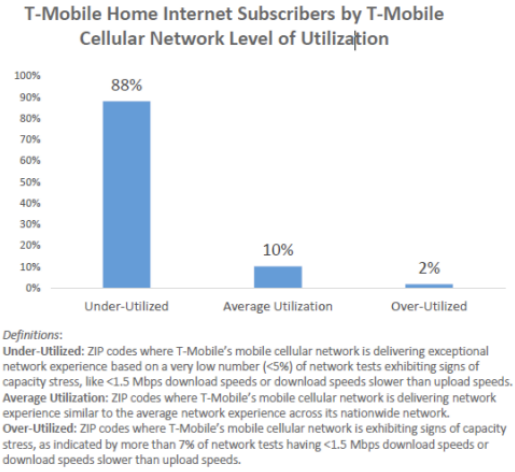
Charter's Footprint: FY21



Source: CHTR 2021 10K

T-Mobile FWB:

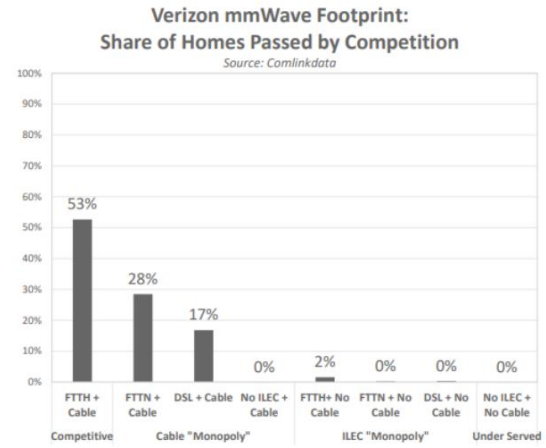


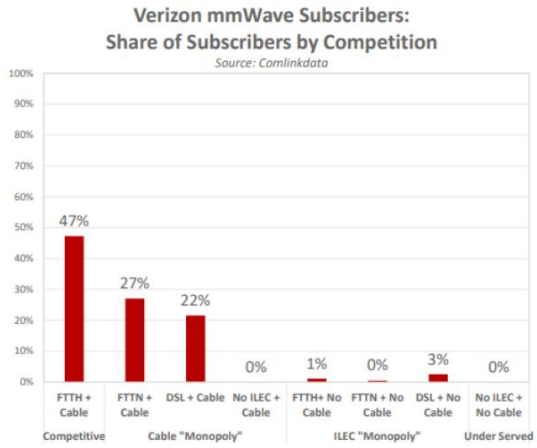


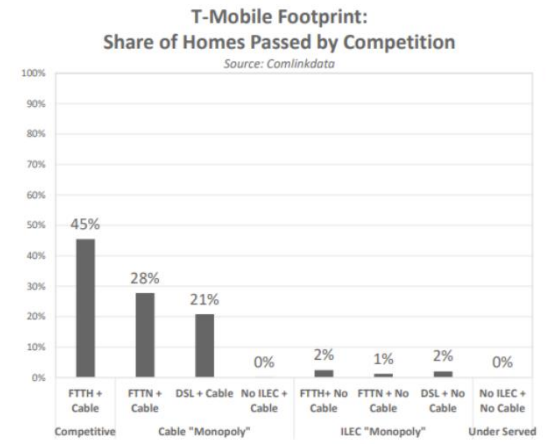
Definitions:
Under-Utilized: ZIP codes where T-Mobile's mobile cellular network is delivering exceptional network experience based on a very low number (<5%) of network tests exhibiting signs of capacity stress, like <1.5 Mbps download speeds or download speeds slower than upload speeds.
Average Utilization: ZIP codes where T-Mobile's mobile cellular network is delivering network experience similar to the average network experience across its nationwide network.
Over-Utilized: ZIP codes where T-Mobile's mobile cellular network is exhibiting signs of capacity stress, as indicated by more than 7% of network tests having <1.5 Mbps download speeds or download speeds slower than upload speeds.

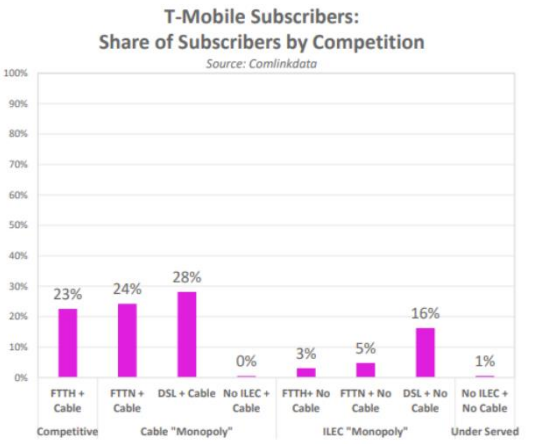
Source: Comlinkdata via Moffett Nathanson Equity Research Reports

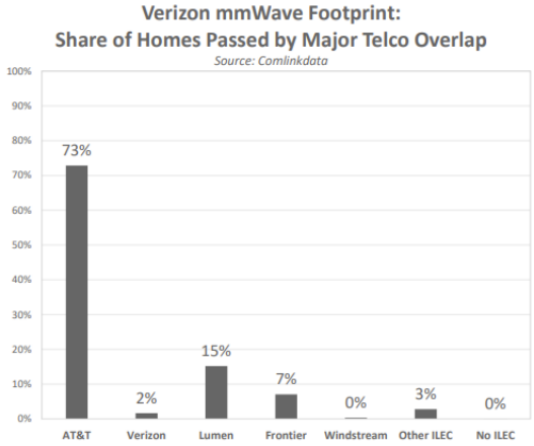
FWB and Fiber Overlap:

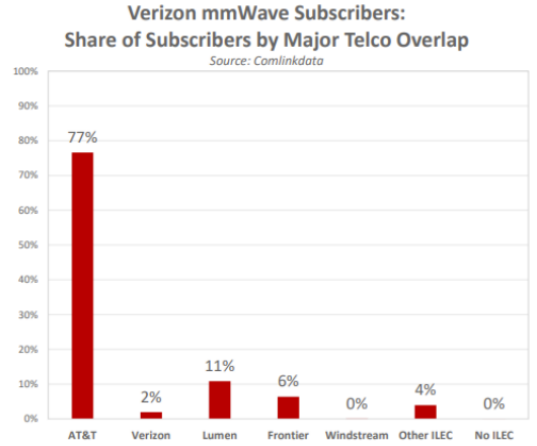


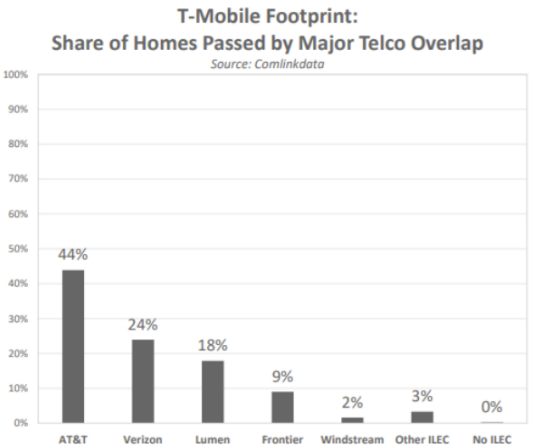


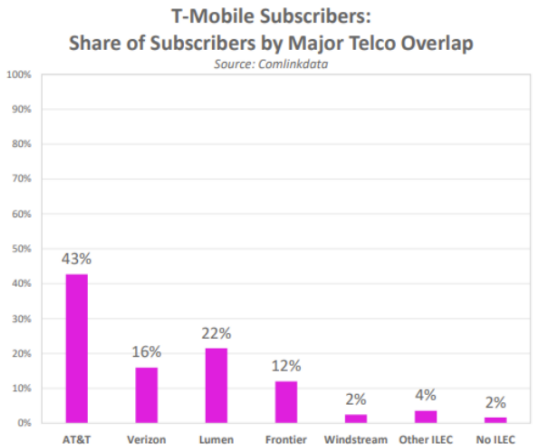






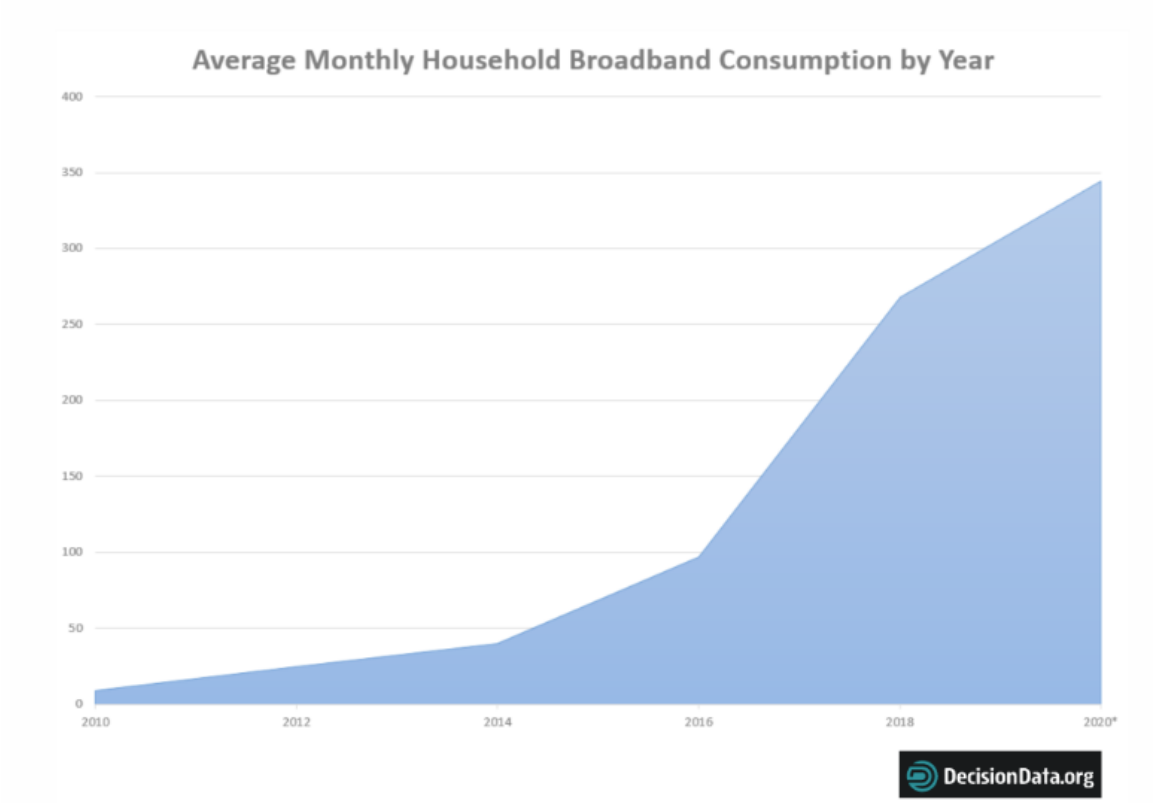




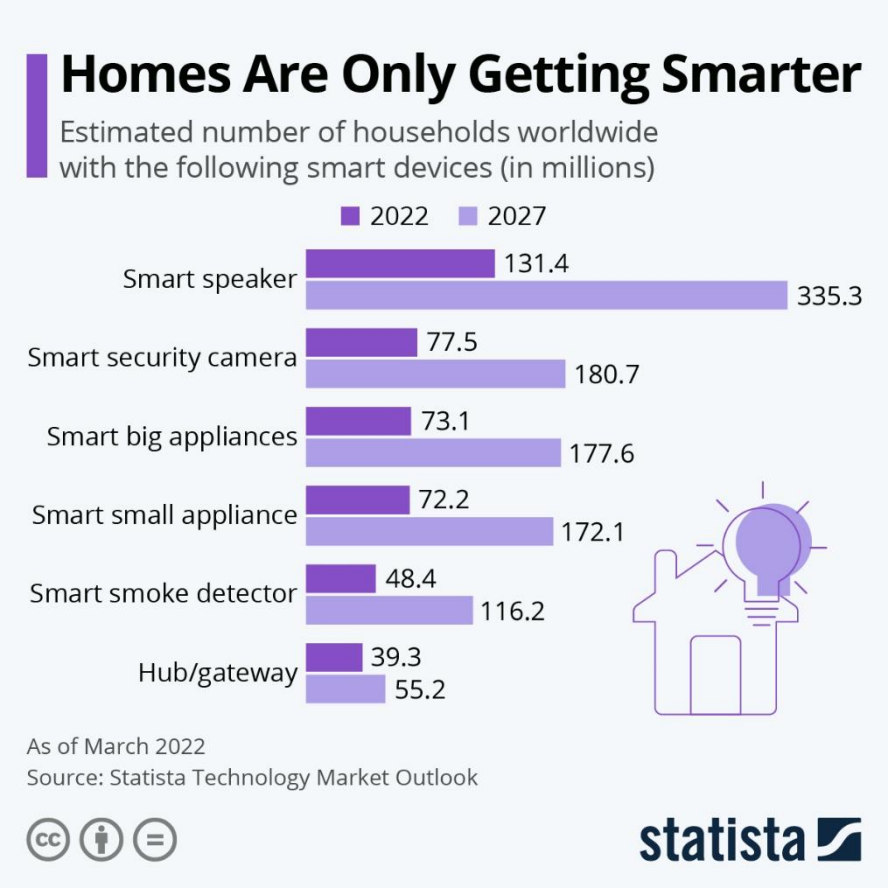


Source: Comlinkdata via Moffett Nathanson Equity Research Reports

Projected Broadband Consumption:

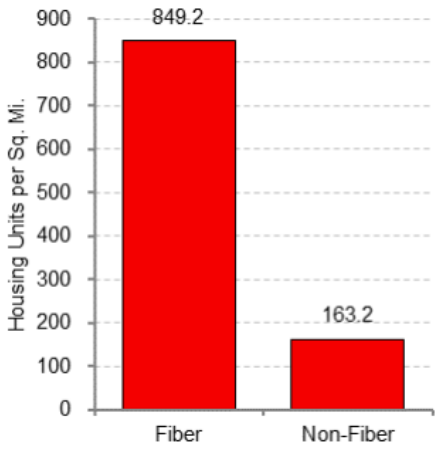
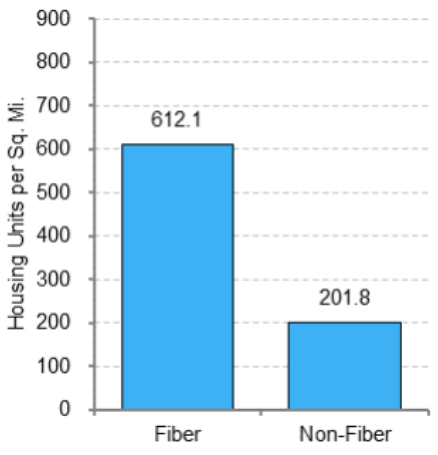
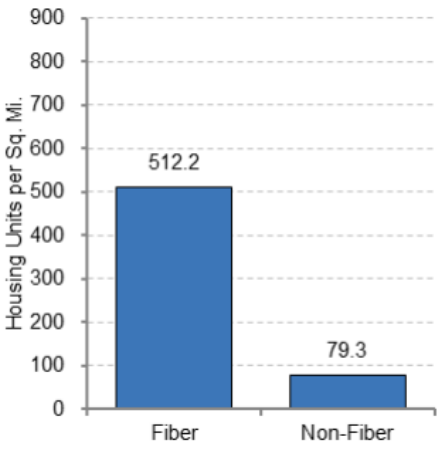


Source: DecisionData.org



Source: Statista

Fiber Passing: City Selection

Verizon: Density of Fiber-Passed vs. Unpassed	AT&T: Density of Fiber-Passed vs. Unpassed	Lumen: Density of Fiber-Passed vs. Unpassed
		
Source: FCC, MoffettNathanson estimates and analysis	Source: FCC, MoffettNathanson estimates and analysis	Source: FCC, MoffettNathanson estimates and analysis

Source: FCC via Moffett Nathanson Equity Research Reports

Summary Financials:

Summary

	2017	2018	2019	2020	2021	Projections 2022	2023	2024	2025	2026	2021 1Q	2Q	3Q	4Q	2022 1QE	2QE	3QE	4QE
Residential																		
Internet Revenue	**$16,626**	**$17,348**	**$16,667**	**$18,521**	**$21,094**	**$22,679**	**$24,331**	**$26,140**	**$28,024**	**$29,982**	**$5,086**	**$5,221**	**$5,363**	**$5,424**	**$5,452**	**$5,646**	**$5,764**	**$5,817**
% yOy	*1%*	*4%*	*(4%)*	*11%*	*14%*	*8%*	*7%*	*7%*	*7%*	*7%*	*15%*	*15%*	*14%*	*12%*	*7%*	*8%*	*7%*	*7%*
Internet Monthly ARPU	*$63.15*	*$62.66*	*$57.24*	*$59.44*	*$63.74*	*$66.47*	*$69.73*	*$73.22*	*$76.88*	*$80.72*	*$62.35*	*$63.19*	*$64.20*	*$64.45*	*$64.40*	*$66.35*	*$67.41*	*$67.68*
% yOy	*(5%)*	*(1%)*	*(9%)*	*4%*	*7%*	*4%*	*5%*	*5%*	*5%*	*5%*	*7%*	*8%*	*8%*	*7%*	*3%*	*5%*	*5%*	*5%*
Internet Net Adds	*1,159*	*1,107*	*1,283*	*2,115*	*1,114*	*589*	*700*	*650*	*600*	*550*	*334*	*365*	*243*	*172*	*164*	*125*	*150*	*150*
Video Revenue	**$14,102**	**$15,181**	**$17,607**	**$17,432**	**$17,630**	**$17,523**	**$17,309**	**$17,025**	**$16,661**	**$16,213**	**$4,344**	**$4,378**	**$4,502**	**$4,406**	**$4,346**	**$4,348**	**$4,465**	**$4,365**
% yOy	*11%*	*8%*	*16%*	*(1%)*	*1%*	*(1%)*	*(1%)*	*(2%)*	*(2%)*	*(3%)*	*(2%)*	*0%*	*7%*	*(0%)*	*0%*	*(1%)*	*(1%)*	*(1%)*
Video Monthly ARPU	*$71.00*	*$77.84*	*$92.50*	*$92.94*	*$95.23*	*$97.42*	*$99.37*	*$101.35*	*$103.38*	*$105.45*	*$93.05*	*$94.45*	*$97.74*	*$96.30*	*$95.59*	*$96.33*	*$99.70*	*$98.22*
% yOy	*13%*	*10%*	*19%*	*0%*	*2%*	*2%*	*2%*	*2%*	*2%*	*2%*	*(2%)*	*1%*	*9%*	*2%*	*3%*	*2%*	*2%*	*2%*
Video Net Adds	*(301)*	*(296)*	*(484)*	*19*	*(423)*	*(453)*	*(493)*	*(543)*	*(593)*	*(643)*	*(156)*	*(63)*	*(133)*	*(71)*	*(123)*	*(100)*	*(130)*	*(100)*
Voice Revenue	**$2,542**	**$2,114**	**$1,920**	**$1,806**	**$1,598**	**$1,469**	**$1,324**	**$1,189**	**$1,065**	**$950**	**$399**	**$394**	**$409**	**$396**	**$391**	**$354**	**$367**	**$357**
% yOy	*(12%)*	*(17%)*	*(9%)*	*(6%)*	*(12%)*	*(8%)*	*(10%)*	*(10%)*	*(10%)*	*(11%)*	*(13%)*	*(13%)*	*(9%)*	*(12%)*	*(2%)*	*(10%)*	*(10%)*	*(10%)*
Voice Monthly ARPU	*$20.41*	*$17.14*	*$16.34*	*$16.13*	*$14.93*	*$14.72*	*$14.28*	*$13.85*	*$13.44*	*$13.03*	*$14.51*	*$14.49*	*$15.32*	*$15.17*	*$15.26*	*$14.06*	*$14.86*	*$14.71*
% yOy	*(14%)*	*(16%)*	*(5%)*	*(1%)*	*(7%)*	*(1%)*	*(3%)*	*(3%)*	*(3%)*	*(3%)*	*(10%)*	*(10%)*	*(4%)*	*(6%)*	*5%*	*(3%)*	*(3%)*	*(3%)*
Video Net Adds	*93*	*(289)*	*(692)*	*(228)*	*(594)*	*(606)*	*(580)*	*(560)*	*(540)*	*(520)*	*(102)*	*(99)*	*(230)*	*(163)*	*(156)*	*(150)*	*(150)*	*(150)*
Total Residential Revenue	**$33,270**	**$34,643**	**$36,194**	**$37,759**	**$40,322**	**$41,672**	**$42,964**	**$44,355**	**$45,750**	**$47,145**	**$9,829**	**$9,993**	**$10,274**	**$10,226**	**$10,189**	**$10,347**	**$10,596**	**$10,539**
% yOy	*4%*	*4%*	*4%*	*4%*	*7%*	*3%*	*3%*	*3%*	*3%*	*3%*	*6%*	*7%*	*9%*	*5%*	*4%*	*4%*	*3%*	*3%*
Total Monthly ARPU	*$110.53*	*$111.53*	*$112.65*	*$111.67*	*$113.89*	*$115.21*	*$116.96*	*$119.20*	*$121.88*	*$124.67*	*$112.13*	*$112.88*	*$115.15*	*$114.10*	*$113.28*	*$114.64*	*$117.01*	*$115.95*
% yOy	*0%*	*1%*	*1%*	*(1%)*	*2%*	*1%*	*2%*	*2%*	*2%*	*2%*	*(0%)*	*2%*	*6%*	*2%*	*1%*	*2%*	*2%*	*2%*
Total Net Adds	*829*	*771*	*1,007*	*1,802*	*847*	*431*	*508*	*291*	*252*	*210*	*282*	*299*	*163*	*103*	*109*	*102*	*100*	*119*
Commercial																		
SMB Revenue	**$3,581**	**$3,665**	**$3,868**	**$3,964**	**$4,170**	**$4,398**	**$4,657**	**$4,907**	**$5,138**	**$5,352**	**$1,012**	**$1,042**	**$1,062**	**$1,054**	**$1,059**	**$1,099**	**$1,122**	**$1,118**
% yOy	*5%*	*2%*	*6%*	*2%*	*5%*	*5%*	*6%*	*5%*	*5%*	*4%*	*2%*	*6%*	*7%*	*6%*	*5%*	*5%*	*6%*	*6%*
Total Monthly ARPU	*$188.99*	*$174.77*	*$170.05*	*$164.80*	*$165.71*	*$166.66*	*$168.23*	*$169.91*	*$171.61*	*$173.33*	*$163.67*	*$166.39*	*$167.38*	*$164.60*	*$163.96*	*$168.05*	*$169.05*	*$166.24*
% yOy	*(8%)*	*(8%)*	*(3%)*	*(3%)*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*(3%)*	*0%*	*2%*	*1%*	*0%*	*1%*	*1%*	*1%*
Internet Net Adds	*150*	*164*	*122*	*100*	*96*	*101*	*109*	*110*	*110*	*110*	*21*	*35*	*22*	*18*	*21*	*30*	*30*	*20*
Video Net Adds	*53*	*52*	*22*	*37*	*56*	*56*	*38*	*30*	*20*	*20*	*18*	*13*	*12*	*13*	*11*	*15*	*15*	*15*
Voice Net Adds	*137*	*121*	*93*	*80*	*58*	*80*	*88*	*85*	*70*	*65*	*14*	*21*	*14*	*9*	*6*	*25*	*25*	*24*
Enterprise Revenue	**$2,333**	**$2,528**	**$2,556**	**$2,468**	**$2,573**	**$2,656**	**$2,736**	**$2,827**	**$2,918**	**$3,008**	**$638**	**$636**	**$656**	**$643**	**$661**	**$660**	**$665**	**$670**
% yOy	*15%*	*8%*	*1%*	*(3%)*	*4%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*5%*	*6%*	*3%*	*4%*	*4%*	*1%*	*4%*
Video Monthly ARPU	*$946.07*	*$900.28*	*$852.00*	*$804.96*	*$807.60*	*$801.53*	*$799.76*	*$800.00*	*$800.00*	*$800.00*	*$817.95*	*$806.08*	*$818.98*	*$792.36*	*$807.08*	*$800.00*	*$800.00*	*$800.00*
% yOy	*0%*	*(5%)*	*(5%)*	*(6%)*	*0%*	*(1%)*	*(0%)*	*0%*	*0%*	*0%*	*(0%)*	*2%*	*2%*	*(2%)*	*(1%)*	*(1%)*	*(2%)*	*1%*
Enterprise Net Adds	*29*	*28*	*4*	*7*	*13*	*8*	*9*	*9*	*9*	*9*	*2*	*4*	*4*	*3*	*2*	*2*	*2*	*2*
Total Commercial Revenue	**$5,914**	**$6,193**	**$6,424**	**$6,432**	**$6,743**	**$7,054**	**$7,393**	**$7,734**	**$8,055**	**$8,360**	**$1,650**	**$1,678**	**$1,718**	**$1,697**	**$1,720**	**$1,759**	**$1,787**	**$1,788**
% yOy	*9%*	*5%*	*4%*	*0%*	*5%*	*5%*	*5%*	*5%*	*4%*	*4%*	*2%*	*6%*	*7%*	*5%*	*4%*	*5%*	*4%*	*5%*
Mobile																		
Mobile Revenue		**$106**	**$726**	**$1,364**	**$2,178**	**$3,071**	**$3,896**	**$4,790**	**$5,763**	**$6,819**	**$492**	**$519**	**$535**	**$632**	**$690**	**$763**	**$812**	**$806**
% yOy			*585%*	*88%*	*60%*	*41%*	*27%*	*23%*	*20%*	*18%*	*91%*	*67%*	*45%*	*48%*	*40%*	*47%*	*52%*	*28%*
Device Revenue		$96	$488	$658	$909	$1,165	$1,248	$1,322	$1,399	$1,478	$228	$214	$201	$266	$292	$302	$308	$263
% yOy			*408%*	*35%*	*38%*	*28%*	*7%*	*6%*	*6%*	*6%*	*74%*	*35%*	*17%*	*35%*	*28%*	*41%*	*53%*	*(1%)*
Service Revenue		$10	$238	$706	$1,269	$1,906	$2,649	$3,469	$4,365	$5,341	$264	$305	$334	$366	$398	$461	$504	$542
% yOy			*2,280%*	*197%*	*80%*	*50%*	*39%*	*31%*	*26%*	*22%*	*108%*	*101%*	*70%*	*58%*	*51%*	*51%*	*51%*	*48%*
Service Monthly ARPU		*$6.22*	*$32.62*	*$34.04*	*$35.61*	*$36.92*	*$37.97*	*$39.11*	*$40.28*	*$41.49*	*$34.85*	*$36.21*	*$36.36*	*$36.16*	*$35.37*	*$37.30*	*$37.45*	*$37.24*
% yOy			*425%*	*4%*	*5%*	*4%*	*3%*	*3%*	*3%*	*3%*	*1%*	*10%*	*5%*	*4%*	*1%*	*3%*	*3%*	*3%*
Residential Net Adds		*134*	*944*	*1,242*	*1,128*	*1,407*	*1,472*	*1,522*	*1,572*	*1,622*	*285*	*250*	*230*	*363*	*357*	*350*	*350*	*350*
SMB Net Adds		*0*	*4*	*51*	*61*	*68*	*76*	*86*	*96*	*106*	*15*	*15*	*14*	*17*	*16*	*17*	*16*	*19*
Implied Mobile EBITDA		**($240)**	**($520)**	**($401)**	**($311)**	**($275)**	**($175)**	**($13)**	**$239**	**$586**	**($80)**	**($67)**	**($72)**	**($92)**	**($70)**	**($74)**	**($67)**	**($64)**
% yOy			*(117%)*	*23%*	*22%*	*12%*	*37%*	*92%*	*1,907%*	*146%*	*31%*	*35%*	*18%*	*2%*	*13%*	*(10%)*	*7%*	*31%*
% of revenue		*(226%)*	*(72%)*	*(29%)*	*(14%)*	*(9%)*	*(4%)*	*(0%)*	*4%*	*9%*	*(16%)*	*(13%)*	*(13%)*	*(15%)*	*(10%)*	*(10%)*	*(8%)*	*(8%)*
Advertising Revenue	$1,510	$1,785	$1,568	$1,699	$1,594	$1,540	$1,560	$1,582	$1,600	$1,616	$344	$411	$391	$448	$383	$384	$385	$387
Other Revenue	$887	$907	$852	$843	$845	$872	$872	$872	$872	$872	$207	$201	$228	$209	$218	$218	$218	$218
Total Revenue	**$41,581**	**$43,634**	**$45,764**	**$48,097**	**$51,682**	**$54,208**	**$56,685**	**$59,333**	**$62,041**	**$64,811**	**$12,522**	**$12,802**	**$13,146**	**$13,212**	**$13,200**	**$13,472**	**$13,798**	**$13,738**
% yOy	*4%*	*5%*	*5%*	*5%*	*7%*	*5%*	*5%*	*5%*	*5%*	*4%*	*7%*	*9%*	*9%*	*5%*	*5%*	*5%*	*5%*	*4%*

Summary Financials, Continued:

Summary

	2017	2018	2019	2020	2021	Projections 2022	2023	2024	2025	2026	2021 1Q	2Q	3Q	4Q	2022 1QE	2QE	3QE	4QE
Total Revenue	**$41,581**	**$43,634**	**$45,764**	**$48,097**	**$51,682**	**$54,208**	**$56,685**	**$59,333**	**$62,041**	**$64,811**	**$12,522**	**$12,802**	**$13,146**	**$13,212**	**$13,200**	**$13,472**	**$13,798**	**$13,738**
% yOy	*4%*	*5%*	*5%*	*5%*	*7%*	*5%*	*5%*	*5%*	*5%*	*4%*	*7%*	*9%*	*9%*	*5%*	*5%*	*5%*	*5%*	*4%*
Programming	$10,596	$11,124	$11,290	$11,401	$11,844	$11,929	$12,011	$12,036	$11,998	$11,894	$2,988	$2,978	$2,983	$2,895	$2,977	$3,013	$3,015	$2,924
% yOy	*10%*	*5%*	*1%*	*1%*	*4%*	*1%*	*1%*	*0%*	*(0%)*	*(1%)*	*3%*	*4%*	*9%*	*(0%)*	*(0%)*	*1%*	*1%*	*1%*
% of revenue	*25%*	*25%*	*25%*	*24%*	*23%*	*22%*	*21%*	*20%*	*19%*	*18%*	*24%*	*23%*	*23%*	*22%*	*23%*	*22%*	*22%*	*21%*
Monthly Cost/Video Relationship	$52.02	$55.42	$57.46	$58.75	$61.62	$63.58	$65.81	$68.12	$70.50	$72.97	*$61.74*	*$61.90*	*$62.33*	*$60.84*	*$62.90*	*$64.06*	*$64.52*	*$62.97*
% yOy	*12%*	*7%*	*4%*	*2%*	*5%*	*3%*	*4%*	*4%*	*4%*	*4%*	*3%*	*4%*	*11%*	*2%*	*2%*	*4%*	*4%*	*4%*
Regulatory/connectivity/content	$2,064	$2,210	$2,366	$2,183	$2,494	$2,545	$2,672	$2,806	$2,946	$3,093	$600	$668	$634	$592	$556	$701	$666	$622
% yOy	*(1%)*	*7%*	*7%*	*(8%)*	*14%*	*2%*	*5%*	*5%*	*5%*	*5%*	*9%*	*37%*	*4%*	*11%*	*(7%)*	*5%*	*5%*	*5%*
% of revenue	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*5%*	*4%*	*4%*	*5%*	*5%*	*5%*
Costs to service customers	$7,236	$7,327	$7,277	$7,472	$7,393	$7,476	$7,453	$7,453	$7,420	$7,376	$1,804	$1,827	$1,899	$1,863	$1,899	$1,828	$1,893	$1,856
% yOy	*(9%)*	*1%*	*(1%)*	*3%*	*(1%)*	*1%*	*(0%)*	*(0%)*	*(0%)*	*(1%)*	*(2%)*	*(1%)*	*(0%)*	*(1%)*	*5%*	*0%*	*(0%)*	*(0%)*
% of revenue	*17%*	*17%*	*16%*	*16%*	*14%*	*14%*	*13%*	*13%*	*12%*	*11%*	*14%*	*14%*	*14%*	*14%*	*14%*	*14%*	*14%*	*14%*
Monthly Cost/Relationship	*$52.02*	*$55.42*	*$57.46*	*$58.75*	*$61.62*	*$63.58*	*$65.81*	*$68.12*	*$70.50*	*$72.97*	*$61.74*	*$61.90*	*$62.33*	*$60.84*	*$62.90*	*$64.06*	*$64.52*	*$62.97*
% yOy	*12%*	*7%*	*4%*	*2%*	*5%*	*3%*	*4%*	*4%*	*4%*	*4%*	*3%*	*4%*	*11%*	*2%*	*2%*	*4%*	*4%*	*4%*
Marketing	$3,036	$3,042	$3,044	$3,031	$3,071	$3,392	$3,490	$3,594	$3,696	$3,796	$751	$741	$788	$791	$826	$843	$863	$860
% yOy	*28%*	*0%*	*0%*	*(0%)*	*1%*	*10%*	*3%*	*3%*	*3%*	*3%*	*(2%)*	*3%*	*0%*	*4%*	*10%*	*14%*	*10%*	*9%*
% of revenue	*7%*	*7%*	*7%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*	*6%*
Mobile	$0	$346	$1,246	$1,765	$2,489	$3,346	$4,071	$4,804	$5,524	$6,233	$572	$586	$607	$724	$760	$837	$879	$870
% yOy			*260%*	*42%*	*41%*	*34%*	*22%*	*18%*	*15%*	*13%*	*53%*	*42%*	*33%*	*39%*	*33%*	*43%*	*45%*	*20%*
% of revenue		*1%*	*3%*	*4%*	*5%*	*6%*	*7%*	*8%*	*9%*	*10%*	*5%*	*5%*	*5%*	*5%*	*6%*	*6%*	*6%*	*6%*
% of Mobile revenue		*326%*	*172%*	*129%*	*114%*	*109%*	*104%*	*100%*	*96%*	*91%*	*116%*	*113%*	*113%*	*115%*	*110%*	*110%*	*108%*	*108%*
Other expense	$3,348	$3,526	$3,686	$3,727	$3,761	$3,955	$4,074	$4,196	$4,322	$4,451	$862	$982	$949	$968	$969	$1,011	$977	$997
% yOy	*(6%)*	*5%*	*5%*	*1%*	*1%*	*5%*	*3%*	*3%*	*3%*	*3%*	*(5%)*	*13%*	*4%*	*(6%)*	*12%*	*3%*	*3%*	*3%*
% of revenue	*8%*	*8%*	*8%*	*8%*	*7%*	*7%*	*7%*	*7%*	*7%*	*7%*	*7%*	*8%*	*7%*	*7%*	*7%*	*8%*	*7%*	*7%*
Adj. EBITDA	**$15,301**	**$16,059**	**$16,855**	**$18,518**	**$20,630**	**$21,565**	**$22,914**	**$24,446**	**$26,135**	**$27,968**	**$4,945**	**$5,020**	**$5,286**	**$5,379**	**$5,213**	**$5,237**	**$5,505**	**$5,610**
% yOy	*6%*	*5%*	*5%*	*10%*	*11%*	*5%*	*6%*	*7%*	*7%*	*7%*	*12%*	*12%*	*14%*	*8%*	*5%*	*4%*	*4%*	*4%*
% Margin	*37%*	*37%*	*37%*	*39%*	*40%*	*40%*	*40%*	*41%*	*42%*	*43%*	*39%*	*39%*	*40%*	*41%*	*39%*	*39%*	*40%*	*41%*
% Incremental	*54%*	*37%*	*37%*	*71%*	*59%*	*37%*	*54%*	*58%*	*62%*	*66%*	*70%*	*48%*	*58%*	*65%*	*40%*	*32%*	*34%*	*44%*
Shares Outstanding	297	236	224	209	193	162	136	118	103	91	206	199	187	180	175	166	158	151
Adj. Diluted EPS	**$33.35**	**$5.22**	**$7.45**	**$15.40**	**$24.11**	**$30.68**	**$42.72**	**$59.56**	**$79.04**	**$104.32**	**$3.92**	**$5.12**	**$6.50**	**$8.92**	**$6.89**	**$6.69**	**$8.21**	**$9.08**
% yOy	*753%*	*(84%)*	*43%*	*107%*	*57%*	*27%*	*39%*	*39%*	*33%*	*32%*	*111%*	*41%*	*67%*	*52%*	*76%*	*31%*	*26%*	*2%*
BS & CF																		
FCF	$4,093	$2,172	$4,608	$7,070	$8,684	$8,252	$9,248	$10,310	$11,542	$13,027	$1,855	$2,068	$2,476	$2,285	$1,800	$1,987	$2,189	$2,277
% yOy		*(47%)*	*112%*	*53%*	*23%*	*(5%)*	*12%*	*11%*	*12%*	*13%*	*35%*	*11%*	*41%*	*10%*	*(3%)*	*(4%)*	*(12%)*	*(0%)*
FCF Per Share	$13.79	$9.22	$20.59	$33.78	$44.98	$50.82	$68.06	$87.32	$111.80	$143.34	$9.01	$10.39	$13.23	$12.67	$10.32	$11.96	$13.84	$15.12
% yOy		*(33%)*	*123%*	*64%*	*33%*	*13%*	*34%*	*28%*	*28%*	*28%*	*40%*	*17%*	*57%*	*29%*	*14%*	*15%*	*5%*	*19%*
UFCF	$7,514	$6,037	$8,571	$10,936	$12,727	$12,520	$13,809	$14,976	$16,298	$17,760	$2,872	$3,047	$3,518	$3,290	$2,782	$3,063	$3,283	$3,392
% yOy		*(20%)*	*42%*	*28%*	*16%*	*(2%)*	*10%*	*8%*	*9%*	*9%*	*19%*	*9%*	*26%*	*13%*	*(3%)*	*1%*	*(7%)*	*3%*
CapEx	($8,681)	($9,125)	($7,195)	($7,415)	($7,635)	($8,198)	($8,732)	($9,081)	($9,430)	($9,778)	($1,821)	($1,881)	($1,861)	($2,072)	($1,857)	($2,087)	($2,130)	($2,124)
Buybacks	($11,715)	($4,399)	($6,873)	($11,217)	($15,431)	($13,833)	($12,000)	($12,000)	($12,000)	($12,000)	($3,652)	($3,516)	($3,666)	($4,597)	($3,333)	($3,500)	($3,500)	($3,500)
Change in Shares	(13)	(24)	(13)	(16)	(20)	(25)	(26)	(17)	(15)	(12)	(6)	(5)	(4)	(6)	(5)	(8)	(8)	(7)
Financial Debt	$70,231	$72,827	$79,078	$82,752	$91,561	$99,065	$103,832	$104,973	$105,941	$105,523	$84,887	$87,964	$88,372	$91,561	$95,222	$95,957	$97,343	$99,065
Leases	$0	$0	$214	$235	$269	$1,457	$1,457	$1,457	$1,457	$1,457	$1,373	$1,374	$1,372	$1,451	$1,457	$1,457	$1,457	$1,457
Pension	$3,569	$3,041	$3,361	$3,688	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457	$3,457
NCI	$8,447	$7,987	$7,366	$6,476	$4,106	$3,342	$2,570	$1,906	$1,190	$461	$6,184	$4,744	$4,496	$4,106	$3,884	$3,700	$3,503	$3,306
Cash	$621	$551	$3,483	$1,001	$601	$727	$741	$881	$891	$1,000	$772	$1,711	$466	$601	$2,431	$1,153	$727	$727
Net Debt - fully loaded	$81,626	$83,304	$86,536	$92,150	$98,792	$106,595	$110,575	$110,913	$111,154	$109,898	$95,129	$95,828	$97,231	$99,974	$101,589	$103,418	$105,033	$106,559
Gross Debt/EBITDA (finance)	4.6x	4.5x	4.7x	4.5x	4.4x	4.6x	4.5x	4.3x	4.1x	3.8x	4.5x	4.5x	4.4x	4.4x	4.6x	4.5x	4.6x	4.6x
Gross Debt/EBITDA (fully loaded)	5.4x	5.2x	5.3x	5.0x	4.8x	5.0x	4.9x	4.6x	4.3x	4.0x	5.0x	5.0x	4.8x	4.9x	5.0x	5.0x	5.0x	5.0x
Net Debt/EBITDA (finance)	4.5x	4.5x	4.5x	4.4x	4.4x	4.6x	4.5x	4.3x	4.0x	3.7x	4.4x	4.4x	4.3x	4.4x	4.4x	4.5x	4.5x	4.6x
Net Debt/EBITDA (fully loaded)	5.3x	5.2x	5.1x	5.0x	4.8x	4.9x	4.8x	4.5x	4.3x	3.9x	5.0x	4.9x	4.8x	4.8x	4.9x	4.9x	4.9x	4.9x

Risk Scenario:

CHTR Risk Case	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Residential Segment										
Internet net adds	1,159	1,107	1,283	2,115	1,114	500	300	100	(100)	(300)
Video net adds	(301)	(296)	(484)	19	(423)	(450)	(500)	(550)	(600)	(650)
Voice net adds	93	(289)	(692)	(228)	(594)	(600)	(600)	(600)	(600)	(600)
Internet Revenue	$16,626	$17,348	$16,667	$18,521	$21,094	$22,644	$22,963	$22,660	$22,207	$21,612
% yOy	*1%*	*4%*	*(4%)*	*11%*	*14%*	*7%*	*1%*	*(1%)*	*(2%)*	*(3%)*
Video Revenue	$14,102	$15,181	$17,607	$17,432	$17,630	$17,474	$17,259	$16,967	$16,595	$16,138
% yOy	*11%*	*8%*	*16%*	*(1%)*	*1%*	*(1%)*	*(1%)*	*(2%)*	*(2%)*	*(3%)*
Voice Revenue	$2,542	$2,114	$1,920	$1,806	$1,598	$1,446	$1,302	$1,165	$1,034	$911
% yOy	*(12%)*	*(17%)*	*(9%)*	*(6%)*	*(12%)*	*(9%)*	*(10%)*	*(11%)*	*(11%)*	*(12%)*
Total Residential Revenue	**$33,270**	**$34,643**	**$36,194**	**$37,759**	**$40,322**	**$41,564**	**$41,523**	**$40,791**	**$39,836**	**$38,662**
% yOy	*4%*	*4%*	*4%*	*4%*	*7%*	*3%*	*(0%)*	*(2%)*	*(2%)*	*(3%)*
Total Mobile Net Adds		134	948	1,293	1,189	1,400	1,000	750	500	250
Mobile Revenue		**$106**	**$726**	**$1,364**	**$2,178**	**$2,983**	**$3,211**	**$3,407**	**$3,485**	**$3,444**
			585%	*88%*	*60%*	*37%*	*8%*	*6%*	*2%*	*(1%)*
Commercial Segment	**5914**	**$6,193**	**$6,424**	**$6,432**	**$6,743**	**$7,054**	**$7,393**	**$7,734**	**$8,055**	**$8,360**
% yOy	*9%*	*5%*	*4%*	*0%*	*5%*	*5%*	*5%*	*5%*	*4%*	*4%*
Advertising/Other Segments	**2397**	**$2,692**	**$2,420**	**$2,542**	**$2,439**	**$2,412**	**$2,432**	**$2,454**	**$2,472**	**$2,488**
% yOy	*(8%)*	*12%*	*(10%)*	*5%*	*(4%)*	*(1%)*	*1%*	*1%*	*1%*	*1%*
Total Revenue	**41581**	**$43,634**	**$45,764**	**$48,097**	**$51,682**	**$54,012**	**$54,559**	**$54,386**	**$53,848**	**$52,954**
% yOy	*4%*	*5%*	*5%*	*5%*	*7%*	*5%*	*1%*	*(0%)*	*(1%)*	*(2%)*
Implied Mobile EBITDA		($240)	($520)	($401)	($311)	($298)	($257)	($204)	($139)	($69)
% Margin, Mobile		*(226%)*	*(72%)*	*(29%)*	*(14%)*	*(10%)*	*(8%)*	*(6%)*	*(4%)*	*(2%)*
CHTR Core EBITDA	$15,301	$16,299	$17,375	$18,919	$20,941	$21,370	$21,289	$20,924	$20,465	$19,917
% Margin	*37%*	*37%*	*39%*	*40%*	*42%*	*42%*	*41%*	*41%*	*41%*	*40%*
CHTR Consolidated EBITDA	**15301**	**$16,059**	**$16,855**	**$18,518**	**$20,630**	**$21,072**	**$21,032**	**$20,720**	**$20,326**	**$19,848**
% Margin	*37%*	*37%*	*37%*	*39%*	*40%*	*39%*	*39%*	*38%*	*38%*	*37%*
FCF	**4093**	**$2,172**	**$4,608**	**$7,070**	**$8,684**	**$8,870**	**$8,853**	**$8,722**	**$8,556**	**$8,355**
% EBITDA Conversion	*27%*	*14%*	*27%*	*38%*	*42%*	*42%*	*42%*	*42%*	*42%*	*42%*
Diluted Share Count	297	236	224	209	193	172	162	152	142	132
Change in Shares	23	(61)	(12)	(15)	(16)	(21)	(10)	(10)	(10)	(10)
Repurchase $	$11,715	$4,399	$6,873	$11,217	$15,431	$8,870	$4,427	$4,361	$4,278	$4,177
2026 FCF										**$8,355**
Exit Multiple										6.0x
Market Cap										**$50,129**
2025 Shares										142
Price										**$353**
Current Price										$428
Total Return										**(18%)**