October 27, 2015

Chairman Walden, Ranking Members and Members of the Subcommittee:

I appreciate your asking me to be here today to discuss the current state of common carrier regulation as it impacts investment in telecom networks and the Internet following the FCCs Title II order earlier this year. I am a Managing Director at Raymond James covering the telecom, cable, and data center industries, and have done so for 16 years. I do not own shares in any of the companies that I cover and we have provided disclosures about any current or potential business relationships my firm may have with the companies I follow in the documents I submitted previously.

In my role, I analyze companies that provide voice, data, Internet, and pay-TV services to the vast majority of American consumers, businesses, and government institutions both on wireline and wireless platforms, as well as companies that transport, store, and enable the majority of the worlds Internet traffic. Regulation including Title II has a direct impact on the companies I cover and their customers specifically.

In general, we believe the move by the FCC to impose Title II regulation on the Internet is a mistake that ultimately harms consumers, restricts investment, and adds unnecessary costs and burdens to the industry. As with everything in telecom, the rate of change is slow, but we believe the overhang from this regulation (as well as the lighter net neutrality rules that preceded it) have already been a drag on investment, lowered investment returns, and limited consumer choice, in spite of well meaning intentions to the contrary.

As I look at the industry from an investment perspective, the main factors to consider are the amount of capital that is invested, and the rate of return earned on that capital. The current impact on the industry from net-neutrality and Title II is largely felt in the enormous opportunity cost to the carriers. Carriers have limited their investment in networks and products to fit the current rules and the potential future changes that they perceive as likely when Title II regulation becomes implemented after the legal cases are resolved. If carriers had the ability to have more creative models for revenue, whereby they could earn acceptable returns for their investors, I would argue they would spend even more than the $60-$65 billion they invest annually, and customers would have a wider variety of choices to more locations.

Please read disclosure/risk information and Analyst Certification beginning on slide 6.

Unfortunately, regulation, in an effort to prevent problems that *could* occur instead of addressing actual consumer harms that *have* occurred remains a significant restriction on the industries ability to innovate. This is unfortunate and unnecessary in an environment where there are approximately 10 major wireline ISPs in the U.S. and six national and regional wireless providers who represent a significant diversity of Internet access such that industry observers and savvy customers are likely to have multiple vantage points from which to judge discriminatory behavior. This has in the past and would in the future quickly and readily expose any ISP for blocking, throttling, or preferential access regulators fear might occur. Personally, I would have to seriously consider lowering my investment recommendation for any carrier that was foolish enough to block content or charge its customers fees for what is now viewed as just basic Internet access, as the potential loss of revenue would be significant. Losing 25% of your market cap in short order is a career limiting decision for a CEO, and I believe the regulators are naïve to think anything less than a swift, market related reversal of a carriers discriminatory practices would occur in this situation. While we currently lack a record of any actual harm shown, why did we not allow this approach to address the issue before putting onerous rules on a thriving industry?

Which brings us to returns on the invested capital for the industry. The main objective of my clients who represent the large mutual funds, pension funds, insurance companies and other investment firms, is to get an adequate return on their capital. Therefore, they seek out investments in industries that can generate the highest overall risk-adjusted returns. The carriers I follow are seeking this mandate as well in order to attract the ongoing capital necessary to maintain their current services to customers while providing new ones, all of which results in better network facilities t offer to consumers, businesses, and government customers. I believe that these companies are willing to invest even more than the $60-$65 billion they spend each year, but they need reasonable assurance that they can earn a return. This is even more challenging when you consider that the industry as a whole only has earned a modest 4.9% return on invested capital over the last 3 years, and the long-term returns are not much better. So beyond the aforementioned opportunity costs that contributes to this relatively low ROIC, the potential negative impact of Title II makes the sector less attractive, threatening the ability to have affordable capital needed to invest and expand broadband and data services.

I cannot argue that the current state of Title II with the heavy forbearance in place is not, for the moment, impacting the industry any worse than it was under prior FCC orders on Net Neutrality. I do believe, however, that we are seeing the beginnings of Title II adding costs to the industry, as negotiations between carriers are taking longer and it remains unclear what will and will not be allowed and which parts of Title II regulations do and do not apply. Network privacy, pole attachments, and interconnection obligations are all examples of real concerns in the marketplace now. The deceiving part for Congress and industry observers is that everyone is really waiting on the court case to be decided to see what the "real" rules are, but don't mistake this apathetic view with an endorsement for the situation.

I am also concerned that the current environment of heavy forbearance where the FCC is on its best behavior can change swiftly should a different interpretation of the intent of Title II and the proper forbearance be imposed. This is where the "just and reasonable" standard has the potential to be employed, leaving a considerable threat of potential future litigation. While the FCC is trying its best to live to the letter of its promises until the court has a say in the mater, over time the courts and new commission members and staff have the ability to alter this path to be more "just and reasonable". We believe this would be very detrimental to investment and product deployment. Price regulation, required resale of facilities, and onerous accounting and record keeping burdens will have the impact of fewer investments, less deployment of broadband, slower innovation, and general harm to consumers who are ultimately going to pay higher prices for broadband service, if they get the service at all. Effectively, the potential future world of regulation brings a much flatter trajectory of network investment than we have seen in the past.

Wireless is another area that I have significant concerns about with regards to Title II implementation. Network management is even more important to these carriers for the simple reason that wireless networks have inherently less bandwidth to begin with and traffic patterns can cause unpredictable fluctuations and services levels. Under Title II, it is not clear what sort of network monitoring tools will be able to be employed and what sort of business models will be allowed. One of the most obvious trends is TV everywhere, including the ability of consumers to watch TV on their phones, tablets, connected cars, and other devices. A model allowing the content owner or advertiser to pay for a customers data usage might be very attractive, but could be made unlawful under Title II. This will limit the carriers ability to invest to provide advanced wireless data services, in my opinion. Generally, as I have outlined for the wireline sector, the Title II impact on wireless carriers is highly likely to infuse doubt as to where the industry will be able to invest to get any returns, and risks the **U.S.** wireless industry's leadership globally. Again, without adequate returns on investment, the wireless carriers are unlikely to increase their spending, and could see it decline.

Ultimately, I believe that the FCC is attempting to use a large, blunt instrument to address unfounded fears when a swift surgical procedure would suffice. None of the carriers that I cover are or will engage in blocking, throttling, or degrading lawful content, and have even said they will not offer business models that would give products preferential access regardless of potential consumer and public policy benefits. These are simple and uncontested principles that should have a legislative solution, not an imprecise and overreaching agency authority grant. First we see Title II as a way to assume congressional authority, what's next? I would argue that the members of this committee should look to a legislative solution that will not impact the industry in ways that limit investment, choice, and product development for consumers.

So, from my perspective, Title II is restricting overall investment and returns, is beginning to slow down and over complicate an industry in unnecessary ways, and has yet to see the full effect while the court case is pending. The full impact is unlikely to be known for some time, but we do not believe it will make the industry as attractive to capital as it had been in the past. This will result in less investment. Less investment will, eventually, result in a degrading customer experience, and fewer choices in the market. I would encourage the members of this committee to seek out a simple legislative solution to the main goals for the actions on Title II rather than allow the current blunt force approach to have unintended consequences and degrade the biggest investment and tech success story ever in the U.S.: the Internet.

US Telco ROIC	2013-2015
AT&T	5.3%
CenturyLink	2.9%
Frontier	3.3%
Windstream	3.1%
Cincinnati Bell	4.9%
Consolidated Comm.	3.6%
Verizon	8.2%
Comcast	6.7%
Time Warner Cable	6.2%
Charter	3.7%
Cablevision	5.8%
Wireline - Avg.	4.9%

Source: Company reports & Raymond James Estimates

US Telco Capex - Wireline

($ mm)	2009	2010	2011	2012	2013	2014	2015E
AT&T	11,428	11,107	10,351	8,670	9,753	9,816	8,621
CenturyLink	2,163	2,554	2,979	2,858	3,001	3,026	2,832
Frontier	812	749	825	803	635	572	738
Windstream	487	647	892	1,101	841	787	894
Cincinnati Bell	195	150	256	367	197	182	280
Consolidated Comm.	42	42	43	77	107	109	132
Verizon	9,895	8,119	7,271	7,318	7,179	6,676	5,822
Comcast	5,037	4,853	4,806	4,921	5,403	6,154	6,818
Time Warner Cable	3,231	2,930	2,937	3,095	3,198	4,097	4,455
Charter	1,134	1,209	1,311	1,745	1,825	2,221	1,725
Cablevision	613	682	654	916	807	744	745
Wireline - TOTAL	35,038	33,041	32,324	31,871	32,946	34,384	33,061

US Telco Capex - Wireless

($ mm)	2009	2010	2011	2012	2013	2014	2015E
AT&T Wireless	5,907	9,204	9,759	10,795	11,191	11,383	9,385
Clearwire	1,540	2,545	228	183	128	0	0
Sprint Nextel	1,597	1,926	2,855	5,370	7,451	5,524	5,197
Verizon Wireless	7,152	8,438	8,973	8,857	9,425	10,515	11,721
T-Mobile	3,861	2,808	3,619	3,747	4,350	4,317	4,648
TDS/US Cellular	671	755	987	1,005	908	771	830
Ntelos	103	91	58	72	81	107	101
ShenTel	54	56	75	113	101	60	75
Wireless - TOTAL	20,885	25,823	26,554	30,141	33,636	32,677	31,957
Total Capex	**55,923**	**58,864**	**58,878**	**62,012**	**66,581**	**67,061**	**65,019**

Source: Raymond James estimates and company reports

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Market Perform (MP3) Expected to perform in line with the underlying country index.

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