March 2024

Shifting Signals Create Uncertainty for Rural Broadband Consolidation

Jeff Johnston
Lead Economist, Communications

Inside…

Introduction 1
Wireless 3
Cable 3
Rural broadband consolidation 3
Conclusion 5
Sources 5

Key Points:

- The cable and wireless industries have consolidated over the last 20-30 years to create scale and gain access to valuable nationwide spectrum. Observers are watching to see if history will repeat itself in a similar tech provider industry: the rural broadband market.
- While scale will be important for the future of rural broadband delivery, the industry's unique aspects may prevent massive consolidation.
- The industry is fragmented, which typically leads to consolidation when growth begins to slow. However, not all operators will be merger and acquisition (M&A) targets, especially cooperatively owned companies committed to their deep-rooted mission to serve their local communities.
- Infrastructure funds and private equity sponsors will continue to play an important role in industry M&As, but recent headwinds from inflation, higher interest rates and labor shortages could cast a cloud over near-term activity.
- Some level of consolidation is expected over the next 5-10 years, but it's a question of when and how much.

Introduction

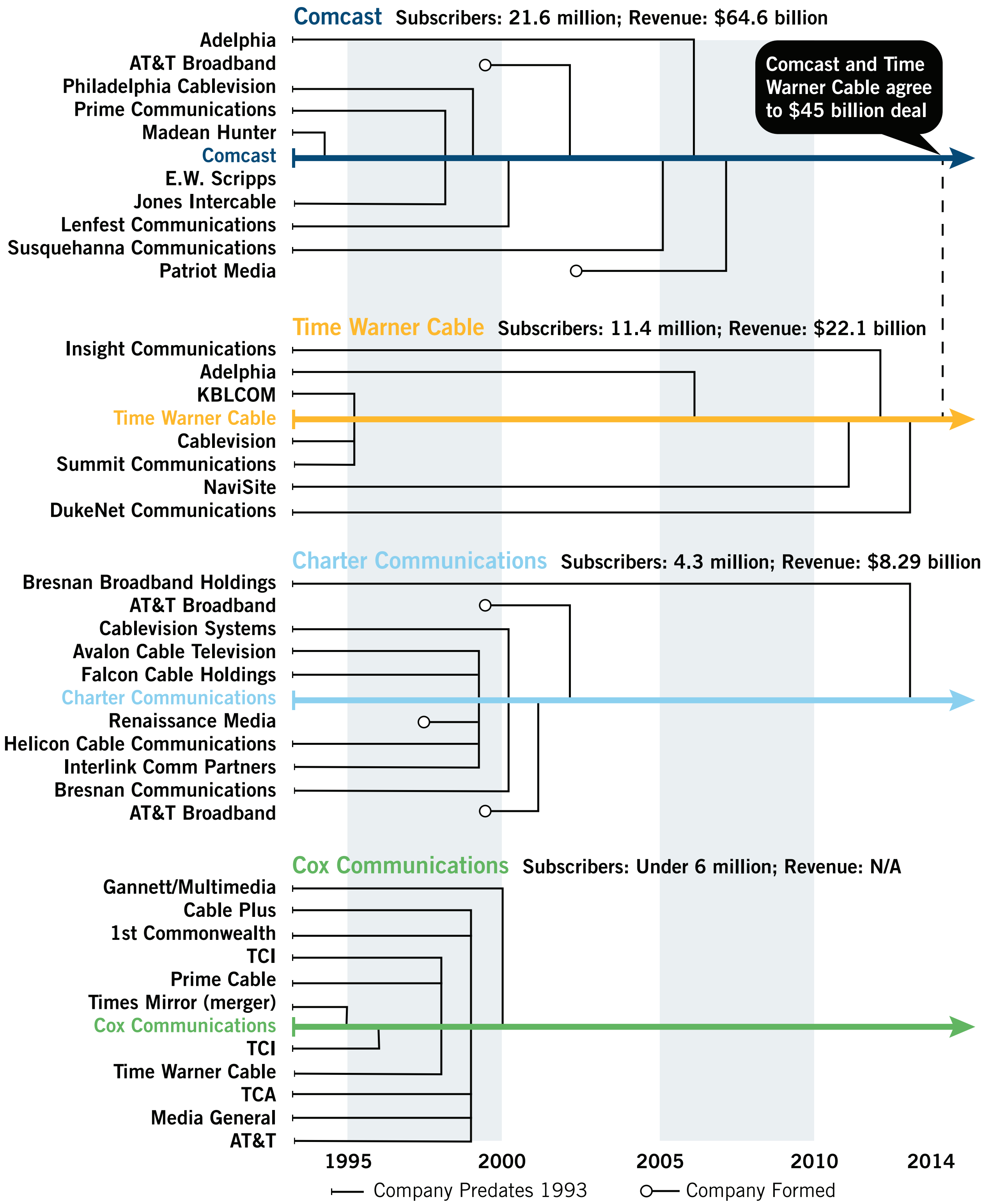
Renowned writer Mark Twain was famously quoted as saying, "history never repeats itself, but it does often rhyme." Will that saying hold true for future rural broadband consolidation trends?

From the mid-1990s to about 2015, the cable and wireless industries underwent a significant amount of consolidation, resulting in a handful of dominant national wireless and cable operators. Consolidation was driven by the need for greater scale and access to valuable wireless spectrum, among other factors. Could the rural broadband industry follow a similar path? Given the importance of broadband connectivity, unprecedented government support to build new networks, and the attractive economics of the business model, it's possible. Of course, the devil is in the detail and the rural broadband market has some unique aspects that prevents us from assuming history will repeat itself.

In this report we review why the wireless and cable industries consolidated, and assess what could happen in the rural broadband market.

EXHIBIT 1: Cable-Company Consolidation

Major acquisitions and mergers by the top 4 U.S. cable-TV providers



Source: *Wall Street Journal* reporting, the companies; data from latest reported quarter Rani Molla/The Wall Street Journal

Wireless

Long before Verizon, AT&T, T-Mobile, and a small number of large regional operators were around, the wireless industry had numerous small regional operators. These included the seven “baby bells” and Sprint, MetroPCS and Leap Wireless, among a few others. These regional operators acquired geographic-based licensed spectrum from the Federal Communications Commission, which enabled operators to build networks in their respective parts of the country. For example, PrimeCo Personal Communications operated service in 19 major cities, AirTouch Cellular sold service primarily in California, and Alltel offered service in 34 states. All three operators were rolled up in to what today is Verizon.

Gaining access to spectrum was one of the major factors behind the wireless consolidation. Pre-consolidation, regional operators had reciprocal roaming agreements which enabled their customers to use their phones across the country, but they had to pay a fee to do so. By aggregating regional operators, companies like Verizon were able to piece together regional networks to assemble a nationwide network.

From a scale perspective, having a nationwide presence in the pre-iPhone era meant wireless operators could negotiate exclusive handset agreements to differentiate their service. And they were able to negotiate better terms with infrastructure manufacturers and tower operators as compared to regional operators. This scale led to higher margins and revenue growth for the newly formed behemoths of the industry, and it kept new competition at bay. The capital-intensive nature of the business – specifically as it related to acquiring new spectrum licenses, which is the lifeblood of the industry – became a major entry barrier.

Cable

For many years, cable operators were regionally based with broadcast television as their main competition. Cable operators did not compete against each other and were awarded franchises to offer service in a specific region. But as subscriber growth started to slow and satellite TV operators became a larger competitive threat, cable industry consolidation started to gain traction in the mid-‘90s. This form of horizontal integration was not intended to eliminate competition; it was intended to gain scale and negotiate leverage with content providers. It also enabled operators to more effectively develop and deploy new technologies. CableLabs, the industry’s research and development arm, is a perfect example of how consolidation helped cable companies invest in new technologies. CableLabs is largely supported by Comcast and Charter, and has developed technologies that enable cable operators to optimize the performance of legacy cable networks.

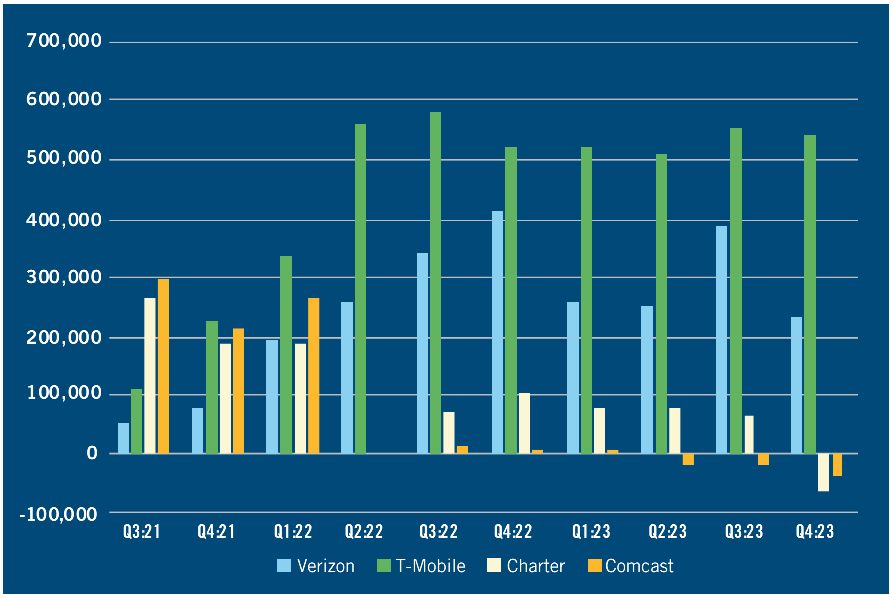
Major acquisitions are what made Comcast, Time Warner Cable, Charter Communications and Cox Communications *(Exhibit 1).* (Notable acquisitions not shown include Charter buying Time Warner Cable and Bright House Networks.)

Rural broadband consolidation

Some level of continued consolidation in the rural broadband industry over the next 5-10 years appears to be inevitable. It seems to be not a question of if, but when, and how much. The outlook is clouded by a patchwork of unprecedented levels of government financial support directed at rural broadband technology and programs, a highly fragmented market with numerous greenfield opportunities (some of which are being built by first-time operators), cooperatives that are unlikely to sell anytime soon, and investors who are falling short of their return goals. It’s important to recognize that many small operators in markets lacking an attractive overbuild opportunity will likely remain independent. The same is true for operators utilizing the various government funding programs so they can provide the best possible service to their customers.

Rural broadband consolidation will probably look different than other industries where mergers and acquisitions (M&A) are largely a function of horizontal integration. When industries begin to mature and growth starts to slow, companies typically grow their business inorganically by acquiring competitors. In rural places without many service options or competition, this will not likely be the case. Before acquisitions happen in the rural broadband

EXHIBIT 2: Fixed Wireless vs. Cable Broadband Net Additions



Source: Company reports

candidate. Some of these operators will get overbuilt with fiber from larger players and will struggle to survive, and some are in high-cost, remote areas that may not be attractive for an investor or strategic company to own. And of course, cooperatively owned operators – who have been formed to serve a specific need and are likely the only provider in the area – have historically been reluctant to sell. Despite all of this, the sheer number of operators and the coverage holes that are being addressed with fiber networks (largely with government grants and loans) means that many operators who have built fiber networks in attractive markets may be considered M&A candidates.

market, we are likely to see private equity sponsors and infrastructure funds accelerate their acquisitions of specific operators that meet their investment criteria and roll them into a portfolio of independent companies. From the outside these will look like independently run companies, but in reality, they are owned by a small group of investors. After the funds meet their time horizon and return objective, strategic buyers could step in and acquire part or all of the portfolio companies, rebrand the service and consolidate the operations, thus taking on a more traditional definition of industry consolidation.

Industry fragmentation

The broadband industry is heavily fragmented with thousands of differently structured operators offering either fiber-to-the-premise, digital subscriber lines (DSL) or coaxial solutions and more recently, fixed wireless carriers. According to BroadbandNow, as of 2020 there were over 1,700 fiber providers, over 800 DSL providers and over 400 coaxial (cable) broadband providers. Typically, this level of fragmentation leads to consolidation when growth starts to slow and scale becomes a bigger priority. Independent operators in rural broadband networks each has their own mission, service territory and business case, which means many of them will not be an M&A

Large operators are struggling

Publicly traded broadband operators, notably Charter and Comcast, have been ceding broadband market share to the national wireless operators for over two years *(Exhibit 2).* Based on recent trends, their losses could worsen. The national wireless operators are offering home internet and smartphone bundles at aggressive prices, which is resonating with consumers. The game plan for the wireless operators is simple: Use excess capacity in the mobile network for fixed wireless home internet, which requires zero incremental capital expenditures and increases network utilization. To address these competitive threats, Comcast and Charter are upgrading their legacy hybrid fiber-coaxial (HFC) networks to support multi-gig symmetrical speeds, and are offering a smartphone + broadband bundle. But they could also acquire smaller operators to stabilize and grow their broadband business, and expand their reach. And depending on the economics, investors could view this favorably.

To be clear, we don't see Charter or Comcast buying small rural operators anytime soon. Charter has been building service in underserved and unserved rural areas by leveraging the various federal programs, and we see

this continuing for the foreseeable future. But given the inflationary effects on labor and equipment, and the permitting delays in getting new networks built, a buy-versus-build analysis for operators looking for growth cannot be ignored.

Private equity and infrastructure funds

Institutional investors have been one of the driving forces behind industry M&A for about the last five years, and they will play a very important role in future consolidation activity. During the most recent period, investors drove EBITDA valuations north of 20x for larger regional operators with significant near market opportunities – higher than most industry participants thought they'd ever go. Investors' willingness to pay these valuations is rooted in the fact that digital infrastructure will continue to play an increasingly important role in how we live and work. If those entities could acquire operators with attractive growth and competitive market dynamics, the investment will have been justified. However, when inflation, labor shortages and higher interest rates came along, they all negatively impacted investors' ability to upgrade networks and turn over their portfolio. These unforeseen circumstances, and their impact on investors' return on investment, will likely cast a cloud over M&A until costs and timelines begin to normalize.

Conclusion

The rural broadband industry is becoming a major focus for investors, strategic partners and governments across all levels. The pandemic illustrated the vulnerability of those who don't have access to reliable broadband, and artificial intelligence will be another powerful reminder of this. And given the unprecedented amount of private and public capital making its way into rural America, M&A opportunities may start to emerge. It's important to understand what factors drove industry consolidation in the cable and wireless industries as some are applicable in today's environment, and some are not. Further consolidation will take time to play out, but it does seem to be a question of when, not if. But it's also a question of how much. Not all independent operators will be M&A targets, and cooperatives are uniquely structured to prevent a typical operator sale. Either way, a broadband operator in rural America providing a reliable service is, and will continue to be, an increasingly valuable asset to the future of its community.

Sources Used

Cable television webpage on Encyclopedia.com, accessed Feb. 20, 2024. https://www.encyclopedia.com/science-and-technology/computers-and-electrical-engineering/electrical-engineering/cable-television

DeSilver, Drew. "Chart of the Week: A long history of cable consolidation," Pew Research Center, Feb. 14, 2014. https://www.pewresearch.org/short-reads/2014/02/14/chart-of-the-week-a-long-history-of-cable-consolidation/

Charter Communications webpage in Wikipedia, accessed Feb. 20, 2024. https://en.wikipedia.org/wiki/Charter_Communications

Alltel webpage in Wikipedia, accessed Feb. 20, 2024. https://en.wikipedia.org/wiki/Alltel

"The Complete List of Internet Companies in the US," BroadbandNow web site, accessed Feb. 20, 2024. https://broadbandnow.com/All-Providers

CoBank's Knowledge Exchange Division welcomes readers' comments and suggestions. Please send them to KEDRESEARCH@cobank.com.