

Bridging the Rural/Urban Digital Divide

Inside this Issue...

At Risk of Falling Behind2

The Rural/Urban Digital Divide2

Universal Service3

Industry Development and Network Convergence3

Rural Telecom's Transition and Evolution3

Global Telecom Networks4

Telecom Providers – Who's Who?.....5

CoBank's Telecom Lending Authorities7

CoBank's Mission to Support Rural Telecom9

Concluding Remarks10

Broadband access is vital to the health, education and economic wellbeing of rural America. CoBank finances a broad array of telecom and broadband companies whose capital investments are bridging the rural/urban "digital divide," thus enabling rural Americans and their communities to enjoy the fruits of technological progress alongside their urban peers.

Key Points:

- **Modern, high-speed broadband access is just as vital to the economic health of rural America as it is to the wellbeing of urban America. No longer is the Internet a novelty or luxury.**
- **Rural Americans have less access to high-speed broadband connectivity than their urban counterparts. The Federal Communications Commission (FCC) documented that broadband deployment in rural America is "failing to keep pace."**
- **The FCC found that only 41 percent of rural elementary and secondary schools are linked to the Internet with broadband fiber versus nearly 70 percent of urban schools.**
- **Communications networks are converging toward Internet-based protocols (IPs) dependent upon an increasingly optical fiber-based physical infrastructure.**
- **The rural telecom industry is moving away from the monopolistic business model employed so successfully by the rural local exchange carriers but heavily reliant on regulatory support subsidies and legacy voice telephony.**
- **Telecommunications networks are, by their very nature, globally connected. There is today just one global telecom network, from which it is impossible to isolate any one rural telecom network.**
- **This evolving interconnectivity is creating a transformative business model for today's telecom providers whereby serving urban areas will become increasingly necessary and incidental to serving rural areas – thus blurring the distinction between rural and urban telecom providers.**
- **As the traditional voice-related legacy subsidies to rural telecom customers decline, the new telecom business model strives to replace them with "self-subsidizing" revenues from more urbanized customers.**
- **Rural America's needs for modern telecom services are being accommodated today by a variety of large and small providers, including RLECs, wireline, cable, wireless, broadband, and satellite companies. With its Congressionally mandated mission of supporting rural telecom providers, CoBank is committed to serving all of these types of companies.**

At Risk of Falling Behind

Rural telecommunications providers face a challenging, rapidly evolving business environment. Dramatic shifts in telecom technology and government support programs, combined with the ever-present challenge posed by broadly dispersed populations across rural areas, are threatening traditional business models, driving mega-mergers in the industry, and fostering an imperative for big and small companies to collaborate to ensure that modern, efficient telecommunications services are available and sufficiently robust to meet the needs of rural communities. All businesses, schools, government agencies, healthcare providers, and families rely on modern, high capacity communications networks and services to operate and function; yet those based in rural America are at risk of being left behind.

Congress assigned CoBank a mission of supporting those businesses that provide telecommunications products and services to rural America. Today, CoBank remains firmly committed to fulfilling this important mission. With a team of experienced bankers leveraging CoBank's strong balance sheet capacity, the bank provides \$4.3 billion in net loan commitments to the telecom industry and lends its support to a broad range of initiatives aimed at improving rural access to modern communications services. The purpose of this report is to document the current status of the rural telecom industry, the challenges it faces, and CoBank's many initiatives aimed at fulfilling its mission in support of the rural telecom industry.

The Rural/Urban Digital Divide

Modern, high-speed broadband access is as vital to the economic health of rural America as it is to the wellbeing of urban America. Broadband access supports the economic development that drives job creation and keeps America's small towns and rural communities connected and competitive within the global marketplace. Rural Americans need broadband access to benefit fully from existing technologies, such as telemedicine and online education. Moreover, the buildout of broadband infrastructure to rural America will spur innovative

“*Broadband access connects small towns and rural communities to the global Internet.*”

approaches to existing businesses, such as “fiber to the field” applications that combine landline and wireless infrastructure enabling farmers to increase yields by remotely monitoring soil conditions and crop growth.

The economic benefits of broadband access are widely recognized and well documented. A recent World Bank study found that developed countries “enjoyed a 1.21 percentage point increase in per capita GDP growth” for each 10 percent increase in their broadband penetration rates.¹ The USDA has recognized that access to modern, high-speed broadband services will enable rural America to “see improved educational opportunities, health care, safety and security and ultimately, higher employment.”² Broadband access connects small towns and rural communities to the global Internet. For example, when broadband access was introduced in one small Oregon town, a local artisanal goat cheese manufacturer was able to establish a viable Internet website presence as a new marketing tool.³ Other local, rural businesses, including a cabinet maker and a tech company, also succeeded in tapping global markets to market their products.

Rural Americans, however, have less access to high-speed broadband than their urban peers. The Federal Communications Commission (FCC) has documented that broadband deployment in rural America is “failing to keep pace.”⁴ Fifty-three percent of rural Americans do not have access to the FCC's broadband benchmark of 25 Mbps/3 Mbps service, compared to only 9 percent of urban Americans.⁵ Similarly, the FCC also found that only 41 percent of rural elementary and secondary schools are linked to the Internet with broadband fiber whereas nearly 70 percent of urban schools enjoy modern, high-speed broadband access.⁶ This disparity in broadband access is often characterized as the rural/urban Digital Divide.

Universal Service

Universal Service has long been a central tenet of U.S. telecom policy. Its premise is that all Americans should have equal access to advanced telecommunications and information services. In the past, the FCC established various cost-recovery programs aimed at ensuring Universal Service in voice communications, and has reoriented this financial support in recent years toward broadband connectivity. In early 2015, the FCC stated that “the day may be fast approaching when we would consider ‘advanced telecommunications capability’ to be fully deployed only in areas where consumers have access to both mobile and fixed high-speed broadband.”⁷ In support of this reorientation, the FCC has disbursed more than \$438 million through its Connect America Fund, Phase I funding to many CoBank borrowers including AT&T, CenturyLink, and Frontier Communications, with the aim of bringing broadband service to more than 1.6 million unserved rural Americans.⁸

Other FCC programs are also designed to support the deployment of advanced wireless services and modern, high-speed broadband to unserved, high-cost rural areas. The FCC’s Mobility Fund will distribute about \$300 million in one-time support to 33 wireless companies to provide 3G/4G mobile voice and broadband services to previously unserved rural areas.⁹ In addition, the FCC is in the process of awarding \$100 million in funding for the construction of high-speed broadband networks in rural areas under its Rural Broadband Experiment (RBE) program. CoBank has actively supported both of these critical programs with its specialized financial products. In fact, given CoBank’s history of working with borrowers in the rural telecom sector, it was the only financial institution listed by name as an eligible issuer of Letters of Credit under the RBE program.¹⁰

Industry Development and Network Convergence

Prior to enactment of the Telecommunications Act of 1996, rural telecom systems or networks were separate and easily distinguished from their urban counterparts. America’s communications infrastructure was then

bifurcated between narrowband voice service (telephone) or one-way video entertainment products (cable TV), with mobile wireless voice (still essentially a narrowband product) added in the 1980s and 1990s. Each of these segments of the communications industry had its own physical infrastructure (e.g., twisted pair, coaxial cable, or electromagnetic spectrum), its own regulatory framework, and its own separate and distinct customer bases. There was also little or no competition among them.

With the rise of the Internet in the 1990s and the introduction of smartphone technology in 2007, communications networks have been converging towards Internet-based protocols (IPs) dependent upon an increasingly optical fiber-based physical infrastructure. These networks have become increasingly interconnected and dense, with fiber “backbone” routes connecting cities and “middle mile” connections linking Internet access points to neighborhoods. “Last mile” connectivity to individual homes and businesses still depends on legacy copper infrastructure in many cases, but these copper wires are gradually being replaced by fiber “drops” from neighborhood nodes to individual homes and businesses.

Meanwhile, ownership of the various network elements has become highly fragmented. Gone forever are the days of the monopoly telephone company controlling one specific regional territory with network elements that it alone owns. Today, fiber routes, data centers, cell towers and the physical last mile connections may all be owned by different companies, yet all of these network elements are essential to create the seamlessly operating telecom network that underpins America’s entire economy – including small towns and rural communities. And all of these telecommunications segments require the ongoing capital investment that CoBank helps provide.

Rural Telecom’s Transition and Evolution

The rural telecom industry has always struggled to survive. Because of Rural America’s much lower population densities, lower service usage, and lower disposable incomes, rural communications providers have found it difficult to generate sufficient income

to support and upgrade the far flung and costly infrastructure needed to connect rural communities, households, and businesses with each other and the rest of the world.

The fundamental challenge faced by rural telecom providers is that it is uneconomical to provide the costly telecom services to customers located in low-density rural areas. The costs were (and remain) simply too great to be recovered solely from rural subscribers. Since the Telecommunications Act of 1996, financial support for the high costs of serving low-density rural areas has been provided by a system of inter-carrier compensation and Universal Service Fund (USF) payments. The smaller rural local exchange carriers (RLECs) – i.e., those with fewer than 10,000 access lines – were the ones most heavily dependent on these subsidies. For decades, the USF along with other government programs and local cooperative efforts succeeded in providing basic telephone service for virtually every U.S. household and business in rural America.

“The fundamental challenge faced by rural telecom providers is that it is uneconomical to provide the costly telecom services to customers located in low-density rural areas.”

But within the past 15 to 20 years, the nation’s telecommunications industry has undergone profound technological and structural change. And so has the rural segment of this industry. Moreover, in response to these vast changes, the FCC has sought to curtail these USF and other subsidies for legacy voice networks and migrate the financial support toward broadband investments benefitting rural America.

As a result, the rural telecom industry is moving away from the former monopolistic business model employed so successfully by the RLECs, but heavily reliant on regulatory support subsidies and legacy voice telephony. Today’s

rural providers are becoming increasingly urbanized with global reach. As wireless substitution has gradually eroded the rural local exchange carriers’ voice access lines while regulatory reform has shrunk its subsidies, these companies have begun investing in regional fiber networks, competitive local exchange carriers, and data centers. These investments and acquisitions generally “follow the money” and thus target customers in higher density areas contiguous to their rural markets.

Telecommunications networks everywhere benefit from global interconnectivity. Advances in IP-based services mean that telecommunications companies in rural areas can now also serve businesses located in major metropolitan areas or even other countries. This evolving interconnectedness, we believe, is creating a transformative business model for telecom providers whereby serving urban areas will become increasingly necessary and incidental to serving rural areas.

This new telecom business model is blurring the distinction between rural and urban. As traditional voice-related legacy subsidies decline, they are being replaced by revenues from more urbanized customers. This evolving “self-subsidizing” business model in which revenues from urban subscribers implicitly subsidize rural subscribers is also an attractive free market solution to promoting rural communications – one that the FCC would like to cultivate.

Some companies operating in particularly low-density areas, however, may not be able to exploit these opportunities to diversify. These companies may increasingly elect to merge with other similarly-positioned systems or may be acquired by larger companies wishing to consolidate these types of assets, thereby gaining scale and cost efficiencies that allow the assets to be operated with less reliance on direct subsidies.

Global Telecom Networks

Telecommunications networks are, by their very nature, globally connected. The same physical infrastructure that serves rural subscribers also serves urban subscribers and networks, and U.S. domestic networks are interconnected with international networks. The voice, video, and data

content that flows over those networks is generally not originated or stored in rural areas. In fact, most of this content is stored on file servers located in urban-based data centers and is replicated and transported to rural subscribers over these globally interconnected networks. When delivered to end-users in rural America, this internet-based content is reformatted into data packets which then bounce back-and-forth between routers located alternately in both rural and urban areas before terminating on the end users' televisions, computers, cell phones, or other hand-held electronic devices.

Whereas rural telecommunications networks used to be totally separate and distinguishable from urban networks, today it is impossible to isolate a rural telecommunications network from a global network. In fact, there is really just one single network, worldwide. Moreover, many rural telecommunications companies operate data centers and provide broadband services not just to their rural customers, but also to urban customers. As regulatory reforms continue to diminish subsidies for rural networks, the nation's telecom providers will necessarily have to rely on more urban-based revenue streams to support the services provided to their rural customers.

Telecom Providers – Who's Who?

Rural telecom customers are served today by a wide array of providers. Wireline, cable, wireless, broadband, and satellite companies, large and small, all serve rural and urban markets. Less well known are the companies that provide the infrastructure on which the telecom providers and networks rely, including those that supply cell towers, provide data backhaul services, and build and maintain data centers. All are essential in making telecommunications services available in rural communities, and competition among them is fierce.

Following are descriptions of the key sectors that comprise today's telecommunications industry:

1. Rural Local Exchange Carriers

Rural local exchange carriers (RLECs) are the traditional stalwarts of the rural telecommunications industry. But they are also the ones most impacted by regulatory

reform and the most susceptible to technological and competitive obsolescence.

As the USF and other subsidies have shrunk in round after round of regulatory reforms, the leverage-bearing capacity of the smaller RLECs has been gradually compromised. Moreover, the wireless and cable companies, which offer high-quality substitutes for the RLECs' legacy voice telephony services as well as their broadband offerings, have wrested significant market share from these former local telecommunications monopolists.

Nonetheless, across much of rural America, the local RLECs continue to be the most important providers of broadband telecommunications services. To fulfill this mission, many small RLECs must upgrade their decades-old copper networks with modern fiber. Most would like to bring fiber all the way to the subscriber premises – a high quality, ultra-fast, but also extremely pricey endeavor. CoBank today serves roughly 75 RLECs, and is providing them with much of the capital needed for these upgrades.

Many of these RLECs qualify for Rural Utilities Service (RUS) funding for such regulated network investments. However, the application and funding process for an RUS loan tends to be long and complicated. Most borrowers need to make interim investments during this period. In these cases, CoBank often provides interim financing on an unsecured basis with the assurance that the first draws on the RUS loans will refinance this debt. In addition, RUS will typically not provide funding for non-regulated investments. CoBank finances these expenditures by employing relatively short-term loans in a shared, second lien, or occasionally an unsecured position to RUS. CoBank also provides funding for mergers and acquisitions that are not usually financed by RUS.

CoBank also lends to some of the largest consolidators of RLECs. Companies such as CenturyLink, Frontier Communications, Windstream, and Consolidated Communications serve millions of rural subscribers and thousands of rural communities nationwide. Over the last decade, many of these companies have gained scale through serial acquisitions of smaller RLEC customers. These companies have also consolidated subscribers

divested by Verizon, AT&T, and Qwest, and these transactions have resulted in significant concentrations of urban assets.

In general, these consolidators use the profits they obtain from their urban subscribers to self-subsidize the costs of serving their rural subscribers. Moreover, due largely to their broad geographic reach, these consolidators have received grants from the FCC to promote the deployment of broadband in underserved or unserved rural areas. These consolidators are using their scale and access to capital markets to help deliver broadband telecommunications cost-effectively to rural subscribers. Providing financing support to these companies is consistent with CoBank's mission to service rural America.

2. Cable Companies

Cable companies have become one of the most important providers of broadband telecommunications in rural areas. These companies typically receive no USF subsidies to help offset the high costs of serving rural areas, so they generally serve the higher-density rural areas. Going forward, the new Connect America Fund may provide some incentives for cable companies to reach out to more underserved and unserved rural communities.

Over the past 15 years, cable companies have evolved from monopoly providers of video service to providers of complete suites of broadband services including voice, video, and data. As a rule, the quality of cable infrastructure rivals, and often exceeds, that of local RLECs within the area. CoBank is an active provider of financing for small local and regional rural cable systems. It also funds larger urban systems such as Charter Communications and Cablevision. Unlike the local exchange carrier consolidators, these largely urban cable companies generally serve comparatively few rural subscribers. However, CoBank lends to these more urban companies to help diversify its portfolio and provide profits that enable it to generate the capital necessary to underwrite its commitments to the smaller systems. Moreover, CoBank's relationships with larger cable operators with national scale give it valuable insights into the technological, demographic, and competitive trends that ultimately will impact rural customers.

3. Wireless Companies

Wireless companies are vitally important providers of voice communications in rural areas. As network technology evolves, they are capable of providing a sufficiently robust broadband product.

Wireless companies started out in the 1980s as mobile voice telephony providers. With the advent of digital technology in the late 1990s, these companies added data to their product offerings. Within the last decade or so, digital technology has undergone several rounds of improvements to boost data speeds, commonly referred to as "generation" improvements. Wireless companies are presently rolling out so-called fourth-generation or, "4G," services. These networks provide broadband data speeds that approach, and sometimes exceed, the capability of wireline solutions such as Digital Subscriber Line and cable modem service.

Consolidation has swept across the wireless industry to a greater extent than any other telecommunications sector. The vast majority of small rural wireless companies have been acquired by larger regional or national carriers over the last decade. CoBank takes a leading role in financing these large carriers, including Union Telephone and NE Colorado Cellular. These two companies play an important role in bringing wireless voice and data service to the sparsely populated areas of Wyoming and Colorado.

CoBank's largest commitments, however, are with the larger, regional wireless companies such as Shentel, US Cellular, Nsight, and C-Spire. Similar to the local exchange carrier consolidators, these companies serve a combination of urban and rural subscribers, where the profits yielded from the higher density urban areas are used to subsidize high quality, ubiquitous coverage for the more sparsely populated rural areas. CoBank's loans to these larger carriers offer high quality portfolio diversification and substantial income that help it support the financing needs of smaller rural networks.

Wireless tower companies provide the real estate and tower infrastructure on which mobile wireless companies mount their antennas. Tower companies consequently are integral to the mobile wireless service provided to millions of rural and urban subscribers. The tower

companies host multiple tenants on each tower, thus insulating them to some degree against the competitive dynamics of individual carriers. No matter which mobile wireless company wins the right to serve the subscriber, the tower company's infrastructure is still needed.

CoBank currently lends to three of the largest tower companies in the world – i.e., American Tower, Crown Castle, and SBA. These three companies collectively own more than 90 percent of the towers in the nation. American Tower and Crown Castle, in particular, are very profitable, with strong credit ratings. As a result, they provide excellent portfolio diversification for CoBank and help provide a natural hedge against the higher credit risk of our mobile wireless borrowers.

4. Fiber Transport

Fiber transport companies own, operate, and maintain the fiber-optic networks that link the local network providers (e.g., RLECs, cable companies, and wireless providers) with other content providers in distant places. They also facilitate interconnection with the content located in data centers and ensure that urban and rural subscribers are able to access the important business, retail, and media applications they need to run their households and businesses.

Fiber transport companies transcend the geographic boundaries of rural and urban areas because their networks are designed specifically to interconnect with both rural and urban users and transport broadband traffic between them. Due to the sustained, meteoric growth in demand for data services from both consumers and businesses, fiber transport is one of the most rapidly growing sectors within the telecommunications value chain. Fiber transport companies are increasingly emphasizing the need to build more robust networks in rural areas, especially to facilitate wireless traffic backhaul.

CoBank plays an active role in financing many large-scale fiber construction projects for companies such as Fiberlight, Southern Light, and Zayo Broadband, all of which provide important long haul routes that connect rural areas with urban centers in several states. In addition, CoBank is a premier lender to several statewide fiber networks such as Iowa Network Services,

Indiana Fiber Networks, Spirit Communications, and Kansas Fiber Networks. These networks are owned by consortiums of RLECs and provide the middle mile and regional transport services needed by their members.

5. Data Centers

Data Center companies provide a secure, power redundant, and climate-controlled space for businesses and institutions to locate their mission-critical file servers. Data centers also provide a point of carrier-neutral connectivity to the broader telecommunications network. Many data centers also provide managed and cloud-based services to clients who do not wish to own and manage their own file servers and applications.

Data centers are increasingly becoming a vital player in the telecommunication value chain. The content that rural subscribers are accessing – whether for on-line shopping, entertainment, or business software and applications – is located on file servers residing in data centers. Each year, more businesses and institutions outsource their traditional in-house data center infrastructure to third party data center operators. Most data centers are presently located in urban areas.

Because they are integral to the storage and delivery of content and applications vital to rural subscribers, CoBank views financing data centers as an important part of its mission. CoBank not only finances standalone data centers, but also the data centers owned by its local exchange carrier, cable, and fiber transport customers. As content providers seek ways to reduce latency and improve the customer experience, CoBank expects more data centers to be constructed in rural areas.

CoBank's Telecom Lending Authorities

CoBank lends to rural communications companies today under two different authorities.

1. Rural Telephone Services

CoBank received authority under the Farm Credit Act of 1971 to make loans to rural telephone companies. (See 12 U.S.C. §2129(b)(1)(A).) CoBank refers to these companies as “directly eligible.” This authority is derived from similar authorities granted to the Rural Telephone

Bank (RTB) and the Rural Utilities Service (RUS) under the Rural Electrification Act of 1936. (See 7 U.S.C. Chapter 31.) CoBank, like RTB and RUS, may make loans to companies that are engaged in the provision of the telecommunications services in rural areas.

“Telecommunications services” are defined broadly to include transmission or reception of voice, data, sounds, signals, pictures, writing, or signs of all kinds by wire, fiber, radio, light, or other visual or electromagnetic means, including, wireline, cellular, PCS, internet and speed data services and, for subsidiaries and joint ventures of directly eligible borrowers, licensed cable TV. (See 7 U.S.C. §924(a).)

“Rural areas” are defined as “all territory of a State that is not within the outer boundary of any city or town having a population of more than 20,000 inhabitants based on the latest decennial census of the United States.” (See 12 C.F.R. §613.3100(a)(4).) CoBank analyzes each directly eligible borrower to ensure that the proceeds of CoBank’s loans are used primarily to provide telecommunications services to customers located in rural areas. Increasingly, however, communications companies serve a customer base that is a mix of rural and urban populations. In these instances, CoBank conducts analysis to determine whether the primary purpose of the loan is to provide telecommunications services to rural areas and whether service to urban areas is necessary and incidental to service to rural areas.

2. Similar Entities

CoBank also has the authority to make loans to companies that are “similar entities.” A similar entity is defined as an entity that, while not directly eligible for a loan under CoBank’s other lending authorities, is functionally similar to a company that is eligible to borrow from CoBank “in that it derives a majority of its income from, or has a majority of its assets invested in, the conduct of activities functionally similar to those conducted by” a company directly eligible under CoBank’s other lending authorities. (See 12 U.S.C. 2122(11)(B)(ii).) Typically, to be designated as a functionally similar company, the majority of its income

(but not 100 percent) would have to be derived from the company’s functionally similar activities.

Congress authorized similar entity lending authorities for CoBank in 1992 in order to allow some diversification of its loan portfolio and to help manage the concentrated risk of lending to narrow industry segments in rural communities. CoBank uses its similar entity lending authority to balance concentration risk and ensure that it can continue to meet the needs of rural communities.

Certain companies may provide telecommunications services but still not be directly eligible for a loan from CoBank because they do not satisfy the requirement that the loan primarily benefits customers in rural areas (or, in some instances, a potential borrower may not be able to provide CoBank with the necessary data to make such a determination). These companies often provide essential services to customers in rural America, but the complexity of the mix between rural and urban customers (or the sheer size of the company) may make it difficult for CoBank to make a determination that the customer is directly eligible. But in certain such instances, CoBank will extend credit to such entities under its similar entity authority, provided that the loans by CoBank still significantly benefit rural customers of these similar entity borrowers.

CoBank’s authority to make similar entity loans contemplates that, in doing so, it will partner with commercial banks, community banks, or other investors via syndicated, multi-lender transactions. Such syndicated transactions provide medium and large-sized companies with the vast sums of money critical to develop large infrastructure projects to enhance the global network with both rural and urban investments. Accordingly, CoBank has partnered with Bank of America, JP Morgan, Citibank, Fifth Third Bank, Key Bank, Wells Fargo, Sun Trust, GE Capital, Webster Bank, Raymond James Financial, Union Bank of California, Bank of the West, PNC Bank, and Manufacturers and Traders Trust along with other leading domestic financial institutions to help them deliver critical capital for communications infrastructure investment while prudently managing risk.

Other restrictions also apply to CoBank's authority to lend to similar entities. CoBank cannot hold a majority portion of a similar entity loan, and the overall amount of similar entity loans held by CoBank cannot exceed 15 percent of its total loan portfolio. Similarly, the Farm Credit System's aggregate hold in a loan to a similar entity must be less than 50 percent of the total amount of the loan. Additionally CoBank's Board of Directors has imposed certain internal limitations on the bank's similar entity portfolio. All of these restrictions ensure that CoBank uses this authority as Congress intended – to offset the risk of a narrowly focused loan portfolio and guarantee that CoBank can continue fulfilling the mission Congress assigned to it.

CoBank's Mission to Support Rural Telecom

CoBank serves more than 200 companies across the entire spectrum of telecommunications services, with \$4.3 billion in net loan commitments to the telecom industry as of February 28, 2015. It strives to be a reliable source of competitive financing to the telecom industry, backed by the bank's detailed industry knowledge and long-term commitment to improving rural community access to modern telecommunications services.

Traditionally, the RLEC sector accounted for the largest share of CoBank's telecom portfolio by both volume and customer count. And it still does. However, their significance has declined sharply over the last decade, as technological advances and regulatory reform have enabled more companies to compete to serve rural telecom customers. In addition to RLECs, CoBank also lends to cable companies, mobile wireless and wireless tower companies, and data infrastructure companies (e.g., fiber transport and data centers).

The vast majority of CoBank's telecom customers qualify as directly eligible borrowers. Similar entity customers account for only about 23 percent of our telecom loan portfolio by customer count and 32 percent of our commitments to telecom companies, but these customers are considered to be an essential part of

our lending strategy, offering portfolio diversification benefits, market intelligence, and high-quality income that helps us generate the capital necessary to support our mission to serve rural America. We consider our similar entity customers to be mission-centric in light of the aforementioned industry-wide interconnectivity. Even data centers, which generally qualify only as similar entities, house content that is integral to the telecommunications needs of rural subscribers.

This interconnectivity is also a key consideration behind CoBank's recent participations in loans made to several large telecom companies. Some critics have protested and questioned whether CoBank's participation in these multi-lender credit facilities not only conflicts with its congressional mandate, but also exceeds its legal lending authorities. However, these loan participations conform fully not only to CoBank's congressionally mandated mission to support rural telecom providers, but also to our mission of service to rural America.

Consider, for instance, the credit facility set up for AT&T. This huge telecom was once the largest regulated wire-line telephone monopoly in the U.S., but has evolved in recent years into a diversified telecommunications service provider with 118 million wireless subscribers, 16 million wired broadband connections, and 24 million voice access lines split roughly 50/50 between residential and commercial. In 2014, CoBank committed \$200 million toward AT&T's \$5 billion credit facility established to provide funding for its acquisition of DirectTV and for its AWS-3 radio spectrum purchases.

While it is true that its customer base includes millions of urban subscribers, AT&T is also one of the largest providers of rural telecommunications services in the U.S. In addition to providing direct connections with rural subscribers, AT&T also transacts business with every one of CoBank's rural local exchange carrier customers, is in rural wireless partnerships with many CoBank customers, and is an integral part of the overall rural economy as a provider of critical telecommunications services and infrastructure. Its acquisition of AWS-3 spectrum will provide it with a more robust platform to expand its 4G wireless coverage to both urban and rural subscribers.

Its purchase of DirectTV also has positive implications for rural subscribers. In its Public Interest Statement filed with the FCC in support of its acquisition of DirectTV, AT&T pledged that it will expand its broadband coverage to 13 million largely underserved, rural customer locations using “Wireless Local Loop” technology. By combining the DirectTV’s video platform with its wireless capabilities, AT&T will be able to offer a “triple play” of voice, video, and data that will make it more economically feasible to serve these areas. This is yet another example of how large, urban-based companies use their financial resources and infrastructure to self-subsidize the costs of providing service in rural areas.

Concluding Remarks

Rural businesses, schools, municipalities, and families all need access to modern, high-speed broadband services to maintain and improve the quality of their life, just as much as their urban counterparts. Hence, the persistent urban/rural broadband access gap remains a critically important policy concern – and one that looms large in the FCC’s policymaking deliberations about Universal Service.

In order to help bridge this divide, Congress mandated that CoBank provide financial support to improve rural America’s access to modern telecommunications and broadband services. In fulfilling this mission, CoBank makes loans and provides specialized financial products to a broad range of telecom industry enterprises – from the traditional voice service-oriented rural telcos to the wireless service providers that cover broad swathes of America and the cable and fiber infrastructure companies that tie rural, urban, and global telecom networks together.

Years ago, rural telecommunications networks were separate and distinguishable from urban networks – but that’s no longer true. Today, there is really just one single global telecommunications network to which all users – rural and urban, and worldwide – are linked. Here in the U.S., this evolving digital interconnectivity is creating a transformative business model for telecom providers whereby serving urban areas is becoming necessary and incidental to serving rural areas. Moreover, this global interconnectivity also means that the large telecom behemoths like AT&T and Verizon are just as important as the rural telcos in ensuring that rural customers have access to modern, high-speed broadband services. ■

Endnotes:

- ¹ “Economic Impacts of Broadband”, Qiang and Rossotto, The World Bank, 2009, p. 45.
- ² U.S. Department of Agriculture “Rural Utilities Service”, <http://www.rd.usda.gov/about-rd/agencies/rural-utilities-service>.
- ³ U.S. Department of Agriculture “Rural Utilities Service”, discussion of the benefits of an RUS Telecommunications Infrastructure loan program
<http://www.rd.usda.gov/newsroom/success-stories/telecom-company-helps-rural-businesses-compete-global-marketplace>.
- ⁴ FCC Finds U.S. Broadband Deployment Not Keeping Pace”, FCC press release dated January 29, 2015.
<http://www.fcc.gov/document/fcc-finds-us-broadband-deployment-not-keeping-pace>.
- ⁵ FCC, “2015 Broadband Progress Report”, FCC 15-10 (February 4, 2015), Para 121.
- ⁶ FCC, “2015 Broadband Progress Report”, FCC 15-10 (February 4, 2015), Para 127.
- ⁷ FCC, “2015 Broadband Progress Report”, FCC 15-10 (February 4, 2015), Para 120.
- ⁸ FCC, “2015 Broadband Progress Report”, FCC 15-10 (February 4, 2015), Para 17.
- ⁹ USF/ICC Transformation Order, 26 FCC Rcd at 17771-825, paras. 295-497; Mobility Fund Phase I Auction Closes; Winning Bidders Announced for Auction 901, AU Docket No. 12-25, Public Notice, 27 FCC Rcd 12031 (Wireless Tel. Bur. 2012) (Mobility Fund Auction Public Notice).
- ¹⁰ FCC 14-98, “Rural Broadband Experiment” Order, July 14, 2014, para 60.
https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-98A1.pdf.

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

Disclaimer: *The information provided in this report is not intended to be investment, tax, or legal advice and should not be relied upon by recipients for such purposes. The information contained in this report has been compiled from what CoBank regards as reliable sources. However, CoBank does not make any representation or warranty regarding the content, and disclaims any responsibility for the information, materials, third-party opinions, and data included in this report. In no event will CoBank be liable for any decision made or actions taken by any person or persons relying on the information contained in this report.*