

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the fiscal year ended December 31, 2020

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.

For the transition period from _____ to _____

Commission file number 000-51829

COGENT COMMUNICATIONS HOLDINGS, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of
Incorporation or Organization)

**2450 N Street N.W.
Washington, D.C.**

(Address of Principal Executive Offices)

46-5706863

(I.R.S. Employer
Identification No.)

20037

(Zip Code)

(202) 295-4200

Registrant's Telephone Number, Including Area Code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered:
Common Stock, par value \$0.001 per share	CCOI	NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The number of shares outstanding of the registrant's common stock, par value \$0.001 per share, as of January 31, 2021 was 47,224,589.

The aggregate market value of the Common Stock held by non-affiliates of the registrant, based on the closing price of \$77.36 per share on June 30, 2020 as reported by the NASDAQ Global Select Market was approximately \$3.3 billion.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement on Schedule 14A for the registrant's 2021 annual shareholders meeting are incorporated by reference in Part III of this Form 10-K.

COGENT COMMUNICATIONS HOLDINGS, INC.
ANNUAL REPORT ON FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2020

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K of Cogent Communications Holdings, Inc. (the “Company,” “Cogent,” “we,” “our” or “us”) may contain forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Forward-looking statements are not statements of historical facts, but rather reflect our current expectations concerning future results and events. You can identify these forward-looking statements by our use of words such as “anticipates,” “believes,” “continues,” “expects,” “intends,” “likely,” “may,” “opportunity,” “plans,” “potential,” “project,” “will,” and similar expressions to identify forward-looking statements, whether in the negative or the affirmative. We cannot guarantee that we actually will achieve these plans, intentions or expectations. These forward-looking statements are subject to risks and uncertainties including those discussed in Item 1A “Risk Factors” and other factors, some of which are beyond our control, which could cause actual results to differ materially from those forecasts or anticipated in such forward-looking statements.

You should not place undue reliance on these forward-looking statements, which reflect our view only as of the date of this report. We undertake no obligation to update these statements or publicly release the result of any revisions to these statements to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events.

PART I

ITEM 1. BUSINESS

We are a facilities-based provider of low-cost, high-speed Internet access, private network services, and data center colocation space. Our network is specifically designed and optimized to transmit packet switched data. We deliver our services primarily to small and medium-sized businesses, communications service providers and other bandwidth-intensive organizations in 47 countries across North America, Europe, Asia, South America, Australia and Africa. We are a Delaware corporation, and we are headquartered in Washington, DC.

We offer on-net Internet access services exclusively through our own facilities, which run from our network to our customers' premises. We offer our on-net services to customers located in buildings that are physically connected to our network. As a result, we are not dependent on local telephone companies or cable TV companies to serve our customers for our on-net Internet access and private network service. Our on-net service consists of high-speed Internet access and private network services offered at speeds ranging from 100 megabits per second ("Mbps") to 100 gigabits per second ("Gbps"). We provide our on-net Internet access and private network services to our corporate and net-centric customers. Our corporate customers are located in multi-tenant office buildings and typically include law firms, financial services firms, advertising and marketing firms, as well as health care providers, educational institutions and other professional services businesses. Our net-centric customers include bandwidth-intensive users that leverage our network to either deliver content to end users or to provide access to residential or commercial internet users. Content delivery customers include over the top ("OTT") media service providers, content delivery networks, web hosting companies, and commercial content and application software providers. Our access customers include over 7,330 access networks comprised of other Internet service providers ("ISPs"), telephone companies, mobile phone operators and cable television companies that collectively provide internet access to a substantial number of broadband subscribers and mobile phone subscribers across the world. These net-centric customers generally receive our services in carrier neutral colocation facilities and in our data centers. We operate data centers throughout North America and Europe that allow our customers to collocate their equipment and access our network.

In addition to providing our on-net services, we provide Internet access and private network services to customers that are not located in buildings directly connected to our network. We provide these off-net services primarily to corporate customers using other carriers' circuits to provide the "last mile" portion of the link from the customers' premises to our network. We also provide certain non-core services that resulted from acquisitions. We continue to support but do not actively sell these non-core services.

Competitive Advantages

We believe we address many of the data communications needs of small and medium-sized businesses, communications service providers and other bandwidth-intensive organizations by offering them high-quality, high-speed Internet access and private network services at attractive prices. We believe that our organization has the following competitive advantages:

Low Cost of Operation. We have made a series of choices around our network design, operating strategy and product offering designed to provide us with a lower cost of operation. Our single network design allows us to avoid many of the costs that our competitors who operate, circuit-switched, TDM and hybrid fiber coaxial networks incur related to provisioning, monitoring and maintaining multiple transport protocols. Utilizing only one network protocol enables us to benefit from the continued rapid improvement in price and performance of our key network equipment and creates scale advantages in the installation and maintenance of that equipment. We have acquired optical fiber from the excess inventory of existing networks which reduces the capital intensity and operating costs of our intercity and metro networks. Our streamlined set of products reduces our service delivery costs in terms of customer and product support and the investment required to train our sales representatives. We believe that our low cost of operation gives us greater pricing flexibility and a significant advantage in a competitive environment characterized by falling Internet access prices. (See "Our Key Operating Advantages")

Greater Control and Superior Delivery. Our on-net service does not rely on circuits that must be provisioned by a third-party carrier. In our on-net multi-tenant office buildings (“MTOBs”) we provide our customers the entire network, including the “last mile” and the in-building wiring connecting to our customer’s suite. In our carrier neutral data centers (“CNDCs”) we are collocated with our customers so only a cross-connection within the data center is required to provide our services. The structure of our on-net service provides us more control over our service, quality and pricing. It also allows us to provision services more quickly and efficiently than provisioning services on a third-party carrier network.

High-Quality, Reliable Service. We are able to offer high-quality Internet service due to our network design and composition. We believe that we deliver a high level of technical performance because our network is optimized for packet switched traffic. Its design increases the speed and throughput of our network and reduces the number of data packets dropped during transmission compared to traditional circuit-switched networks. We believe that our network is more reliable and carries traffic at lower cost than networks built as overlays to traditional circuit-switched, or TDM networks.

Large Addressable Market. We have systematically evaluated and chosen our network extensions to buildings, data centers and markets based upon a rigorous set of criteria to evaluate the economic opportunity of network locations. Additional factors relevant to our pursuit of new buildings include the willingness of building owners to grant us access rights, the availability of optical fiber networks to serve those buildings, the costs to connect buildings to our network and equipment availability. Our network is connected to 2,914 total buildings located in 202 metropolitan markets. These buildings include 1,792 large MTOBs (totaling 976.8 million square feet of office space) in major North American cities where we offer our services to a diverse set of high-quality, low churn corporate customers within close physical proximity of each other. These buildings also include 1,252 CNDCs located in 1,068 buildings in North America, Europe, Asia, South America, Australia and Africa where our net-centric customers directly interconnect with our network. We also operate our own 54 data centers across the United States and in Europe which comprise over 606,000 square feet of floor space and are directly connected to our network. We believe that these network points of presence strategically position our network to attract high levels of Internet traffic and maximize our revenue opportunities and profitability.

Balanced, High-Traffic Network. Since its inception, our network has grown significantly in terms of its geographic reach, customer connections, and traffic. We currently serve over 7,330 access networks as well as numerous large and small content providers and over 47,100 corporate customer connections. As a result of these growing bases of customers who distribute (content providers) and receive (access networks) content on our network, we believe that the majority of all the traffic on our network originates and terminates on our network. This control of traffic increases our reliability and speed of delivery and enhances our margins. The breadth of our network, extensive size of our customer base, and volume of our traffic enables us to be one of a handful of Tier One networks that are interconnected on a settlement free basis. This internetworking status broadens our geographic delivery capability and materially reduces our network costs.

Proven and Experienced Management Team. Our senior management team is composed of seasoned executives with extensive expertise in the telecommunications industry as well as knowledge of the markets in which we operate. The members of our senior management team have an average of over 20 years of experience in the telecommunications industry and many have been working together at the Company for several years. Several members of the senior management team have been working together at the Company since 2000. Our senior management team has designed and built our network and, during our formative years, led the integration of network assets we acquired through 13 significant acquisitions and managed the expansion and growth of our business.

Our Strategy

We intend to become the leading provider of high-quality, high-speed Internet access and private network services and to continue to improve our profitability and cash flow. The principal elements of our strategy include:

Grow our Corporate Customer Base. Our on-net corporate customers are typically small- to medium-sized businesses connected to our network through our multi-tenant office buildings or connected to our

network through one of our carrier neutral data centers. We generally sell two types of services to our corporate customers: dedicated internet access and private network services. We typically sell dedicated internet access at the same price per connection as our competitors, but our clients benefit from our significantly faster speeds and rapid installation times. These customers are increasingly integrating off-site data centers and cloud services into their IT infrastructure in order to take advantage of the safety, security and redundancy that is offered by locating company processing power, storage and software at a data center. An important part of this new infrastructure is a high-speed, dedicated internet connection from the corporate premises to the data center and the Internet and from one corporate premises to another corporate premises. We believe that the importance of data centers will increasingly lead tenants to reconfigure their communications infrastructure to include dedicated internet access across their locations.

Increase our Share of the Net-Centric Market. We are currently one of the leading providers of high-speed internet access to a variety of content providers and over 7,330 access networks across the world. We intend to further load our high-capacity network as a result of the growing demand for high-speed internet access generated by these types of bandwidth-intensive applications such as OTT media services, online gaming, video, Internet of Things (IoT), voice over IP (VOIP), remote data storage, and other services. We expect that we will continue to grow our shares of these segments by offering our customers a series of attractive features including:

- Geographic breadth—We have the broadest carrier neutral data center footprint in the industry and currently offer network services in 47 countries;
- High capacity and reliability—We offer 1 Gbps to 100 Gbps ports in all of the carrier neutral data centers on our network, which differentiates the capacity choices we provide our net-centric clients;
- Balanced customer base—Our leading share of content providers and access networks increases the amount of traffic that originates and terminates on our network thereby reducing latency and enhancing reliability;
- Large and dedicated salesforce—Our team of 236 net-centric sales professionals is one of the largest salesforces in this industry segment and enables us to better serve this customer segment while also identifying new sales opportunities and gaining new business and customers; and
- Competitive pricing—We aggressively discount our services to customers in order to attract new customers and drive volume.

Develop a Worldwide Peering Platform. In late 2020 we introduced a new product, Global Peer Connect (“GPC”), targeted at the growing demand for certain net-centric customers to dynamically peer traffic anywhere on our global platform. Our GPC product provides access to our Global Peer Exchange (“GPE”) which is a worldwide connectivity platform for the exchange of peering traffic destined for the Internet. Similar product offerings in the marketplace offer a materially smaller geographic footprint configuration and require a higher fixed cost for customers. We believe our product offering provides the following unique advantages over other private peer exchanges or public Internet exchange points:

- Ubiquity through Leading CNDC Connectivity: We are collocated in 1,252 CNDCs in 47 countries. We believe this portfolio provides us a significant advantage over regional peer exchanges that typically have substantially fewer CNDC collocations and countries served. In order to take advantage of this footprint, we enable GPC customers to peer with any other member of our GPE regardless of location thereby significantly broadening the reach for potential customers.
- Attractive Economics and Terms: Our GPC product offers economics and terms which should make it attractive for potential users to switch their service to us. Customers only pay for direct usage and there are no fixed port charges or distance based fees. Our contracts have no minimum terms. These terms reduce the hurdle for new customers to join the GPE and should drive participation.
- Greater Customer Control and Selectivity: As our GPC offering provides direct connectivity to anywhere in our network, customers will be able to have greater control and reliability over their traffic as this eliminates intermediate networks and enables customers to selectively bypass certain regions due to regulatory or censorship concerns.

Pursue On-Net Customer Growth. Our high-capacity network provides us with the ability to add a significant number of customers to our network with minimal direct incremental costs. We intend to increase usage of our network and operational infrastructure by adding customers in our existing on-net buildings, as well as developing additional markets and connecting more multi-tenant office buildings and carrier neutral data centers to our network. We emphasize our on-net services because they generate greater profit margins and we have more control over service levels, quality, pricing and our on-net services are provisioned in considerably less time than our off-net services. Our fiber network connects directly to our on-net customers' premises and we pay no local access ("last mile") charges to other carriers to provide our on-net services.

Grow and Improve our Sales Efforts. A critical factor in our success has been our growing investment and focus on our sales and marketing efforts. Over the past five years, we have increased the size of our quota bearing salesforce by 34% from 378 to 569 employees. We seek to pair this growth in the size of our salesforce with a consistent level of productivity as measured by the number of connections sold per salesperson per month, taking into account adjustments to the changing mix of products sold and installed. In order to gain market share in our targeted businesses, we expect to continue to increase our sales efforts, including increasing the number of sales representatives and introducing strategies and tools to optimize sales productivity.

Expand our Off-Net Corporate Business. We have agreements with national carriers providing us "last mile" network access to over 4 million commercial buildings across North America that are lit by fiber optic cable and that are not currently served by our network. We have developed an automated process to enable our salesforce to identify opportunities in the off-net market and to quickly offer pricing proposals to potential customers. We believe these agreements broaden our addressable market for corporate dedicated internet access and enable us to better leverage the skills and capacity of our direct salesforce. Our carrier agreements also provide for discounts related to volume purchases thereby enabling us to reduce our cost of service if we are able to increase our pool of off-net customers.

Our Key Operational Advantages

We believe that the wireline telecom industry is undergoing, and will continue to face, significant price deflation for its applications and services. This price deflation is a result of a variety of factors including increased competition, enhanced substitutability of certain products and services and the continued impact of Moore's Law, which has driven down the cost of technology, particularly for customer premise, fiber optics and networking equipment. Faced with the backdrop of continued price deflation in our industry, we have made a number of discreet choices around our network design and operating structures that are consistent with our objective of becoming the low cost operator in our industry. Since our initiation of operations, this strategy has resulted in a rapid decline in our cost to transmit bits, which has increased margins and decreased capital intensity as measured by capital expenditures per total revenues. Over the last five years, our cost of goods sold per bit delivered for our customers has declined at a compounded annual rate of 22.5%. Important components of our key operating advantages include:

One Network Protocol. Upon our founding, we selected to operate our network solely using Ethernet protocol. We made this selection in order to take advantage of the significantly greater installed base and lower cost of Ethernet network equipment versus other protocols, the substantially lower costs associated with operating and maintaining one network protocol and the continued benefits of the rapid price performance ratio improvements of Ethernet-related equipment. Selecting one operating protocol has also had positive affects in terms of our operating overhead and the simplicity of our organization. We believe the vast majority of our competition currently operates their networks with multiple protocols and we believe that attempts to upgrade their networks to one protocol would be operationally challenging and costly.

Broad Access to Fiber on a Cost Effective, Long Term Basis. We currently maintain a large portfolio of dark fiber leases around the world that supports our network operation. The nature of this portfolio and the individual leases provides us long-term access to dark fiber at attractive rates and the opportunity in many cases to extend these leases for multiple renewal terms.

On average, a modest number of our dark fiber leases come up for renewal each year. We have relationships with 269 dark fiber vendors across the globe enabling us to lease dark fiber on a long-term, cost-effective basis to virtually any geographic route or facility we require.

Narrow and Focused Product Set. Since our founding, we have strategically focused on delivering a very narrow product set to our customers. The vast majority of our revenue is driven or related to our high-capacity, bi-directional, symmetric internet access services which can be accessed on-net in multi-tenant office buildings and carrier neutral data centers or off-net through other carriers' "last mile" connections to customer facilities. There are significant cost advantages as a result of this narrow product set. We believe the relative size of our salesforce training, support and overhead is lower than comparable telecom providers which tend to offer a broader product set to their client base.

Scalable Network Equipment and Hub Configurations. Due to our single network protocol and narrow product set, our transmission and network operations rely mainly on two sets of equipment for operation. In order to further scale our operating leverage, we have systematically reused older equipment in less dense portions of our network. Due to interoperability between the generations of products, we are able to transfer older equipment from our core, high-traffic areas to newer, less congested routes. The result of this dynamic grooming process is that we are able to utilize our equipment for materially longer time frames than the expected life of this equipment thereby reducing our capital investment in our network. We design and build all of our network hubs to the same standard and configuration. This replication strategy provides us scale benefits in equipment purchases, training, and maintenance.

Our Network

Our network is comprised of in-building riser facilities, metropolitan optical networks, metropolitan traffic aggregation points and inter-city transport facilities. We believe that we deliver a high level of technical performance because our network is optimized for packet switched traffic. We believe that our network is more reliable and carries packet switched traffic at lower cost than networks built as overlays to traditional circuit-switched telephone networks.

Our network is comprised of 2,914 buildings which are on net and we serve 202 metropolitan markets in North America, Europe, Asia, South America, Australia and Africa. Important strategic components of our Network include:

- 1,792 multi-tenant office buildings strategically located in commercial business districts;
- 1,252 carrier neutral data centers located in 1,068 buildings offering our customers the largest portfolio of CNDCs of any carrier;
- 54 Cogent Data Centers;
- 955 intra-city networks consisting of 37,567 fiber miles;
- an inter-city network of 58,285 fiber route miles; and
- multiple high-capacity transoceanic circuits that connect the North American, European, Asian, South American, Australian and African portions of our network.

We have created our network by acquiring optical fiber from carriers with large amounts of unused fiber and directly connecting Internet routers to our existing optical fiber national backbone. We have expanded our network through key acquisitions of financially distressed companies or their assets at a significant discount to their original cost. Due to our network design and acquisition strategy, we believe we are positioned to grow our revenue and increase our profitability with limited incremental capital expenditures.

Inter-city Networks.

Our inter-city network consists of optical fiber, including transoceanic fiber circuits for undersea portions, connecting major cities in North America, Europe, Asia, South America, Australia and Africa. Our network was built by acquiring from various owners of fiber optic networks the right to use typically two strands of optical fiber out of the multiple fibers owned by the cable operator. We install the optical and electronic equipment necessary to amplify, regenerate, and route the optical signals along these networks. We have the right to use the optical fiber under long-term agreements. We pay these providers our annual pro rata fees for the operation and maintenance of the optical fiber and we provide our own equipment maintenance.

Intra-city Networks.

In each metropolitan area in which we provide our high-speed on-net Internet access services, our backbone network is connected to one or more routers that are connected to one or more of our metropolitan optical networks. We created our intra-city networks by obtaining the right to use optical fiber from carriers with optical fiber networks in those cities. These metropolitan networks consist of optical fiber that runs from the central router in a market into routers located in our on-net buildings. Our metropolitan fiber runs in a ring architecture, which provides redundancy so that if the fiber is cut, data can still be transmitted to the central router by directing traffic in the opposite direction around the ring. The router in the building provides the connection to each of our on-net customers.

Within the cities where we offer our off-net Internet access services, we lease circuits from telecommunications carriers, primarily local telephone companies and cable TV companies, to provide the “last mile” connection to our customer’s premises. Typically, these circuits are aggregated at various locations in those cities onto higher-capacity leased circuits that ultimately connect the local aggregation router to our network.

Multi-Tenant Office Buildings (“MTOBs”). We have network access to a portfolio of 1,792 MTOBs which provide us access to a highly attractive base of bandwidth intensive tenants. In MTOBs where we provide service to multiple tenants, we connect our routers to a cable typically containing 12 to 288 optical fiber strands that run from our equipment that is generally located in the basement of the building through the building riser to the customer location. Our service is initiated by connecting a fiber optic cable from our customer’s local area network to the infrastructure in the building riser giving our customer dedicated and secure access to our network using an Ethernet connection. We believe that Ethernet is the lowest cost network connection technology and is almost universally used for the local area networks that businesses operate.

Carrier Neutral Data Centers (“CNDCs”). Our network is collocated in and can provide connectivity to customers in 1,252 CNDCs located in 1,068 buildings across our footprint. CNDCs are an integral component of the Internet Infrastructure where Content Providers, Application Service Providers, Carriers and Corporates locate their server and service infrastructure. CNDCs offer highly reliable, secure, cost effective and convenient space for these operators to access important services including connectivity, power, rack space and security all on a 24 hour basis in order to support their Internet activities. We believe we are connected to more CNDCs than any other IP transit provider enabling us to offer greater coverage, more network configuration choices and increased reliability for our net-centric customers.

Cogent Data Centers. We operate 54 data centers across the United States and in Europe. These facilities comprise over 606,000 square feet of floor space and are directly connected to our network. Each location is equipped with secure access, uninterruptable power supplies (UPS), and backup generators. Our customers typically purchase bandwidth, rack space, and power within these facilities.

Internetworking. The Internet is an aggregation of interconnected networks. We interconnect with the networks of our customers, which represent the majority of our interconnections, and with other Internet service providers, or ISPs. The majority of our traffic travels between our customers. We have settlement-free interconnections between our network and most major ISPs who are not our customers. We interconnect our network to other ISP networks predominantly through private peering arrangements facilitated with direct connections with networks who are not customers of the ISP. Larger ISPs exchange traffic and interconnect their networks by means of direct private connections referred to as private peering.

Tier 1 ISP Status. We directly connect with over 7,330 total networks of which 24 networks are settlement-free peers. The remaining networks are customers whom we charge for Internet access. We believe our standing as a Tier 1 ISP provides us with a reputation for size, breadth and reliability. These relationships also reduce our cost of operating the network versus non-Tier 1 ISP Peer Networks who must compensate other networks in order to deliver a significant portion of their traffic. Peering agreements between ISPs enable them to exchange traffic. Without peering agreements, each ISP backbone would have to buy Internet access from every other ISP backbone in order for its customer’s traffic, such as email, to reach and be received from customers of other ISP backbones. We are considered a Tier 1 ISP with a large customer base and, as a result, we have settlement-free peering arrangements with other providers. We do not purchase transit services or paid peering to reach any portion of the Internet. This allows us to exchange

traffic with those ISPs without payment by either party. In such arrangements, each party exchanging traffic bears its own cost of delivering traffic to the point at which it is handed off to the other party. We do not treat our settlement-free peering arrangements as generating revenue or expense related to the traffic exchanged. We do not sell or purchase paid peering on our transit network. We facilitate peering between other networks but not to our transit network, on our Global Peer Exchange.

Network Management and Customer Care. Our primary network operations centers are located in Washington, D.C. and Madrid, Spain. These facilities provide continuous operational support for our network. Our network operations centers are designed to immediately respond to any problems in our network. Our customer care call centers are located in Washington D.C., Herndon Virginia, Madrid Spain, Paris France, and Frankfurt Germany. To ensure the quick replacement of faulty equipment in the intra-city and long-haul networks, we have deployed field engineers across North America and Europe. In addition, we have maintenance contracts with third-party vendors that specialize in maintaining optical and routed networks.

Our Customers

We offer our high-speed Internet access and IP connectivity services to two sets of customers: corporates customers, which primarily include small and medium-sized businesses located in North America, and net-centric customers, which include, content providers, applications service providers and access networks, comprised of ISPs, cable operators, mobile operators and phone companies located in North America, Europe, Asia, South America, Australia and Africa.

Our corporate customers primarily purchase direct internet access from us on-net in multi-tenant office buildings and carrier neutral data centers or off-net through other carriers' "last mile" connections to those customer facilities in metropolitan markets in North America. This service enables these customers to access the Internet with a high-speed, bi-directional, symmetric circuit with a very high degree of reliability and 100% access to that contractual capacity at all times. Depending upon the geographic breadth of our customers' footprint and their communications requirements, we also sell these corporate customers private network services. Private network services provide connectivity on a point to point or point to multi-point basis. This service allows customers to connect geographically dispersed local area networks in a seamless manner. We primarily offer these corporate customers speeds ranging from 100 Mbps per second to 1 Gbps per second and in some cases up to 10 Gbps per second. The continued growth in demand for increased bandwidth has led to a rapid shift towards higher capacity circuits. In 2020, our 1 Gbps product surpassed our 100 megabit product as our most popular product in terms of revenues and connections, as existing corporate customers upgraded to the faster 1 gigabit service, and new customers preferred the faster connection. We expect that this shift will continue. We also sell our corporate customers other products including rack and power in our data centers.

Our net-centric customers purchase IP connectivity and other services in our 1,252 carrier neutral data centers as well as our data centers. We support these services in 202 metropolitan markets in 47 countries across the world. These bandwidth intensive organizations typically purchase circuits ranging from 10 Gbps up to 100 Gbps, designed to provide them high-speed, bi-directional, symmetric circuits with a high degree of reliability and 100% access to the contractual capacity at all times. In addition to contractual capacity, certain net-centric customers also purchase metered service that enables customers to pay for actual volume of bits delivered on a per bit basis. We also offer a burst product that allows net-centric customers to utilize capacity when they exceed their contractual capacity. The per bit charge for this burst capacity typically exceeds the rate for contractual services. Overall, we believe that, on a per megabit basis, our service offering is one of the lowest priced in the marketplace. We also offer colocation services in our data centers. This service offers Internet access combined with rack space and power in our facilities, allowing the customer to locate a server or other equipment at that location and connect to our Internet access service.

We offer lower prices for longer term and volume commitments. We emphasize the sale of our on-net services over our off-net services, as on-net services generate higher gross margins, and we believe we can offer faster installation and greater reliability with our on-net offerings.

We have agreements with multiple national carriers providing us "last mile" network access to over 4 million buildings across North America that are not currently served by our network. We believe these

agreements broaden our addressable market for corporate dedicated internet access and VPN services and enable us to better leverage the skills and capacity of our direct salesforce. Our carrier agreements also provide for discounts related to volume purchases thereby enabling us to reduce our cost of service if we are able to increase our pool of off-net customers.

Our People—Human Capital Management

We strive to become a leading employer in our industry by creating a workplace where employees have the tools and resources they need to hone their talents, advance in their careers and be rewarded for their hard work. We also seek to create a diverse workplace that is respectful of all employees, as we believe this is critical to fostering an employee culture that can deliver the best service in our industry to our customers. Our human capital objectives and initiatives are overseen by the Compensation Committee of our Board of Directors.

Workforce. As of December 31, 2020, we had 1,083 employees located in 15 different countries in a variety of different roles. Approximately 82.5% of our employees are located in the United States and Canada, 16.8% are located in Europe and 0.7% are located in Asia. As of December 31, 2020, 53% of our employees were quota-bearing sales representatives, 13% were in sales management or sales support roles and 34% were in operational or administrative functions. Unions represent 30 of our employees in France. We believe that we have a satisfactory relationship with our employees.

Diversity and Inclusion. We strive to maintain a diverse and inclusive workforce everywhere we operate. We recruit the best people for the job without regard to gender, race, ethnicity or other protected traits, and it is our policy to comply fully with all domestic, foreign and local laws relating to discrimination in the workplace. In 2020, at the direction of our Board of Directors, we mandated training for all of our employees on topics of diversity and inclusion. All employees were required to complete online training in unconscious bias, and managers were further required to complete additional training in inclusion. We intend to continually reinforce our commitment to global inclusion and diversity.

Employee Retention. We compete in an industry that is highly competitive for talent. Attracting, developing and retaining skilled people in sales, technical and other positions is crucial to executing our strategy and our ability to compete effectively. While we monitor overall employee retention, we focus in particular on sales representative retention, as our new sales and revenue growth are driven almost entirely by the sales generated by our direct sales force. As a complement to our sales representative retention metric, we also closely track the pace of hiring new sales representatives.

Our sales representatives comprise 53% of our employees. For the year ending December 31, 2020, we averaged 4.9% monthly churn within our sales representatives. This churn was caused primarily by an individual's failure to meet sales performance goals. During 2020, we hired 357 new sales representatives and ended the year with 569 sales representatives, a net increase of 21 sales representatives, or 3.8% from our total sales representatives at the beginning of 2020. Our ability to recruit and retain all of our employees depends on a number of factors, including professional development, compensation and benefits, and employee engagement.

Professional Development. We recognize the importance of retaining our sales personnel, and we continually strive to improve the performance of our sales personnel to reduce turnover. To that end, we have invested heavily in professional development as a means for improving performance.

As part of our commitment to professional development, we established a sales training and enablement department that provides both online and in-person training. Our 14 regional learning managers and management development trainers are located around the world and are available for intensive, in-person group training as well as individual training with sales representatives who may need extra assistance. In 2020, our average ratio of sales representatives with less than 12 months of tenure to regional learning managers was 23 to 1.

Our training group includes two additional trainers dedicated exclusively to training sales management. Our trainers also conduct training at our annual sales meeting, during which our entire sales force gathers to learn new skills and reinforce existing skills.

All sales personnel receive four weeks of live, inter-active training during their first month, which training is on developing both general and Cogent-specific sales skills. New sales personnel are also encouraged to, and rewarded for, completing a self-paced, online curriculum led by their manager during their first six months. Both recent and tenured sales personnel have access to online, on-demand training modules and the opportunity to obtain certification in specialized services.

Compensation and Benefits. We are committed to rewarding, supporting, and developing our employees. To that end, we offer a comprehensive compensation program that includes market-competitive pay, stock options or restricted stock grants to all employees, healthcare benefits, retirement savings plans, and paid time off and family leave.

Employee Engagement. To foster and reinforce a company culture where employee concerns are heard, our Chief Executive Officer conducts biweekly town hall meetings to respond to employee questions, which may be submitted anonymously. On alternate weeks, we conduct online town hall chats during which a rotating member of the executive team is available to answer questions from employees. We believe these open and unfiltered channels of communication lead to honest feedback from our employees to our management team.

Health and Safety. The health and safety of our employees is of utmost important to us. We safeguard our people by striving for zero employee injuries and illnesses. While nearly all of our employees work solely in office environments, for our field personnel, we provide safety gear as appropriate given employee job duties.

During the COVID-19 pandemic, we invested heavily to help ensure the health of our employees. Beginning in March 2020, we closed all of our offices worldwide, requiring our entire workforce to work remotely whenever possible. We procured additional computer equipment to permit all employees to work remotely. While our offices have largely remained closed, we believe that it is important to our company culture and employee productivity to return to an in-office environment when it is safe to do so. To this end, a cross-functional team within Cogent has established safety procedures for a return to office, including training and additional safety and sanitation supplies.

Sales and Marketing

Direct Sales. We employ a direct sales and marketing approach. As of December 31, 2020, our sales force included 712 full-time employees. Our quota bearing sales force includes 569 employees with 333 employees focused primarily on the corporate market and 236 employees focused primarily on the net-centric market. Our sales personnel work through direct contact with potential customers in, or intending to locate in, our on-net buildings. Through agreements with building owners, we are able to initiate and maintain personal contact with our customers by staging various promotional and social events in our multi-tenant office buildings and carrier neutral data centers. Sales personnel are compensated with a base salary plus quota-based commissions and incentives. We use a customer relationship management system to efficiently track sales activity levels and sales productivity.

Indirect Sales. We also have an indirect sales program. Our indirect sales program includes several master agents with whom we have a direct relationship. Through our agreements with our master agents we are able to sell through thousands of sub agents. All agents have access to selling to potential corporate customers and may sell all of our products. We have an indirect channel team who manages these indirect relationships. The indirect channel team is compensated with a base salary plus quota-based commissions and incentives. We use our customer relationship management system to efficiently track indirect sales activity levels and the sales productivity of our agents under our indirect sales program.

Marketing. Because of our historical focus on a direct sales force that utilizes direct contact, we have not spent funds on television, radio or print advertising. We use a limited amount of web-based advertising. Our marketing efforts are designed to drive awareness of our products and services, to identify qualified leads through various direct marketing campaigns and to provide our sales force with product brochures, collateral materials, in building marketing events and relevant sales tools to improve the overall effectiveness of our sales organization. In addition, we conduct building events and public relations efforts focused on

cultivating industry analyst and media relationships with the goal of securing media coverage and public recognition of our Internet access and private network services.

Competition

We face competition from incumbent telephone and cable companies, and facilities-based network operators, many of whom are much larger than us, have significantly greater financial resources, better-established brand names and large, existing installed customer bases in the markets in which we compete. We also face competition from new entrants to the communications services market. Many of these companies offer products and services that are similar to our products and services.

Unlike some of our competitors, we generally do not have title to most of the dark fiber that makes up our network. Our interests in that dark fiber are in the form of long-term leases under indefeasible rights of use, or IRUs, with providers, some of which also compete with us. We rely on the owner of the fiber to maintain the fiber. We are also dependent on third-party providers, some of which compete with us, to provide intercity and intracity fiber as well as the lateral fiber connections required to add buildings to our network and to provide the local loop facilities for the provision of connections to our off-net customers.

We believe that competition is based on many factors, including price, transmission speed, ease of access and use, length of time to provision service, breadth of service availability, reliability of service, customer support and brand recognition. Because our fiber optic networks have been recently installed compared to those of the incumbent carriers, our state-of-the-art technology may provide us with cost, capacity, and service quality advantages over some existing incumbent carrier networks; however, our network may not support some of the services supported by these legacy networks, such as circuit-switched voice, ATM, frame relay, wireless and shared hybrid fiber coax networks. While the Internet access speeds offered by traditional ISPs serving multi-tenant office buildings using DSL or cable modems typically do not match our on-net offerings in terms of throughput or quality, these slower services are usually priced lower than our offerings and thus provide competitive pressure on pricing, particularly for more price-sensitive customers. These and other downward pricing pressures particularly in carrier neutral data centers have diminished, and may further diminish, the competitive advantages that we have enjoyed as the result of the pricing of our services. Increasingly, traditional ISPs are upgrading their services using optical fiber and cable technology so that they can match our transmission speed and quality.

Regulation

Our services are subject to the regulatory authority of various agencies in the jurisdictions in which we operate. As a provider of only Internet access and private networks to businesses regulation is generally light. This benefits us in that we have flexibility in offering our services and ease of entry into new markets. However, this light regulation generally extends to our competitors, some of whom are incumbent telephone and cable companies with whom we need to interconnect and from whom we acquire circuits for our off-net services. The extent of regulation can change. For example, the U.S. Federal Communications Commission (“FCC”) recently rescinded regulations applicable to mass market Internet access providers. In all jurisdictions regulations continue to evolve. We also enter into new markets with their own regulations. The regulations with which we need to comply include obtaining the proper licenses to provide our services, data privacy, interception of communications by law enforcement, blocking of websites, and other regulations. We believe that we comply with all regulations in the jurisdictions in which we operate.

The laws related to Internet telecommunications are unsettled and there may be new legislation and court decisions that may affect our services and expose us to burdensome requirements and liabilities.

Available Information

We maintain an Internet website at www.cogentco.com. We make available free of charge through our Internet website our annual report on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. The reports are made available through a link to the SEC’s Internet website at www.sec.gov. You can find these reports and request a copy of our Code of Conduct on our website at www.cogentco.com under the “About Cogent” tab at the “Investor Relations” link.

ITEM 1A. RISK FACTORS

Market Risks

The COVID-19 pandemic has had, and may continue to have, an adverse impact on our business, financial condition and results of operations.

We serve 47 countries, most of which were significantly impacted by the COVID-19 pandemic. The extent of the impact of the COVID-19 pandemic on our business and financial results will continue to depend on numerous evolving factors that we are not able to accurately predict and which will vary by market. Such future uncertain and unpredictable developments include the ultimate duration and scope of the pandemic, the availability and efficacy of vaccines and therapeutic treatments, governmental actions that have been taken, or may be taken in the future, in response to the pandemic, and global economic conditions during and after the pandemic.

Approximately 67.5% of our revenue for the year ended December 31, 2020 was from our corporate customers. Corporate customers are located in multi-tenant office buildings, almost exclusively in the United States and Canada. Authorities in many of these markets have implemented numerous measures in response to the pandemic, such as travel bans and restrictions, quarantines, curfews, shelter-in-place and stay-at-home orders and business shutdowns and closures, and have also implemented multi-step polices with the goal of re-opening these markets. These measures have impacted, and continue to impact, us and our employees, customers, suppliers and other third parties with whom we do business. The geographic areas in which we operate are in varying stages of restrictions or re-opening. Some jurisdictions have re-opened, while other jurisdictions began re-opening only to return to restrictions in the face of increases in new COVID-19 cases. Considerable uncertainty exists regarding how current and future health and safety measures implemented in response to the pandemic will impact our business, including whether such measures will result in further changes in demand for our services, impair our ability to access buildings to install our services or maintain our network or impact our supply chain. The continuing impact of existing or new mandates, restrictions, laws or regulations could have a material adverse impact on our operations and the operations of our customers or others with whom we do business.

In addition, a significant number of our corporate customers have continued remote work policies instituted at the beginning of the COVID-19 pandemic, slowed the pace of opening new offices and closed offices due to global economic conditions. As a result, through much of 2020, we saw corporate customers take a cautious approach to adding new services and upgrading existing services as well as reduced demand for connecting smaller satellite offices. We also witnessed a deteriorating real estate market in and around the buildings we service, with rising vacancy levels and falling lease initiations or renewals resulting in fewer sales opportunities for our salesforce. As a result, we experienced a slowdown in new sales to our corporate customers which negatively impacted our corporate revenue growth. In the future, these trends may continue.

We have taken measures to protect our workforce and minimize their exposure to COVID-19 such as requiring our entire workforce to work remotely whenever possible, establishing safety procedures for our on-site technical personnel and severely curtailing all business travel. In addition to the associated costs incurred, these measures may be insufficient in protecting our employees. If a significant percentage of our workforce is unable to work due to the impact of COVID-19, our operations will be negatively impacted. As we consider a future return to our offices, even on a strictly voluntary basis, compliance with governmental measures imposed in response to COVID-19 has caused, and will continue to cause, us to incur additional costs, and any inability to comply with such measures may subject us to restrictions on our business activities, fines, and other penalties, any of which can adversely affect our business.

In addition, the shift of our workforce to working remotely has amplified certain risks to our business, including increased demand on our information technology resources and systems, increased phishing and other cybersecurity attacks as cybercriminals try to exploit the uncertainty surrounding the COVID-19 pandemic, and an increase in the number of points of potential attack, such as laptops and mobile devices (both of which are now being used in increased numbers), to be secured. Any failure to effectively manage these risks, including to timely identify and appropriately respond to any cyberattacks, may adversely affect our business.

Our growth and financial health are subject to a number of economic risks.

A downturn in the world economy, especially the economies of North America and Europe would negatively impact our growth. We would be particularly impacted by a decline in the development of new applications and businesses that make use of the Internet. Our revenue growth is predicated on growth in the use of the Internet that makes up for the declining prices of Internet service. An economic downturn could impact the Internet business more significantly than other businesses that are less dependent on new applications and growth in the use of those applications because of the retrenchment by consumers and businesses that typically occurs in an economic downturn.

Events beyond our control may impact our ability to provide our services to our customers or increase the costs or reduce the profitability of providing our services

Catastrophic events, such as major natural disasters, extreme weather, fire, flooding or similar events as well as the continued threat of terrorist activity and other acts of war or hostility have had, and may continue to have, an adverse effect on our headquarters, other offices, our network, infrastructure or equipment or our customers and prospective customers, which could adversely affect our business. These events may also have an adverse impact on business, financial and general economic conditions around the world. We have certain locations through which a large amount of our Internet traffic passes. Examples are facilities in which we exchange traffic with other carriers, the facilities through which our transoceanic traffic passes, and certain of our network hub sites. We are particularly vulnerable to acts of terrorism because our largest customer concentration is located in New York, our headquarters is located in Washington, D.C., and we have significant operations in Paris, Madrid and London, cities that have historically been targets for terrorist attacks and vulnerable to pandemics.

If these or any other of our key facilities were destroyed or seriously damaged, a significant amount of our network traffic could be disrupted. Because of the large volume of traffic passing through these facilities our ability (and the ability of carriers with whom we exchange traffic) to quickly restore service would be challenged. There could be parts of our network or the networks of other carriers that could not be quickly restored or that would experience substantially reduced service for a significant time. If such a disruption occurs, our reputation could be negatively impacted which may cause us to lose customers and adversely affect our ability to attract new customers, resulting in an adverse effect on our business and operating results.

Business Risks

We need to retain existing customers and continue to add new customers in order to become consistently profitable and cash flow positive.

In order to become consistently profitable and consistently cash flow positive, we need to both retain existing customers and continue to add a large number of new customers. The precise number of additional customers required is dependent on a number of factors, including the turnover of existing customers, the pricing of our product offerings and the revenue mix among our customers. We may not succeed in adding customers if our sales and marketing efforts are unsuccessful. In addition, many of our targeted customers are businesses that are already purchasing Internet access services from one or more providers, often under a contractual commitment. It has been our experience that such targeted customers are often reluctant to switch providers due to costs and effort associated with switching providers. Further, as some of our customers grow larger they may decide to build their own Internet backbone networks or enter into direct connection agreements with telephone and cable companies that provide Internet service to consumers. A migration of a few very large Internet users to their own networks, or to special networks that may be offered by major telephone and cable providers of last mile broadband connections to consumers, or the loss or reduced purchases from several significant customers could impair our growth, cash flow and profitability.

We have customers who depend on the U.S. government's E-rate program for funding. There can be no assurance that the E-rate program will continue or that other governmental programs that fund governments and organizations that are or might become customers will continue. A failure of such programs to continue could result in a loss of customers and impair our growth, cash flow and profitability.

A substantial and long-term shift to remote work may impact our ability to add new customers and to retain existing customers.

Through much of 2020, we saw corporate customers institute remote work policies and take a cautious approach to new services and upgrades, as well as a reduced demand for connecting smaller satellite offices. We also witnessed a deteriorating real estate market in and around the buildings we service, with rising vacancy levels and falling lease initiations or renewals resulting in fewer sales opportunities for our salesforce. As a result, we experienced a slowdown in new sales to our corporate customers which negatively impacted our corporate revenue growth. If, after the end of the COVID-19 pandemic, a significant number of our corporate customers or potential customers decide to retain remote work policies, we may experience increased customer turnover, fewer upgrades of existing customer configurations and fewer new tenant opportunities. These trends may negatively impact our revenue growth, cash flows and profitability.

Our business and operations are growing rapidly and we may not be able to efficiently manage our growth.

We have grown our company rapidly through network expansion, by obtaining new customers through our sales efforts and through increasing the number of our sales personnel. Our expansion places significant strains on our management, operational and financial infrastructure. Our ability to manage our growth will be particularly dependent upon our ability to:

- expand, develop and retain an effective sales force and qualified personnel;
- maintain the quality of our operations and our service offerings;
- maintain and enhance our system of internal controls to ensure timely and accurate compliance with our financial and regulatory reporting requirements; and
- expand our accounting and operational information systems in order to support our growth.

If we fail to implement these measures successfully, our ability to manage our growth will be impaired.

Competitive Risks

Our connections to the Internet require us to establish and maintain relationships with other providers, which we may not be able to maintain.

The Internet is composed of various network providers who operate their own networks that interconnect at public and private interconnection points. Our network is one such network. In order to obtain Internet connectivity for our network, we must establish and maintain relationships with other ISPs and certain of our larger customers. These providers may be customers (who connect their network to ours by buying Internet access from us) or may be other large ISPs to whom we connect on a settlement-free peering basis as described below. Both customers and settlement-free peers may be competitors of ours.

By entering into what are known as settlement-free peering arrangements, providers agree to exchange traffic between their respective networks without charging each other. Our ability to avoid the higher costs of acquiring paid dedicated network capacity (transit or paid peering) and to maintain high network performance is dependent upon our ability to establish and maintain settlement-free peering relationships and to increase the capacity of the interconnections provided by these relationships. The terms and conditions of our settlement-free peering relationships may also be subject to adverse changes, which we may not be able to control. If we are not able to maintain or increase our settlement-free peering relationships in all of our markets on favorable terms or to upgrade the capacity of our existing settlement-free peering relationships, we may not be able to provide our customers with high performance, affordable or reliable services, which could cause us to lose existing and potential customers, damage our reputation and have a material adverse effect on our business.

We cannot assure you that we will be able to continue to establish and maintain relationships with other ISPs, favorably resolve disputes with such providers, or increase the capacity of our interconnections with such providers.

The sector in which we operate is highly competitive, and we may not be able to compete effectively.

We face significant competition from incumbent carriers, Internet service providers and facilities-based network operators. Relative to us, many of these providers have significantly greater financial resources, more well established brand names, larger customer bases, and more diverse strategic plans and service offerings. A number of these providers also have large bases of consumers, which makes their networks particularly attractive to content providers as they can provide a direct connection to their customers.

Intense competition from these traditional and new communications companies has led to declining prices and margins for many communications services, and we expect this trend to continue as competition intensifies in the future. Decreasing prices for high-speed Internet services have somewhat diminished the competitive advantage that we have enjoyed as a result of our service pricing.

Our business is premised on the idea that customers want simple Internet access and private networks rather than a combination of such services with other services such as VOIP and complex enterprise services. Our competitors offer such services. Should the market come to favor such services our ability to acquire and keep customers would be impaired. Our competitors may also upgrade their existing services or introduce new technologies or services, such as satellite-based Internet or 5G services that could make our services less attractive to potential customers.

Our business could suffer because telephone companies and cable companies may provide better delivery of certain Internet content, including content originating on their own networks, than content on the public Internet.

Broadband connections provided by cable TV and telephone companies have become the predominant means by which consumers connect to the Internet. The providers of these broadband connections may treat Internet content or other broadband content delivered from different sources differently. The possibility of this has been characterized as an issue of “net neutrality.” As many of our customers operate websites and services that deliver content to consumers our ability to sell our services would be negatively impacted if Internet content delivered by us was less easily received by consumers than Internet content delivered by others. The FCC had promulgated rules that would have banned practices such as blocking and throttling of Internet traffic, but those rules were rescinded by the FCC in December 2017. Some US states have either issued or are trying to issue their own net neutrality rules. Also, the European Union and other countries in which we operate, have issued similar net neutrality rules. We also do not know the extent to which the providers of broadband Internet access to consumers may favor certain content or providers in ways that may disadvantage us.

Operational Risks

Our network may be the target of potential cyber-attacks and other security breaches that could have significant negative consequences.

Our business depends on our ability to limit and mitigate interruptions to or degradation of the security of our network. We are considered a critical infrastructure provider and therefore may be more likely to be the target of cyber-attacks. Our network, systems, applications, and routers may be vulnerable to unauthorized access, computer viruses, cyber-attacks, distributed denial of service (DDOS), and other security breaches. We experience such cyber-attacks and other security incidents of varying degrees from time to time, though none which individually or in the aggregate has led to costs or consequences which have materially impacted our operations or business. An attack on or security breach of our network could result in theft of trade secrets, intellectual property, or other company confidential information, the interruption, degradation, or cessation of services, an inability to meet our service level commitments or our financial reporting obligations, and potentially compromise customer data stored on or transmitted over our network. We have experienced cyber-attacks of increasing sophistication which suggest an increase in cyber-attacks that may be state-sponsored or conducted by other well-financed organizations. Moreover, as cyber warfare becomes a tool in asymmetric conflicts between the United States and other nations, we, as a US provider, may be targeted with increasing frequency. We cannot guarantee that our security measures will not be circumvented, thereby resulting in security events, network failures or interruptions that could impact our network security or availability and have a material adverse effect on our business, our ability to meet our financial reporting obligations, financial condition and operational results. We may be required

to expend significant resources to protect against such threats, and may experience a reduction in revenues, litigation, and a diminution in goodwill, caused by a compromise of our cybersecurity. Although our customer contracts limit our liability, affected customers and third parties may seek to recover damages from us under various legal theories. In response to past attacks, we have implemented further controls and taken and planned for other preventative actions to further strengthen our systems against future attacks. However, we cannot assure you that such measures will provide absolute security, that we will be able to react in a timely manner, or that our remediation efforts following any past or future attacks will be successful.

If the information systems that we depend on to support our customers, network operations, sales, billing and financial reporting do not perform as expected, our operations and our financial results may be adversely affected.

We rely on complex information systems to operate our network and support our other business functions. Our ability to track sales leads, close sales opportunities, provision services, bill our customers for our services and prepare our financial statements depends upon the effective integration of our various information systems. In 2020, we developed and deployed our own customer relationship management software for our sales force. We may have difficulty maintaining this software and adding features that our sales representatives require. If our information systems, individually or collectively, fail or do not perform as expected, our ability to make sales, to process and provision orders, to make timely payments to vendors, to ensure that we collect amounts owed to us and prepare and file our financial statements would be adversely affected. Such failures or delays could result in increased capital expenditures, customer and vendor dissatisfaction, loss of business or the inability to add new customers or additional services, and the inability to prepare accurate and timely financial statements all of which would adversely affect our business and results of operations.

Network Augmentation and Maintenance Risks

Our network is comprised of a number of separate pieces, and we may be unable to obtain or maintain the agreements necessary to augment or maintain our network.

Our network is primarily composed of (i) leased capacity on transoceanic optical fiber; (ii) terrestrial inter-city optical fiber; (iii) intra-city optical fiber; and (iv) the buildings that we serve and the associated optical fiber connecting those buildings. We lease our optical fiber and obtain access to the buildings on our network, both carrier neutral data centers and multi-tenant office buildings, from a number of vendors. A number of our leases, both for fiber and building access, are up for renewal in any given year. A deterioration in our existing relationship with these operators could impact our network, harm our sales and marketing efforts and could substantially reduce our potential customer base. In addition, portions of our long-haul optical fiber and metro optical fiber are nearing the end of their original projected useful life. While we believe that this fiber will remain usable beyond the projected end date, we face the risk that portions of our network may need to be replaced in the future.

We expect to enter additional agreements with carriers and operators to obtain additional facilities, whether optical fiber or buildings, for our network in order to add capacity to our network and to expand our addressable market. However, we cannot assure you that we will be able to enter into such agreements in the future, be able to do so on economically attractive terms or find an adequate substitute if we are unable to reach an agreement. Failure to acquire new facilities to augment our network could keep us from adding new markets, capacity or buildings to our network and negatively impact our growth opportunities.

Our business could suffer delays and problems due to the actions of “last mile” providers on whom we are partially dependent.

Our off-net customers are connected to our network by means of communications lines that are provided as services by local telephone and cable companies and others. We may experience problems with the installation, maintenance and pricing of these lines which could adversely affect our results of operations and our plans to add additional customers to our network using such services. We have historically experienced installation and maintenance delays when the network provider is devoting resources to other services, such as traditional telephony, cable TV services and private network services. We have also experienced pricing problems when a lack of alternatives allows a provider to charge high prices for services in a

particular area. We attempt to reduce this problem by using many different providers so that we have alternatives for linking a customer to our network. Competition among the providers tends to improve installation intervals, maintenance and pricing. Additionally, these providers are often competing with us for the same customers, and have marketed their own service to our customers when our initial contract with our customer nears the end of its term.

Our business could suffer from an interruption of service from our fiber providers.

The optical fiber cable owners from whom we have obtained our inter-city and intra-city dark fiber maintain that dark fiber. We are contractually obligated under the agreements with these carriers to pay maintenance fees, and if we are unable to continue to pay such fees we would be in default under these agreements. If these carriers fail to maintain the fiber or disrupt our fiber connections due to our default or for other reasons, such as business disputes with us, bankruptcy, and governmental takings, our ability to provide service in the affected markets or parts of markets would be impaired unless we have or can obtain alternative fiber routes. Some of the companies that maintain our inter-city dark fiber and some of the companies that maintain our intra-city dark fiber are also competitors of ours. Consequently, they may have incentives to act in ways unfavorable to us. While we have successfully mitigated the effects of prior service interruptions and business disputes in the past, we may incur significant delays and costs in restoring service to our customers in connection with future service interruptions, and as a result we may lose customers.

Substantially all of our network infrastructure equipment is manufactured or provided by a single network infrastructure vendor.

We purchase from Cisco Systems, Inc. (“Cisco”) the routers and transmission equipment used in our network. If Cisco fails to provide equipment on a timely basis or fails to meet our performance expectations, including in the event that Cisco fails to enhance, maintain, upgrade or improve its products, hardware or software we purchase from them when and how we need them, we may be delayed or unable to provide services as and when requested by our customers. We also may be unable to upgrade our network and face greater difficulty maintaining and expanding our network.

Transitioning from Cisco to another vendor would be disruptive because of the time and expense required to learn to install, maintain and operate the new vendor’s equipment and to operate a multi-vendor network. Any such disruption could increase our costs, decrease our operating efficiencies and have an adverse effect on our business, results of operations and financial condition.

Cisco may also be subject to litigation with respect to the technology on which we depend, including litigation involving claims of patent infringement. Such claims have been growing rapidly in the communications industry. Regardless of the merit of these claims, they can result in the diversion of technical and management personnel, or require us to obtain non-infringing technology or enter into license agreements for the technology on which we depend. There can be no assurance that such non-infringing technology or licenses will be available on acceptable terms and conditions, if at all.

International Operations Risks

Our international operations expose us to numerous risks.

We have expanded our network into 47 countries worldwide on every continent other than Antarctica. We continue to explore expansion opportunities. We have experienced difficulties, ranging from lack of dark fiber, to regulatory issues, to slower revenue growth rates from our operations in these markets. If we are not successful in developing our market presence in these regions, our operating results and revenue growth could be adversely impacted.

Our international operations involve a number of risks, including:

- fluctuations in currency exchange rates, particularly those involving the Euro as we are required to fund certain of our cash flow requirements of our operations outside of the United States and our €350.0 million senior unsecured notes in Euros;

- exposure to additional regulatory and legal requirements, including import restrictions and controls, exchange controls, tariffs and other trade barriers and privacy and data protection regulations;
- compliance with laws regarding corruption and bribery, including the United States Foreign Corrupt Practices Act;
- difficulties in staffing and managing our foreign operations;
- changes in political and economic conditions, such as the exit of the United Kingdom from the European Union, and
- exposure to additional and potentially adverse tax regimes.

As we continue to expand into other countries, our success will depend, in part, on our ability to anticipate and effectively manage these and other risks. Our failure to manage these risks and grow our operations outside the United States may have a material adverse effect on our business and results of operations.

Litigation Risks

As an Internet service provider, we may incur liabilities for the content disseminated through our network or for network failures, delays or errors in transmissions

The law relating to the liabilities of ISPs for information carried on or disseminated through their networks is unsettled. As the law in this area develops and as we expand our international operations, the potential imposition of liabilities upon us for the behavior of our customers or the information carried on and disseminated through our network could require us to implement measures to reduce our exposure to such liabilities, which may require the expenditure of substantial resources or the discontinuation of certain products or service offerings. Any costs that are incurred as a result of such measures or the imposition of liabilities could have a material adverse effect on our business.

Regulatory Risks

Existing and proposed privacy regulations may impact our business

Many countries, including the United States, are considering adopting, or have already adopted, privacy regulations or laws that would govern the way an Internet user's data is used. The primary impact of these rules are on businesses that collect personal information about consumer users of their services. We do not provide services to consumers and do not collect such personal information. However, we transmit data across the Internet, which data may include personal information collected by our customers. As the applicability of privacy regulations to the types of services we provide remains unsettled, we may be required to adopt additional measures in the future.

Privacy regulations, such as the General Data Protection Regulation ("GDPR") in the European Union and the California Consumer Privacy Act ("CCPA") in California vary in scope and in the obligations they impose on us. As new laws are implemented or existing structures are declared insufficient, such as the Privacy Shield program in place between the US and EU, we may find it difficult to comply with such regulations or find it costly to do so. Moreover, for our customers who collect personal information, increased regulation of the collection, processing and use of personal data may impact their business and their use of services in unknown ways.

Changes in laws, rules, and enforcement could adversely affect us.

We are not subject to substantial regulation by the FCC or the state public utilities commissions in the United States. Internet service is also subject to minimal regulation in Western Europe and in Canada. Elsewhere the regulation is greater, though not as extensive as the regulation for providers of voice services. However, governmental authorities may decide to impose additional regulation and taxes upon providers of Internet access and private network services. All of these matters could inhibit our ability to remain a low-cost carrier and could have a material adverse effect on our business, financial condition and our results of operations.

As with the privacy laws described earlier, much of the laws related to the liability of Internet service providers for content on the network and the behavior of our customers and their end users remains unsettled. Some jurisdictions have laws, regulations, or court decisions that impose obligations upon ISPs to restrict access to certain content. Other legal issues, such as the sharing of copyrighted information, data protection, trans-border data flow, unsolicited commercial email (“spam”), universal service, and liability for software viruses could become subjects of additional legislation and legal development and changes in enforcement policies. We cannot predict the impact of these changes on us. They could have a material adverse effect on our business, financial condition and our results of operations.

Changes in laws, rules and enforcement may also adversely affect our customers. For example, a possible repeal or curtailing of Section 230 of the Communications Decency Act in the United States could have an adverse impact on our customers and, consequently, on us. While our top 25 customers represented less than 5.5% of our revenue for the year ended December 31, 2020, several large net-centric customers are or may be the subject of increased regulatory scrutiny, which may impact their businesses and, consequently, their use of our services in unknown ways.

We may be required to censor content on the Internet, which we may find difficult to do and which may impact our ability to provide our services in some countries as well as impact the growth of Internet usage, upon which we depend.

Some governments attempt to limit access to certain content on the Internet. It is impossible for us to filter all content that flows across the Internet connections we provide. For example, some content is encrypted when a secure website is accessed. It is difficult to limit access to websites by blocking a fixed set of Internet addresses when the website operators engage in practices that make it difficult to block them. Should any government require us to perform these types of blocking procedures we could experience difficulties ranging from incurring additional expenses to ceasing to provide service in that country. We could also be subject to penalties if we fail to implement the censorship.

Tax Risks

Governments may assert that we are liable for taxes which we have not collected from our customers and we may have to begin collecting a multitude of taxes if Internet services become subject to taxation similar to the taxation of telephone service.

In the United States Internet services are generally not subject to taxes. Consequently, in the United States we collect few taxes from our customers even though most telecommunications services are subject to numerous taxes. Various local jurisdictions have asserted or may assert that some of our operations or services should be subject to local taxes. If such jurisdictions assess taxes on prior years we may be subject to a liability for unpaid taxes that we may be unable to collect from our customers or former customers. If the taxation of Internet service is expanded we will need to collect those taxes from our customers. The process of implementing a system to properly bill and collect such taxes may require significant resources. In addition, the FCC is considering changes to its Universal Services Fund that could result in its application to Internet services. This too would require that we expend resources to collect this tax. Finally, the cumulative effect of these taxes levied on Internet services could discourage potential customers from using Internet services to replace traditional telecommunication services and negatively impact our ability to grow our business.

Our private network services, such as our VPN services, are subject to taxes and fees in various jurisdictions. We believe we collect all required taxes, however, a jurisdiction may assert we have failed to collect certain taxes. The expense of paying any unpaid taxes could be substantial and we might not be able to collect such back taxes from our customers.

We are also subject to audit of our tax compliance in numerous jurisdictions. These may result in the assessment of amounts due that are material and therefore would have an adverse effect on us.

The utilization of certain of our net operating loss carryforwards is limited and depending upon the amount of our taxable income we may be subject to paying income taxes earlier than planned.

Section 382 of the Internal Revenue Code in the United States limits the utilization of net operating losses when ownership changes, as defined by that section, occur. We have performed an analysis of our

Section 382 ownership changes and have determined that the utilization of certain of our net operating loss carryforwards in the United States is limited. Further, recent changes to the tax law in the United States and changes to tax laws in other jurisdictions in which we operate may impact our utilization of our net operating losses.

Risk Factors Related to Our Indebtedness

We have substantial debt which we may not be able to repay when due.

Our total indebtedness, at par, at December 31, 2020 was \$1.1 billion and included \$445.0 million of our 5.375% senior secured notes and €350.0 million of our 4.375% senior unsecured notes. Our \$445.0 million senior secured notes are due in March 2022 and require annual interest payments of \$23.9 million per year—paid semi-annually. Our €350.0 million of senior unsecured notes are due in June 2024 and require annual interest payments of €15.3 million per year—paid semi-annually. All of our noteholders have the right to be paid the principal upon default and upon certain designated events, such as certain changes of control. Our total indebtedness at December 31, 2020 included \$219.1 million of finance lease obligations for dark fiber primarily under 15 – 20 year IRUs and \$7.7 million due under an installment payment agreement with a vendor. Our total indebtedness at December 31, 2020 excludes \$122.5 million of operating lease liabilities which we were required to be recorded as right-to-use assets and operating lease liabilities in connection with the adoption of ASU No. 2016-02 *Leases* on January 1, 2019. The amount of our IRU finance lease obligations may be impacted due to our expansion activities, the timing of payments and fluctuations in foreign currency rates. The amount of US dollars required to fund our interest and principal obligations for our Euro-denominated notes may be impacted due to fluctuations in the Euro to US Dollar exchange rate. We may not have sufficient funds to pay the interest and principal related to these obligations at the time we are obligated to do so, which could result in bankruptcy, or we may only be able to raise the necessary funds on unfavorable terms.

Our substantial level of indebtedness could adversely affect our financial condition and prevent us from fulfilling our obligations under our notes and our other indebtedness.

We have substantial indebtedness. Our substantial debt may have important consequences. For instance, it could:

- make it more difficult for us to satisfy our financial obligations, including those relating to our debt;
- require us to dedicate a substantial portion of any cash flow from operations to the payment of interest and principal due under our debt, which will reduce funds available for other business purposes, including the growth of our operations, capital expenditures, dividends, purchases of our common stock and acquisitions;
- place us at a competitive disadvantage compared with some of our competitors that may have less debt and better access to capital resources; and
- limit our ability to obtain additional financing required to fund working capital and capital expenditures, for strategic acquisitions and for other general corporate purposes.

Our ability to satisfy our obligations including our debt depends on our future operating performance and on economic, financial, competitive and other factors, many of which are beyond our control. Our business may not generate sufficient cash flow, and future financings may not be available to provide sufficient net proceeds, to meet these obligations or to successfully execute our business strategy.

Despite our leverage we may still be able to incur more debt. This could further exacerbate the risks that we and our subsidiaries face.

We and our subsidiaries may incur additional indebtedness, including additional secured indebtedness, in the future. The terms of our debt indentures restrict, but do not completely prohibit, us from doing so. In addition, the indentures allow us to issue additional notes and other indebtedness secured by the collateral under certain circumstances. Moreover, we are not prevented from incurring other liabilities that do not constitute indebtedness as defined in the indentures, including additional finance lease obligations in the

form of IRUs. These liabilities may represent claims that are effectively prior to the claims of our note holders. If new debt or other liabilities are added to our debt levels the related risks that we and our subsidiaries now face could intensify.

The agreements governing our various debt obligations impose restrictions on our business and could adversely affect our ability to undertake certain corporate actions.

The agreements governing our various debt obligations include covenants imposing significant restrictions on our business. These restrictions may affect our ability to operate our business and may limit our ability to take advantage of potential business opportunities as they arise. These covenants place restrictions on our ability to, among other things:

- incur additional debt;
- create liens;
- make certain investments;
- enter into certain transactions with affiliates;
- declare or pay dividends, redeem stock or make other distributions to stockholders; and
- consolidate, merge or transfer or sell all or substantially all of our assets.

Our ability to comply with these agreements may be affected by events beyond our control, including prevailing economic, financial and industry conditions. These covenants could have an adverse effect on our business by limiting our ability to take advantage of financing, merger and acquisition or other corporate opportunities. The breach of any of these covenants or restrictions could result in a default under the agreements governing our debt obligations.

To service our indebtedness, we will require a significant amount of cash. However, our ability to generate cash depends on many factors many of which are beyond our control.

Our ability to make payments on and to refinance our indebtedness and to fund planned capital expenditures will depend on our ability to generate cash in the future, which, in turn, is subject to general economic, financial, competitive, regulatory and other factors, many of which are beyond our control.

Our business may not generate sufficient cash flow from operations and we may not have available to us future borrowings in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs. In these circumstances, we may need to refinance all or a portion of our indebtedness on or before maturity. We may not be able to refinance any of our indebtedness on commercially reasonable terms or at all. Without this financing, we could be forced to sell assets or secure additional financing to make up for any shortfall in our payment obligations under unfavorable circumstances. However, we may not be able to secure additional financing on terms favorable to us or at all and, in addition, the terms of the indentures governing our notes limit our ability to sell assets and also restrict the use of proceeds from such a sale. We may not be able to sell assets quickly enough or for sufficient amounts to enable us to meet our obligations, including our obligations under our notes.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease space for offices, data centers, colocation facilities, and points-of-presence.

Our headquarters facility consists of 43,117 square feet located in Washington, D.C. The lease for our headquarters is with an entity controlled by our Chief Executive Officer. The lease was scheduled to expire in May 2020. In February 2020, the lease was extended to expire in May 2025. The lease may be cancelled by us upon 60 days' notice.

We lease a total of approximately 760,000 square feet of space for our data centers, offices and operations centers. We believe that these facilities are generally in good condition and suitable for our operations.

ITEM 3. LEGAL PROCEEDINGS

We are involved in legal proceedings in the ordinary course of our business that we do not expect to have a material adverse effect on our business, financial condition or results of operations. For a discussion of the significant proceedings in which we are involved, see Note 6 to our consolidated financial statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

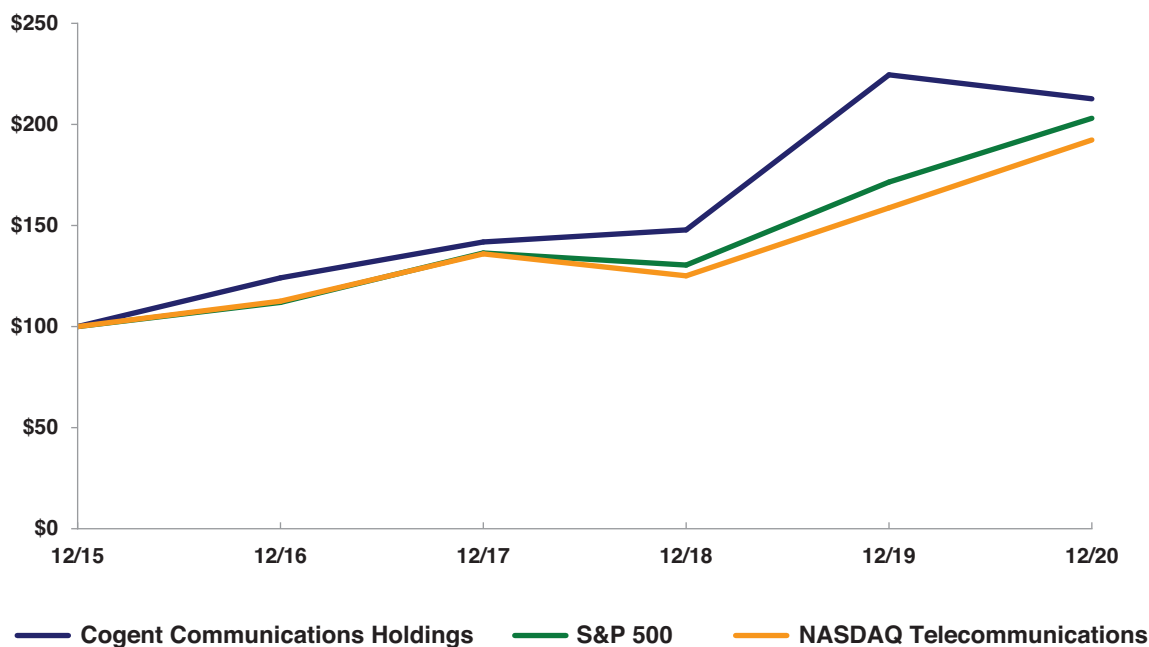
Our sole class of common equity is our common stock, par value \$0.001, which is currently traded on the NASDAQ Global Select Market under the symbol “CCOI.” Prior to March 6, 2006, our common stock traded on the American Stock Exchange under the symbol “COI.” Prior to February 5, 2002, no established public trading market for our common stock existed.

As of February 1, 2021, there were 127 holders of record of shares of our common stock holding 46,042,876 shares of our common stock.

Performance Graph

Our common stock currently trades on the NASDAQ Global Select Market. The chart below compares the relative changes in the cumulative total return of our common stock for the period from December 31, 2015 to December 31, 2020, against the cumulative total return for the same period of the (1) The Standard & Poor’s 500 (S&P 500) Index and (2) the NASDAQ Telecommunications Index. The comparison below assumes \$100 was invested on December 31, 2015 in our common stock, the S&P 500 Index and the NASDAQ Telecommunications Index, with dividends, if any, reinvested.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among Cogent Communications Holdings, the S&P 500 Index
and the NASDAQ Telecommunications Index



* \$100 invested on 12/31/14 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

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	12/15	12/16	12/17	12/18	12/19	12/20
Cogent Communications Holdings	100.00	124.10	141.85	147.82	224.53	212.68
S&P 500	100.00	111.96	136.40	130.42	171.49	203.04
NASDAQ Telecommunications	100.00	112.56	135.96	125.10	158.73	192.30

The stock price performance included in this graph is not necessarily indicative of future stock price performance.

Issuer Purchases of Equity Securities

Our Board of Directors authorized a plan to permit the repurchase of up to \$50.0 million of our common stock in negotiated and open market transactions through December 31, 2021. As of December 31, 2020, \$30.4 million remained available for such negotiated and open market transactions concerning our common stock. We may purchase shares from time to time depending on market, economic, and other factors.

The following table summarizes our common stock repurchases during the fourth quarter of 2020 made pursuant to this authorization. During the quarter, we did not purchase shares outside of this program, and all purchases were made by or on behalf of the Company and not by any “affiliated purchaser” (as defined by Rule 10b-18 under the Exchange Act).

Issuer Purchases of Equity Securities

<u>Period</u>	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs</u>
October 1 - 31, 2020	51,016	\$57.37	51,016	\$31,708,066
November 1 - 30, 2020	20,000	\$55.08	20,000	\$30,606,473
December 1 - 31, 2020	3,473	\$56.60	3,473	\$30,409,902
Total	<u>74,489</u>	<u>\$56.72</u>	<u>74,489</u>	

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis together with our consolidated financial statements and related notes included in this report. The discussion in this report contains forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. The cautionary statements made in this report should be read as applying to all related forward-looking statements wherever they appear in this report. Factors that could cause or contribute to these differences include those discussed in “Item 1A. Risk Factors,” as well as those discussed elsewhere. You should read “Item 1A. Risk Factors” and “Special Note Regarding Forward-Looking Statements.” Our actual results could differ materially from those discussed here. Factors that could cause or contribute to these differences include, but are not limited to:

The COVID-19 pandemic and accompanying government policies worldwide; future economic instability in the global economy, which could affect spending on Internet services; the impact of changing foreign exchange rates (in particular the Euro to US dollar and Canadian dollar to US dollar exchange rates) on the translation of our non-US dollar denominated revenues, expenses, assets and liabilities into US dollars; legal and operational difficulties in new markets; the imposition of a requirement that we contribute to the US Universal Service Fund on the basis of our Internet revenue; changes in government policy and/or regulation, including rules regarding data protection, cyber security and net neutrality; increasing competition leading to lower prices for our services; our ability to attract new customers and to increase and maintain the volume of traffic on our network; the ability to maintain our Internet peering arrangements on favorable terms; our ability to renew our long-term leases of optical fiber that comprise our network; our reliance on an equipment vendor, Cisco Systems Inc., and the potential for hardware or software problems associated with such equipment; the dependence of our network on the quality and dependability of third-party fiber providers; our ability to retain certain customers that comprise a significant portion of our revenue base; the management of network failures and/or disruptions; our ability to make payments on our indebtedness as they become due and outcomes in litigation as well as other risks discussed from time to time in our filings with the Securities and Exchange Commission, including, without limitation, this Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q.

Results of Operations

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

In this section, we discuss the results of our operations for the year ended December 31, 2020 compared to the year ended December 31, 2019. For a discussion of the year ended December 31, 2019 compared to the year ended December 31, 2018, please refer to Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Annual Report on Form 10-K for the year ended December 31, 2019.

Our management reviews and analyzes several key financial measures in order to manage our business and assess the quality and variability of our service revenue, operating results and cash flows. The following summary tables present a comparison of our results of operations with respect to certain key financial measures. The comparisons illustrated in the tables are discussed in greater detail below.

	Year Ended December 31,		Percent Change
	2020	2019	
	(in thousands)		
Service revenue	\$568,103	\$546,159	4.0%
On-net revenues	419,454	396,753	5.7%
Off-net revenues	148,128	148,931	(0.5)%
Network operations expenses(1)	219,157	219,801	(0.3)%
Selling, general, and administrative expenses(2)	158,476	146,913	7.9%
Depreciation and amortization expenses	83,477	80,247	4.0%
Realized gain on foreign exchange—2024 Notes	2,533	—	NM
Unrealized (loss) gain on foreign exchange—2024 Notes	(36,997)	2,271	NM
Loss on debt extinguishment and redemption—2021 Notes	(638)	—	NM
Interest expense	62,486	57,453	8.8%
Income tax expense	4,096	15,154	(73.0)%

(1) Includes non-cash equity-based compensation expense of \$1,219 and \$994 for 2020 and 2019, respectively.

(2) Includes non-cash equity-based compensation expense of \$22,306 and \$17,466 for 2020 and 2019, respectively.

NM—not meaningful

	Year Ended December 31,		Percent Change
	2020	2019	
Other Operating Data			
<i>Average Revenue Per Unit (ARPU)</i>			
ARPU—on-net	\$ 460	\$ 461	(0.2)%
ARPU—off-net	\$ 1,045	\$ 1,097	(4.7)%
Average price per megabit	\$ 0.46	\$ 0.62	(25.5)%
<i>Customer Connections—end of period</i>			
On-net	77,305	74,554	3.7%
Off-net	11,970	11,660	2.7%

Service Revenue. We continually work to grow our total service revenue by increasing the number of potential customers that we can reach on our network. We do this by investing capital to expand the

geographic footprint of our network and by increasing the number of buildings that we are connected to, including carrier neutral data centers and multi-tenant office buildings. These efforts broaden the global reach of our network and increase the size of our potential addressable market. We also seek to grow our service revenue by investing in our sales and marketing team. Over the last five years we have grown our quota bearing salesforce by 34% to 569 full time equivalent salespeople. We typically sell corporate connections at similar pricing to our competitors, but our clients benefit from our significantly faster speeds, enhanced service level agreements and rapid installation times. In the net-centric market, we offer comparable services in terms of capacity but typically at significantly lower prices.

Our service revenue increased by 4.0% from 2019 to 2020. Exchange rates positively impacted our increase in service revenue by \$1.5 million. All foreign currency comparisons herein reflect results for 2020 translated at the average foreign currency exchange rates for 2019. We increased our total service revenue by increasing the number of sales representatives selling our services, by expanding our network, by adding additional buildings to our network, by increasing our penetration into the buildings connected to our network and by gaining market share by offering our services at lower prices than our competitors.

Revenue recognition standards include guidance relating to any tax assessed by a governmental authority that is directly imposed on a revenue-producing transaction between a seller and a customer and may include, but is not limited to, gross receipts taxes, Universal Service Fund fees and certain state regulatory fees. We record these taxes billed to our customers on a gross basis (as service revenue and network operations expense) in our consolidated statements of operations. The impact of these taxes including the Universal Service Fund resulted in an increase to our revenues from 2019 to 2020 of \$0.2 million.

Our corporate customers purchase their services on a price per connection basis. Our net-centric customers generally purchase their services on a price per megabit basis. Revenues from our corporate and net-centric customers represented 67.5% and 32.5% of total service revenue, respectively, for 2020 and represented 68.4% and 31.6% of total service revenue, respectively, for 2019. Revenues from corporate customers increased by 2.6% to \$383.4 million for 2020 from 2019. Revenues from our net-centric customers increased by 7.1% to \$184.7 million for 2020 from 2019.

Our revenue from our corporate customers has increased as our corporate customers take advantage of our superior speeds, service levels and installation times versus our competitors. The growing trend of customers installing second lines for redundancy and in order to supplement their VPN capabilities has also led to our growing corporate revenues. However, in 2020, we saw corporate customers take a cautious approach to new configurations and upgrades as well as a reduction in demand for connecting smaller satellite offices as a result of the challenges and uncertainties of the COVID-19 pandemic. We also witnessed a deteriorating real estate market in and around the buildings we service, with rising vacancy levels and falling lease initiations or renewals resulting in fewer sales opportunities for our salesforce. As a result, during 2020, we experienced a slowdown in new sales to our corporate customers which negatively impacted our corporate revenue growth. While we believe that demand for office space in the buildings in which we operate will remain among the strongest in our markets, we may experience increased corporate customer turnover, fewer upgrades of existing corporate customer configurations and fewer new tenant opportunities which would negatively impact our corporate revenue growth.

Our revenue from our net-centric customers increased primarily due to an increase in our number of net-centric customers partly offset by a decline in our average price per megabit. Our net-centric customers purchase our services on a price per megabit basis. The net-centric market exhibits significant pricing pressure due to the continued introduction of new technology which lowers the marginal cost of transmitting bits, and the commodity nature of the service where price is typically the only differentiating factor for these customers. Our average price per megabit declined by 25.5% from 2019 to 2020. We expect that our average price per megabit will continue to decline at similar rates. The impact of foreign exchange rates has a more significant impact on our net-centric revenues.

Our on-net revenues increased by 5.7% from 2019 to 2020. Our on-net revenues increased as we increased the number of our on-net customer connections by 3.7% at December 31, 2020 from December 31, 2019. On-net revenues increased at a greater rate than on-net customer connections primarily due to an increase in our usage based revenues, a relatively stable on-net ARPU from 2019 to 2020 and the positive

impact of foreign exchange. ARPU is determined by dividing revenue for the period by the average customer connections for that period.

Our off-net revenues decreased by 0.5% from 2019 to 2020. Our off-net revenues decreased as the 4.7% decrease in our off-net ARPU more than offset the 2.7% increase in the number of our off-net customer connections from December 31, 2019 to December 31, 2020.

Network Operations Expenses. Network operations expenses include the costs of personnel associated with service delivery, network management, and customer support, network facilities costs, fiber and equipment maintenance fees, leased circuit costs, access and facilities fees paid to building owners and excise taxes billed to our customers and recorded on a gross basis. Non-cash equity-based compensation expense is included in network operations expenses consistent with the classification of the employee's salary and other compensation. Our network operations expenses, including non-cash equity-based compensation expense, decreased by 0.3% from 2019 to 2020. The decrease in network operations expense is primarily attributable to an increase in costs related to our network and facilities expansion activities, offset by price reductions obtained in certain of our leased circuit costs, fewer operating leases for dark fiber and the impact of a renewal of an IRU fiber lease agreement in the second quarter of 2020. We adopted *Leases* ("ASU 2016-02") on January 1, 2019. When we adopted ASU 2016-02 we elected to apply certain practical expedients under ASU 2016-02 including not separating lease and nonlease components on our finance and operating leases. As a result of accounting for this IRU renewal under ASU 2016-02, the present value of \$1.8 million of quarterly maintenance and co-location fees (non-lease components) that were previously accounted for as network operations expenses prior to the second quarter of 2020, were capitalized as a finance lease liability and right-of-use leased asset totaling \$34.0 million. Amortization of the right-of-use asset is recorded as depreciation and amortization expense and the payments that are made toward the finance lease liability are recorded as a reduction of the finance lease liability and interest expense.

Selling, General, and Administrative Expenses ("SG&A"). Our SG&A expenses, including non-cash equity-based compensation expense, increased by 7.9% from 2019 to 2020. Non-cash equity-based compensation expense is included in SG&A expenses consistent with the classification of the employee's salary and other compensation and was \$22.3 million for 2020 and \$17.5 million for 2019. SG&A expenses increased primarily from an increase in salaries and related costs required to support our expansion and increases in our sales efforts and an increase in our headcount. Our sales force headcount increased by 3.8% from 686 at December 31, 2019 to 712 at December 31, 2020 and our total headcount increased by 2.7% from 1,055 at December 31, 2019 to 1,083 at December 31, 2020.

Depreciation and Amortization Expenses. Our depreciation and amortization expenses increased by 4.0% from 2019 to 2020. The increase is primarily due to the depreciation expense associated with the increase related to newly deployed fixed assets associated with our network expansion activities and the impact of the renewal of an IRU lease as discussed above.

Interest Expense. Our interest expense resulted from interest incurred on our \$445.0 million of senior secured notes due 2022 ("2022 Notes"), interest incurred on our \$189.2 million of senior unsecured notes due 2021 ("2021 Notes") until these notes were redeemed in June 2020, interest on our installment payment agreement, interest on our finance lease obligations and interest incurred on our €350.0 million aggregate principal amount of 4.375% senior unsecured notes due 2024 ("2024 Notes"). We issued €215.0 million of our 2024 Notes in June 2020 and €135.0 million of our 2024 Notes in June 2019. In June 2020, we redeemed and extinguished our 2021 Notes at par value resulting in a loss on debt extinguishment and redemption of \$0.6 million. Our interest expense increased by 8.8% for 2020 from 2019 primarily due to an increase in our finance lease obligations and the issuances of our 2024 Notes, partly offset by the redemption of our 2021 Notes.

Realized Gain and Unrealized (Loss) Gain on Foreign Exchange on 2024 Notes. Our 2024 Notes were issued in Euros and are reported in our reporting currency—US Dollars. As of December 31, 2020, the carrying value of our 2024 Notes was \$429.3 million and as of December 31, 2019, the carrying value of our 2024 Notes was \$151.4 million. In June 2020, we issued our €215.0 million 2024 Notes at a Euro to USD rate of \$1.112. We received proceeds in USD on the 2024 Notes on June 9, 2020 at a Euro to USD rate of \$1.133 resulting in a realized gain on foreign exchange of \$2.5 million. Our unrealized (loss) gain on foreign

exchange on our 2024 Notes from converting our 2024 Notes into USD was an unrealized loss of \$(37.0) million for 2020 and an unrealized gain of \$2.3 million for 2019. We have not entered into hedges for our foreign currency obligations.

Income Tax Expense. Our income tax expense was \$4.1 million for 2020 and \$15.2 million for 2019. The reduction in our income tax expense is primarily related to a reduction in our income before income taxes.

Buildings On-net. As of December 31, 2020 and 2019 we had a total of 2,914 and 2,801 on-net buildings connected to our network, respectively.

Liquidity and Capital Resources

In assessing our liquidity, management reviews and analyzes our current cash balances, accounts receivable, accounts payable, accrued liabilities, capital expenditure commitments, and required finance lease and debt payments and other obligations. As our business has grown as a result of an increasing customer base, broader geographic coverage and increased traffic, we have produced a growing level of operating cash flow. As a result of the operating leverage of our network, our annual capital expenditures as measured as a percentage of revenues has fallen over the last decade. We have also had increasing success in raising capital by issuing notes and arranging financing and leases that have had a lower cost and more flexible terms. The combination of this improved operating performance and access to capital has enhanced our financial flexibility and increased our ability to make distributions to shareholders in the form of cash dividends or through share repurchases. Since our initial public offering, we have returned over \$894 million to our shareholders through share repurchases and dividends. We will continue to assess our capital and liquidity needs and, where appropriate, return capital to shareholders.

Over the next several years we have significant contractual and anticipated cash outlays including our indicative dividend payments on our common stock, our maturing debt obligations, interest payments on our debt obligations and our projected capital expenditure requirements in order to help execute our business plan. Based upon our historical growth rate of our dividend, we expect that we would have to provide approximately \$310 million in order to meet our quarterly dividend payments over the next two years. Our \$445.0 million of Senior Secured Notes mature in March 2022 and include annual interest payments of \$23.9 million until maturity. Our €350 million of Senior Unsecured Notes mature in June 2024 and include annual interest payments €15.3 million until maturity. Our €350 million of Senior Unsecured Notes are denominated in Euros and expose us to potentially unfavorable adverse movements in foreign currency rate changes. Our overseas operations provides us access to Euros, however these amounts may be insufficient to fund our obligations under our Senior Unsecured Notes. Additionally, we have not entered into forward exchange contracts related to our foreign currency exposure.

Any future acquisitions or other significant unplanned costs or cash requirements in excess of amounts we currently hold may require that we raise additional funds through the issuance of debt or equity. We cannot assure you that such financing will be available on terms acceptable to us or our stockholders, or at all. Insufficient funds may require us to delay or scale back the number of buildings and markets that we add to our network, reduce our planned increase in our sales and marketing efforts, or require us to otherwise alter our business plan or take other actions that could have a material adverse effect on our business, results of operations and financial condition. If issuing equity securities raises additional funds, substantial dilution to existing stockholders may result.

We may need to or elect to refinance all or a portion of our indebtedness at or before maturity and we cannot provide assurances that we will be able to refinance any such indebtedness on commercially reasonable terms or at all. In addition, we may elect to secure additional capital in the future, at acceptable terms, to improve our liquidity or fund acquisitions or for general corporate purposes. In addition, in an effort to reduce future cash interest payments as well as future amounts due at maturity or to extend debt maturities, we may, from time to time, issue new debt, enter into debt for debt, or cash transactions to purchase our outstanding debt securities in the open market or through privately negotiated transactions. We will evaluate any such transactions in light of the existing market conditions. The amounts involved in any such transaction, individually or in the aggregate, may be material.

We or our affiliates may, at any time and from time to time, seek to retire or purchase our outstanding debt through cash purchases and/or exchanges for equity or debt, in open-market purchases, privately negotiated transactions or otherwise. Such repurchases or exchanges, if any, will be upon such terms and at such prices as we may determine, and will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

In light of the economic uncertainties associated with the COVID-19 pandemic, our executive officers and Board have continued to carefully monitor our liquidity and cash requirements. Based on current circumstances, we plan to continue our current dividend policy. Given uncertainties regarding the duration of the pandemic and timing for economic recovery, we will continue to monitor our capital spending. As we do each year, we will continue to monitor our future sources and uses of cash, and anticipate that we will make adjustments to our capital allocation strategies when, as and if determined by our Board of Directors.

Impact of COVID-19 on Our Liquidity and Operating Performance

In late March 2020, we adopted a mandatory work-from-home policy through which we required all employees to work from home and follow shelter in place guidelines issued by state and local authorities. We believe we have been able to continue to operate effectively with the use of laptops, remote connectivity and the continued support of our critical support employees. Further, we severely curtailed all business travel and adopted new safety procedures for our on-site technical personnel and customers accessing our data centers. While we are contemplating a voluntary return to in-office presence for a small number of our offices, we expect to continue to have the vast majority of our workforce to work remotely for the foreseeable future. We believe the policies followed by our workforce and the support provided by our IT and other groups has enabled our employees to continue to perform tasks and activities that are essential for the operation of our network, our sales and marketing efforts and other support functions.

We experienced some delays with respect to the installation of new services in March and April of 2020 when certain multi-tenant office buildings were closed to our personnel. We worked with local authorities and building owners to categorize our employees as essential workers who need priority access to buildings. We believe that our disruption in access to buildings was effectively mitigated throughout our second and third quarters.

In April and May 2020, we waived late fees for customers who were unable to pay their bills due to the pandemic. We have not encountered any material change in the payment profile of our customers or seen any significant increase in customer turnover since the beginning of the pandemic. There can be no assurance that we will continue to experience normal operations as economic dislocations may adversely affect our customers and may lead to higher customer turnover, bad debt expense and lower revenue and profitability.

We continue to operate with a high level of liquidity and as of December 31, 2020 we had cash and cash equivalents of approximately \$371.3 million. We have recently experienced certain corporate customers taking a more cautious approach to new configurations and upgrades as well as a reduction in demand for connecting smaller satellite offices as a result of the challenges and uncertainties of the COVID-19 pandemic. We also have witnessed a deteriorating real estate market in and around the buildings we service with rising vacancy levels and falling lease initiations or renewals. Rising vacancy levels and falling lease initiations or renewals meant fewer sales opportunities for our salesforce. As a result, we experienced a slowdown in new sales to our corporate customers which negatively impacted our corporate revenue growth in 2020. While we believe that demand for office space in the buildings in which we operate will remain among the strongest in our markets, we may experience increased customer turnover, fewer upgrades of existing customer configurations and fewer new tenant opportunities. These trends may negatively impact our revenue growth, cash flows and profitability.

Shortly after COVID-19 began its rapid spread around the world, domestic and worldwide capital markets ceased operating for a short period. While worldwide capital markets have remained unstable or unpredictable since then, particularly for non-investment grade issuers, legislative bodies and reserve banks have taken various actions in response to the pandemic that have impacted the capital markets, and we expect that these efforts may continue. In June 2020, we issued an additional €215 million of our 4.375% Senior Unsecured Notes due 2024. The COVID-19 pandemic has not impacted our credit rating to date, nor do we believe that it has materially changed our cost of capital. We believe we are able to timely service our debt

obligations and will not require any concessions to do so. We believe we will have access to additional capital from a variety of sources and the public capital markets for debt and equity.

Cash Flows

The following table sets forth our consolidated cash flows.

	Year Ended December 31,		
	2020	2019	2018
		(in thousands)	
Net cash provided by operating activities	\$ 140,320	\$148,809	\$133,921
Net cash used in investing activities	(55,952)	(46,958)	(49,937)
Net cash (used in) provided by financing activities	(116,002)	22,020	(52,545)
Effect of exchange rates on cash	3,513	(542)	(2,357)
Net (decrease) increase in cash and cash equivalents during the year	<u>\$ (28,121)</u>	<u>\$123,329</u>	<u>\$ 29,082</u>

Net Cash Provided By Operating Activities. Our primary source of operating cash is receipts from our customers who are billed on a monthly basis for our services. Our primary uses of operating cash are payments made to our vendors, employees and interest payments made to our finance lease vendors and our note holders. Our changes in cash provided by operating activities are primarily due to changes in our operating profit and changes in our interest payments. Cash provided by operating activities for 2020, 2019 and 2018 included interest payments on our note obligations of \$48.8 million, \$38.0 million and \$32.7 million, respectively.

Net Cash Used In Investing Activities. Our primary use of investing cash is for purchases of property and equipment. These amounts were \$56.0 million, \$47.0 million and \$49.9 million for 2020, 2019 and 2018, respectively. The annual changes in purchases of property and equipment are primarily due to the timing and scope of our network expansion activities including geographic expansion and adding buildings to our network. In 2020, 2019 and 2018 we obtained \$5.8 million, \$11.3 million and \$9.9 million, respectively, of network equipment and software in non-cash exchanges for notes payable under an installment payment agreement.

Net Cash (Used In) Provided By Financing Activities. Our primary uses of cash for financing activities are for dividend payments, stock purchases and principal payments under our debt and finance lease obligations. During 2020, 2019 and 2018 we paid \$129.4 million, \$112.6 million and \$97.9 million, respectively, for our quarterly dividend payments. Our quarterly dividend payments have increased due to regular quarterly increases in our quarterly dividend per share amounts. Amounts paid under our stock buyback program were \$4.5 million for 2020 and \$6.6 million for 2018. There were no stock purchases during 2019. Principal payments under our finance lease obligations were \$24.0 million, \$9.1 million and \$10.3 million for 2020, 2019 and 2018, respectively, and are impacted by the timing and extent of our network expansion activities. Total installment payment agreement principal payments were \$10.5 million, \$10.0 million and \$9.4 million for 2020, 2019 and 2018, respectively. Our financing activities also include proceeds from and repayments of our debt offerings. In June 2020, we received net proceeds of \$240.3 million from the issuance of €215.0 million of our 2024 Notes and we redeemed \$189.2 million of our 2021 Notes at par value, thereby extinguishing the remaining principal amount owed. In June 2019 we received net proceeds of \$152.1 million from the issuance of €135.0 million of our 2024 Notes. In August 2018 we received net proceeds of \$69.9 million from the issuance of \$70.0 million of our 2022 Notes.

Indebtedness

Our total cash and cash equivalents at December 31, 2020 were \$371.3 million. We believe this level of liquidity reduces our exposure to refinancing risk, potential underperformance of the business or other unforeseen challenges and enhances our ability to pursue acquisitions or operating opportunities. We intend upon holding levels of cash and cash equivalents sufficient to maintain our ability to fund operations, refinance indebtedness and make dividend payments to our shareholders.

Our total indebtedness at December 31, 2020, at par value, was \$1.1 billion. Our total indebtedness at December 31, 2020 includes \$219.1 million of finance lease obligations for dark fiber under long-term IRU agreements.

On May 15, 2014, pursuant to the Agreement and Plan of Reorganization (the “Merger Agreement”) by and among Cogent Communications Group, Inc. (“Group”), a Delaware corporation, Cogent Communications Holdings, Inc., a Delaware corporation (“Holdings”) and Cogent Communications Merger Sub, Inc., a Delaware corporation (“Merger Sub”), Group adopted a new holding company organizational structure whereby Group is now a wholly owned subsidiary of Holdings. Holdings is a “successor issuer” to Group pursuant to Rule 12g-3(a) under the Exchange Act.

Senior unsecured notes—€350.0 million

In June 2019, Group completed an offering of €135.0 million aggregate principal amount of 2024 Notes. In June 2020, Group completed an offering of €215.0 million aggregate principal amount of 2024 Notes. The 2024 Notes were sold in private offerings for resale to qualified institutional buyers pursuant to SEC Rule 144A and mature on June 30, 2024. Interest accrues at 4.375% and is paid semi-annually in arrears on June 30 and December 30 of each year. Holdings provided a guarantee of the 2024 Notes but Holdings is not subject to the covenants under the indenture.

Senior secured notes—\$445.0 million

In February 2015, Group issued \$250.0 million of 5.375% senior secured notes due 2022 (the “2022 Notes”). In December 2016, we issued an additional \$125.0 million of our 2022 Notes at a premium of 100.365%. In August 2018, we issued an additional \$70.0 million of our 2022 Notes at a premium of 101.75%. The 2022 Notes were sold in private offerings for resale to qualified institutional buyers pursuant to SEC Rule 144A and mature on March 1, 2022. Interest accrues at 5.375% and is paid semi-annually in arrears on March 1 and September 1 of each year. Holdings provided a guarantee of the 2022 Notes but Holdings is not subject to the covenants under the indenture.

Limitations under the indentures

The indentures governing the 2024 Notes and 2022 Notes, among other things, limits our ability to incur indebtedness; to pay dividends or make other distributions; to make certain investments and other restricted payments; to create liens; consolidate, merge, sell or otherwise dispose of all or substantially all of its assets; to incur restrictions on the ability of a subsidiary to pay dividends or make other payments; and to enter into certain transactions with its affiliates. Limitations on the ability to incur additional indebtedness (excluding IRU agreements incurred in the normal course of business) include a restriction on incurring additional indebtedness if our consolidated leverage ratio, as defined in the indentures, is greater than 6.0 for the 2024 Notes and greater than 5.0 for the 2022 Notes. Limitations on the ability to incur additional secured indebtedness include a restriction on incurring additional secured indebtedness if our consolidated secured leverage ratio, as defined in the indentures, is greater than 4.0 for the 2024 Notes and greater than 3.5 for the 2022 Notes. The indentures prohibit certain payments, such as dividends and stock purchases, when our consolidated leverage ratio, as defined by the indentures, is greater than 4.25. A certain amount of such unrestricted payments is permitted notwithstanding this prohibition. The unrestricted payment amount may be increased by our consolidated cash flow, as defined in the indentures, as long as our consolidated leverage ratio is less than 4.25. Our consolidated leverage ratio was above 4.25 as of December 31, 2020. As of December 31, 2020, a total of \$94.0 million was permitted for investment payments including dividends and stock purchases.

Summarized Financial Information of Holdings

Holdings is a guarantor under the 2024 and 2022 Notes. Under the indentures we are required to disclose financial information of Holdings including its assets, liabilities and its operating results (“Holdings Financial Information”). The Holdings Financial Information as of and for the year ended December 31, 2020 is detailed below (in thousands).

	<u>December 31, 2020</u>
	<u>(Unaudited)</u>
Cash and cash equivalents	\$ 93,986
Accrued interest receivable	1
Total assets	<u>\$ 93,987</u>
Investment from subsidiaries	\$ 246,722
Common stock	47
Accumulated deficit	<u>(152,782)</u>
Total equity	<u>\$ 93,987</u>
	<u>Year Ended</u>
	<u>December 31, 2020</u>
	<u>(Unaudited)</u>
Equity-based compensation expense	\$ 25,800
Interest income	584
Net loss	<u>\$(25,216)</u>

Common Stock Buyback Program

Our Board of Directors has approved through December 31, 2021, purchases of our common stock under a buyback program (the “Buyback Program”). We purchased 79,056 shares of our common stock for \$4.5 million during the year ended December 31, 2020 and 147,995 shares of our common stock for \$6.6 million during the year ended December 31, 2018. There were no purchases of common stock during the year ended December 31, 2019. As of December 31, 2020 there was a total of \$30.4 million available under the Buyback Program.

Dividends on Common Stock

Dividends are recorded as a reduction to retained earnings. Dividends on unvested restricted shares of common stock are paid as the awards vest. Our initial quarterly dividend payment was made in the third quarter of 2012. On February 24, 2021, our Board of Directors approved the payment of our quarterly dividend of \$0.755 per common share. The dividend for the first quarter of 2021 will be paid to holders of record on March 12, 2021. This estimated \$34.6 million dividend payment is expected to be made on March 26, 2021.

The payment of any future dividends and any other returns of capital, including stock buybacks, will be at the discretion of our Board of Directors and may be reduced, eliminated or increased and will be dependent upon our financial position, results of operations, available cash, cash flow, capital requirements, limitations under our debt indentures and other factors deemed relevant by the our Board of Directors. We are a Delaware Corporation and under the General Corporate Law of the State of Delaware distributions may be restricted including a restriction that distributions, including stock purchases and dividends, do not result in an impairment of a corporation’s capital, as defined under Delaware Law. The indentures governing our notes limit our ability to return cash to our stockholders. See Note 4 to our consolidated financial statements for additional discussion of limitations on distributions.

Future Capital Requirements

We believe that our cash on hand and cash generated from our operating activities will be adequate to meet our working capital, capital expenditure, debt service, dividend payments and other cash requirements for the next twelve months if we execute our business plan.

Any future acquisitions or other significant unplanned costs or cash requirements in excess of amounts we currently hold may require that we raise additional funds through the issuance of debt or equity. We cannot assure you that such financing will be available on terms acceptable to us or our stockholders, or at all. Insufficient funds may require us to delay or scale back the number of buildings and markets that we add to our network, reduce our planned increase in our sales and marketing efforts, or require us to otherwise alter our business plan or take other actions that could have a material adverse effect on our business, results of operations and financial condition. If issuing equity securities raises additional funds, substantial dilution to existing stockholders may result.

We may need to or elect to refinance all or a portion of our indebtedness at or before maturity and we cannot provide assurances that we will be able to refinance any such indebtedness on commercially reasonable terms or at all. In addition, we may elect to secure additional capital in the future, at acceptable terms, to improve our liquidity or fund acquisitions or for general corporate purposes. In addition, in an effort to reduce future cash interest payments as well as future amounts due at maturity or to extend debt maturities, we may, from time to time, issue new debt, enter into debt for debt, or cash transactions to purchase our outstanding debt securities in the open market or through privately negotiated transactions. We will evaluate any such transactions in light of the existing market conditions. The amounts involved in any such transaction, individually or in the aggregate, may be material.

Off-Balance Sheet Arrangements

We do not have relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts. As such, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in these relationships.

Income Taxes

Section 382 of the Internal Revenue Code in the United States limits the utilization of net operating losses when ownership changes, as defined by that section, occur. We have performed an analysis of our Section 382 ownership changes and have determined that the utilization of certain of our net operating loss carryforwards in the United States is limited.

Critical Accounting Policies and Significant Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and the related disclosure of contingent assets and liabilities. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The accounting policies we believe to be most critical to understanding our financial results and condition or that require complex, significant and subjective management judgments are discussed below.

Finance Lease Obligations

We record assets and liabilities under finance leases at the lesser of the present value of the aggregate future minimum lease payments or the fair value of the assets under lease. We establish the number of renewal option periods used in determining the lease term, if any, based upon our assessment at the inception of the lease of the number of option periods for which failure to renew the lease imposes a penalty on us in such amount that renewal appears to be reasonably certain. Useful lives are determined based on historical usage with consideration given to technological changes and trends in the industry that could impact the asset utilization. We estimate the fair value of leased assets primarily using estimated replacement cost data for similar assets. We determine the incremental borrowing rate for each lease using our current borrowing rate adjusted for various factors including the level of collateralization and term to align with the term of the lease.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain market risks. These risks, which include interest rate risk and foreign currency exchange risk, arise in the normal course of business rather than from trading activities.

Interest Rate Risk

Our cash flow exposure due to changes in interest rates related to our debt is limited as our note obligations have fixed interest rates. The fair value of our note obligations may increase or decrease for various reasons, including fluctuations in the market price of our common stock, fluctuations in market interest rates and fluctuations in general economic conditions. A decline in interest rates in the future will not generally benefit us with respect to our fixed rate debt due to the terms and conditions of the indentures relating to that debt that would require us to repurchase the debt at specified premiums if redeemed early. Our interest income is sensitive to changes in the general level of interest rates. However, based upon the nature and current level of our investments, which consist of cash and cash equivalents, we believe that there is no material interest rate exposure related to our investments.

Foreign Currency Exchange Risk

Our operations outside of the United States and our 2024 Notes expose us to potentially unfavorable adverse movements in foreign currency rate changes. We have not entered into forward exchange contracts related to our foreign currency exposure. While we record financial results and assets and liabilities from our international operations in the functional currency, which is generally the local currency, these results are reflected in our consolidated financial statements in US dollars. Therefore, our reported results are exposed to fluctuations in the exchange rates between the US dollar and the local currencies, in particular the Euro and the Canadian dollar. In addition, we may fund certain cash flow requirements of our international operations including the interest and principal payment obligations, while due in Euros, on our 2024 notes in US dollars. Accordingly, in the event that the local currencies strengthen versus the US dollar to a greater extent than planned, the revenues, expenses and cash flow requirements associated with our international operations may be significantly higher in US-dollar terms than planned. During the year ended December 31, 2020, our foreign activities accounted for 23% of our consolidated revenue. A 1% change in foreign exchange rates would impact our consolidated annual revenue by approximately \$1.1 million. A 1% change in foreign exchange rates as of December 31, 2020 would impact the reported value of our 2024 Notes by approximately \$4.3 million. Changes in foreign currency rates could adversely and materially affect our operating results and cash flow.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Cogent Communications Holdings, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Cogent Communications Holdings, Inc. and subsidiaries (the Company) as of December 31, 2020 and 2019, the related consolidated statements of comprehensive income (loss), changes in stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and financial statement schedule listed in the Index at Item 15(a)2 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 26, 2021 expressed an unqualified opinion thereon.

Adoption of New Accounting Standard

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Determining the Initial Carrying Amount for Indefeasible Right of Use Lease Assets and Liabilities

Description of the Matter

As described in Notes 1, 2 and 6 to the consolidated financial statements, as of December 31, 2020, the Company has recorded \$254.3 million and \$219.1 million of indefeasible right of use (IRU) finance lease assets, net, and liabilities, respectively and recorded \$71.6 million of finance lease assets and liabilities additions during the year ended December 31, 2020. The Company makes certain judgments and estimates to determine the initial carrying amount of the asset and lease liabilities at the lease commencement date, which include, among others, the lease term.

Auditing the initial carrying amount of IRU lease assets and liabilities involved subjectivity due to the application of judgment in management's determination of the lease term. For example, management's determination of the lease term included assumptions related to the useful life of IRUs and the expectations regarding exercise or non-exercise of renewal options contained in certain IRU lease agreements. Changes in this assumption may have a material effect on the initial carrying amount of the right-of-use assets or lease liabilities due to the volume of the IRU agreements executed each period.

How We Addressed the Matter in Our Audit

We tested the design and operating effectiveness of the Company's controls over the process to determine the carrying amount of its IRU leases. This included testing controls related to management's assumptions regarding the lease term.

To test the initial carrying amount of right-of-use assets and lease liabilities, our audit procedures included among others, assessing the Company's historical lease option renewals compared to management's assumptions and evaluating industry practice in estimating useful lives compared to those selected by management.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2002
Tysons, VA
February 26, 2021

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2020 AND 2019
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

	2020	2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 371,301	\$ 399,422
Accounts receivable, net of allowance for credit losses of \$1,921 and \$1,771, respectively	44,185	40,484
Prepaid expenses and other current assets	40,851	35,822
Total current assets	456,337	475,728
Property and equipment:		
Property and equipment	1,515,867	1,366,782
Accumulated depreciation and amortization	(1,085,532)	(997,853)
Total property and equipment, net	430,335	368,929
Right-of-use leased assets	99,666	73,460
Deposits and other assets	14,139	14,007
Total assets	\$ 1,000,477	\$ 932,124
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 9,775	\$ 11,075
Accrued and other current liabilities	51,029	51,301
Current maturities, operating lease liabilities	11,151	10,101
Installment payment agreement, current portion, net of discount of \$136 and \$350, respectively	6,786	9,063
Finance lease obligations, current maturities	15,702	8,154
Total current liabilities	94,443	89,694
Senior unsecured 2024 Euro notes, net of unamortized debt costs of \$2,961 and \$1,410, respectively and net of discount of \$1,142 and \$0, respectively	425,160	150,001
Senior secured 2022 notes, net of unamortized debt costs of \$1,052 and \$1,897 respectively and including premium of \$544 and \$985, respectively	444,492	444,088
Senior unsecured 2021 notes, net of unamortized debt costs of \$857	—	188,368
Operating lease liabilities, net of current maturities	111,318	86,690
Finance lease obligations, net of current maturities	203,438	161,635
Other long-term liabilities	14,792	15,327
Total liabilities	1,293,643	1,135,803
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.001 par value; 75,000,000 shares authorized; 47,214,077 and 46,840,434 shares issued and outstanding, respectively	47	47
Additional paid-in capital	515,867	493,178
Accumulated other comprehensive income (loss)	(1,306)	(12,326)
Accumulated deficit	(807,774)	(684,578)
Total stockholders' deficit	(293,166)	(203,679)
Total liabilities and stockholders' equity	\$ 1,000,477	\$ 932,124

The accompanying notes are an integral part of these consolidated balance sheets.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
FOR EACH OF THE THREE YEARS ENDED DECEMBER 31, 2020
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Service revenue	\$ 568,103	\$ 546,159	\$ 520,193
Operating expenses:			
Network operations (including \$1,219, \$994 and \$895 of equity-based compensation expense, respectively), exclusive of amounts shown separately	219,157	219,801	219,526
Selling, general, and administrative (including \$22,306, \$17,466 and \$16,813 of equity-based compensation expense, respectively)	158,476	146,913	133,858
Depreciation and amortization	83,477	80,247	81,233
Total operating expenses	<u>461,110</u>	<u>446,961</u>	<u>434,617</u>
Gains on equipment transactions	352	1,059	982
Losses on lease terminations	(423)	—	—
Operating income	106,922	100,257	86,558
Interest expense	(62,486)	(57,453)	(51,056)
Realized foreign exchange gain on 2024 Euro Notes	2,533	—	—
Unrealized foreign exchange (loss) gain on 2024 Euro Notes	(36,997)	2,271	—
Loss on debt extinguishment and redemption—2021 Notes	(638)	—	—
Interest income and other	978	7,599	5,880
Income before income taxes	10,312	52,674	41,382
Income tax expense	(4,096)	(15,154)	(12,715)
Net income	<u>\$ 6,216</u>	<u>\$ 37,520</u>	<u>\$ 28,667</u>
Comprehensive income:			
Net income	\$ 6,216	\$ 37,520	\$ 28,667
Foreign currency translation adjustment	11,020	(1,398)	(6,328)
Comprehensive income	<u>\$ 17,236</u>	<u>\$ 36,122</u>	<u>\$ 22,339</u>
Basic net income per common share	<u>\$ 0.14</u>	<u>\$ 0.82</u>	<u>\$ 0.63</u>
Diluted net income per common share	<u>\$ 0.13</u>	<u>\$ 0.81</u>	<u>\$ 0.63</u>
Dividends declared per common share	<u>\$ 2.78</u>	<u>\$ 2.44</u>	<u>\$ 2.12</u>
Weighted-average common shares—basic	<u>45,947,772</u>	<u>45,542,315</u>	<u>45,280,161</u>
Weighted-average common shares—diluted	<u>46,668,198</u>	<u>46,080,395</u>	<u>45,780,954</u>

The accompanying notes are an integral part of these consolidated statements.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
FOR EACH OF THE THREE YEARS ENDED DECEMBER 31, 2020
(IN THOUSANDS, EXCEPT SHARE AMOUNTS)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholder's Equity (Deficit)
	Shares	Amount				
Balance at December 31, 2017	<u>45,960,799</u>	<u>\$46</u>	<u>\$456,696</u>	<u>\$ (4,600)</u>	<u>\$(554,686)</u>	<u>\$(102,544)</u>
Cumulative effect adjustment from adoption of ASC 606	—	—	—	—	14,455	14,455
Forfeitures of shares granted to employees	(24,973)	—	—	—	—	—
Equity-based compensation	—	—	19,431	—	—	19,431
Foreign currency translation	—	—	—	(6,328)	—	(6,328)
Issuances of common stock	496,228	—	—	—	—	—
Exercises of options	52,440	—	1,768	—	—	1,768
Common stock purchases and retirement	(147,995)	—	(6,564)	—	—	(6,564)
Dividends paid	—	—	—	—	(97,887)	(97,887)
Net income	—	—	—	—	28,667	28,667
Balance at December 31, 2018	<u>46,336,499</u>	<u>\$46</u>	<u>\$471,331</u>	<u>\$(10,928)</u>	<u>\$(609,451)</u>	<u>\$(149,002)</u>
Forfeitures of shares granted to employees	(12,632)	—	—	—	—	—
Equity-based compensation	—	—	20,210	—	—	20,210
Foreign currency translation	—	—	—	(1,398)	—	(1,398)
Issuances of common stock	473,550	1	—	—	—	1
Exercises of options	43,017	—	1,637	—	—	1,637
Dividends paid	—	—	—	—	(112,647)	(112,647)
Net income	—	—	—	—	37,520	37,520
Balance at December 31, 2019	<u>46,840,434</u>	<u>\$47</u>	<u>\$493,178</u>	<u>\$(12,326)</u>	<u>\$(684,578)</u>	<u>\$(203,679)</u>
Forfeitures of shares granted to employees	(53,428)	—	—	—	—	—
Equity-based compensation	—	—	25,802	—	—	25,802
Foreign currency translation	—	—	—	11,020	—	11,020
Issuances of common stock	476,030	—	—	—	—	—
Exercises of options	30,097	—	1,382	—	—	1,382
Common stock purchases and retirement	(79,056)	—	(4,495)	—	—	(4,495)
Dividends paid	—	—	—	—	(129,412)	(129,412)
Net income	—	—	—	—	6,216	6,216
Balance at December 31, 2020	<u>47,214,077</u>	<u>\$47</u>	<u>\$515,867</u>	<u>\$ (1,306)</u>	<u>\$(807,774)</u>	<u>\$(293,166)</u>

The accompanying notes are an integral part of these consolidated statements.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR EACH OF THE THREE YEARS ENDED DECEMBER 31, 2020
(IN THOUSANDS)

	2020	2019	2018
Cash flows from operating activities:			
Net income	\$ 6,216	\$ 37,520	\$ 28,667
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	83,477	80,247	81,233
Amortization of debt discount and premium	1,894	1,807	1,533
Equity-based compensation expense (net of amounts capitalized)	23,525	18,460	17,708
Unrealized foreign currency exchange loss (gain) on 2024 Euro Notes	36,997	(2,271)	—
Realized foreign currency exchange gain on 2024 Euro Notes	(2,533)	—	—
Loss on extinguishment of 2021 notes	638	—	—
Gains—equipment transactions and other, net	(546)	(358)	(1,109)
Deferred income taxes	282	12,158	11,117
Changes in operating assets and liabilities:			
Accounts receivable	(2,702)	1,067	(3,204)
Prepaid expenses and other current assets	(2,771)	(3,730)	(438)
Deposits and other assets	(873)	(1,131)	(1,490)
Accounts payable, accrued liabilities and other long-term liabilities	(3,284)	5,040	(96)
Net cash provided by operating activities	140,320	148,809	133,921
Cash flows from investing activities:			
Purchases of property and equipment	(55,952)	(46,958)	(49,937)
Net cash used in investing activities	(55,952)	(46,958)	(49,937)
Cash flows from financing activities:			
Net proceeds from issuance of senior 2024 Euro Notes, net of debt costs of \$2,137 and \$1,556, respectively	240,285	152,134	—
Net proceeds from issuance of 2022 Notes, net of debt costs of \$1,364	—	—	69,861
Redemption and extinguishment of 2021 Notes	(189,225)	—	—
Dividends paid	(129,412)	(112,647)	(97,887)
Principal payments of finance lease obligations	(23,990)	(9,097)	(10,286)
Principal payments of installment payment agreement	(10,547)	(10,007)	(9,437)
Purchases of common stock	(4,495)	—	(6,564)
Proceeds from exercises of common stock options	1,382	1,637	1,768
Net cash (used in) provided by financing activities	(116,002)	22,020	(52,545)
Effect of exchange rate changes on cash	3,513	(542)	(2,357)
Net (decrease) increase in cash and cash equivalents	(28,121)	123,329	29,082
Cash and cash equivalents, beginning of year	399,422	276,093	247,011
Cash and cash equivalents, end of year	\$ 371,301	\$ 399,422	\$276,093

The accompanying notes are an integral part of these consolidated statements.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR EACH OF THE THREE YEARS ENDED DECEMBER 31, 2020
(IN THOUSANDS) (Continued)

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Supplemental disclosures of cash flow information:			
Cash paid for interest	\$62,917	\$56,022	\$48,918
Cash paid for income taxes	3,446	3,409	2,444
Non-cash investing and financing activities:			
Finance lease obligations incurred	71,622	14,307	20,050
PP&E obtained for installment payment agreement	5,771	11,255	9,925
Fair value of equipment acquired in leases	536	1,207	—
Non-cash component of network equipment obtained in exchange transactions	320	978	968

The accompanying notes are an integral part of these consolidated statements.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of the business and summary of significant accounting policies:

Reorganization and merger

On May 15, 2014, pursuant to the Agreement and Plan of Reorganization (the “Merger Agreement”) by and among Cogent Communications Group, Inc. (“Group”), a Delaware corporation, Cogent Communications Holdings, Inc., a Delaware corporation (“Holdings”) and Cogent Communications Merger Sub, Inc., a Delaware corporation, Group adopted a new holding company organizational structure whereby Group is now a wholly owned subsidiary of Holdings. Holdings is a “successor issuer” to Group pursuant to Rule 12g-3(a) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). References to the “Company” for events that occurred prior to May 15, 2014 refer to Cogent Communications Group, Inc. and its subsidiaries and on and after May 15, 2014 the “Company” refers to Cogent Communications Holdings, Inc. and its subsidiaries. Cogent Communications, Inc. is wholly owned by Group and the vast majority of Cogent’s assets, contractual arrangements, and operations are executed by Cogent Communications, Inc.

Description of business

The Company is a facilities-based provider of low-cost, high-speed Internet access, private network services, and data center colocation space. The Company’s network is specifically designed and optimized to transmit packet switched data. The Company delivers its services primarily to small and medium-sized businesses, communications service providers and other bandwidth-intensive organizations in 47 countries across North America, Europe, Asia, South America, Australia and Africa. The Company is a Delaware corporation and is headquartered in Washington, DC.

The Company offers on-net Internet access services exclusively through its own facilities, which run from its network to its customers’ premises. The Company offers its on-net services to customers located in buildings that are physically connected to its network. As a result, the Company is not dependent on local telephone companies or cable TV companies to serve its customers for its on-net Internet access and private network service. The Company’s on-net service consists of high-speed Internet access and private network services offered at speeds ranging from 100 megabits per second to 100 gigabits per second.

The Company provides its on-net Internet access and private network services to its corporate and net-centric customers. The Company’s corporate customers are located in multi-tenant office buildings and typically include law firms, financial services firms, advertising and marketing firms, as well as health care providers, educational institutions and other professional services businesses. The Company’s net-centric customers include bandwidth-intensive users that leverage its network to either deliver content to end users or to provide access to residential or commercial internet users. Content delivery customers include over the top (“OTT”) media service providers, content delivery networks, web hosting companies, and commercial content and application software providers. Access customers include access networks comprised of other ISPs, telephone companies, mobile phone operators and cable television companies that collectively provide internet access to a substantial number of broadband subscribers and mobile phone subscribers across the world. These net-centric customers generally receive the Company’s services in carrier neutral colocation facilities and in its data centers. The Company operates data centers throughout North America and Europe that allow its customers to collocate their equipment and access the Company’s network.

In addition to providing on-net services, the Company provides Internet access and private network services to customers that are not located in buildings directly connected to its network. The Company provides these off-net services primarily to corporate customers using other carriers’ circuits to provide the “last mile” portion of the link from the customers’ premises to the Company’s network. The Company also provides certain non-core services that resulted from acquisitions. The Company continues to support but does not actively sell these non-core services.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

Principles of consolidation

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles and include the accounts of the Company and all of its wholly-owned and majority-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of estimates

The preparation of consolidated financial statements in conformity with United States generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from these estimates.

Allowance for credit losses

The Company establishes an allowance for credit losses and other sales credit adjustments related to its trade receivables. Trade receivables are recorded at the invoiced amount and can bear interest. Allowances for sales credits are established through a reduction of revenue, while allowances for credit losses are established through a charge to selling, general, and administrative expenses as bad debt expense. The Company assesses the adequacy of these reserves by evaluating factors, such as the length of time individual receivables are past due, historical collection experience, and changes in the credit worthiness of its customers. The Company also assesses the ability of specific customers to meet their financial obligations and establishes specific allowances related to these customers. If circumstances relating to specific customers change or economic conditions change such that the Company's past collection experience and assessment of the economic environment are no longer appropriate, the Company's estimate of the recoverability of its trade receivables could be impacted. Accounts receivable balances are written-off against the allowance for credit losses after all means of internal collection activities have been exhausted and the potential for recovery is considered remote.

Recent accounting pronouncements—adopted

Effective January 1, 2020, the Company adopted Accounting Standards Update (“ASU”) No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (“ASU 2016-13”) later codified as Accounting Standards Codification (“ASC”) 326 (“ASC 326”), using the modified retrospective transition approach. This guidance introduces a revised approach to the recognition and measurement of credit losses, emphasizing an updated model based on expected losses rather than incurred losses. As of January 1, 2020, the Company maintained an allowance for credit losses to cover its current expected credit losses on its trade receivables arising from the failure of customers to make contractual payments. The Company estimates credit losses expected over the life of its trade receivables based on historical information combined with current conditions that may affect a customer's ability to pay and reasonable and supportable forecasts. While the Company uses various credit quality metrics, it primarily monitors collectability by reviewing the duration of collection pursuits on its delinquent trade receivables. Based on the Company's experience, the customer's delinquency status is the strongest indicator of the credit quality of the underlying trade receivables, which is analyzed monthly. Adoption of ASU 2016-13 did not have a material impact on the Company's consolidated financial statements and related disclosures, and no cumulative adjustment was recorded.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

<u>Description</u>	<u>Balance at Beginning of Period</u>	<u>Current-period Provision for Expected Credit Losses</u>	<u>Write offs Charged Against Allowance</u>	<u>Balance at End of Period</u>
<i>Allowance for credit losses (deducted from accounts receivable)</i>				
Year ending December 31, 2020	\$1,771	\$4,997	\$(4,847)	\$1,921
Year ending December 31, 2019	\$1,263	\$6,190	\$(5,682)	\$1,771
Year ending December 31, 2018	\$1,499	\$4,115	\$(4,351)	\$1,263

The current-period provision for expected credit losses is net of bad debt recoveries of \$1.2 million, \$1.9 million and \$0.9 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Leases

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (“ASU 2016-02”). ASU 2016-02 replaced most existing lease accounting guidance. In July 2018, the FASB approved an Accounting Standards Update which, among other changes, allowed a company to elect to adopt ASU 2016-02 using the modified retrospective method applying the transition provisions at the beginning of the period of adoption, rather than at the beginning of the earliest comparative period presented in these financial statements. ASU 2016-02 was effective for the Company beginning on January 1, 2019 and required the Company to record a right-of-use asset and a lease liability for most of its facilities leases. These leases were previously treated as operating leases. The Company adopted ASU 2016-02 using the optional transition method whereby the new lease requirements under ASU 2016-02 were recorded through a cumulative-effect adjustment, which after completing the implementation analysis, did not result in an adjustment to the Company’s January 1, 2019 beginning retained earnings balance. The effect of ASU 2016-02 was to record a cumulative-effect adjustment on January 1, 2019 as a right-of-use asset and an operating lease liability totaling \$97.3 million. The operating lease liability is not considered a liability under the consolidated leverage ratio calculations in the indentures governing the Company’s senior unsecured and senior secured note obligations. The Company has made an accounting policy election to not apply the recognition requirements of ASU 2016-02 to its short-term leases—leases with a term of one year or less. The Company has also elected to apply certain practical expedients under ASU 2016-02 including not separating lease and nonlease components on its finance and operating leases, not reassessing whether any existing contracts contained leases, not reconsidering lease classification, not reassessing initial direct costs and using hindsight in determining the lease reasonably certain term of its leases.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

	Year Ended December 31, 2020	Year Ended December 31, 2019
Finance lease cost amortization of right-of-use assets	\$ 22,850	\$ 19,823
Interest expense on finance lease liabilities	18,892	17,709
Operating lease cost	17,362	15,688
Total lease costs	59,104	53,220
<i>Other lease information</i>		
<i>Cash paid for amounts included in the measurement of lease liabilities</i>		
Operating cash flows from finance leases	(19,121)	(17,959)
Operating cash flows from operating leases	(18,664)	(17,106)
Financing cash flows from finance leases	(23,990)	(9,097)
Right-of-use assets obtained in exchange for new finance lease liabilities	71,622	14,307
Right-of-use assets obtained in exchange for new operating lease liabilities	35,659	9,754
Weighted-average remaining lease term—finance leases (in years)	12.4	14.3
Weighted-average remaining lease term—operating leases (in years)	20.2	21.9
Weighted average discount rate—finance leases	10.3%	11.0%
Weighted average discount rate—operating leases	5.6%	5.6%

Finance leases—fiber lease agreements

The Company has entered into lease agreements with numerous providers of dark fiber under indefeasible-right-of use agreements (“IRUs”). These IRUs typically have initial terms of 15 – 20 years and include renewal options after the initial lease term. The Company establishes the number of renewal option periods used in determining the lease term based upon its assessment at the inception of the lease of the number of option periods for which failure to renew the lease imposes a penalty in such amount that renewal appears to be reasonably certain. The option to renew may be automatic, at the option of the Company or mutually agreed to between the dark fiber provider and the Company. Once the Company has accepted the related fiber route, leases that meet the criteria for treatment as finance leases are recorded as a finance lease obligation and an IRU asset. The interest rate used in determining the present value of the aggregate future minimum lease payments is the Company’s incremental borrowing rate for the reasonably certain lease term. The determination of the Company’s incremental borrowing rate requires judgment. The Company determines its incremental borrowing rate for each lease using its current borrowing rate, adjusted for various factors including level of collateralization and term to align with the term of the lease. Finance lease assets are included in property and equipment in the Company’s consolidated balance sheets. As of December 31, 2020, the Company had committed to additional dark fiber IRU lease agreements totaling \$21.0 million in future payments to be paid over periods of up to 20 years. These obligations begin when the related fiber is accepted, which is generally expected to occur in the next 12 months.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

The future minimum payments (principal and interest) under these finance leases are as follows (in thousands):

<u>For the Twelve Months Ending December 31,</u>	
2021	\$ 34,246
2022	33,269
2023	32,353
2024	32,614
2025	27,399
Thereafter	<u>232,145</u>
Total minimum finance lease obligations	392,026
Less—amounts representing interest	<u>(172,886)</u>
Present value of minimum finance lease obligations	219,140
Current maturities	<u>(15,702)</u>
Finance lease obligations, net of current maturities	<u>\$ 203,438</u>

Operating leases

The Company leases office space and certain data center facilities under operating leases. In certain cases the Company also enters into short-term operating leases for dark fiber. Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments under the lease. Operating lease right-of-use assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the reasonably certain lease term. The implicit rates within the Company's operating leases are generally not determinable and the Company uses its incremental borrowing rate at the lease commencement date to determine the present value of its lease payments. The determination of the Company's incremental borrowing rate requires judgment. The Company determines its incremental borrowing rate for each lease using its current borrowing rate, adjusted for various factors including level of collateralization and term to align with the term of the lease. The determination of the Company's incremental borrowing rate requires judgment. The Company determines its incremental borrowing rate for each lease using its current borrowing rate, adjusted for various factors including level of collateralization and term to align with the term of the lease. Certain of the Company's leases include options to extend or terminate the lease. The Company establishes the number of renewal option periods used in determining the operating lease term based upon its assessment at the inception of the operating lease of the number of option periods for which failure to renew the lease imposes a penalty in such amount that renewal appears to be reasonably certain. The option to renew may be automatic, at the option of the Company or mutually agreed to between the landlord or dark fiber provider and the Company. Once the Company has accepted the related fiber route or the facility lease term has begun, the present value of the aggregate future minimum operating lease payments is recorded as an operating lease liability and a right-of-use leased asset. Lease incentives and deferred rent liabilities for facilities operating leases are presented with the right-of-use leased asset. Lease expense for lease payments is recognized on a straight-line basis over the term of the lease.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

The future minimum payments under these operating lease agreements are as follows (in thousands):

<u>For the Twelve Months Ending December 31,</u>	
2021	\$ 17,755
2022	16,391
2023	16,490
2024	15,007
2025	12,554
Thereafter	<u>118,157</u>
Total minimum operating lease obligations	196,354
Less—amounts representing interest	<u>(73,885)</u>
Present value of minimum operating lease obligations	122,469
Current maturities	<u>(11,151)</u>
Lease obligations, net of current maturities	<u>\$111,318</u>

Revenue recognition

The Company recognizes revenue under ASU No. 2014-09, *Revenue from Contracts with Customers* (“ASC 606”), which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. Under ASC 606 installation fees for contracts with terms longer than month-to-month are recognized over the contract term. The Company believes that the installation fee does not give rise to a material right as defined by ASC 606 for contracts with terms longer than month-to-month. The Company recognizes revenue over the estimated average customer life for installation fees associated with month-to-month contracts, because the installation fee represents a material right as defined by ASC 606. The Company capitalizes certain contract acquisition costs that relate directly to a customer contract, including commissions paid to its sales team and sales agents and amortizes these costs on straight-line basis over the period the services are transferred to the customer for commissions paid to its sales team (estimated customer life) and over the remaining original contract term for agent commissions. Management assesses these costs for impairment at least quarterly and as “triggering” events occur that indicate it is more likely than not that an impairment exists. These contract costs were \$20.6 million as of December 31, 2020 and were \$18.7 million as of December 31, 2019.

The Company’s service offerings consist of on-net and off-net telecommunications services. Fixed fees are billed monthly in advance and usage fees are billed monthly in arrears. Amounts billed are due upon receipt and contract lengths range from month to month to 60 months. The Company satisfies its performance obligations to provide services to customers over time as the services are rendered. In accordance with ASC 606, revenue is recognized when a customer obtains the promised service. The amount of revenue recognized reflects the consideration to which the Company expects to be entitled to receive in exchange for these services. The Company has adopted the practical expedient related to certain performance obligation disclosures since it has a right to consideration from its customer in an amount that corresponds directly with the value to the customer of the Company’s performance completed to date.

To achieve this core principle, the Company follows the following five steps:

- 1) Identification of the contract, or contracts with a customer
- 2) Identification of the performance obligations in the contract
- 3) Determination of the transaction price

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

- 4) Allocation of the transaction price to the performance obligations in the contract
- 5) Recognition of revenue when, or as, we satisfy a performance obligation

Fees billed in connection with customer installations are deferred (as deferred revenue) and recognized as noted above. To the extent a customer contract is terminated prior to its contractual end the customer is subject to termination fees. The Company vigorously seeks payment of these amounts. The Company recognizes revenue for these amounts as they are collected. Service revenue recognized from amounts in deferred revenue (contract liabilities) at the beginning of the period during the years ended December 31, 2020, 2019 and 2018 was \$4.4 million, \$4.4 million and \$5.0 million, respectively. Amortization expense for contract costs for the years ended December 31, 2020, 2019 and 2018 was \$17.1 million, \$17.3 million and \$16.8 million, respectively.

Gross receipts taxes, universal service fund and other surcharges

Revenue recognition standards include guidance relating to taxes or surcharges assessed by a governmental authority that are directly imposed on a revenue-producing transaction between a seller and a customer and may include, but are not limited to, gross receipts taxes, excise taxes, Universal Service Fund fees and certain state regulatory fees. Such charges may be presented gross or net based upon the Company's accounting policy election. The Company records certain excise taxes and surcharges on a gross basis and includes them in its revenues and costs of network operations. Excise taxes and surcharges billed to customers and recorded on a gross basis (as service revenue and network operations expense) were \$15.1 million, \$14.9 million, and \$12.5 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Network operations

Network operations expenses include the costs of personnel and related operating expenses associated with service delivery, network management, and customer support, network facilities costs, fiber and equipment maintenance fees, leased circuit costs, access fees paid to building owners and certain excise taxes and surcharges recorded on a gross basis. The Company estimates its accruals for any disputed leased circuit obligations based upon the nature and age of the dispute. Network operations costs are impacted by the timing and amounts of disputed circuit costs. The Company generally records these disputed amounts when billed by the vendor and reverses these amounts when the vendor credit has been received or the dispute has otherwise been resolved. The Company does not allocate depreciation and amortization expense to its network operations expense.

Foreign currency translation adjustment and comprehensive income

The consolidated financial statements of the Company's non-US operations are translated into US dollars using the period-end foreign currency exchange rates for assets and liabilities and the average foreign currency exchange rates for revenues and expenses. Gains and losses on translation of the accounts are accumulated and reported as a component of other comprehensive income in stockholders' equity. The Company's only components of "other comprehensive income" are currency translation adjustments for all periods presented. The Company considers the majority of its investments in its foreign subsidiaries to be long-term in nature. The Company's foreign exchange transaction gains (losses) are included within interest income and other on the consolidated statements of comprehensive income.

Financial instruments

The Company considers all highly liquid investments with an original maturity of three months or less at purchase to be cash equivalents. The Company determines the appropriate classification of its investments at the time of purchase and evaluates such designation at each balance sheet date.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

At December 31, 2020 and December 31, 2019, the carrying amount of cash and cash equivalents, accounts receivable, prepaid and other current assets, accounts payable, and accrued expenses approximated fair value because of the short-term nature of these instruments. The Company measures its cash equivalents at amortized cost, which approximates fair value based upon quoted market prices (Level 1). Based upon recent trading prices (Level 2—market approach) at December 31, 2020 the fair value of the Company’s \$445.0 million senior secured notes due 2022 was \$458.4 million and the fair value of the Company’s €350.0 million (\$429.3 million) senior unsecured notes due 2024 was \$437.8 million.

Concentrations of credit risk

The Company’s assets that are exposed to credit risk consist of its cash and cash equivalents, other assets and accounts receivable. As of December 31, 2020 and 2019, the Company’s cash equivalents were invested in demand deposit accounts, overnight investments and money market funds. The Company places its cash equivalents in instruments that meet high-quality credit standards as specified in the Company’s investment policy guidelines. Accounts receivable are due from customers located in major metropolitan areas in the United States, Europe, Canada, Mexico, Asia, South America, Australia and Africa. Receivables from the Company’s net-centric (wholesale) customers are generally subject to a higher degree of credit risk than the Company’s corporate customers.

The Company relies upon an equipment vendor for the majority of its network equipment and is also dependent upon many third-party fiber providers for providing its services to its customers.

Property and equipment

Property and equipment are recorded at cost and depreciated once deployed using the straight-line method over the estimated useful lives of the assets. Useful lives are determined based on historical usage with consideration given to technological changes and trends in the industry that could impact the asset utilization. System infrastructure costs include the capitalized compensation costs of employees directly involved with construction activities and costs incurred by third-party contractors.

Assets and liabilities under finance leases are recorded at the lesser of the present value of the aggregate future minimum lease payments or the fair value of the assets under lease. Leasehold improvements include costs associated with building improvements. The Company determines the number of renewal option periods, if any, included in the lease term for purposes of amortizing leasehold improvements and the lease term of its finance leases based upon its assessment at the inception of the lease for which the failure to renew the lease imposes a penalty on the Company in such amount that a renewal appears to be reasonably assured. Expenditures for maintenance and repairs are expensed as incurred.

Depreciation and amortization periods are as follows:

<u>Type of asset</u>	<u>Depreciation or amortization period</u>
Indefeasible rights of use (IRUs)	Shorter of useful life or the IRU lease agreement; generally 15 to 20 years
Network equipment	3 to 8 years
Leasehold improvements	Shorter of lease term, including reasonably assured renewal periods, or useful life
Software	5 years
Owned buildings	40 years
Office and other equipment	3 to 7 years
System infrastructure	5 to 10 years

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

Long-lived assets

The Company's long-lived assets include property and equipment. These long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Impairment is determined by comparing the carrying value of these long-lived assets to management's probability weighted estimate of the future undiscounted cash flows expected to result from the use of the assets. In the event an impairment exists, a loss is recognized based on the amount by which the carrying value exceeds the fair value of the asset, which would be determined by using quoted market prices or valuation techniques such as the discounted present value of expected future cash flows, appraisals, or other pricing models. In the event there are changes in the planned use of the Company's long-term assets or the Company's expected future undiscounted cash flows are reduced significantly, the Company's assessment of its ability to recover the carrying value of these assets could change.

Equity-based compensation

The Company recognizes compensation expense for its share-based payments granted to its employees based on their grant date fair values with the expense being recognized on a straight-line basis over the requisite service period. The Company begins recording equity-based compensation expense related to performance awards when it is considered probable that the performance conditions will be met and for market-based awards compensation cost is recognized if the service condition is satisfied even if the market condition is not satisfied. Equity-based compensation expense is recognized in the statement of operations in a manner consistent with the classification of the employee's salary and other compensation.

Income taxes

The Company's deferred tax assets or liabilities are computed based upon the differences between financial statement and income tax bases of assets and liabilities using the enacted marginal tax rate. Deferred income tax expenses or benefits are based upon the changes in the assets or liability from period to period. At each balance sheet date, the Company assesses the likelihood that it will be able to realize its deferred tax assets. Valuation allowances are established when management determines that it is "more likely than not" that some portion or all of the deferred tax asset may not be realized. The Company considers all available positive and negative evidence in assessing the need for a valuation allowance including its historical operating results, ongoing tax planning, and forecasts of future taxable income, on a jurisdiction by jurisdiction basis. The Company reduces its valuation allowance if the Company concludes that it is "more likely than not" that it would be able to realize its deferred tax assets.

Management determines whether a tax position is more likely than not to be sustained upon examination based on the technical merits of the position. Once it is determined that a position meets this recognition threshold, the position is measured to determine the amount of benefit to be recognized in the financial statements. The Company adjusts its estimated liabilities for uncertain tax positions periodically because of ongoing examinations by, and settlements with, the various taxing authorities, as well as changes in tax laws, regulations and interpretations. The Company's policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of its income tax expense.

Basic and diluted net income per common share

Basic earnings per share ("EPS") excludes dilution for common stock equivalents and is computed by dividing net income or (loss) available to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted EPS is based on the weighted-average number of shares of common stock outstanding during each period, adjusted for the effect of dilutive common stock equivalents.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Description of the business and summary of significant accounting policies: (Continued)

Shares of restricted stock are included in the computation of basic EPS as they vest and are included in diluted EPS, to the extent they are dilutive, determined using the treasury stock method.

The following details the determination of the diluted weighted average shares:

	Year Ended December 31, 2020	Year Ended December 31, 2019	Year Ended December 31, 2018
Weighted average common shares—basic	45,947,772	45,542,315	45,280,161
Dilutive effect of stock options	80,849	32,222	33,134
Dilutive effect of restricted stock	639,577	505,858	467,659
Weighted average common shares—diluted . . .	<u>46,668,198</u>	<u>46,080,395</u>	<u>45,780,954</u>

The following details unvested shares of restricted common stock as well as the anti-dilutive effects of stock options and restricted stock awards outstanding:

	December 31, 2020	December 31, 2019	December 31, 2018
Unvested shares of restricted common stock . .	1,339,596	1,283,281	1,187,586
Anti-dilutive options for common stock	32,324	39,608	53,114
Anti-dilutive shares of restricted common stock	223,118	348	3,545

2. Property and equipment:

Property and equipment consisted of the following (in thousands):

	December 31,	
	2020	2019
Owned assets:		
Network equipment	\$ 611,265	\$ 566,936
Leasehold improvements	241,379	227,388
System infrastructure	148,533	134,726
Software	10,609	10,035
Office and other equipment	19,611	18,169
Building	1,376	1,252
Land	116	106
	<u>1,032,889</u>	<u>958,612</u>
Less—Accumulated depreciation and amortization	(856,859)	(790,033)
	176,030	168,579
Assets under finance leases:		
IRUs	482,978	408,170
Less—Accumulated depreciation and amortization	(228,673)	(207,820)
	<u>254,305</u>	<u>200,350</u>
Property and equipment, net	<u>\$ 430,335</u>	<u>\$ 368,929</u>

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. Property and equipment: (Continued)

Depreciation and amortization expense related to property and equipment and finance leases was \$83.5 million, \$80.2 million and \$81.2 million, for 2020, 2019 and 2018, respectively.

The Company capitalizes the compensation cost of employees directly involved with its construction activities. In 2020, 2019 and 2018, the Company capitalized compensation costs of \$12.1 million, \$10.7 million and \$10.5 million, respectively. These amounts are included in system infrastructure costs.

Exchange agreement

In 2020, 2019 and 2018 the Company exchanged certain used network equipment and cash consideration for new network equipment. The fair value of the new network equipment received was estimated to be \$1.1 million, \$3.3 million and \$3.2 million, respectively, resulting in gains of \$0.3 million, \$1.0 million and \$1.0 million, respectively. The estimated fair value of the equipment received was based upon the cash consideration price the Company pays for the new network equipment on a standalone basis (Level 3).

Installment payment agreement

The Company has entered into an installment payment agreement (“IPA”) with a vendor. Under the IPA the Company was able to purchase network equipment in exchange for interest free note obligations each with a twenty-four month term. There are no payments under each note obligation for the first six months followed by eighteen equal installment payments for the remaining eighteen month term. As of December 31, 2020 and December 31, 2019, there was \$7.7 million and \$12.5 million, respectively, of note obligations outstanding under the IPA, secured by the related equipment. The Company recorded the assets purchased and the present value of the note obligation utilizing an imputed interest rate. The resulting discounts totaling \$0.1 million and \$0.4 million as of December 31, 2020 and December 31, 2019, respectively, under the note obligations are being amortized over the note term using the effective interest rate method.

3. Accrued and other liabilities:

Accrued and other current liabilities consist of the following (in thousands):

	December 31,	
	2020	2019
Operating accruals	\$24,168	\$23,695
Deferred revenue—current portion	4,651	4,316
Payroll and benefits	8,024	6,613
Taxes—non-income based	5,918	6,053
Interest	8,268	10,624
Total	\$51,029	\$51,301

4. Long-term debt:

Issuance of 2024 Notes

In June 2020, Group completed an offering of €215.0 million aggregate principal amount of 4.375% senior unsecured notes due 2024 (“2024 Notes”). The net proceeds from the June 2020 offering, after deducting offering expenses, were \$240.3 million. In June 2019, Group completed an offering of €135.0 million aggregate principal amount of 2024 Notes. The net proceeds from the June 2019 offering, after deducting offering expenses, were \$152.1 million. The Company expects to use the proceeds from these offerings for general corporate purposes , to repay debt obligations, to repurchase the Company’s common stock or for

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. Long-term debt: (Continued)

special or recurring dividends to the Company's stockholders. The 2024 Notes are guaranteed (the "Guarantees") on a senior unsecured basis, jointly and severally, by the Company's material domestic subsidiaries, subject to certain exceptions, and by the Company (collectively, the "Guarantors"). Under certain circumstances, the Guarantors may be released from these Guarantees without the consent of the holders of the 2024 Notes.

The 2024 Notes and the Guarantees are Group's and the Guarantors' senior unsecured obligations. The 2024 Notes and the Guarantees are effectively subordinated to all of Group's and the Guarantors' existing and future secured indebtedness to the extent of the value of the collateral securing such indebtedness, and are structurally subordinated to all indebtedness and other liabilities of subsidiaries that are not Guarantors. Without giving effect to collateral arrangements, the 2024 Notes and the Guarantees rank *pari passu* in right of payment with Group's and the Guarantors' existing and future senior indebtedness. The 2024 Notes and the Guarantees rank contractually senior in right of payment to all of Group's and the Guarantors' existing and future subordinated indebtedness.

The 2024 Notes were offered and sold only to persons reasonably believed to be qualified institutional buyers in an unregistered offering pursuant to Rule 144A under the Securities Act of 1933, as amended (the "Act"), and to certain non-U.S. persons in transactions outside the United States in compliance with Regulation S under the Act. The 2024 Notes have not been registered under the Act, and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements. The 2024 Notes are listed on the Official List of The International Stock Exchange; however, there can be no assurance that the listing will be maintained.

The 2024 Notes bear interest at a rate of 4.375% per annum and will be paid semi-annually in arrears on June 30 and December 30 of each year. Unless earlier redeemed, the 2024 Notes will mature on June 30, 2024. The 2024 Notes were issued in Euros and are reported in the Company's reporting currency—US Dollars. As of December 31, 2019, the 2024 Notes were valued at \$151.4 million resulting in an unrealized gain on foreign exchange of \$2.3 million for the year ended December 31, 2019. As of December 31, 2020, the 2024 Notes were valued at \$429.3 million resulting in an unrealized loss on foreign exchange of \$37.0 million for the year ended December 31, 2020.

Group may redeem some or all of the 2024 Notes at any time prior to June 30, 2021 at a price equal to 100% of the principal amount of the 2024 Notes, plus a "make-whole" premium as set forth in the indenture, plus accrued and unpaid interest, if any, to, but not including, the date of redemption. Thereafter, Group may redeem the 2024 Notes, in whole or in part, at a redemption price ranging from 102.188% to par (depending on the year), as set forth in the indenture. Group may also redeem up to 35% of the principal amount of the 2024 Notes using proceeds of certain equity offerings completed prior to June 30, 2021 at a redemption price equal to 104.375%, plus accrued and unpaid interest, if any, to, but not including, the date of redemption, subject to certain exceptions. Group may also redeem the 2024 Notes, in whole but not in part, in the event of certain changes in the tax laws of the United States (or any taxing authority in the United States). This redemption would be at 100% of the principal amount of the 2024 Notes to be redeemed (plus any accrued interest and additional amounts then payable with respect to the 2024 Notes to, but not including, the redemption date).

If Group undergoes specific kinds of change in control accompanied by certain ratings events, it will be required to offer to repurchase the 2024 Notes from holders at a price equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any, to, but not including, the date of repurchase. Additionally, if Group or any of its restricted subsidiaries sells assets and does not apply the proceeds from such sale in a certain manner or certain other events have not occurred, under certain circumstances, Group will be required to use the excess net proceeds to make an offer to purchase the 2024 Notes at an offer price in cash equal to 100% of the principal amount of the 2024 Notes, plus accrued and unpaid interest, if any, to, but not including, the repurchase date.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. Long-term debt: (Continued)

In connection with any offer to purchase all or any of the 2024 Notes (including a change of control offer, asset sale offer or any tender offer), if holders of no less than 90% of the aggregate principal amount of the 2024 Notes validly tender their 2024 Notes, Group or a third party is entitled to redeem any remaining 2024 Notes at the price offered to each holder.

The 2024 Notes indenture includes covenants that restrict Group and its restricted subsidiaries' ability to, among other things: incur indebtedness; issue certain preferred stock or similar equity securities; pay dividends or make other distributions in respect of, or repurchase or redeem, capital stock; make certain investments and other restricted payments, such as prepayment, redemption or repurchase of certain indebtedness; create liens; consolidate, merge, sell or otherwise dispose of all or substantially all of the assets of Group and its restricted subsidiaries taken as a whole; incur restrictions on the ability of a subsidiary to pay dividends or make other payments; and enter into transactions with affiliates. However, the covenants provide for certain exceptions to these restrictions and the Company is not subject to the covenants under the 2024 Notes indenture. Certain covenants will cease to apply to the 2024 Notes if, and for so long as, the 2024 Notes have investment grade ratings from any two of Moody's Investors Service, Inc., Fitch Ratings, Inc. and S&P Global Ratings and so long as no default or event of default under the Indenture has occurred and is continuing.

The principal amount of the 2024 Notes would become immediately due and payable upon the occurrence of certain bankruptcy or insolvency events involving Group or certain of its subsidiaries, and may be declared immediately due and payable by the trustee or the holders of at least 25% of the aggregate principal amount of the then-outstanding 2024 Notes upon the occurrence of certain events of default under the indenture.

Senior secured notes - \$445.0 million 2022 Notes

In February 2015, Group issued \$250.0 million of 5.375% senior secured notes due 2022 (the "2022 Notes"). The net proceeds from the offering were \$248.6 million after deducting discounts and offering costs. In December 2016, the Company issued an additional \$125.0 million par value of its 2022 Notes at a premium of 100.375% of par value. The Company received net proceeds of \$124.3 million after deducting offering costs. In August 2018, the Company issued an additional \$70.0 million par value of its 2022 Notes at a premium of 101.75% of par value. The Company received net proceeds of \$69.9 million after deducting offering costs. The premium and offering costs are amortized to interest expense to the maturity date using the effective interest rate method. The net proceeds from these offerings are intended to be used for general corporate purposes.

The 2022 Notes were sold in private offerings for resale to qualified institutional buyers pursuant to SEC Rule 144A and mature on March 1, 2022. Interest accrues at 5.375% and is paid semi-annually in arrears on March 1 and September 1 of each year. The indenture governing the 2022 Notes provides that the Company and each of the Company's existing domestic subsidiaries and future material domestic subsidiaries guarantee the 2022 Notes, subject to certain exceptions and permitted liens. The 2022 Notes are also secured by a pledge of all of the equity interests in Group's domestic subsidiaries and 65% of the equity interests in Group's first-tier foreign subsidiaries. The 2022 Notes and the subsidiary guarantees will be the Company's and the subsidiary guarantors' senior indebtedness and will rank *pari passu* in right of payment with all of the Company's and the subsidiary guarantors' existing and future senior indebtedness, effectively senior to Group's senior unsecured indebtedness to the extent of the value of the collateral securing the 2022 Notes and the subsidiary guarantees, and senior to any of the Company's and the subsidiary guarantors' future subordinated indebtedness. The 2022 Notes are structurally subordinated to the liabilities of the non-guarantor subsidiaries and are effectively subordinated to the Company's and the subsidiary guarantors' secured indebtedness to the extent of the value of the collateral securing such indebtedness on a basis senior to the 2022 Notes and the subsidiary guarantees. Holdings is also a guarantor of the 2022

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. Long-term debt: (Continued)

Notes; however Holdings' guarantee is unsecured and thus its guarantee is not secured by any of Holdings assets. Holdings is also not subject to the covenants under the indenture governing the 2022 Notes.

The 2022 Notes may be redeemed prior to December 1, 2021 (three months prior to the maturity date of the Notes) in whole or from time to time in part, at a redemption price equal to the sum of (1) 100% of the principal amount plus accrued and unpaid interest, if any, to, but not including, the redemption date, and (2) a make-whole premium, if any. The make-whole premium is the excess of (1) the net present value, on the redemption date, of the principal being redeemed or paid and the amount of interest (exclusive of interest accrued to the date of redemption) that would have been payable if such redemption had not been made, over (2) the aggregate principal amount of the notes being redeemed or paid. Net present value shall be determined by discounting, on a semi-annual basis, such principal and interest at the reinvestment rate (as determined in the indenture governing the 2022 Notes) from the respective dates on which such principal and interest would have been payable if such redemption had not been made. In addition, at any time on or after December 1, 2021 (three months prior to the maturity date of the 2022 Notes), the Issuer may redeem the 2022 Notes, in whole and or in part, at a redemption price equal to 100% of the principal amount of the 2022 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the redemption date.

Senior unsecured notes—\$189.2 million 2021 Notes

On April 9, 2014, Cogent Communications Finance, Inc. (“Cogent Finance”), a newly formed financing subsidiary of Group, completed an offering at par of \$200.0 million in aggregate principal amount of 5.625% Senior Notes due 2021 (the “2021 Notes”). The 2021 Notes were sold in private offerings for resale to qualified institutional buyers pursuant to SEC Rule 144A, accrued interest at a rate of 5.625% and were to mature on April 15, 2021. Interest was paid semi-annually on April 15 and October 15. Cogent Finance merged with Group, with Group continuing as the surviving corporation (the “Finance Merger”). At the time of consummation of the Finance Merger, Group assumed the obligations of Cogent Finance under the 2021 Notes and the indenture governing the 2021 Notes (the “Indenture”) and Group and each of Group's domestic subsidiaries became party to the Indenture pursuant to a supplemental indenture to the Indenture and the obligations under the Indenture became obligations solely of Group and each of Group's domestic subsidiaries. Holdings also provided a guarantee of the 2021 Notes but Holdings was not subject to the covenants under the Indenture. In the second quarter of 2016, the Company paid \$10.9 million for the purchase of \$10.8 million of par value and accrued interest on its 2021 Notes reducing the principal amount to \$189.2 million.

Debt extinguishment and redemption 2021 Notes

In June 2020, Group redeemed the 2021 Notes with the proceeds from its June 2020 issuance of 2024 Notes. The Company redeemed the entire outstanding amount of the 2021 Notes at a redemption price of 100.00% of the \$189.2 million principal amount plus \$1.6 million of accrued interest. As a result of this transaction, the Company incurred a loss on debt extinguishment and redemption of \$0.6 million from the amortization of the remaining unamortized notes cost and certain transaction expenses.

Limitations under the indentures

The indentures governing the 2024 Notes and 2022 Notes, among other things, limit the Company's ability to incur indebtedness; to pay dividends or make other distributions; to make certain investments and other restricted payments; to create liens; consolidate, merge, sell or otherwise dispose of all or substantially all of its assets; to incur restrictions on the ability of a subsidiary to pay dividends or make other payments; and to enter into certain transactions with its affiliates. Limitations on the ability to incur additional indebtedness (excluding IRU agreements incurred in the normal course of business) include a restriction on

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. Long-term debt: (Continued)

incurring additional indebtedness if the Company's consolidated leverage ratio, as defined in the indentures, is greater than 6.0 for the 2024 Notes and greater than 5.0 for the 2022 Notes. Limitations on the ability to incur additional secured indebtedness include a restriction on incurring additional secured indebtedness if the Company's consolidated secured leverage ratio, as defined in the indentures, is greater than 4.0 for the 2024 Notes and greater than 3.5 for the 2022 Notes. The indentures prohibit certain payments, such as dividends and stock purchases, when the Company's consolidated leverage ratio, as defined by the indentures, is greater than 4.25. A certain amount of such unrestricted payments is permitted notwithstanding this prohibition. The unrestricted payment amount may be increased by the Company's consolidated cash flow, as defined in the indentures, as long as the Company's consolidated leverage ratio is less than 4.25. The Company's consolidated leverage ratio was above 4.25 as of December 31, 2020. As of December 31, 2020, a total of \$94.0 million was permitted for investment payments including dividends and stock purchases.

Long-term debt maturities

The aggregate future contractual maturities of long-term debt were as follows as of December 31, 2020 (in thousands):

<u>For the year ending December 31,</u>	
2021	\$ 6,922
2022	445,790
2023	—
2024	429,263
2025	—
Thereafter	—
Total	<u>\$881,975</u>

5. Income taxes:

The components of income before income taxes consist of the following (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
Domestic	\$ 23,808	\$ 72,773	\$ 63,878
Foreign	<u>(13,496)</u>	<u>(20,099)</u>	<u>(22,496)</u>
Total income before income taxes	<u>\$ 10,312</u>	<u>\$ 52,674</u>	<u>\$ 41,382</u>

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Income taxes: (Continued)

The income tax expense is comprised of the following (in thousands):

	<u>Years Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
<i>Current:</i>			
Federal	\$ 32	\$ —	\$ —
State	(2,908)	(2,647)	(1,522)
Foreign	(947)	(370)	(75)
<i>Deferred:</i>			
Federal	(1,867)	(10,899)	(9,746)
State	1,241	(1,285)	(802)
Foreign	353	47	(570)
Total income tax expense	<u>\$ (4,096)</u>	<u>\$ (15,154)</u>	<u>\$ (12,715)</u>

Our consolidated temporary differences comprising our net deferred tax assets are as follows (in thousands):

	<u>December 31,</u>	
	<u>2020</u>	<u>2019</u>
<i>Deferred Tax Assets:</i>		
Net operating loss carry-forwards	\$ 273,999	\$ 255,269
Tax credits	1,965	2,261
Equity-based compensation	4,901	4,116
Operating leases	40,081	32,289
Total gross deferred tax assets	320,946	293,935
Valuation allowance	(150,589)	(131,069)
	<u>170,357</u>	<u>162,866</u>
<i>Deferred Tax Liabilities:</i>		
Depreciation and amortization	37,364	34,884
Accrued liabilities and other	105,554	107,711
Right-of-use assets	37,097	29,670
Gross deferred tax liabilities	180,015	172,265
Net deferred tax liabilities	<u>\$ 9,658</u>	<u>\$ 9,399</u>

At each balance sheet date, the Company assesses the likelihood that it will be able to realize its deferred tax assets. The Company considers all available positive and negative evidence in assessing the need for a valuation allowance. The Company maintains a full valuation allowance against certain of its deferred tax assets consisting primarily of net operating loss carryforwards related to its foreign operations in Europe, Asia, South America, Australia and Africa and net operating losses in the United States that are limited for use under Section 382 of the Internal Revenue Code.

As of December 31, 2020, the Company has combined net operating loss carry-forwards of \$1.1 billion. This amount includes federal net operating loss carry-forwards in the United States of \$60.3 million, net operating loss carry-forwards related to its European operations of \$1.0 billion and \$5.3 million related to

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Income taxes: (Continued)

its other international operations. Section 382 of the Internal Revenue Code in the United States limits the utilization of net operating losses when ownership changes, as defined by that section, occur. The Company has performed an analysis of its Section 382 ownership changes and has determined that the utilization of certain of its net operating loss carryforwards in the United States is limited based on the annual Section 382 limitation and remaining carryforward period. Of the net operating losses available at December 31, 2020 in the United States \$32.0 million are limited for use under Section 382. Net operating loss carryforwards outside of the United States totaling \$1.0 billion are not subject to limitations similar to Section 382. The net operating loss carryforwards in the United States will expire, if unused, between 2025 and 2036. The net operating loss carry-forwards related to the Company's European operations include \$870.0 million that do not expire and \$153.9 million that expire between 2021 and 2036.

The Company has not provided for United States deferred income taxes or foreign withholding taxes on its undistributed earnings for certain non-US subsidiaries earnings or cumulative translation adjustments because these earnings and adjustments are intended to be permanently reinvested in operations outside the United States. It is not practical to determine the amount of the unrecognized deferred tax liability on such undistributed earnings or cumulative translation adjustments.

In the normal course of business the Company takes positions on its tax returns that may be challenged by taxing authorities. The Company evaluates all uncertain tax positions to assess whether the position will more likely than not be sustained upon examination. If the Company determines that the tax position is not more likely than not to be sustained, the Company records a liability for the amount of the benefit that is not more likely than not to be realized when the tax position is settled. The Company does not have a material liability for uncertain tax positions at December 31, 2020 and does not expect that its liability for uncertain tax positions will materially increase during the twelve months ended December 31, 2021, however, actual changes in the liability for uncertain tax positions could be different than currently expected. If recognized, changes in the Company's total unrecognized tax benefits would impact the Company's effective income tax rate.

The Company or one of its subsidiaries files income tax returns in the US federal jurisdiction and various state and foreign jurisdictions. The Company is subject to US federal tax and state tax examinations for years 2004 to 2020. The Company is subject to tax examinations in its foreign jurisdictions generally for years 2005 to 2020.

The following is a reconciliation of the Federal statutory income taxes to the amounts reported in the financial statements (in thousands).

	<u>Years Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
Federal income tax expense at statutory rates	\$(2,166)	\$(11,061)	\$ (8,690)
Effect of:			
State income taxes, net of federal benefit	(1,091)	(2,973)	(2,665)
Impact of foreign operations	(365)	(505)	(694)
Non-deductible expenses	(411)	(491)	(1,218)
Tax effect of TCJA from foreign earnings	(66)	(28)	(130)
Other	32	(32)	—
Changes in valuation allowance	(29)	(64)	682
Income tax expense	<u>\$(4,096)</u>	<u>\$(15,154)</u>	<u>\$(12,715)</u>

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Commitments and contingencies:

Current and potential litigation

In accordance with the accounting guidance for contingencies, the Company accrues its estimate of a contingent liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Where it is probable that a liability has been incurred and there is a range of expected loss for which no amount in the range is more likely than any other amount, the Company accrues at the low end of the range. The Company reviews its accruals at least quarterly and adjusts them to reflect the impact of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular matter. The Company has taken certain positions related to its obligations for leased circuits for which it is reasonably possible could result in a loss of up to \$3.3 million in excess of the amount accrued at December 31, 2020.

The Company is engaged in an arbitration proceeding in Spain in which a former provider of optical fiber to the Company is seeking approximately \$9.0 million for Company's early termination of the optical fiber leases, which amount the Company accrued in 2015. The Company has counterclaimed for damages and is contesting its obligation to pay the termination liability. The arbitration is being conducted by the Civil and Commercial Arbitration Court (CIMA) in Madrid, Spain.

In the ordinary course of business the Company is involved in other legal activities and claims. Because such matters are subject to many uncertainties and the outcomes are not predictable with assurance, the liability related to these legal actions and claims cannot be determined with certainty. Management does not believe that such claims and actions will have a material impact on the Company's financial condition or results of operations. Judgment is required in estimating the ultimate outcome of any dispute resolution process, as well as any other amounts that may be incurred to conclude the negotiations or settle any litigation. Actual results may differ from these estimates under different assumptions or conditions and such differences could be material.

Network equipment sites and data center facilities

The Company enters into leases for network equipment sites and for space in data center facilities. Future minimum annual payments under these arrangements are as follows (in thousands):

<u>For the year ending December 31,</u>	
2021	\$19,235
2022	8,531
2023	5,586
2024	3,119
2025	1,240
Thereafter	<u>1,690</u>
	<u>\$39,401</u>

Expenses related to these arrangements were \$21.0 million in 2020, \$20.6 million in 2019 and \$20.8 million in 2018.

Unconditional purchase obligations

Unconditional purchase obligations for equipment and services totaled \$10.6 million at December 31, 2020. As of December 31, 2020, the Company had also committed to additional dark fiber IRU capital and operating lease agreements totaling \$21.0 million in future payments to be paid over periods of up to 20 years. These obligations begin when the related fiber is accepted, which is generally expected to occur in 2021.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Commitments and contingencies: (Continued)

Future minimum payments under these obligations are \$2.5 million, \$0.8 million, \$0.7 million, \$0.7 million and \$0.7 million for the years ending December 31, 2021 to December 31, 2025, respectively, and \$15.6 million, thereafter.

Defined contribution plan

The Company sponsors a 401(k) defined contribution plan that provides for a Company matching payment. The Company matching payments were paid in cash and were \$0.9 million for 2020, \$0.8 million for 2019 and \$0.8 million for 2018.

7. Stockholders' equity:

Authorized shares

The Company has 75.0 million shares of authorized \$0.001 par value common stock and 10,000 authorized but unissued shares of \$0.001 par value preferred stock. The holders of common stock are entitled to one vote per common share and, subject to any rights of any series of preferred stock, dividends may be declared and paid on the common stock when determined by the Company's Board of Directors.

Common stock buybacks

The Company's Board of Directors has approved \$50.0 million for purchases of the Company's common stock under a buyback program (the "Buyback Program"). At December 31, 2020, there was \$30.4 million remaining for purchases under the Buyback Program. During 2020 and 2018 the Company purchased 79,056 and 147,995 shares of its common stock for \$4.5 million and \$6.6 million, respectively. These shares of common stock were subsequently retired. There were no purchases of common stock in 2019.

Dividends on common stock

Dividends are recorded as a reduction to retained earnings. Dividends on unvested restricted shares of common stock are paid as the awards vest. The payment of any future dividends and any other returns of capital, including stock buybacks, will be at the discretion of the Company's Board of Directors and may be reduced, eliminated or increased and will be dependent upon the Company's financial position, results of operations, available cash, cash flow, capital requirements, limitations under the Company's debt indentures and other factors deemed relevant by the Company's Board of Directors. The Company is a Delaware Corporation and under the General Corporate Law of the State of Delaware distributions may be restricted including a restriction that distributions, including stock purchases and dividends, do not result in an impairment of a corporation's capital, as defined under Delaware Law. The indentures governing the Company's notes limit the Company's ability to return cash to its stockholders.

8. Stock option and award plan:

Incentive award plan

The Company grants restricted stock and options for common stock under its award plan, as amended (the "Award Plan"). Stock options granted under the Award Plan generally vest over a four-year period and have a term of ten years. Grants of shares of restricted stock granted under the Award Plan generally vest over periods ranging from three to four years. Compensation expense for all awards is recognized on a straight-line basis over the service period. Awards with graded vesting terms that are subject only to service conditions are recognized on a straight-line basis. Certain option and share grants provide for accelerated vesting if there is a change in control, as defined. For grants of restricted stock, when an employee terminates

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Stock option and award plan: (Continued)

prior to full vesting the employee retains their vested shares and the employees' unvested shares are returned to the plan. For grants of options for common stock, when an employee terminates prior to full vesting, the employee may elect to exercise their vested options for a period of ninety days and any unvested options are returned to the plan. Shares issued to satisfy awards are provided from the Company's authorized shares. The vesting of certain shares granted to the Company's executives is subject to certain performance conditions and the vesting of certain shares granted to the Company's CEO is subject to the total shareholder return of the Company's common stock compared to the total shareholder return of the Nasdaq Telecommunications Index and, for the shares granted to the Company's CEO in 2020, equal portions of the shares are also subject to the Company's growth rate in revenue and the Company's growth rate in cash flow from operating activities, with each portion of the performance-based equity award subject to a cap and no shares earned if performance with respect to a target is less than zero.

The accounting for equity-based compensation expense requires the Company to make estimates and judgments that affect its financial statements. These estimates for stock options include the following.

Expected Dividend Yield—The Company uses an expected dividend yield based upon expected annual dividends and the Company's stock price.

Expected Volatility—The Company uses its historical volatility for a period commensurate with the expected term of the option.

Risk-Free Interest Rate—The Company uses the zero coupon US Treasury rate during the quarter having a term that most closely resembles the expected term of the option.

Expected Term of the Option—The Company estimates the expected life of the option term by analyzing historical stock option exercises.

Forfeiture Rates—The Company estimates its forfeiture rate based on historical data with further consideration given to the class of employees to whom the options or shares were granted.

The weighted-average per share grant date fair value of options was \$13.21 in 2020, \$8.92 in 2019 and \$8.45 in 2018. The following assumptions were used for determining the fair value of options granted in the three years ended December 31, 2020:

<u>Black-Scholes Assumptions</u>	<u>Years Ended December 31,</u>		
	<u>2020</u>	<u>2019</u>	<u>2018</u>
Dividend yield	3.4%	4.5%	4.6%
Expected volatility	31.5%	28.3%	28.7%
Risk-free interest rate	1.1%	2.5%	2.5%
Expected life of the option term (in years)	4.2	4.3	4.4

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

8. Stock option and award plan: (Continued)

Stock option activity under the Company's Award Plan during the year ended December 31, 2020, was as follows:

	<u>Number of Options</u>	<u>Weighted-Average Exercise Price</u>
Outstanding at December 31, 2019	156,666	\$46.21
Granted	73,148	\$74.90
Cancelled and expired	(39,837)	\$67.45
Exercised—intrinsic value \$0.8 million; cash received \$1.4 million	<u>(30,097)</u>	\$45.94
Outstanding at December 31, 2020—\$1.7 million intrinsic value and 6.9 years weighted-average remaining contractual term	<u>159,880</u>	\$54.09
Exercisable at December 31, 2020—\$1.5 million intrinsic value and 5.9 years weighted-average remaining contractual term	<u>100,050</u>	\$47.63
Expected to vest—\$1.6 million intrinsic value and 6.7 years weighted-average remaining contractual term	<u>144,490</u>	\$52.71

A summary of the Company's non-vested restricted stock awards as of December 31, 2020 and the changes during the year ended December 31, 2020 are as follows:

<u>Non-vested awards</u>	<u>Shares</u>	<u>Weighted-Average Grant Date Fair Value</u>
Non-vested at December 31, 2019	1,283,281	\$45.40
Granted	476,030	\$75.18
Vested	(366,287)	\$46.13
Forfeited	(53,428)	\$47.55
Non-vested at December 31, 2020	<u>1,339,596</u>	<u>\$55.70</u>

The weighted average per share grant date fair value of restricted stock granted was \$75.18 in 2020 (0.5 million shares), \$53.53 in 2019 (0.5 million shares) and \$44.02 in 2018 (0.5 million shares). The fair value was determined using the quoted market price of the Company's common stock on the date of grant. Valuations were obtained to determine the fair value for the shares granted to the Company's CEO that are subject to the total shareholder return of the Company's common stock compared to the total shareholder return of the Nasdaq Telecommunications Index. The fair value of shares of restricted stock vested in 2020, 2019 and 2018 was \$25.4 million, \$20.8 million and \$19.1 million, respectively.

Equity-based compensation expense related to stock options and restricted stock was \$23.5 million, \$18.5 million, and \$17.7 million for 2020, 2019, and 2018, respectively. The income tax benefit related to stock options and restricted stock was \$4.2 million, \$3.0 million, and \$1.8 million for 2020, 2019, and 2018, respectively. The Company capitalized compensation expense related to stock options and restricted stock for 2020, 2019, and 2018 of \$2.3 million, \$1.8 million and \$1.7 million, respectively. As of December 31, 2020, there was \$40.7 million of total unrecognized compensation cost related to non-vested equity-based compensation awards. That cost is expected to be recognized over a weighted average period of 2.0 years.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. Related party transactions:

Office lease

The Company's headquarters is located in an office building owned by Sodium LLC whose owner is the Company's Chief Executive Officer. The fixed annual rent for the headquarters building is \$1.0 million per year plus an allocation of taxes and utilities. The lease began in May 2015 and the lease term was for five years. In February 2020 the lease term was extended to May 2025. The lease is cancellable at no cost by the Company upon 60 days' notice. The Company's audit committee reviews and approves all transactions with related parties. The Company paid \$1.7 million in 2020, \$1.7 million in 2019 and \$1.7 million in 2018 for rent and related costs (including taxes and utilities) for this lease.

10. Geographic information:

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing the Company's performance. The Company has one operating segment. Revenues are attributed to regions based on where the services are provided. Below are the Company's service revenues and long lived assets by geographic region (in thousands):

<u>Year Ended December 31, 2020</u>	<u>On-net</u>	<u>Off-net</u>	<u>Non-core</u>	<u>Total</u>
North America	\$330,924	\$129,879	\$474	\$461,277
Europe	79,568	17,252	47	96,867
Asia Pacific	6,834	949	—	7,783
South America	2,056	48	—	2,104
Africa	72	—	—	72
Total	<u>\$419,454</u>	<u>\$148,128</u>	<u>\$521</u>	<u>\$568,103</u>
<u>Year Ended December 31, 2019</u>	<u>On-net</u>	<u>Off-net</u>	<u>Non-core</u>	<u>Total</u>
North America	\$319,330	\$131,815	\$422	\$451,567
Europe	72,320	16,323	53	88,696
Asia Pacific	4,615	778	—	5,393
South America	488	15	—	503
Total	<u>\$396,753</u>	<u>\$148,931</u>	<u>\$475</u>	<u>\$546,159</u>
<u>Year Ended December 31, 2018</u>	<u>On-net</u>	<u>Off-net</u>	<u>Non-core</u>	<u>Total</u>
North America	\$299,021	\$128,510	\$572	\$428,103
Europe	72,958	15,918	62	88,938
Asia Pacific	2,562	576	—	3,138
South America	14	—	—	14
Total	<u>\$374,555</u>	<u>\$145,004</u>	<u>\$634</u>	<u>\$520,193</u>
		<u>December 31,</u>	<u>December 31,</u>	
		<u>2020</u>	<u>2019</u>	
<i>Long lived assets, net</i>				
North America		\$306,652	\$269,364	
Europe and other		123,699	99,582	
Total		<u>\$430,351</u>	<u>\$368,946</u>	

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. Quarterly financial information (unaudited):

	Three months ended			
	March 31, 2020	June 30, 2020	September 30, 2020	December 31, 2020
	(in thousands, except share and per share amounts)			
Service revenue	\$ 140,915	\$ 140,990	\$ 142,302	\$ 143,901
Network operations, including equity-based compensation expense	55,921	53,886	54,519	54,829
Operating income	25,850	27,574	26,036	27,384
Net income (loss)(1)	9,227	8,564	(6,555)	(6,620)
Net income (loss) per common share—basic . . .	0.20	0.19	(0.11)	(0.14)
Net income (loss) per common share—diluted . .	0.20	0.18	(0.11)	(0.14)
Weighted-average number of common shares— basic	45,658,565	45,754,880	45,815,718	45,904,943
Weighted-average number of common shares— diluted	46,391,066	46,686,665	45,815,718	45,904,943

	Three months ended			
	March 31, 2019	June 30, 2019	September 30, 2019	December 31, 2019
	(in thousands, except share and per share amounts)			
Service revenue	\$ 134,137	\$ 134,789	\$ 136,942	\$ 140,292
Network operations, including equity-based compensation expense	54,150	54,407	55,253	55,990
Operating income	24,400	22,022	25,799	28,033
Net income(2)	9,217	7,136	13,701	7,465
Net income per common share—basic and diluted	0.20	0.16	0.30	0.16
Weighted-average number of common shares— basic	45,223,157	45,354,327	45,438,656	45,553,727
Weighted-average number of common shares— diluted	45,644,236	45,912,291	46,019,691	46,145,970

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- (1) Included in net income (loss) for the three months ended March 31, 2020, June 30, 2020, September 30, 2020 and December 31, 2020 are unrealized gains and (losses) on foreign exchange on the Company's 2024 Notes of \$2.9 million, (\$3.4) million, (\$17.3) million and \$(19.2) million, respectively. Included in net income for the three months ended June 30, 2020 was a realized gain on foreign exchange on the Company's 2024 Notes of \$2.5 million.
- (2) Included in net income for the three months ended September 30, 2019 and December 31, 2019 are an unrealized gain (loss) on foreign exchange on the Company's 2024 Notes of \$6.1 million and (\$4.0) million, respectively.

COGENT COMMUNICATIONS HOLDINGS, INC., AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

12. Subsequent Events:

Dividend

On February 24, 2021, the Company's Board of Directors approved the payment of a quarterly dividend of \$0.755 per common share. The dividend for the first quarter of 2021 will be paid to holders of record on March 12, 2021. This estimated \$34.6 million dividend payment is expected to be made on March 26, 2021.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by SEC Rule 13a-15(b), an evaluation was performed under the supervision and with the participation of our management, including our principal executive officer and our principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, our management, including our principal executive officer and our principal financial officer, concluded that the design and operation of these disclosure controls and procedures were effective at the reasonable assurance level.

There has been no change in our internal control over financial reporting during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

We are responsible for the preparation and integrity of our published financial statements. The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America and, accordingly, include amounts based on judgments and estimates made by our management. We also prepared the other information included in the annual report and are responsible for its accuracy and consistency with the financial statements.

We are responsible for establishing and maintaining a system of internal control over financial reporting, which is intended to provide reasonable assurance to our management and Board of Directors regarding the reliability of our financial statements. The system includes but is not limited to:

- a documented organizational structure and division of responsibility;
- established policies and procedures, including a code of conduct to foster a strong ethical climate which is communicated throughout the company;
- regular reviews of our financial statements by qualified individuals; and
- the careful selection, training and development of our people.

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention or overriding of controls. Also, the effectiveness of an internal control system may change over time. We have implemented a system of internal control that was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles.

As required by Rule 13a-15(d) of the Exchange Act, we have assessed our internal control system in relation to criteria for effective internal control over financial reporting described in "Internal Control—Integrated Framework" issued by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission (2013 Framework). Based upon these criteria, we believe that, as of December 31, 2020, our system of internal control over financial reporting was effective.

The independent registered public accounting firm, Ernst & Young LLP, has audited our 2020 financial statements. Ernst & Young LLP was given unrestricted access to all financial records and related data, including minutes of all meetings of stockholders, the Board of Directors and committees of the Board. Ernst & Young LLP has issued an unqualified report on our 2020 financial statements as a result of the audit and also has issued an unqualified report on our internal control over financial reporting which is attached hereto.

Cogent Communications Holdings, Inc.
February 26, 2021

By: /s/ DAVID SCHAEFFER
 David Schaeffer
 Chief Executive Officer

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Cogent Communications Holdings, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Cogent Communications Holdings, Inc. and subsidiaries' internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Cogent Communications Holdings, Inc. and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Cogent Communications Holdings, Inc. and subsidiaries as of December 31, 2020 and 2019, the related consolidated statements of comprehensive income (loss), changes in stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and financial statement schedule listed in the Index at Item 15(a)2 (collectively referred to as the "consolidated financial statements") and our report dated February 26, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk

that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Tysons, VA
February 26, 2021

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10 is incorporated in this report by reference to the information set forth under the captions entitled “Proposal No. 1—Election of Directors,” “Executive Officers and Significant Employees,” “The Board of Directors and Committees,” and, if applicable, “Delinquent Section 16(a) Reports” in our Proxy Statement for the 2021 Annual Meeting of Stockholders, which is expected to be filed with the Securities and Exchange Commission within 120 days after the close of our fiscal year (the “2021 Proxy Statement”).

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item 11 is incorporated in this report by reference to the information set forth under the captions entitled “The Board of Directors and Committees,” “Compensation Discussion and Analysis,” “Employment Agreements and Potential Post-Employment Compensation Arrangements,” “Compensation Committee Report” and “Compensation Committee Interlocks and Insider Participation” in our 2021 Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item 12 is incorporated in this report by reference to the information set forth under the caption “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance Under Equity Compensation Plan” in our 2021 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this Item 13 is incorporated in this report by reference to the information set forth under the caption “Certain Relationships and Related Transactions” and “The Board of Directors and Committees” in our 2021 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 is incorporated in this report by reference to the information set forth under the caption “Relationship With Independent Registered Public Accountants” in our 2021 Proxy Statement.

PART IV

ITEM 15. EXHIBIT AND FINANCIAL STATEMENT SCHEDULES

- (a) 1. Financial Statements. A list of financial statements included herein is set forth in the Index to Financial Statements appearing in “ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.”
2. Financial Statement Schedules. The Financial Statement Schedule described below is filed as part of the report.

Description

Schedule II—Valuation and Qualifying Accounts.

All other financial statement schedules are not required under the relevant instructions or are inapplicable and therefore have been omitted.

(b) Exhibits

- 2.1 Agreement and Plan of Reorganization, dated as of May 15, 2014, by and among Cogent Communications Group, Inc., Cogent Communications Holdings, Inc. and Merger Sub (previously filed as Exhibit 2.1 to our Current Report on Form 8-K, filed on May 15, 2014, and incorporated herein by reference).
- 3.1 Certificate of Incorporation of Cogent Communications Holdings, Inc. (previously filed as Exhibit 3.1 to our Current Report on Form 8-K, filed on May 15, 2014, and incorporated herein by reference).
- 3.2 Bylaws of Cogent Communications Holdings, Inc., as amended and restated on September 10, 2018 (previously filed as Exhibit 3.2 to our Current Report on Form 8-K/A, filed on September 10, 2018, and incorporated herein by reference).
- 4.1 Indenture to the 5.625% Senior Notes due 2021, dated as of April 9, 2014, between Cogent Communications Finance, Inc. (to which Cogent Communications Group, Inc. is successor by merger) and Wilmington Trust, National Association, as trustee (filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on April 10, 2014, and incorporated herein by reference).
- 4.2 Form of 5.625% Senior Notes due 2021 (previously filed as Exhibit A to the Exhibit 4.1 to our Current Report on Form 8-K, filed on April 10, 2014, and incorporated herein by reference).
- 4.3 First Supplemental Indenture related to the 5.625% Senior Notes due 2021, dated as of June 23, 2014, among Cogent Communications Group, Inc., Cogent Communications Holdings, Inc., the subsidiary guarantors named therein and Wilmington Trust, National Association, as trustee (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on June 26, 2014, and incorporated herein by reference).
- 4.4 Indenture related to the 5.375% Senior Secured Notes due 2022, dated as of February 20, 2015, among Cogent Communications Group, Inc., the guarantors named therein and Wilmington Trust, National Association, as trustee and collateral agent (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on February 20, 2015 and incorporated herein by reference).
- 4.5 Form of 5.375% Senior Secured Notes due 2022 (previously filed as Exhibit A to the Exhibit 4.1 to our Current Report on Form 8-K, filed on February 20, 2015 and incorporated herein by reference).
- 4.6 First Supplemental Indenture related to the 5.375% Senior Secured Notes due 2022, dated as of December 2, 2016, among Cogent Communications Group, Inc., the guarantors named therein and Wilmington Trust, National Association, as trustee and collateral agent (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on December 2, 2016 and incorporated herein by reference).
- 4.7 Second Supplemental Indenture related to the 5.375% Senior Secured Notes due 2022, dated as of August 20, 2018, among Cogent Communications Group, Inc., the guarantors named therein and

- Wilmington Trust, National Association, as trustee and collateral agent (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on August 20, 2018 and incorporated herein by reference).
- 4.8 Indenture related to the 4.375% Senior Notes due 2024, dated as of June 25, 2019, among Cogent Communications Group, Inc., the guarantors named therein, Wilmington Trust, National Association, as trustee, Deutsche Bank AG, London Branch, as paying agent, and Deutsche Bank Luxembourg S.A., as authentication agent and registrar (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on June 25, 2019, and incorporated herein by reference).
- 4.9 Form of 4.375% Senior Notes due 2024 (previously filed as Exhibit A to the Exhibit 4.1 to our Current Report on Form 8-K, filed on June 25, 2019, and incorporated herein by reference).
- 4.10 First Supplemental Indenture to the Base Indenture, dated as of June 10, 2020, among Cogent Communications Group, Inc., the guarantors named therein and Wilmington Trust, National Association, as trustee (previously filed as Exhibit 4.4 to our Current Report on Form 8-K, filed on June 10, 2020, and incorporated herein by reference).
- 4.11 Indenture related to the 4.375% Senior Notes due 2024, dated as of June 3, 2020, among Cogent Communications Finance, Inc., Wilmington Trust, National Association, as trustee, Deutsche Bank AG, London Branch, as paying agent, and Deutsche Bank Trust Company Americas, as authentication agent and registrar (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on June 9, 2020, and incorporated herein by reference).
- 4.12 Form of 4.375% Senior Notes due 2024 (previously filed as Exhibit A to the Exhibit 4.1 to our Current Report on Form 8-K, filed on June 9, 2020, and incorporated herein by reference).
- 4.13 First Supplemental Indenture to the Temporary Indenture, dated as of June 10, 2020, between Cogent Communications Group, Inc. and Wilmington Trust, National Association, as trustee (previously filed as Exhibit 4.1 to our Current Report on Form 8-K, filed on June 10, 2020, and incorporated herein by reference).
- 4.14 Description of Securities Registered under Section 12 of the Securities Exchange Act of 1934 (previously filed as Exhibit 4.10 to our Annual Report on Form 10-K for the year ended December 31, 2019, filed on February 28, 2020, and incorporated herein by reference).
- 10.1 Dark Fiber IRU Agreement, dated April 14, 2000, between WilTel Communications, Inc. and Cogent Communications, Inc., as amended June 27, 2000, December 11, 2000, January 26, 2001, and February 21, 2001 (previously filed as Exhibit 10.2 to our Registration Statement on Form S-4, Commission File No. 333-71684, filed on October 16, 2001, and incorporated herein by reference).*
- 10.2 David Schaeffer Employment Agreement with Cogent Communications Group, Inc., dated February 7, 2000 (previously filed as Exhibit 10.6 to our Registration Statement on Form S-4, Commission File No. 333-71684, filed on October 16, 2001, and incorporated herein by reference).
- 10.3 Timothy G. O'Neill Employment Agreement with Cogent Communications Group, Inc., dated as of September 25, 2003 (previously filed as Exhibit 10.29 to our Annual Report on Form 10-K, filed on February 27, 2012, and incorporated herein by reference).
- 10.4 Brad Kummer Employment Agreement with Cogent Communications Group, Inc., dated January 11, 2000, (previously filed as Exhibit 10.23 to our Registration Statement on Form S-1, Commission File No. 333-122821, filed on February 14, 2005, and incorporated herein by reference).
- 10.5 David Schaeffer Amendment No. 2 to Employment Agreement with Cogent Communications Group, Inc., dated as of March 12, 2007 (previously filed as Exhibit 10.26 to our Annual Report on Form 10-K, filed on March 14, 2007, and incorporated herein by reference).
- 10.6 Thaddeus G. Weed Employment Agreements, dated September 25, 2003 through October 26, 2006 (previously filed as Exhibit 10.28 to our Annual Report on Form 10-K, filed on March 14, 2007, and incorporated herein by reference).
- 10.7 Amendment No. 3 to Employment Agreement of Dave Schaeffer, dated as of August 7, 2007 (previously filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q, filed on August 8, 2007, and incorporated herein by reference).

- 10.8 Amendment No. 4 to Employment Agreement of Dave Schaeffer, dated as of February 26, 2010 (previously filed as Exhibit 10.25 to our Annual Report on Form 10-K, filed on March 1, 2010, and incorporated herein by reference).
- 10.9 Amendment No. 5 to Employment Agreement of Dave Schaeffer, dated April 7, 2010 (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on April 7, 2010, and incorporated herein by reference).
- 10.10 Cogent Communications Holdings, Inc. 2004 Incentive Award Plan (as amended through April 17, 2014) (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed April 18, 2014, and incorporated herein by reference).
- 10.11 Assignment and Assumption Agreement, dated as of May 15, 2014, by and between Cogent Communications Group, Inc. and Cogent Communications Holdings, Inc. assuming the obligations of the 2004 Incentive Award Plan (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on May 15, 2014, and incorporated herein by reference).
- 10.12 Amendment No. 6 to Employment Agreement of Dave Schaeffer, dated August 6, 2014 (previously filed as Exhibit 10.4 to our Quarterly Report on Form 10-Q, filed on August 7, 2014, and incorporated herein by reference).
- 10.13 Lease Agreement, dated April 16, 2015, between Sodium LLC and Cogent Communications, Inc. (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on April 17, 2015, and incorporated herein by reference).
- 10.14 First Amendment to Lease Agreement, dated February 28, 2020, between Sodium LLC and Cogent Communications, Inc. (previously filed as Exhibit 10.2 to our Current Report on Form 8-K, filed on March 2, 2020, and incorporated herein by reference).
- 10.15 Restricted Stock Award, dated as of May 3, 2017, between the Company and David Schaeffer (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on May 3, 2017, and incorporated herein by reference).
- 10.16 Form of Restricted Stock Award, dated as of May 3, 2017, between the Company and the Vice President named executive officers (previously filed as Exhibit 10.2 to our Current Report on Form 8-K, filed on May 3, 2017, and incorporated herein by reference).
- 10.17 Amendment No. 7 to Employment Agreement of David Schaeffer, dated November 17, 2017 (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on November 20, 2017, and incorporated herein by reference).
- 10.18 Cogent Communications Holdings, Inc. 2017 Incentive Award Plan (previously filed as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed March 15, 2019, and incorporated herein by reference).
- 10.19 First Amendment to Cogent Communications Holdings, Inc. 2018 Incentive Award Plan (previously filed as Appendix B of the Company's Definitive Proxy Statement on Schedule 14A filed March 15, 2019, and incorporated herein by reference).
- 10.20 Amendment No. 8 to Employment Agreement of David Schaeffer, dated February 14, 2020 (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on February 19, 2020, and incorporated herein by reference).
- 10.21 Restricted Stock Award, dated as of February 14, 2020, between the Company and David Schaeffer (previously filed as Exhibit 10.2 to our Current Report on Form 8-K, filed on February 19, 2020, and incorporated herein by reference).
- 10.22 Employment Letter between the Company and Sean Wallace, effective April 22, 2020 (previously filed as Exhibit 10.1 to our Current Report on Form 8-K, filed on May 11, 2020, and incorporated herein by reference).
- 10.23 Restricted Stock Award, dated May 11, 2020, between the Company and Sean Wallace (previously filed as Exhibit 10.2 to our Current Report on Form 8-K, filed on May 11, 2020, and incorporated herein by reference).

- 10.24 Severance Agreement, dated May 11, 2020, between the Company and Sean Wallace (previously filed as Exhibit 10.3 to our Current Report on Form 8-K, filed on May 11, 2020, and incorporated herein by reference).
- 21.1 Subsidiaries (filed herewith)
- 23.1 Consent of Ernst & Young LLP (filed herewith)
- 31.1 Certification of Chief Executive Officer (filed herewith)
- 31.2 Certification of Chief Financial Officer (filed herewith)
- 32.1 Certification of Chief Executive Officer (furnished herewith)
- 32.2 Certification of Chief Financial Officer (furnished herewith)
- 99.1 Policy Against Excise Tax Gross-ups on “Golden Parachute” Payments, with effect from April 7, 2010 (previously filed as Exhibit 99.1 to our Current Report on Form 8-K, filed on April 7, 2010, and incorporated herein by reference).
- 101 The following materials from the Annual Report on Form 10-K of Cogent Communications Group, Inc. for the year ended December 31, 2020, formatted in iXBRL (Inline eXtensible Business Reporting Language); (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Comprehensive Income (Loss), (iii) Consolidated Statements of Changes in Stockholders’ Equity (Deficit), (iv) Consolidated Statements of Cash Flows and (v) Notes to Consolidated Financial Statements.
- 104 Cover Page Interactive Data File (the cover page XBRL tags are embedded within the iXBRL document).

* Confidential treatment requested and obtained as to certain portions. Portions have been omitted pursuant to this request where indicated by an asterisk.

Schedule II
COGENT COMMUNICATIONS HOLDINGS, INC. AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS
(in thousands)

<u>Description</u>	<u>Balance at Beginning of Period</u>	<u>Charged to Costs and Expenses</u>	<u>(Deductions)</u>	<u>Balance at End of Period</u>
<i>Deferred tax valuation allowance</i>				
Year ended December 31, 2018	\$129,673	\$ 2,138	\$(5,232)	\$126,579
Year ended December 31, 2019	\$126,579	\$ 5,785	\$(1,295)	\$131,069
Year ended December 31, 2020	\$131,069	\$20,599	\$(1,079)	\$150,589

ITEM 16. FORM 10-K SUMMARY

None

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

COGENT COMMUNICATIONS HOLDINGS, INC.

Dated: February 26, 2021

By: /s/ DAVID SCHAEFFER

Name: David Schaeffer

Title: *Chairman and Chief Executive Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ DAVID SCHAEFFER</u> David Schaeffer	Chairman and Chief Executive Officer (Principal Executive Officer)	February 26, 2021
<u>/s/ SEAN WALLACE</u> Sean Wallace	Vice President, Chief Financial Officer and Treasurer (Principal Financial and Principal Accounting Officer)	February 26, 2021
<u>/s/ CAROLYN KATZ</u> Carolyn Katz	Director	February 26, 2021
<u>/s/ STEVEN BROOKS</u> Steven Brooks	Director	February 26, 2021
<u>/s/ SHERYL KENNEDY</u> Sheryl Kennedy	Director	February 26, 2021
<u>/s/ DAVID BLAKE BATH</u> David Blake Bath	Director	February 26, 2021
<u>/s/ MARC MONTAGNER</u> Marc Montagner	Director	February 26, 2021
<u>/s/ LEWIS H. FERGUSON III</u> Lewis H. Ferguson III	Director	February 26, 2021