



LUMEN[®]

**2021 ANNUAL REPORT
2022 PROXY STATEMENT**



Our Story

We are an international facilities-based technology and communications company focused on providing our business and residential customers with a broad array of integrated services and solutions necessary to fully empower our customers in a rapidly evolving digital world, which is undergoing the “4th Industrial Revolution” or simply “4IR”.

We operate one of the world's most interconnected networks. Our platform empowers our customers to rapidly adjust their digital programs to meet immediate demands, create efficiencies, accelerate market access and reduce costs. This allows customers to rapidly evolve their information, communications and technology programs to address dynamic changes without distraction from their core competencies. By empowering our customers to rapidly acquire, analyze and act on data, we are furthering human progress through technology and enabling our customers to thrive in the 4IR.

Our Purpose

Lumen's purpose to further human progress through technology is guided by our belief that humanity is at its best when technology advances the way we live and work.

We believe realizing our purpose depends on continuing to listen to the voice of our employees. We strive to meet our Employee Value Proposition, which includes attracting and retaining amazing people, promoting high quality people leaders, fostering an inclusive and flexible environment, maintaining a culture of recognition and rewarding outstanding achievement. Our Unifying Principles remain the foundation on which we build value. Going forward, our Success Enablers of Owning our Commitments, Growing Lumen, Ourselves & Others, and Being Inclusive are key to Lumen's success.

SUCCESS ENABLERS



**Own
commitments**



Grow
YOURSELF | OTHERS | LUMEN



Be inclusive



CEO Letter

Dear Fellow Shareholders

As we close the books on 2021, we look forward to what the future holds for Lumen. We ended the year strong, driving continued sales momentum as enterprise customers see the value of the Lumen Platform to meet their needs to acquire, analyze, and act on data. We are continuing to augment the Lumen Platform, enabling new technologies and expanding our addressable market opportunity.

We are confident in our ability to grow revenue in the coming years as we are seeing early traction with edge compute and our Quantum Fiber build plan. Quantum Fiber enablements are expected to ramp in 2022 from our 400,000 location historical run rate to as many as 1.5 to 2 million locations exiting the year. The broadband penetration rate of our Quantum Fiber-enabled locations is already more than double that of our copper-enabled locations. 2022 is an investment year for Lumen. We expect to improve our product portfolio and go-to-market initiatives as we drive towards revenue growth. At the same time, we will continue investing to transform our delivery model to optimize both customer experience and operational efficiency.

CHANGES IN YEAR 2 OF COVID-19

The ongoing pandemic continued to impact individuals and enterprises around the globe in 2021. With the lessons learned through our response in 2020, Lumen has transformed how we operate. But amidst all the change, one thing remained constant: we never lost sight of the importance of providing scalable, flexible connectivity to our customers. It is what we do best and is fundamental to our purpose of “furthering human progress through technology.”

As an organization, we have demonstrated that many of our employees can work virtually from anywhere. As we pivot to what the future of work looks like for Lumen, manager enablement is critical. We have focused on leveraging forums to engage directly with our people leaders to ensure they have the tools, resources and information needed to be successful and lead their teams. The future of work we envision for Lumen continues to focus on supporting and enabling our customers and employees and meeting their needs in a post-COVID-19 world.

We have recently begun bringing employees back to the office while also allowing more flexibility to meet the needs of our organization and our workforce. We expect approximately 60% of our workforce to work remotely or maintain a hybrid schedule. Our localized approach and commitment to managing the needs of our customers, the organization and our employees will not waiver.

DIVESTITURE TRANSACTIONS

On July 25, 2021, we entered into a definitive agreement to divest our Latin American business to affiliates of Stonepeak Partners LP in exchange for \$2.7 billion cash, subject to adjustments and related transaction expenses.

On August 3, 2021, we entered into a definitive agreement to divest our incumbent local exchange (“ILEC”) business conducted within 20 Midwestern and Southern states to affiliates of Apollo Global Management, Inc. in exchange for \$7.5 billion, subject to offsets for assumed indebtedness, taxes, transaction expenses, and other customary purchase price adjustments.

The transaction to divest our Latin American business will unlock value for our shareholders while allowing us to maintain our global presence through our strategic relationship with Stonepeak Partners LP, who will operate the independent, U.S. headquartered portfolio company. The transaction allows Lumen to focus investments in key areas of the business to drive future growth while providing flexibility for our capital allocation strategy.

We also believe the transaction to sell our ILEC business is an important step in our continued efforts to transform Lumen and drive future growth for our company. We were pleased with the attractive valuation we received for both the Latin American and ILEC businesses, which highlights the overall value of Lumen’s extensive asset portfolio.



Throughout the year, we recognized the importance of our services through what we do best: providing scalable, flexible connectivity to further human progress through technology

We are making excellent progress toward closing the announced divestitures, which will sharpen the focus of our investments on the most strategic areas of our business and improve our revenue mix. The net proceeds will provide us with the flexibility to pay down debt and invest for growth.

LUMEN BRAND ONE YEAR LATER

As we look back on our first year under the new Lumen brand name, we have received a positive reception both from an internal and external perspective.

Externally, we are gaining strong traction in our shift towards becoming a technology company. Our focus has shifted away from offering purely network-centric services and towards delivering a secure platform for next generation apps on the Lumen Platform. Four out of five IT decision makers are now familiar with Lumen with nearly two-thirds of them viewing Lumen as a technology company, rather than a telecommunications company, and over half would consider purchasing Lumen solutions.

Internally, the rebranding has been tremendously useful to rally the Company towards enterprise growth and focusing on our new identity as a technology company. We are investing in the digital experience across the customer journey, and our Customer Success organization is focused on driving a better customer experience. We are all aligned behind this Digital-First culture change, beginning with the stake in the ground to become Lumen and the launch of Quantum Fiber.

ESG AND CORPORATE GOVERNANCE INITIATIVES

In the Fall of 2020 and the Spring of 2021, we began discussing plans to re-think our ESG program and disclosures to better reflect Lumen's re-brand and

identify our best sustainability opportunities. While we have traditionally had a strong Corporate Responsibility program, we tended to separately manage "E", "S", and "G". During 2021 we pivoted, and our new sustainability strategy focuses on integrating a cohesive and coordinated sustainability vision supporting Lumen's overall business strategy.

We are evolving our strategy, with a focus on communicating issues, risks, and opportunities significant to our industry and business. In an effort to elevate our communication and inform our stakeholders of the steps Lumen is undertaking to address sustainability matters, we completed a third-party materiality assessment in August 2021, designed to inform our strategy and establish meaningful goals for Lumen and our long-term vision. We have also established a Lumen Sustainability Management committee which is responsible for driving our sustainability agenda with the Board and senior leadership.

On the corporate governance front we have been focusing on raising transparency around Board oversight. We continue our practice of having robust year-round shareholder engagement to learn more about the trends and opportunities impacting our shareholders and how we can best be responsive to their concerns. Our disclosure strategy is ever evolving, and we are working to incorporate greater detail and integrated messaging throughout our periodic reports, proxy statement, and ESG report.

One of our focuses in 2021 continued to be around board diversity and refreshment. We work to ensure our Board is identifying, maintaining, and evolving the complementary skills, experiences, and perspectives needed to pursue a successful strategy and realize Lumen's long-term vision.



We embrace the rich mix of cultures, viewpoints and backgrounds that come from our diverse global workforce, and we draw from their experiences in all areas of the business – from company culture to customers to the communities we serve.

Effective with the annual meeting, our average Board tenure will now be 7.7 years, well below our target maximum of 10 years and down from 9 years in 2019 and 12 years in 2018. For 2022, we are proposing an 11-director slate, within our objective for 10 to 12 directors. We remain committed to our other targets and expectations related to key Board composition and governance policies, including:

- Rotating Board chairs and assignments every five years;
- With the exception of the CEO, having all Board members be independent, which is the case with the director nominees up for election this year; and
- Continually enhancing critical skills for our Board, through both Board refreshment and targeted education programs for current directors.

The Board believes that year-round engagement with our shareholders is a critical component in our efforts to continually enhance our governance practices. We appreciate and value your ongoing feedback.

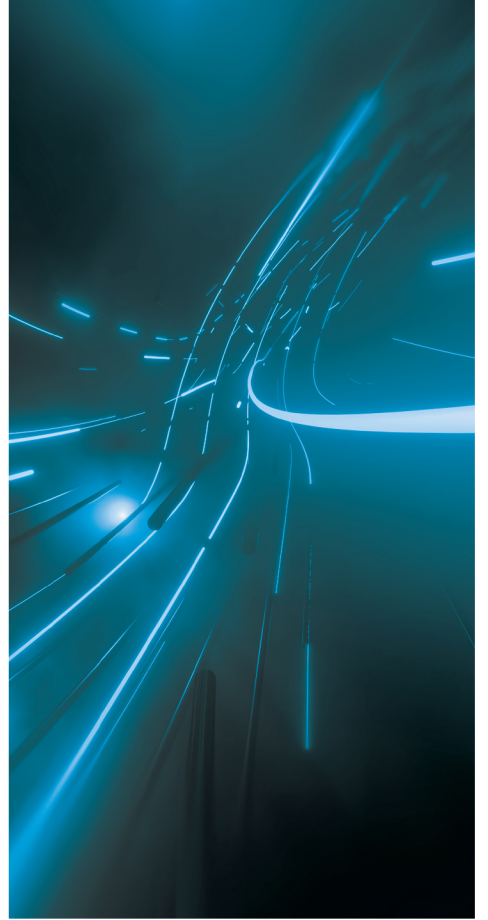
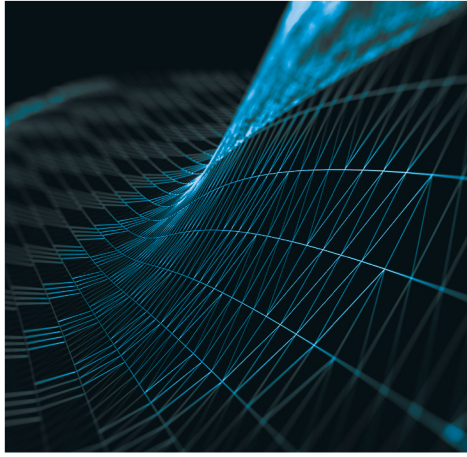
ANNUAL MEETING

This year, our virtual annual meeting will be held on Wednesday, May 18 at noon CT. Details on how to register can be found in the accompanying proxy statement. As always, we encourage you to vote your shares prior to the annual meeting.

In closing, on behalf of the entire Board of Directors, thank you for your investment in and support of Lumen. We are glad to have you along with us on this journey.

Regards,

Jeff Storey
PRESIDENT AND CHIEF EXECUTIVE OFFICER
LUMEN TECHNOLOGIES



2022 Proxy Statement



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FORWARD-LOOKING STATEMENTS

Except for historical and factual information contained herein, matters set forth in our 2022 proxy materials identified by words such as “expects,” “believes,” “will” and similar expressions are forward-looking statements as defined by the federal securities laws and are subject to the “safe harbor” protection thereunder. These forward-looking statements are not guarantees of future results and are based on current expectations only and are subject to uncertainties. Actual events and results may differ materially from those anticipated by us in those statements due to several factors, including those disclosed in our other filings with the SEC. We may change our intentions or plans discussed in our forward-looking statements without notice at any time and for any reason.

CERTAIN DEFINED TERMS

All references in this proxy statement or related materials to “we,” “us,” “our,” the “Company” or “Lumen” refer to Lumen Technologies, Inc. In addition, each reference to (i) the “Board” refers to our Board of Directors, (ii) “Voting Shares” refers collectively to our shares of Common Stock (“Common Shares”) and shares of Series L Preferred Stock (“Preferred Shares”), (iii) “Meeting,” “the meeting” “annual shareholders meeting” or “annual meeting” refers to the 2022 annual meeting of our shareholders described further herein, (iv) “named executives,” “named officers,” “named executive officers” or “NEOs” refers to the five officers listed in the Summary Compensation Table in this proxy statement, (v) “HRCC” refers to the Human Resources and Compensation Committee of our Board, (vi) “NCG Committee” refers to the Nominating and Corporate Governance Committee of our Board, (vii) “SLT,” “senior leadership team” or “senior officers” refers to our executive officers and a limited number of additional officers whose compensation is determined by the HRCC, (viii) “Qwest” refers to Qwest Communications International Inc., which we acquired on April 1, 2011, (ix) “Level 3” refers to Level 3 Parent, LLC and its predecessor, Level 3 Communications, Inc., (x) “Level 3 Combination” refers to our business combination with Level 3, which was consummated on November 1, 2017, (xi) “SEC” refers to the U.S. Securities and Exchange Commission, (xii) “ESG” refers to environmental, social and governance, (xiii) “GAAP” refers to U.S. generally accepted accounting principles, (xiv) “NYSE” refers to the New York Stock Exchange, (xv) “TSR” refers to total shareholder return; (xvi) “STI” refers to short-term incentive compensation, (xvii) “LTI” refers to long-term incentive compensation, (xviii) “CD&A” refers to the “Compensation, Discussion and Analysis” section of this proxy statement, (xix) “SOP” refers to Say on Pay, and (xx) “4IR” refers the 4th Industrial Revolution. Unless otherwise provided, all information is presented as of the date of this proxy statement.

Notice of 2022 Annual Shareholders Meeting

2022 ANNUAL MEETING INFORMATION



Date and Time

Wednesday
May 18, 2022
12:00 noon CT



Location

virtualshareholdermeeting.com/LUMN2022



Record Date

You can vote if you were a shareholder of record at the close of business on March 24, 2022.



Proxy Mail Date

On or about
April 7, 2022

ITEMS OF BUSINESS

ITEM 1

Elect the 11 Director nominees named in this proxy statement



Vote FOR

See **page 14**

ITEM 2

Ratify the appointment of KPMG LLP as our independent auditor for 2022



Vote FOR

See **page 39**

ITEM 3

Conduct a non-binding advisory vote to approve our executive compensation



Vote FOR

See **page 46**

Transact other business that may properly come before the annual meeting

PROXY VOTING

Shareholders are invited to attend the live virtual meeting. Even if you expect to attend, we urge you to vote in advance using any of the following methods:

Your vote is important to us. We urge your participation.



By Internet

visit proxyvote.com



By phone

1-800-690-6903



By mail

mark, sign, date & return proxy card



Live virtual meeting

vote electronically at the virtual annual meeting

Headquarters: 100 CenturyLink Drive, Monroe, LA 71203

Meeting Details: See "Frequently Asked Questions" in this proxy statement for further details.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Shareholders to Be Held on May 18, 2022

The Notice of 2022 Annual Meeting, Proxy Statement, and 2021 Annual Report and information on the means to vote by Internet are available at proxyvote.com

Stacey W. Goff, Secretary

April 7, 2022

About Lumen

Who We Are

We are an international facilities-based technology and communications company focused on providing our business and residential customers with a broad array of integrated services and solutions necessary to fully participate in our rapidly evolving digital world, which we believe is undergoing the 4th Industrial Revolution (4IR). We operate one of the world's most interconnected networks and our platform empowers our customers to rapidly adjust digital programs to meet immediate demands, create efficiencies, accelerate market access and reduce costs – enabling customers to rapidly evolve their information, communications and technology programs to address dynamic changes without distraction from their core competencies. By empowering our customers to rapidly acquire, analyze and act on data, we are furthering human progress through technology and enabling our customers to thrive.

In 2020, we launched the Lumen Platform and rebranded from CenturyLink to Lumen Technologies to better position us for the future. The Lumen brand speaks to the way that we interface differently with our customers with a focus on delivering digital experiences that are designed to drive their success as they navigate the 4IR.

We conduct our operations under the following three brands: (i) "Lumen," which is our flagship brand for serving the enterprise and wholesale markets, (ii) "Quantum Fiber," which is our brand for providing fiber-based services to residential and small business customers, and (iii) "CenturyLink," which is our long-standing brand for providing mass-marketed legacy copper-based services.

With approximately 190,000 on-net buildings and 500,000 route miles of fiber optic cable globally, we are among the largest providers of communications services to domestic and global enterprise customers. Our terrestrial and subsea fiber optic long-haul network throughout North America, Europe, Latin America and Asia Pacific connects to the metropolitan fiber networks we operate. We provide services in over 60 countries, with most of our revenue being derived in the United States. We believe our secure global platform plays a central role in facilitating communications worldwide.



Key 2021 Financial Highlights

During 2021, we delivered solid results, despite the ongoing global pandemic. Specifically, we:

- Reported Net Income of \$2.033 billion for the full year 2021, compared to a reported Net Loss of \$1.232 billion for the full year 2020, which included a non-cash goodwill impairment charge of \$2.642 billion
- Delivered solid profitability and strong cash flow:
 - Expanded our Adjusted EBITDA margin to 42.8%, compared to 41.0% for 2020
 - Diluted EPS of \$1.91, compared to \$(1.14) per share for 2020
 - Delivered Free Cash Flow of \$3.742 billion for 2021, compared to \$2.979 billion for 2020, excluding cash paid for special items
 - Returned approximately \$2.1 billion to shareholders through quarterly dividends and stock repurchases
- Reduced Net Debt by approximately \$1.5 billion in 2021 and exited 2021 maintaining leverage at 3.6x Net Debt to Adjusted EBITDA

For information on how our non-GAAP metrics used above reconcile to GAAP measures and a description of our special items, see Appendix A. For more complete information on Lumen and our recent performance, see the remainder of this proxy statement, including Appendix B.

100+
basis points
increase in
adjusted
EBITDA margin



\$1.5B
decrease in
net debt



\$2.1B
returned to
shareholders
through
dividends and
stock
repurchases



ESG Highlights

OUR PEOPLE – HUMAN CAPITAL

Lumen’s ability to fulfill our purpose is dependent on the quality and capabilities of our people. Lumen’s highly competitive business requires attracting, developing and retaining a motivated team that is inspired by leadership, engaged in meaningful work, driven by growth opportunities and thriving in a culture that embraces diversity, inclusion and belonging.

Diversity and Inclusion Steering Committee

Lumen’s Diversity and Inclusion Steering Committee (DISC), is made up of senior leaders and executives, including Lumen’s Chief Diversity and Inclusion Officer. Our DISC helps shape, drive and champion our overall diversity, inclusion and belonging strategy.

Commitment to Pay Equity

Following the pay equity reviews we conducted over the past few years, we adjusted employees’ pay where needed. As part of our commitment to fair and equitable compensation, we plan to continue regular gender, race, and ethnicity pay equity studies of our U.S., non-represented employees and to make pay adjustments where warranted.

OHS Management Systems

We have implemented occupational health and safety management systems for employees in our North America; Europe, Middle East and Africa (EMEA); and Latin America (LatAm) regions. Our environment, health and safety team and relevant business units implement these systems and perform periodic reviews designed to identify and achieve improvements in overall safety and performance.

Benefits enhancements

Lumen offers progressive employee benefits and enhancements that recognize the diverse needs of our employees and their families. These include a comprehensive wellness program, flexible time off, extended maternity/parental leave, the Milk Stork program for nursing mothers, fertility benefits, gender-affirming and same sex/domestic partner healthcare benefits, adoption benefits, survivor benefits, financial wellness, mental health benefits and disability accommodations.

OUR IMPACT – ENVIRONMENT

Environmental stewardship is inherent in our Lumen purpose. We actively review the impact of our operations and make choices to reduce our environmental footprint. We believe our commitment to environmental sustainability promotes the financial health of our business, the quality of service we provide and value creation for our employees, communities, customers and investors. Our EHS team oversees and executes the company’s EHS and environmental sustainability visions, which are available to all employees on the Lumen intranet.

Energy and Emissions

We have continued to make solid progress on our greenhouse gas (GHG) emission reduction targets.

Renewable Energy Initiatives

In 2019, Lumen purchased 280,189 megawatt hours of renewably sourced zero-carbon electricity.

Customer Initiatives

Lumen's Platform for Amazing Things helps customers reduce their energy consumption by enabling smart technologies, dematerialization and virtualization. We align our Lumen Platform with our customers' goal to reduce the effects of climate change with the goal of attracting more customers by communicating our success in supporting these energy consumption reduction technologies.

Transportation Initiatives

We work to reduce transportation emissions by:

- Dispatching and operating our fleet more efficiently through the installation of GPS on over 9,500 of our vehicles. These efficiencies are resulting in fuel expense savings as well as reduced GHG emissions.
- Using flex-fuel vehicles, which produce significantly less GHG emissions than traditional vehicles.
- Reviewing the impact of using mass-produced hybrid and electric vehicles from major manufacturers.

OUR COMMITMENT – GOVERNANCE AND SOCIAL CAPITAL

Lumen's Platform for Amazing Things and the opportunities presented by the 4IR have created a strategic opportunity for evaluating and evolving our sustainability program and developing additional reporting responsive to various frameworks, including SASB standards and TCFD recommendations. To achieve our ESG program goals, during 2021 we engaged with stakeholders to learn their perspectives on sustainability generally and our evolving programs specifically.

Cybersecurity

As part of our cybersecurity risk management efforts, we periodically assess our program, including:

- Adequacy and effectiveness of the company's internal controls regarding cybersecurity.
- Emerging cybersecurity developments and threats.
- Cybersecurity response and contingency plans in the event of security breaches or other system disruptions.

Employee Volunteer Program and Volunteer Grants

Lumen awards volunteer grants to eligible charities through our Dollars for Doers program. The program allows employees to receive up to \$1,000 each calendar year to be granted to the eligible charity where they volunteer. In 2020, we awarded over 90 grants, totaling over \$45,000 in support of employee volunteerism.

Data Privacy

We have adopted a data minimization policy designed to comply with applicable state, U.S. and other international jurisdictions' laws and ensure appropriate protections when sharing information with third parties, including vendors.

Commitment to Human Rights

In 2020, Lumen implemented a global human rights policy outlining our expectations in areas including privacy, data security, individual rights, freedom of association, diversity, inclusion and fair treatment, and working conditions including forced and child labor.

Proxy Voting Roadmap

ITEM 1

Election of Directors

 See page 14

BOARD DEMOGRAPHICS

Age

65.7

years old average

Tenure

7.7

Average years

An Engaged Board of Directors

≥90%

attendance rate

Each director attended more than 90% of Board meetings and standing committee meetings

8 regular Board meetings and 21 standing committee meetings

Independence

10 of 11

nominees are independent

All members of the Audit, Human Resources & Compensation, and Nominating & Corporate Governance committees are independent.

Skills

 5/11

Customer Experience



 6/11

Digital Transformation



 4/11

Industry Experience



 7/11

M&A Experience/ Legal



 3/11

ESG



 7/11

Finance



 10/11

Strategy



 5/11

Technology & Innovation



 9/11

Global Business Experience



 3/11

HR Leadership



 7/11

Risk Management/ Cybersecurity



FOR

The Board unanimously recommends a vote FOR each nominee

ITEM 2

Ratify KPMG as Our 2022 Independent Auditor

→ See page 39

KPMG is an Independent firm with few ancillary services and reasonable fees. They provide significant industry and financial reporting expertise to the Company. The audit committee annually evaluates KPMG and determined that its retention continues to be in the best interests of Lumen and its shareholders.



FOR

The Board unanimously recommends a vote FOR this proposal

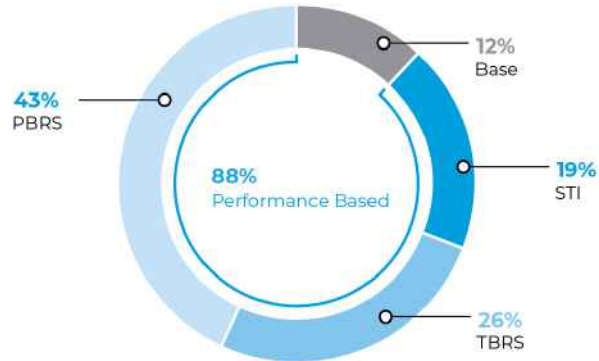
ITEM 3

Advisory Vote on Executive Compensation – “Say-On-Pay”

→ See page 46

Pay and Performance Alignment

- Executive compensation targeted at the 50th percentile of peers and aligned with short- and long-term business goals and strategy.



FOR

The Board unanimously recommends a vote FOR this proposal

ITEM 1

Election of Directors

Lumen's mission is to further human progress through technology. We believe that strong corporate governance is key to achieving our mission.

Following the NCG Committee's recommendation, the Board of Directors has nominated the 11 nominees below for a one-year term expiring at our 2023 annual meeting of shareholders, or until his or her successor is duly elected and qualified. All of the nominees were elected to the Board at the 2021 annual meeting.

To be elected, each of the 11 nominees must receive an affirmative vote of a majority of the votes cast in the director's election. Any director failing to receive a majority of votes cast must promptly tender his or her resignation, which will be addressed by us in the manner described in our Bylaws.

Director Nominees

Quincy L. Allen	Kevin P. Chilton	W. Bruce Hanks	Laurie Siegel
Martha Helena Bejar	Steven T. "Terry" Clontz	Hal Stanley Jones	Jeffrey K. Storey
Peter C. Brown	T. Michael Glenn	Michael Roberts	

Refreshment

Board and committee refreshment are regularly reviewed by our Nominating and Corporate Governance (NCG) Committee. Our Board periodically receives recommendations from the NCG Committee about possible changes designed to staff the Board and its committees with individuals who have the skills, experiences and perspectives necessary to make meaningful contributions to shaping and implementing Lumen's business strategies.

In 2021 and for our 2022 slate of nominees, the NCG Committee and Board considered a wide range of factors in assessing the composition of the Board, including:

- shareholder input on important elements of Board composition;
- skill sets necessary to advise and oversee the successful development and implementation of our business strategies, including our continued evolution to a digital technology company offering a simpler and improved customer experience;
- balancing fresh, diverse perspectives with institutional and industry knowledge;
- current and long-term needs of the Board; and
- independence and potential conflicts.

Recent Board Changes

We have made a concerted effort over the past couple years to refresh and refocus our Board.

In 2020, the NCG Committee retained an independent firm to help identify potential candidates with the skills, attributes and experience that matched the needs of the Board. The search resulted in the appointment of Quincy L. Allen to the Board, effective February 25, 2021, who is an industry, technology, and operational expert.

Effective January 1, 2020, we added Hal Jones to the Board, who is a financial, risk management, and mergers/acquisitions expert. Mr. Jones was among several director candidates recommended to the Board by Southeastern Asset Management, our fourth largest shareholder at the time of his appointment. In connection with adding Mr. Jones to the Board, we announced the retirement of several directors and various governance changes, which we discussed in our 2020 proxy statement and are summarized elsewhere herein.



FOR

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE FOR EACH OF THE ABOVE NAMED NOMINEES FOR DIRECTOR.

Board of Directors and Governance

Board Composition – Qualifications, Skills and Diversity

Our Board collectively possesses a wide array of skills, experiences and perspectives that we believe strengthen its ability to fulfill its oversight roles in creating and maintaining long-term sustainable shareholder value.

Each year, the Board reviews the skills necessary to effectively discharge its oversight responsibilities. We strive to maintain a well-rounded and diverse Board. Below please find information about our nominees.

BOARD NOMINEE COMPOSITION



Diversity

36%

of 11 nominees

4/11 Total Diversity



3/11 Ethnicity



2/11 Women



Tenure

7.7

years average tenure

2/11 0-2 years



5/11 3-5 years



1/11 6-10 years



3/11 >10 years



Independence

91%

Independent

10/11 Independent directors



SKILLS AND RELEVANCE TO LUMEN'S STRATEGY

Lumen's NCG Committee uses a skills matrix as part of the Board's annual evaluation, succession planning and director nomination process. The goal is to ensure our director nominees collectively possess the relevant skills and backgrounds for effective governance and meaningful strategy oversight that enhances financial performance and builds stakeholder value. The skills listed in this matrix only indicate the most prominent skills that our Board relies upon. This matrix is not a comprehensive reflection of the wide variety of skills that our director nominees possess and routinely contribute to Lumen.

BOARD SKILLS MATRIX

Skill	Allen	Bejar	Brown	Chilton	Clontz	Glenn	Hanks	Jones	Roberts	Siegel	Storey
Customer experience	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Digital Transformation	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
ESG		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	
Finance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Global Business experience	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HR Leadership							<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Industry experience		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>
M&A experience/ Legal			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Risk Management/Cybersecurity				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Strategy	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Technology & Innovation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>

Diversity

Gender Diversity		<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>	
Ethnic Diversity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>

Our Director Nominees

The first item for consideration at the meeting will be the election of the following 11 nominees:

QUINCY ALLEN



Director since: **2021**

Independent

62 years old

Committees:

Audit Committee

Risk and Security Committee

Skills

-  Customer Experience
-  Digital Transformation
-  Finance
-  Global Business Experience
-  Strategy
-  Technology & Innovation

Experience

Quincy L. Allen has over 35 years of leadership experience in the technology services industry.

IBM Corporation

- Co-To-Market Leader of Cognitive Process Services and Chief Marketing Officer for IBM Cloud (2015 to 2018)

Unisys Corporation, a global information technology company

- Chief Marketing and Strategy Officer (2012 to 2015)

Vertis Communications, a direct marketing and advertising company

- Chief Executive Officer (2009 to 2010)

Xerox Corporation (1982-2009)

- President of the Global Services and Strategic Marketing Group
- President of Production Systems Group

Other Public Company Directorships

Mr. Allen currently also serves on the boards of Office Depot and ABM Industries, Inc.

MARTHA HELENA BEJAR



Director since: **2016**

Independent

60 years old

Committees:

Human Resources and Compensation Committee

CHAIR Nominating and Corporate Governance Committee

Skills

-  Customer Experience
-  ESG
-  Finance
-  Global Business Experience
-  Industry Experience
-  Technology & Innovation

Experience

Martha Helena Bejar is a telecommunications expert with innovative experience.

Red Bison Advisory Group, LLC, which provides business advisory services

- Co-founder and principal (2014 to 2019)

Unium, Inc., a Wi-Fi technology provider

- Chief Executive Officer 2016 to 2018

Flow Mobile, Inc., a broadband wireless company

- Chief Executive Officer 2012 to 2015

Infocrossing, Inc. (a U.S.-based cloud services affiliate of Wipro Limited)

- Chief Executive Officer and Chairperson 2011 to 2012

Wipro's Information Technology Services affiliate

- President of Worldwide Sales and Operations 2009 to 2011

Microsoft Corporation

- Corporate Vice President for the communications sector 2007 to 2009.

Other

- Prior to 2007, Ms. Bejar held diverse executive sales, operations, engineering and R&D positions at Nortel and Bellsouth/ AT&T.

Other Public Company Directorships

Ms. Bejar currently serves on the boards of CommVault Systems; Sportsman's Warehouse Holdings, Inc.; and Quadient SA (formerly Neopost). In the last five years she served on the boards of Mitel Networks Corporation and Polycom, Inc.

PETER C. BROWN



Director since: **2009**

Independent



63 years old

Committees:

Audit Committee

Risk and Security Committee

Skills

-  Customer Experience
-  Digital Transformation
-  Finance
-  Global Business Experience
-  M&A Experience/ Legal
-  Strategy

Experience

Peter C. Brown is a business leader with significant, finance, strategy, corporate development, and management experience.

Grassmere Partners, LLC, a private investment firm

- Chairman (2009-present)

AMC Entertainment Inc.

- Chairman and Chief Executive Officer (1999 to 2009)
- Chief Financial Officer (1991 to 1999)

EPR Properties, a NYSE-listed real estate investment trust

- Founder and Chairman of the Board (1997-2000)
- Member of the Audit Committee and Chairman of the Finance Committee (2010 to present)

Other Public Company Directorships

He serves on the board of Cinedigm Corporation where he is Chairman of the Nominating and Audit Committees, and serves on the Compensation Committee.

KEVIN P. CHILTON



Director since: **2017**

Independent

67 years old

Committees:

Audit Committee

CHAIR Risk and Security Committee

Skills

-  ESG
-  Finance
-  M&A Experience/ Legal
-  Risk Management/ Cybersecurity
-  Strategy
-  Technology & Innovation

Experience

Kevin P. Chilton is retired from the U.S. Air Force as a four-star general and contributes considerable cybersecurity, risk management and scientific leadership experience to our Board.

Chilton & Associates, LLC, a consulting company

- President (2011-present)

34-year military career

- Commander, U.S. Strategic Command (2007 to 2011), overseeing the U.S. Department of Defense's nuclear, space and cyberspace operations;

- Commander, U.S. Air Force, Space Command (2006 to 2007)
- NASA astronaut (1987 to 1996), including three space shuttle flights;
- Deputy Program Manager of the International Space Station (1996 to 1998)

Other Public Company Directorships

He serves on the board of AeroJet Rocketdyne and, in the last five years, has served on the boards of Anadarko Petroleum Corp., Level 3 Communications, Inc., Orbital Sciences Corporation and Orbital ATK, Inc.

STEVEN T. "TERRY" CLONTZ



Director since: **2017**

Independent

71 years old

Committees:

Human Resources and Compensation Committee

Nominating and Corporate Governance Committee

Skills

- Global Business Experience
- Industry Experience
- M&A Experience/ Legal
- Risk Management/ Cybersecurity
- Strategy
- Technology & Innovation

Experience

Steven T. "Terry" Clontz is an innovative technology leader with global telecommunications experience developed throughout his career in several executive roles in the telecommunications industry.

StarHub, Ltd., a Singaporean telecommunications company

- Chief Executive Officer (1999 to 2010)

ST Telemedia Pte. Ltd.

- Senior Executive Vice President (International) (2010 to 2017)
- Corporate Advisor (2018 to present)

IPC Information Systems

- Chief Executive Officer, President and Director (1995 to 1998)

BellSouth International, Inc.

- President, Asia-Pacific (1987 to 1995)

Temasek International Advisors Pte. Ltd.

- Corporate Advisor (2010 to present)

Other

Mr. Clontz's leadership experience includes various positions with other communications companies, including Cloud9 Technologies LLC; and STT GDC Pte. Ltd.

Other Public Company Directorships

He serves on the board of StarHub Ltd. and, in the last five years, has served on the board of Level 3 Communications, Inc. (2012 to 2017).

T. MICHAEL GLENN



Director since: **2017**

Independent

66 years old

Chairman of the Board

Committees:

Human Resources and Compensation Committee

Skills

- Customer Experience
- Digital Transformation
- Finance
- Global Business Experience
- M&A Experience/ Legal
- Strategy

Experience

T. Michael Glenn brings significant market development, customer, communications, strategic development and operational experience to our Board having served in executive leadership roles.

FedEx Corp.

- Executive Vice President of Market Development and Corporate Communications (1998 to 2016)
- President and Chief Executive Officer of FedEx Corporate Services and a member of its five-person Executive Committee responsible for developing and implementing strategic business activities

- Senior Vice President, Worldwide Marketing, Customer Service and Corporate Communications for FedEx Express

Oak Hill Capital Partners, a private equity firm

- Senior Advisor (2017 to 2020)

Other Public Company Directorships

He serves on the board of Pentair PLC and, in the last five years, has served on the board of Level 3 Communications, Inc.

W. BRUCE HANKS



Director since: **1992**

Independent

67 years old

Vice Chairman of the Board

Committees:

Audit Committee (Chair)

Skills

-  Finance
-  HR Leadership
-  Industry Experience
-  M&A Experience/ Legal
-  Risk Management/ Cybersecurity
-  Strategy

Experience

W. Bruce Hanks is a corporate development and planning, operations, finance and public accounting leader with telecommunications expertise.

Investment management and financial planning company based in Monroe, Louisiana

- Consultant

University of Louisiana at Monroe

- Athletic Director (2001 to 2004)

Peat, Marwick & Mitchell

- Certified Public Accountant (1977-1980)

Lumen

- Various senior level roles between 1980 and 2001, including:
- Chief Operating Officer
- Senior Vice President—Corporate Development and Strategy
- Chief Financial Officer
- Chief Administrative Officer
- President—Wireless Services

Other Public Company Directorships

None.

HAL STANLEY JONES



Director since: **2020**

Independent

69 years old

Committees:

Audit Committee
Risk and Security Committee

Skills

-  Digital Transformation
-  Finance
-  Global Business Experience
-  M&A Experience/ Legal
-  Risk Management/ Cybersecurity
-  Strategy

Experience

Hal Stanley Jones brings significant financial, public accounting and controls experience to our Board.

Graham Holdings (formerly known as the Washington Post Company)

- Chief Financial Officer (2009 to 2013)
- Held various senior level positions at The Washington Post Company (1989 to 2008)

Kaplan Professional, a subsidiary of The Washington Post

- Chief Executive Officer and President (2008 to 2009)

PricewaterhouseCoopers

- Certified Public Accountant (1977 to 1988)

Other Public Company Directorships

He has served on the board of Playa Hotels and Resorts, N.V. since 2013 when it became publicly traded.

MICHAEL ROBERTS



Director since: **2011**

Independent

71 years old

Committees:

Human Resources and Compensation Committee

Nominating and Corporate Governance Committee

Skills

- Customer Experience
- Digital Transformation
- Global Business Experience
- HR Leadership
- Strategy

Experience

Michael Roberts has Fortune 500 global executive, marketing and customer service expertise.

McDonald's Corporation

- President and Chief Operating Officer (2004 to 2006)
- Chief Executive Officer of McDonald's USA
- Prior to these roles, held various senior level roles at McDonald's USA (2001 to 2004)

Westside Holdings LLC, a marketing and brand development company

- Founder and Chief Executive Officer (2006 to present)

Other Public Company Directorships

He serves on the board of W. W. Grainger, Inc.

LAURIE SIEGEL



Director since: **2009**

Independent

66 years old

Committees:

Human Resources and Compensation Committee (Chair)

Nominating and Corporate Governance Committee

Skills

- ESG
- Global Business Experience
- HR Leadership
- M&A Experience/ Legal
- Strategy

Experience

Laurie Siegel is a business advisor with expertise in human capital and executive compensation.

Tyco International

- Senior Vice President of Human Resources and Internal Communication (2003 to 2012)

G100

- Chairman (Talent Consortium)
- Senior Advisor (current)

Honeywell International, Inc.

- Held various senior level positions (1994 to 2002)

LAS Advisory Services, a business and human resources consultancy

- Founder and Principal since 2012

Other Public Company Directorships

She serves on the board of FactSet Research Systems, Inc. In the last five years she served on the boards of California Resources Corporation and Volt Information Sciences, Inc.

JEFFREY K. STOREY



Director since: **2017**

61 years old

Committees:

**Risk and Security
Committee**

Skills

-  Digital Transformation
-  Global Business Experience
-  Industry Experience
-  Risk Management/
Cybersecurity
-  Strategy
-  Technology & Innovation

Experience

Jeffrey K. Storey is an innovative, transformational telecommunications and cybersecurity leader.

Lumen

- President and Chief Executive Officer (2018 to present)
- Chief Operating Officer (2017 to 2018)

Level 3 Communications, Inc.

- President and Chief Executive Officer (2013 to 2017)
- President and Chief Operating Officer (2008 to 2013)

Leucadia Telecommunications Group (Leucadia National Corporation)

- President (2006 to 2008)

WilTel Communications Group Inc.

- Chief Executive Officer and President (2002 to 2005)
- Held various other senior level positions with WilTel or its affiliates (1999 to 2002)

Cox Communications

- Vice President of Commercial Services (1998 to 1999)
- Vice President and General Manager of Cox Fibernet (1994 to 1998)

Southwestern Bell Telephone

- Held various engineering and operations positions

Other Public Company Directorships

In the last five years he served on the board of Level 3 Communications, Inc.

How our Board is Evaluated and Selected

EVALUATIONS

Our NCG Committee leads an annual evaluation of our Board, its members and committees, and the Board periodically assesses whether it has the skills, processes, structure, and policies necessary to attain its goals and fulfill its responsibilities. While this formal evaluation is conducted on an annual basis, directors share their perspectives and suggestions throughout the year. The NCG Committee uses this ongoing and annual feedback when considering Board composition and other governance issues, and in connection with nominating directors to be elected to the Board. The NCG Committee periodically engages nationally recognized firms to assist it with the design and implementation of its director evaluation processes.

NOMINATION

In considering director nominees, the NCG Committee reviews candidates suggested by our directors, executive officers or shareholders who comply with our Bylaws. A shareholder or group of up to 10 shareholders owning 3% or more of Lumen's outstanding common stock continuously for at least three years can nominate director candidates constituting up to 20% of the Board and include these nominations in our annual meeting proxy materials. From time to time, the NCG Committee may engage a third-party search firm to assist in identifying and evaluating qualified candidates.

The NCG Committee assesses each director candidate based on his or her skills, judgment, character, independence, diversity, and experience in the context of the needs of the Board. Potential conflicts and over-boarding are also evaluated. When evaluating candidates for nomination as new directors, the NCG Committee considers (and asks any search firm that it engages to provide) a pool of candidates that includes women and individuals from diverse backgrounds, in accordance with the "Rooney Rule" the Board adopted in 2019.

Our Corporate Governance Guidelines also establish a target average director tenure of no more than ten years, set a goal of all Board members (except our CEO) being independent and express the Board's general sense that no director should be age 75 or older prior to the next annual shareholders meeting. No director may serve on more than three other unaffiliated public company boards, unless this prohibition is waived by the Board. The NCG Committee may, but has not formally chosen to, establish additional qualifications. The NCG Committee and the Board also evaluate on a periodic basis the effectiveness of its nominating processes and procedures.

EDUCATION AND ORIENTATION

We encourage our directors to participate in continuing education programs focused on our business and industry, their committee roles and responsibilities and the legal and ethical responsibilities of directors. We reimburse our directors for the costs of these programs. We also provide continuing director education during Board and committee meetings and other Board discussions. From time to time, these include presentations from third parties. Over the course of 2021, our Board collectively attended a combination of over 80 continuing education webinars and seminars covering an extensive list of topics ranging from board committee effectiveness, cybersecurity, and ESG, to human capital management and SOX controls.

Additionally, we encourage our directors to participate in nationally recognized governance organizations, including the National Association of Corporate Directors ("NACD") and G100.

New directors participate in an orientation program that familiarizes them with the Company's business, operations, strategies and corporate governance practices and assists them in developing Company and industry knowledge to optimize their service on the Board. New directors also attend meetings with members of our management team to expedite their ability to effectively and fully discharge their responsibilities.

INDEPENDENCE

All directors other than our CEO are independent and the Board regularly meets in executive sessions with only the independent directors. Each year and prior to nominating a new director, the Board evaluates and affirmatively determines each director nominee's independence using standards required by the SEC, NYSE and our Corporate Governance Guidelines. Annually, each director nominee completes a detailed questionnaire that solicits information about relationships that could have an impact on independence. Our management delivers reports on those relationships

to the NCG and Audit Committees. Both the NCG and Audit Committees evaluate the reports from management and consider any other factors which could influence a nominee's independence. During this review, the NCG and Audit Committees consider transactions and relationships between the Company, its subsidiaries or affiliates and any directors, executive officers, their immediate family members or an entity in which any of the foregoing have a significant interest. Both the NCG and Audit Committee chairs make reports on these independence evaluations to the Board. In early 2022, the Board reviewed all relationships between the Company and each director and affirmatively determined that all of our director nominees are independent other than Mr. Storey, our CEO.

What is the Rooney Rule?

The Rooney Rule is named after former Pittsburgh Steelers owner Dan Rooney and was adopted in the National Football League in 2003 requiring teams to interview ethnic-minority candidates for head coaching jobs. As applied at Lumen, the rule requires us to consider at least one woman and one underrepresented minority in the slate of candidates for open Board seats.

How our Board is Organized

BOARD LEADERSHIP STRUCTURE

The NCG Committee periodically reviews the Board's leadership structure and, when appropriate, recommends changes, taking into consideration the needs of the Board and the Company at the time. Since 2009, we have elected a non-executive chairman.

Effective May 20, 2020, Mr. Glenn became Lumen's independent, non-executive Chairman, with Mr. Hanks continuing his role as Vice Chairman. As Chairman, Mr. Glenn presides over meetings of the Board, oversees the management, development and functioning of the Board and performs any additional duties the Board may identify.

We believe that separation of the Chairman and CEO positions has functioned effectively over the past several years. Separating these positions has allowed our CEO to have primary responsibility for the operational leadership and strategic direction of our business, while allowing our Chairman to lead the Board in its fundamental role of providing guidance to and separate oversight of management.

As noted in our Corporate Governance Guidelines, it is the sense of the Board that the Chairman of the Board and the chairs of our committees should rotate approximately every five years.

Board Committees

Each of our four standing Board committees supports the full Board with various risk management, governance and strategic responsibilities.

AUDIT COMMITTEE*

Meetings in 2021: 9



See “**Audit—Audit Committee Report**” below for additional information.



W. Bruce Hanks
CHAIR

Quincy L. Allen

Peter C. Brown

Kevin P. Chilton

Hal Stanley Jones

Key Responsibilities

- Oversees the Company's system of financial reporting
- Reviews and discusses our major financial risks, including matters potentially impacting financial reporting, with management, our internal auditors and our independent auditors
- Assists the Board in fulfilling its oversight responsibilities relating to the adequacy and effectiveness of
 - our internal controls over financial reporting,
 - our internal controls regarding information technology security and
 - our disclosure controls and procedures
- Monitors the qualifications, independence and performance of Lumen's independent auditors

*Each member is an “audit committee financial expert”

HUMAN RESOURCES AND COMPENSATION COMMITTEE

Meetings in 2021: 4



See “**CD&A**” below for additional information.



Laurie Siegel
CHAIR

T. Michael Glenn

Steven T. “Terry” Clontz

Michael Roberts

Martha H. Bejar

Key Responsibilities

- Establishes executive compensation strategy
- Oversees design and administration of equity incentive plans
- Oversees human capital strategy, including diversity and inclusion and talent recruiting, development and retention
- Oversees, in consultation with management, our compliance with regulations governing executive and director compensation
- Monitors compensation, labor relations, and workforce risk

NOMINATING AND CORPORATE GOVERNANCE COMMITTEE

Meetings in 2021: 4



Martha Helena Bejar
CHAIR

Michael Roberts

Steven T. "Terry" Clontz

Laurie Siegel

Key Responsibilities

- Recommends to the Board nominees to serve as directors and officers
- Oversees CEO's annual performance evaluation
- Oversees the development and implementation of our ESG strategies
- Oversees and recommends improvements to our governance principles, policies and practices
- Assists the Board in fulfilling its oversight responsibilities with respect to the management of risks associated with the Company's Board leadership structure and corporate governance matters
- Annually leads Board and Committee evaluations
- Evaluates Board composition, skills and director independence
- Reviews political contributions reporting and budget

RISK AND SECURITY COMMITTEE

Meetings in 2021: 4



Kevin P. Chilton
CHAIR

Quincy L. Allen

Peter C. Brown

Jeffrey K. Storey*

Hal Stanley Jones

Key Responsibilities

- Assists the Board in fulfilling its oversight responsibilities with respect to, among others:
 - risks posed by cyberattacks or other casualty events
 - risks related to network reliability, privacy and regulations
 - other key enterprise or operational risks as jointly determined by the Committee and management
 - insurance program reviews
- Oversees our classified activities and facilities through a subcommittee
- Oversees our corporate ethics and compliance and enterprise risk management programs and activities
- Receives periodic reports on various risk exposures. These include quarterly reports on cybersecurity, which typically include reports on recent cyber intrusions, mitigation steps taken in response to those intrusions and ongoing cybersecurity initiatives and periodic reports from outside consultants regarding cyber security
- Coordinates risk oversight functions of other Board committees

* As President and CEO, Mr. Storey is our only non-independent director.

Additional information about the responsibilities of our committees is available in the committees' respective charters, which can be obtained on our website: <https://www.lumen.com/en-us/about/governance/board-committees.html>.

DIRECTOR MEETING ATTENDANCE

Directors are expected to attend all Board meetings, meetings of committees on which they serve and the annual shareholders meeting. All then current directors attended our 2021 annual meeting. During 2021 there were eight regular meetings of the Board, as well as 21 standing committee meetings. Each director attended more than 90% of the total number of the 2021 Board and the respective committee meetings on which he or she served. During 2021, our independent directors met in executive session on a quarterly basis, led by our Chairman.

Our Board’s Responsibilities & Engagement




Our Board and its committees collectively oversee our business and management’s development and implementation of our strategies through regular meetings and communications with Lumen’s executive team. We believe our governance policies and practices provide a transparent framework for effective governance and compliance with SEC and NYSE requirements. The Board continually reviews our governance practices for alignment with best practices and stakeholder interests and acts to enhance our ability to oversee the execution of strategies that drive value for Lumen, our customers, employees and shareholders. Our Corporate Governance Guidelines, along with other governance documents, including our Code of Conduct, Bylaws and other governance policies are available on our website: lumen.com/en-us/about/governance/documentation.html

KEY RESPONSIBILITIES OF THE BOARD

Shareholder Engagement	Oversight of Strategy	Succession Planning	Oversight of Risk	Oversight of ESG
<ul style="list-style-type: none"> Members of management and the Board engage on a year-round basis with holders of our equity and debt securities, as well as proxy advisory firms and ESG rating firms, among others. 	<ul style="list-style-type: none"> Our Board regularly engages in active discussions with management to formulate and implement appropriate strategies for the Company and each of its business segments. In addition to regular Board and committee meetings, the Board participates in an annual in- depth dedicated review of the Company’s overall strategy with our management team. 	<ul style="list-style-type: none"> The Board oversees succession planning for our senior leadership positions, including the CEO. 	<ul style="list-style-type: none"> The Board, along with its committees, reviews and oversees Lumen’s risk management processes. The Board also works with management to assess our key short- and long-term risks and mitigation efforts. 	<ul style="list-style-type: none"> The Board and the NCG Committee, in conjunction with designated management teams periodically evaluate our ESG programs and seek to identify meaningful opportunities to enhance our programs.

SHAREHOLDER ENGAGEMENT

The Board believes that input from shareholders is a critical component in our efforts to continually enhance our governance practices and earn our shareholders' confidence toward improving long-term shareholder value. As illustrated below, members of management and the Board engage on a year-round basis with holders of our equity and debt securities, as well as proxy advisory firms and ESG rating firms, among others.

Fall 	Winter 	Spring 	Summer
<ul style="list-style-type: none"> Regular outreach focused on shareholders' corporate governance views, executive compensation and sustainability Share investor feedback with committee members 	<ul style="list-style-type: none"> Additional targeted outreach 10-K filing Governance and compensation decisions taken incorporating fall feedback 	<ul style="list-style-type: none"> Proxy filing EEO-1 Data published Regular outreach to largest investors and proxy advisory firms to discuss important items to be considered at the annual meeting Hold annual meeting 	<ul style="list-style-type: none"> ESG Report published Additional targeted outreach Review and report results from our most recent annual meeting Review proxy season trends with Board Discuss investor feedback with our directors Evaluate whether to revise our current practices in light of business priorities, corporate governance trends, best practices and regulatory developments

Communications to the Board

Communication with shareholders and other interested parties is an important part of the governance process. Any shareholder or other stakeholder who wishes to contact the Board, Chairman or any Director can send correspondence to:

Write: P.O. Box 5061; Monroe, Louisiana 71211

Email: boardinquiries@lumen.com



In 2021, our compensation program received the support of holders of 91% of the total votes cast at our annual meeting, which was an improvement from the 2020 vote. We continued our outreach efforts with shareholders throughout the fall, contacting shareholders representing 58% of our outstanding common stock.

Our primary purpose for initiating these meetings was to obtain feedback from our shareholders on our enhanced disclosure strategy, and also discuss other corporate governance topics important to shareholders including board diversity, human capital management, employee diversity, inclusion and belonging and our ESG initiatives.

During the fall of 2021, each of the shareholder meetings was attended by our Chairman of the Board, our HRCC Chair and our NCG Committee Chair. The input we received was shared with other members of the Board.

The chart below summarizes engagement topics discussed and governance actions taken over the past couple years in response to specific shareholder feedback or voting guidelines published by our shareholders or proxy advisors.

Shareholder Engagement Topics – 2019 to 2022	Actions taken in response to shareholder input	
Long-Term Incentive (LTI) Framework	2020 to 2022 <ul style="list-style-type: none"> No Changes to 2020 or 2021 compensation program design – despite COVID-19 No one-time awards⁽¹⁾ Rotated NCG Committee Chair at 2020 annual meeting Reduced average Board tenure Independent Chairman named at 2020 annual meeting All non-CEO directors independent since 2020 annual meeting Commitment to publish EEO-1 Data on Sustainability webpage in April 2022 Formation of Sustainability Management Committee LTI - added Relative TSR performance metric 	2019 to 2020 <ul style="list-style-type: none"> “Rooney Rule” – adopted for director searches Board Tenure – commitment to lower overall average years of service NCG Committee Oversight – clarified political contributions and lobbying policies STI – added Revenue weighted at 15% STI – added a discretionary 20% cap on Individual Performance Modifier for Named Executive Officers Goal Rigor – supplemental disclosures to explain the compelling business rationale for our incentive compensation performance targets
Short-Term Incentive (STI) Framework	Increased disclosure for: <ul style="list-style-type: none"> Board diversity Cyber security/ data privacy Human capital management ESG Incentive design rationale Rigorous goal setting process 	<ul style="list-style-type: none"> CEO Pay – expanded “realized” and “realizable” pay disclosure LTI Performance Period – returned to 3 yr. cumulative LTI – added Relative TSR modifier No one-time awards
Pay for Performance Alignment		
Board Diversity		
Governance Practices		
ESG		
Human Capital Resources		
Board Refreshment		
COVID-19 Pandemic Response		
Capital Allocation and Growth Strategy		
EEO-1 Data Disclosure		

(1) Other than one-time awards made on April 4, 2022 in connection with retaining our new CFO.




LONG-TERM STRATEGIC PLANNING

To ensure that our business strategies create long-term, sustainable value for our shareholders, our Board regularly engages in active discussions with management to formulate and implement appropriate strategies for the Company and each of its business segments. The Board and management routinely discuss key initiatives, transformative technologies, innovation, culture and corporate governance opportunities focused on driving long-term value. During 2021, this collaboration focused on (1) elevating Lumen’s speed, scale and network resiliency; (2) realizing the potential in expanding and maximizing the fiber network for greater efficiency and capacity; (3) enabling enterprise customers to easily enhance performance through flexible, secure platform solutions; (4) transforming data into a strategic asset through high data quality, consistency, and repeatability throughout the lifecycle; and (5) maximizing the potential of innovative and disruptive technologies through collaboration. In addition to regular Board and committee meetings, which include presentations and discussions of strategic and tactical initiatives, the Board participates in an annual in-depth dedicated review of the Company’s overall strategy with our management team. The Board and our management team discuss the industry and competitive landscapes, short and long-term plans, capital allocation strategies and other mission-critical topics.

CEO AND EXECUTIVE SUCCESSION PLANNING

The Board and management recognize the importance of continuously developing our executive talent, identifying potential outside candidates and preparing for emergency situations. Our HRCC, along with management, conducts periodic talent reviews that include succession plans for our senior leadership positions, including 360° peer reviews conducted by the NCG Committee. In 2018, the NCG Committee engaged a nationally recognized third-party consultant to develop a comprehensive executive management succession planning strategy and since then Lumen has retained the same consultant to continue to advise the Board and the company's leadership with the following objectives:

- View succession planning as an ongoing process, not an “event”
- Develop a succession plan for different scenarios (emergency, accelerated and orderly)
- Link succession planning to strategy by creating a CEO profile that focuses on what is most needed to lead Lumen in the future, not only today
- Understand the external market of CEO-ready talent and regularly update this understanding and benchmark data
- Assess the readiness of current key Lumen executives to assume the CEO position and Lumen's plans and timeframes for addressing any gaps in readiness
- Ensure that key Lumen executives have clear and actionable development plans, including detailed coaching for key executives and establish a regular and transparent process for leadership and the Board to track progress against development goals as needed

2018 	2019 	2020 	2021
<ul style="list-style-type: none"> • Initiated our engagement with an independent consulting firm regarding succession planning efforts • Developed CEO success profile • Began assessment of key Lumen executives 	<ul style="list-style-type: none"> • Approved an emergency succession plan and related communications plan • Completed assessment of key Lumen executives • Created development plans for key Lumen executives • Identified and reviewed potential external CEO candidates 	<ul style="list-style-type: none"> • Refreshed and reviewed potential external CEO candidates • Implemented actionable development plans, including detailed coaching, for key Lumen executives 	<ul style="list-style-type: none"> • Independent consulting firm continued to assist with our internal and external development plans and review process • Our CEO provided his review and feedback of senior leadership team

RISK OVERSIGHT

BOARD OF DIRECTORS

- The Board, along with its committees, reviews and oversees Lumen’s risk management processes in many ways, including receiving regular reports about our enterprise risk management (“ERM”) program, which is designed to comprehensively identify our most significant risks.
- The Board also works with management to assess our key short-and long-term risks and mitigation efforts relating to, among other things, cybersecurity, financial reporting, strategic plans, operations, capital budgets, human capital, corporate functions and business units.



Audit Committee

- Internal Controls over Financial Reporting (Quarterly)
- Risk Factors included in periodic reports (Annual with Quarterly Reviews)
- Investment Risk related to Treasury Activities (As Needed)

Human Resources and Compensation Committee

- Executive Compensation (Quarterly)
- Human Capital Strategy (Quarterly)
- Workforce related risks (Quarterly)

Nominating and Corporate Governance Committee

- ESG (Quarterly)
- Political Contributions (Annually)

Risk and Security Committee

- Enterprise Risk Management (Quarterly)
- Cybersecurity (Quarterly)
- Ethics and Compliance (Quarterly)
- Data Privacy (Biannually)



Management

- Under the ERM program, management develops a response plan for prioritized risks, as well as monitoring and mitigation plans for other identified risk focus areas.
- Management provides regular reports on the risk portfolio and response efforts to the Risk and Security Committee.
- Committees report on risk issues to the full Board.

Oversight of Cybersecurity Risks

As a technology and communications company that enables global transmission of large amounts of information over our networks, maintaining the security and integrity of information and systems under our control is a priority among our operational risk management efforts. We view cybersecurity risk as an enterprise-wide risk, subject to control and monitoring at various levels of management throughout the Company. The Risk and Security Committee and its Chair review Cybersecurity and Data Privacy quarterly and such topics of review include:

- risk assessments from information security, privacy and internal audit management teams with respect to cybersecurity, including the adequacy and effectiveness of the Company's internal controls regarding cybersecurity,
- emerging cybersecurity developments and threats and
- the Company's strategy to mitigate cybersecurity risks, such as our contingency plans in the event of security breaches or other system disruptions and cyber insurance coverage.

To assess and mitigate cybersecurity risk, we have implemented a global information security management program that includes administrative, technical and physical safeguards and we periodically engage both internal and external auditors and consultants to assess and enhance our program, all of which is subject to oversight by and reporting to the Risk and Security Committee. We engage independent external auditors and consultants who are fully accredited under various information security standards, including those administered by the International Organization for Standardization and the PCI Security Council. **During 2021, Lumen took the additional step of organizing a Security & Privacy Council that meets on a bi-monthly basis. The meetings are led by Lumen's Chief Privacy Officer and Chief Security Officer who provide organization level updates and also include other presenters who provide updates on emerging threats and other topical issues.**

Oversight of Data Privacy Risks

In addition to securing our network, we also take steps to protect the content of information Lumen collects, stores, uses and shares. Employee and customer information is encrypted, consistent with industry standards or legal requirements, both at rest and in transmission. We have adopted a data minimization policy designed to comply with and detect breaches of applicable laws and ensure appropriate protections when sharing information with third parties, including vendors. We maintain other plans or programs to manage our data privacy risks, including a privacy policy and a cyber incident response plan. As part of the ERM process, the Risk and Security Committee receives reports on data privacy protection efforts and controls to meet and enhance legal and compliance requirements across the enterprise.

Oversight of Political Contributions Risks

Our Board and NCG Committee engage in the oversight of our political initiatives and annually review Lumen's political and lobbying activities and related budgets. We strive to advocate public policy solutions that best serve our stakeholders. Our semi-annual Political Contributions Reports provide transparency in this process, demonstrating ethical corporate governance and promoting confidence in the democratic process. Specifically, our Reports disclose our corporate political contributions and those of our political action committees in accordance with applicable federal and state campaign finance laws and contributions to trade associations and 501(c) (4) organizations. Although not part of this proxy statement, our most recent Political Contributions Reports can be located on our website at lumen.com.

Oversight of Human Capital Management Risks

Our highly competitive business requires skilled and motivated employees and leaders with the necessary expertise to execute our innovation, efficiency and transformation strategies. Developing and retaining top talent is a priority. The Board regularly discusses with management Lumen's continuous efforts to attract and retain the caliber of employee with the type of knowledge and skills necessary to realize our goals. Both our directors and management set a "tone at the top" through:

- regularly meeting with our most senior human resources executive to discuss culture, talent strategy and leadership development and staying ahead of market trends by identifying early the skills needed for our future;
- designing strategies to support diversity, inclusion and belonging programs; and
- designing strategies to bridge any gaps in our succession plans by cultivating our in-house talent or engaging third parties.

Oversight of Other Risks and Information

Our Board committees oversee certain other risks specified in the preceding section "— Board Committees," and our Board and committees further oversee the ESG program and other risks discussed under the heading "ESG Sustainability Leadership" below.

ESG SUSTAINABILITY LEADERSHIP

Lumen is committed to creating lasting value for all our stakeholders. Environmental sustainability and social responsibility are core to our business priorities.

Lumen's Nominating and Corporate Governance Committee has primary responsibility for ESG oversight with quarterly reviews. In addition, (i) the Audit Committee reviews data transparency and reporting, (ii) the Human Resource and Compensation Committee reviews human capital management, and (iii) the Risk and Security Committee reviews network reliability and privacy.

Our CEO and other members of senior management provide leadership and guidance around Lumen's sustainability efforts. Lumen has a Sustainability Committee that is comprised of individuals from across the business including corporate communications, customer experience, data security and privacy, diversity, inclusion and belonging, environmental, government relations, human resources, internal audit, investor relations, legal, and sourcing/procurement, amongst others. The Sustainability Committee designs and oversees our sustainability program. The Sustainability Committee meets both before and after each meeting of the Nominating and Corporate Governance Committee to prepare for such meetings and to report on ESG outcomes and action items from the meetings.

ESG outcomes are driven by Lumen's strategy of strengthening our business purpose by focusing on sustainability opportunities important to our stakeholders and important to our long-term value. In August 2021, Lumen completed its inaugural "materiality assessment," which we plan to use to guide how we prioritize our sustainability and ESG initiatives. Working with an independent consultant, we conducted a peer and industry benchmarking review of sustainability topics that are common to the communications and technology industry. We assessed international standards and guidelines, including those of the Sustainability Accounting Standards Board (SASB), the Taskforce for Climate-related Financial Reporting (TCFD), and the Global Reporting Initiative (GRI). Lumen also sought input from a wide range of stakeholders, including investors, employees, community partners, customers, governmental agencies and regulators, suppliers, as well as the Board and senior leadership team.

The results of the materiality assessment revealed that the below-listed sustainability issues were of the most importance to Lumen's stakeholders and also had the potential to have the most impact on Lumen's future business success.

Customer Experience – We continue to focus on the digital customer experience and to assist us in this endeavor we created the Customer Advisory Board, which held its inaugural meeting in May 2021. Customer experience is also one of the performance metrics used to determine the amount of our short-term incentive award payouts.

Cybersecurity and Customer Privacy – We have an integrated security system designed to ensure the security, compliance, and privacy of customer data. We have made a commitment to the publication of a semi-annual transparency report, with the inaugural report already having been published.

Network Resilience and Reliability - The strength and resiliency of our physical infrastructure minimize customer disruptions. 4IR technologies rely on fiber and we have been expanding our fiber footprint. We are also providing disaster recovery services.

Digital Transformation – We are enabling customers to realize opportunities and mitigate risks in 4IR transformation. We are using technology-driven operating models to create efficiencies. We are focusing on reducing latency and enhancing the performance of our network through our edge compute and other services.

Innovation – Lumen is modernizing its IT application landscape by building and deploying platform capabilities in Hybrid Cloud. By anticipating market trends and customer needs, we are enabling downstream success. We are continuing to grow our collaboration ecosystem.

Human Capital

We support the passions and interests of our employees and empower them to be a positive influence in the world. This year we were proud to provide many opportunities to be good neighbors even through the challenges of COVID-19 by volunteering time, money and talent to support the causes that matter most to our employees. We seek to strengthen the communities in which we live and work through philanthropy, local community initiatives and global initiatives. Among our efforts are:

- In support of STEM Education, Lumen partnered with organizations such as Pathways in Technology (P-TECH) to provide underserved youth with an innovative education opportunity with a direct pathway to college attainment and career readiness
- As we adjusted to the changing needs for COVID-19, employees were provided opportunities to participate in over 30 virtual volunteering events
- Employees were also encouraged to actively volunteer individually in their communities and were supported through our Dollars for Doers grants program
- Our policy to match charitable contributions made by our employees
- Our employees are encouraged to volunteer and donate through our annual Campaign to Fight Hunger to support hunger relief efforts around the globe
- Employees are urged to join our partnership with Destination imagination to develop a new STEM-based outreach challenge program called The imagineXperience. Employees volunteered to help students in underserved communities build critical skill sets.
- In 2022, we established a relief fund to support employees with immediate financial grants who suffered losses from wildfires or other natural disasters.

For additional information regarding our management of human capital, please see “Compensation Discussion & Analysis – Section five – HRCC Engagement and Compensation Governance”, and our Annual Report on Form 10-K for the year ended December 31, 2021.

Director Compensation

OVERVIEW

The Board believes that each of our non-employee directors (whom we also refer to as outside directors or non-management directors) should be compensated through a mix of cash and equity-based compensation. Our HRCC, consisting entirely of independent directors, has primary responsibility for periodically reviewing and considering any revisions to director compensation.

The table and the discussion below summarize how we compensated our outside directors in 2021. This table does not include compensation paid to our President and CEO, Jeff Storey, who does not receive any additional compensation for his service as a director. Please see the “Summary Compensation Table” below for details regarding all compensation paid to Mr. Storey during fiscal 2021.

2021 COMPENSATION OF OUTSIDE DIRECTORS

DIRECTORS' COMPENSATION

Name	Fees Earned or Paid In Cash	Stock Awards ⁽¹⁾⁽²⁾⁽³⁾	All Other Compensation ⁽⁴⁾	Total
Current Directors				
Quincy L. Allen ⁽⁵⁾	\$ 120,125	\$ 206,411	\$ —	\$326,536
Martha H. Bejar	157,125	206,411	—	363,536
Peter C. Brown	143,250	206,411	2,000	351,661
Kevin P. Chilton	156,500	206,411	—	362,911
Steven T. Clontz	126,125	206,411	977	333,513
T. Michael Glenn	312,875	206,411	—	519,286
W. Bruce Hanks	248,250	206,411	4,586	459,247
Hal S. Jones	140,125	206,411	—	346,536
Michael J. Roberts	126,125	206,411	—	332,536
Laurie A. Siegel	147,500	206,411	1,060	354,971
Former Director⁽⁶⁾				
Virginia Boulet	49,750	—	—	49,750

¹ For fiscal 2021, the HRCC granted each outside director an award of restricted shares or restricted stock units valued at \$200,000 based upon the volume-weighted average closing price of our Common Shares over a 15-day trading period ending prior to the May 20, 2021, grant date. However, as required by SEC rules, the dollar value reported in this column reflects the grant date fair value of that award based upon the closing stock price of our Common Shares on the grant date in accordance with FASB ASC Topic 718. These awards vest on May 20, 2022, subject to the director's continued service through that date (with vesting accelerated in certain limited circumstances). See “—Cash and Stock Payments.”

² As of December 31, 2021, outside directors held the following unvested equity-based awards: (i) Ms. Siegel and Messrs. Brown, Chilton, Clontz, Hanks, Jones and Roberts each held 14,536 shares of restricted stock; (ii) Messrs. Allen and Glenn each held 14,536 RSUs; and (iii) Ms. Bejar held 3,634 shares of restricted stock and 10,902 RSUs.

³ As of December 31, 2021, outside directors held the following vested RSUs deferred under the Non-Employee Director Deferred Compensation Plan: Ms. Bejar – 8,219; Mr. Chilton – 16,439; Mr. Glenn – 31,145; Mr. Roberts – 14,706. For further information on our directors' stock ownership, see “Ownership of Our Securities —Executive Officers and Directors,” and for information on certain deferred equity and cash fee arrangements, see “—Non-Qualified Deferred Compensation.”

⁴ Includes (i) reimbursements for the cost of annual physical examinations and related travel of \$977 for Mr. Clontz, \$586 for Mr. Hanks and \$1,060 for Ms. Siegel, (ii) the payments related to the attendance of the KPMG Conference of \$2,000 each for Messrs. Brown and Hanks, (iii) the payments related to the attendance of the Chief Executive Board Conference of \$2,000 for Mr. Hanks. Except as otherwise noted in the prior sentence, the table above does not reflect reimbursements for travel expenses.

⁵ Mr. Allen joined the Board on February 25, 2021.

⁶ Ms. Boulet's term ended at the 2021 annual shareholders' meeting.

CASH AND STOCK PAYMENTS

Each year, with assistance from its independent consultant, the HRCC reviews the market competitiveness of our outside director compensation. We review the total compensation for an “average profile” director for their cash fees (retainer, committee fees and meeting fees) and equity awards and compared those amounts against director compensation for the “Compensation Benchmarking Peer Group” described on page 77.

As a result of the above-described process and based on input from its independent consultant, the HRCC approved certain changes to the program to bring our director compensation to approximately the 50th percentile as compared to our peers. These changes, described below, became effective following our Annual Shareholders’ Meeting in May 2021, which coincides with our second quarterly meeting of our Board and its committees.

CASH FEES – During 2021, each outside director earned a combination of annual cash retainers, which are paid on a quarterly basis with amounts prorated for any changes during the year.

We pay an annual cash retainer for attending each regular (quarterly) Board meeting (“Annual Board Retainer”). At the beginning of 2021, the Annual Board Retainer was \$75,000. As a result of the compensation review described above, we increased the Annual Board Retainer to \$100,000, effective in the second quarter of 2021. As a result, each outside director who served on our Board the entirety of 2021 received, in total, an Annual Board Retainer of \$93,750 for the full year.

We pay annual fees to the chairs of each of the following committees (“Annual Committee Chair Fees”). As part of the market competitive review, the HRCC increased the Annual Committee Chair Fees, effective for second-quarter meetings, as follows: (i) the chair of the Audit Committee from \$25,000 to \$35,000, (ii) the chair of the HRCC from \$25,000 to \$35,000, (iii) the chair of the NCG Committee from \$15,000 to \$30,000 and (iv) the chair of the Risk and Security Committee from \$12,500 to \$30,000.

As of our second quarter meeting, we began to pay the following annual fees to the non-Chair members of each of the following committees (“Annual Committee Member Fees”): (i) the members of the Audit Committee receive \$17,500, (ii) the members of the HRCC receive \$17,500, (iii) the members of the NCG Committee receive \$15,000 and (iv) the members of the Risk and Security Committee receive \$15,000.

Through May 2021, each outside directors also received a \$2,000 fee for attending each regular Board meeting, special Board meeting (including each day of the Board’s annual planning session), committee meeting and separate director education program. As a result of the market competitive review, the HRCC eliminated meeting fees in May and reallocated these fees as part of the increases to Annual Board Retainer and Annual Committee Chair Fees and the addition of Annual Committee Member Fees described further above.

During 2021, Mr. Glenn, in his capacity as the non-executive Chairman of the Board, received annual supplemental Board fees of \$200,000 payable in cash. The Chairman’s duties are set forth principally in our Corporate Governance Guidelines. See “How Our Board is Organized—Board Leadership Structure.”

During 2021, Mr. Hanks, in his capacity as non-executive Vice Chairman of the Board, received annual supplemental Board fees of \$100,000 payable in cash. Under our Bylaws, the Vice Chairman is charged with the responsibility of assisting the Chairman and performing such other duties as may be assigned to him by the Board or the Bylaws.

EQUITY GRANT – During 2021, the HRCC awarded an annual equity grant valued at \$200,000 to each outside director, with the number of shares determined by dividing this target value by the volume-weighted average closing price of our Common Shares over a 15-day trading period ending prior to the grant date and rounding to the nearest whole share.

This grant was awarded to each director in the form of time-vested shares of restricted stock unless the director made an election to defer all or a portion of the award under our Non-Employee Directors Deferred Compensation Plan (discussed below). For those directors who elected to defer any portion of the grant, the portion deferred was issued to the director as time-vested restricted stock units. These awards are scheduled to vest on May 20, 2022 (one year after their grant), with vesting accelerated in certain circumstances as described in the award agreement.

Dividends (or, for restricted stock units, dividend equivalents) on these awards are not paid currently but rather accrue from the grant date through the date of vesting (for restricted stock) or the date of issuance of the underlying shares (for restricted stock units) and are subject to the same vesting terms as the related award. Dividends on shares of restricted stock are paid to the director upon vesting while dividend equivalents on restricted stock units are paid to the director at the same time as the underlying shares are issued to him or her.

NON-QUALIFIED DEFERRED COMPENSATION

NON-EMPLOYEE DIRECTOR DEFERRED COMPENSATION PLAN – In March 2019, the Board adopted a deferred compensation plan for our non-employee directors. Under this plan, our non-employee directors may defer up to 100% of their cash and equity compensation.

Participants in the Non-Employee Director Deferred Compensation Plan may elect to receive payment of their account balances in either two to five annual installments or a lump sum upon a fixed date, separation from service, or up to five years following separation from service, subject to any federal tax rules governing deferred compensation.

All cash amounts deferred under this plan by non-employee directors are allocated among deemed investments that follow the performance of a broad array of funds and are reflected in the market value of each participant's account. Distribution amounts will include investment returns (positive or negative).

If a non-employee director elects to defer all or a portion of the director's annual equity award under this plan, as noted above, the portion of the award subject to the deferral election will be issued as restricted stock units instead of shares of restricted stock.

Five of our current directors, Ms. Bejar and Messrs. Allen, Chilton, Glenn and Roberts, participate in this plan.

LEGACY QWEST DEFERRED COMPENSATION PLAN – CLOSED TO NEW PARTICIPANTS AND CONTRIBUTIONS – In connection with our 2011 merger with Qwest, we assumed the Qwest Deferred Compensation Plan for Non-Employee Directors. Under this plan, Qwest outside directors could elect to defer all or a portion of their cash directors' fees, which were then converted to a number of "phantom units" based on the value of a share of Qwest stock, with credit for dividends paid to shareholders "reinvested" in additional phantom units. Plan balances attributable to amounts deferred on or after January 1, 2005, by Qwest directors who joined our Board following the merger were converted, based on the merger exchange ratio, to phantom units based on the value of one of our Common Shares. Other than the crediting and "reinvestment" of dividends for outstanding phantom units, the Company does not make any contributions to and no additional elective deferrals are permitted under this plan. Subject to the terms of the plan, each participant's account will be distributed as a lump sum in cash as soon as practicable following the end of his or her service as a director. As of December 31, 2021, Michael J. Roberts was the only remaining participant in this plan, with a balance of 8,928 phantom units with an aggregate value of approximately \$112,035.

OTHER BENEFITS

Each outside director is entitled to be reimbursed: (i) for expenses incurred in attending Board and committee meetings, (ii) for expenses incurred in attending director education programs and (iii) up to \$5,000 per year for the cost of an annual physical examination, plus related travel expenses. We supply company-owned tablets to certain of our outside directors for use in reviewing materials posted to a dedicated portal that permits management to communicate with the Board.

Directors may use our aircraft in connection with company-related business. However, we generally do not permit either our directors or their family members to use our aircraft for personal trips (except when such use can be accommodated at no incremental cost to us or on terms generally available to all of our employees in connection with a medical emergency).

Our Bylaws require us to indemnify our directors and officers so that they will be free from undue concern about personal liability in connection with their service to the Company. We have signed agreements with each of those individuals contractually obligating us to provide these indemnification rights. We also provide our directors with customary directors and officers liability insurance.

ITEM 2

Ratify KPMG as Our 2022 Independent Auditor

The Audit Committee of the Board has appointed KPMG LLP as our independent auditor for the fiscal year ending December 31, 2022 and we are submitting that appointment to our shareholders for ratification on an advisory basis at the meeting. Although shareholder ratification of KPMG's appointment is not legally required, we are submitting this matter to the shareholders, as in the past, as a matter of good corporate practice.

If the shareholders fail to vote on an advisory basis in favor of the appointment, the Audit Committee will reconsider whether to retain KPMG and may appoint that firm or another without re-submitting the matter to the shareholders. Even if the shareholders ratify the appointment, the Audit Committee may, in its discretion, select a different independent auditor at any time during the year if it determines that such a change would be in the Company's best interests.

In connection with the audit of the 2021 financial statements, we entered into an engagement letter with KPMG which sets forth the terms by which KPMG will provide audit services to us. Any future disputes between KPMG and us under that letter will be subject to certain specified alternative dispute resolution procedures, none of which are intended to restrict the remedies that our shareholders might independently pursue against KPMG.

KPMG has advised us that one or more of its partners plan to participate in the meeting. We understand that these representatives will be available to respond to appropriate questions and will have an opportunity to make a statement if they desire to do so.

For a discussion of factors the Audit Committee considered in connection with re-appointing KPMG for the 2022 audit, see "-Annual Evaluation and Selection of Independent Auditors."

Ratification of KPMG's appointment as our independent auditor for 2022 will require the affirmative vote of a majority of the votes cast on the proposal at the meeting.



FOR

**THE BOARD UNANIMOUSLY RECOMMENDS
A VOTE FOR THIS PROPOSAL.**

Audit Committee Report

Our Audit Committee has oversight authority over Lumen's financial reporting function, including our internal controls over financial reporting ("ICFR") and our external independent audit process. In carrying out its oversight responsibilities, the Audit Committee:

- monitors management's responsibility for fairly presenting our financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") by maintaining accurate and reliable financial information through our ICFR processes;
- appoints our independent auditor; and
- regularly communicates with our independent auditor regarding the scope and status of its annual audit of our consolidated financial statements, including our ICFR.

As part of the Committee's oversight of the Company's financial statements, the Committee reviews and discusses with the Company's management, and internal and external auditors, management's key initiatives and programs aimed at maintaining and improving ICFR, the effectiveness of the Company's internal and disclosure control structure and the scope and adequacy of the Company's internal auditing program.

The Committee met 9 times in 2021 and included, whenever appropriate, executive sessions in which the Committee met separately with KPMG, our independent auditor, as well as representatives of our Internal Audit group and management. During 2021, the Committee discussed with KPMG: (i) those matters required to be discussed by the applicable requirements of the SEC and the Public Company Accounting Oversight Board ("PCAOB"), including the quality of the Company's accounting principles, the reasonableness of significant judgments and the clarity of disclosures in the financial statements; (ii) the written disclosures required by PCAOB regarding the independent auditor's communications with audit committees concerning independence; (iii) KPMG's independence and the effects that the provision of non-audit services may have on KPMG's independence; and (iv) various other matters pertaining to the audit and other matters handled by KPMG.

Among other matters, over the course of the past year, the Committee also:

- discussed the impact of COVID-19 on the Company's financial statements as a whole, including short-term and long-term liquidity, credit losses, revenue, reserves, intangible assets and related ICFRs;
- discussed our 2021 critical accounting policies with KPMG;
- discussed SEC regulatory changes, including amendments to Regulation S-K;
- discussed Company capital allocation, investment and tax planning strategies;
- reviewed the scope of and overall plans for the annual audit and the internal audit program, including a review of critical accounting estimates and significant unusual transactions;
- reviewed KPMG's report describing its quality control procedures and its report included in the Company's Annual Report on Form 10-K;
- reviewed the performance of KPMG's lead engagement partner;
- reviewed and discussed each quarterly and annual financial statements and related earnings press releases before issuance, including reviewing the Company's issuance of guidance and use of non-GAAP financial information, the adequacy of disclosures and management's ICFR report and discussion and analysis;
- reviewed and discussed the effectiveness of our disclosure controls and procedures; and
- reviewed the Company's debt compliance process, including primary debt covenants, debt agreement restrictions, maintenance covenant calculations and liquidity implications.

Moreover, the Committee emphasized the continued importance of an environment supporting the integrity of the financial reporting process; oversaw the implementation of new accounting standards and appropriate related internal controls; met quarterly in separate executive sessions, including private sessions with the Company's independent auditors, internal auditors and top executives; and coordinated with other committees of the Board to oversee the Company's risk management function, especially with respect to matters that could impact the Company's financial results or financial position.


In addition, the Committee:

- received quarterly reports from the Director of Internal Audit, including the Company's work regarding ICFR and met with other members of the Internal Audit staff;
- received periodic reports pursuant to our policy for the submission of confidential communications from employees and others about accounting, internal controls and auditing matters and conducted certain follow-up inquiries as necessary;
- received reports on the Company's goodwill impairment testing;
- received and evaluated a report concerning the Company's major financial risks along with the Company's mitigating actions;
- reviewed the Company's accounting for income taxes;
- reviewed the Company's accounting for pension assets and liabilities;
- received updates on the Company's transition from LIBOR to new interest rate benchmarks; and
- received an annual report with regard to any hiring of former employees of KPMG.

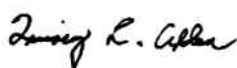
Taking all of these reviews and discussions into account and subject to the limitations on the role and responsibilities of the Committee referred to in its charter, the undersigned Committee members recommended that the Board include the Company's audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021.

In addition to the Company's corporate compliance program and integrity line, the Audit Committee has established procedures for the receipt and evaluation, on a confidential basis, of any complaints or concerns regarding our accounting, auditing, financial reporting or related matters. To report such matters, please send written correspondence to Audit Committee Chair, c/o Post Office Box 4364, Monroe, Louisiana 71211.

Submitted by the Audit Committee of the Board of Directors.



W. Bruce Hanks
(CHAIR)



Quincy L. Allen



Peter C. Brown



Kevin P. Chilton



Hal Stanley Jones

Annual Evaluation and Selection of Independent Auditors

The Audit Committee annually evaluates the performance of the Company's independent auditors, including the senior audit engagement team, and determines whether to reengage the current independent auditors or consider other audit firms. In deciding to retain KPMG as the Company's independent auditors for 2022, the Audit Committee considered a number of factors, including:

- KPMG's global capabilities;
- KPMG's technical expertise and knowledge of the Company's global operations and industry;
- The quality and candor of KPMG's communications with the Audit Committee and management;
- KPMG's independence;
- The quality and efficiency of the services provided by KPMG, including input from management on KPMG's performance and how effectively KPMG demonstrated its independent judgment, objectivity and professional skepticism;
- External data on audit quality and performance, including recent PCAOB reports on KPMG and its peer firms; and
- The appropriateness of KPMG's fees, KPMG's tenure as Independent Auditors (including the advantages and disadvantages of a longer tenure) and the controls and processes in place that help ensure KPMG's continued independence.

Over the last several years, the Audit Committee has attempted to strike an appropriate balance between auditor rotation and retention. Over the past few years, KPMG's engagement partner for our audit has been rotated more frequently than required and the audit team currently includes KPMG partners with no previous relationship with the Company. In addition, since the Level 3 Combination, not only has the engagement partner been rotated multiple times but the KPMG office charged with the audit has alternated between Shreveport, Louisiana and Denver, Colorado. The factors that the Audit Committee considered that favored the retention of KPMG as the Company's independent auditors included:

- **Enhanced audit quality** – KPMG's significant institutional knowledge and deep expertise of the Company's global business, accounting policies and practices, and internal control over financial reporting enhance audit quality.
- **Competitive fees** – Because of KPMG's familiarity with the Company and the communications industry, audit and other fees are competitive with peer companies.
- **Avoid costs associated with a new auditor** – Bringing on new independent auditors would be costly and require a significant time commitment, which could lead to management distractions.

Audit and Other Fees

The following table lists the aggregate fees and costs billed to us by KPMG and its affiliates for the 2020 and 2021 services identified below:

FEES

	2020	2021
Audit Fees ⁽¹⁾	\$14,750,818	\$14,822,340
Audit-Related Fees ⁽²⁾	126,705	152,278
Tax Fees ⁽³⁾	65,470	96,160
Other	—	—
Total Fees⁽⁴⁾	\$14,942,993	\$15,070,778

¹ Includes the cost of services rendered in connection with (i) auditing our annual consolidated financial statements, (ii) auditing our internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002, (iii) reviewing our quarterly financial statements, (iv) auditing the financial statements of several of our subsidiaries, (v) reviewing our registration statements and issuing related comfort letters, (vi) statutory audits for certain of our foreign subsidiaries and (vii) consultations regarding accounting standards.

² Includes the cost of preparing agreed upon procedures reports and providing general accounting consulting services.

³ Includes costs associated with general tax planning, consultation and compliance (which were approximately \$65,000 in 2020 and approximately \$96,000 in 2021).

⁴ Total fees for 2021 include audit-related fees from the planned divestitures of the Latin American business and incumbent local exchange business.

The Audit Committee maintains written procedures that require it to annually review and pre-approve the scope of all services to be performed by our independent auditor. This review includes an evaluation of whether the provision of non-audit services by our independent auditor is compatible with maintaining the auditor's independence in providing audit and audit-related services. The Committee's procedures prohibit the independent auditor from providing any non-audit services unless the service is permitted under applicable law and is pre-approved by the Audit Committee or its Chairman. The Chairman is authorized to pre-approve projects if the total anticipated cost of all projects pre-approved by him during any fiscal quarter does not exceed \$250,000. The Audit Committee has pre-approved the Company's independent auditor to provide up to \$75,000 per quarter of miscellaneous permitted tax services that do not constitute discrete and separate projects. The Chairman and the Chief Financial Officer are required periodically to advise the full Committee of the scope and cost of services not pre-approved by the full Committee. Although applicable regulations permit us to waive these pre-approval requirements in certain limited circumstances, the Audit Committee did not use these waiver provisions in either 2020 or 2021.

Our Executive Officers

We currently have five executive officers. Biographical information for each of them (other than Mr. Storey, who also serves as a director and whose biography may be found under “Board of Directors and Governance – Our Director Nominees”) is found below:

SHAUN ANDREWS



Executive Vice President, Chief Marketing Officer

49 years old

- Shaun Andrews is Lumen’s Executive Vice President, Chief Marketing Officer.
- With nearly 25 years of technology experience, Mr. Andrews is responsible for Lumen’s product and solutions strategy and go-to-market approach.
- He also has oversight of global marketing, including the brand, global messaging and digital campaigns and marketing technology.
- Mr. Andrews previously served as Lumen’s Executive Vice President, Product Management.
- Prior to Lumen’s combination with Level 3 Communications, Inc. in 2017, Mr. Andrews held progressive leadership and strategy roles in Product Management as a Senior Vice President, starting with Level 3 in 2006.
- Mr. Andrews became Lumen’s Executive Vice President and Chief Marketing Officer in 2019.

STACEY W. GOFF



Executive Vice President, General Counsel and Secretary

56 years old

- Stacey W. Goff is Executive Vice President, General Counsel and Secretary for Lumen.
- Mr. Goff is responsible for Lumen’s legal function, as well as the communications, community relations and public policy functions.
- Mr. Goff joined Lumen in 1998 and has served as General Counsel since 2009.

CHRISTOPHER STANSBURY



Executive Vice President, Chief Financial Officer

56 years old

- Effective April 4, 2022, Christopher Stansbury was named as Lumen's Executive Vice President, Chief Financial Officer for Lumen, with global responsibility for financial planning, accounting, tax, treasury, investor relations, procurement and supply chain management and the global real estate portfolio.
- Mr. Stansbury previously served as the Senior Vice President and Chief Financial Officer of Arrow Electronics, Inc. from May 2016 through March 2022. Prior to that, Mr. Stansbury served as Vice President, Finance, and Chief Accounting Officer of Arrow Electronics, Inc. beginning in August 2014.
- Prior to joining Arrow Electronics, Inc., Mr. Stansbury held finance positions at Hewlett-Packard, Inc. and PepsiCo, Inc.

SCOTT TREZISE



Executive Vice President, Human Resources

53 years old

- Scott Trezise is Lumen's Executive Vice President, Human Resources.
- In this role, Mr. Trezise is responsible for the global employee experience, including talent acquisition, employee engagement, recognition, training and development, compensation and benefits, payroll, labor relations for represented employees and contingent labor.
- Mr. Trezise joined Lumen in 2013 in his current role, and was named an executive officer in 2013.

ITEM 3

Advisory Vote on Executive Compensation – “Say-on-Pay”

Each year, we provide our shareholders the opportunity to vote on a non-binding, advisory resolution to approve the compensation of our named executive officers (NEOs) as disclosed in our annual proxy statements in accordance with SEC rules.

Under our executive compensation programs, our NEOs are rewarded for achieving specific annual and long-term goals, as well as increased shareholder value. We believe this structure aligns executive pay with our financial performance and the creation of sustainable shareholder value. The Human Resources and Compensation Committee of our Board (HRCC) continually reviews our executive compensation programs to ensure they achieve the goals of aligning our compensation with both current market practices and your interests as shareholders.

As discussed in greater detail elsewhere in this proxy statement, the HRCC spends considerable time and effort to ensure that not only do we have the right leadership in place, but also that our executive compensation programs continue to appropriately incentivize and reward each key member of the team in a manner that aligns with shareholder interests. In recent years, this has included a significant emphasis on shareholder outreach and taking action in response to the input we received from shareholders. For additional information on our executive compensation programs generally and our recent compensation actions specifically, we urge you to read the “Compensation Discussion & Analysis” and “Compensation Tables” sections of this proxy statement.

At the meeting, we will ask you to vote, in an advisory manner, to approve the overall compensation of our NEOs, as described in this proxy statement, including the Compensation Discussion & Analysis, the Summary Compensation Table and the other related tables and disclosures. This proposal, commonly known as a “say-on-pay” proposal, gives you the opportunity to express your views. This advisory vote is not intended to address any specific element of compensation, but rather relates to the overall compensation of our named executive officers and our executive compensation policies and practices as described in this proxy statement. Accordingly, your vote will not directly affect or otherwise limit any existing compensation or award arrangement of any of our NEOs.

While this “say-on-pay” vote is advisory and will not be binding on our Company or the Board, it will provide valuable information for future use by our HRCC regarding shareholder sentiment about our executive compensation. We understand that executive compensation is an important matter for our shareholders.

Accordingly, we invite shareholders who wish to communicate with our Board on executive compensation or any other matters to contact us as provided under “Board of Directors and Governance–Shareholder Engagement.”

Approval of this proposal will require the affirmative vote of the holders of a majority of the votes cast on the proposal at the meeting.



**THE BOARD UNANIMOUSLY RECOMMENDS
A VOTE FOR THIS PROPOSAL.**

Compensation Discussion & Analysis

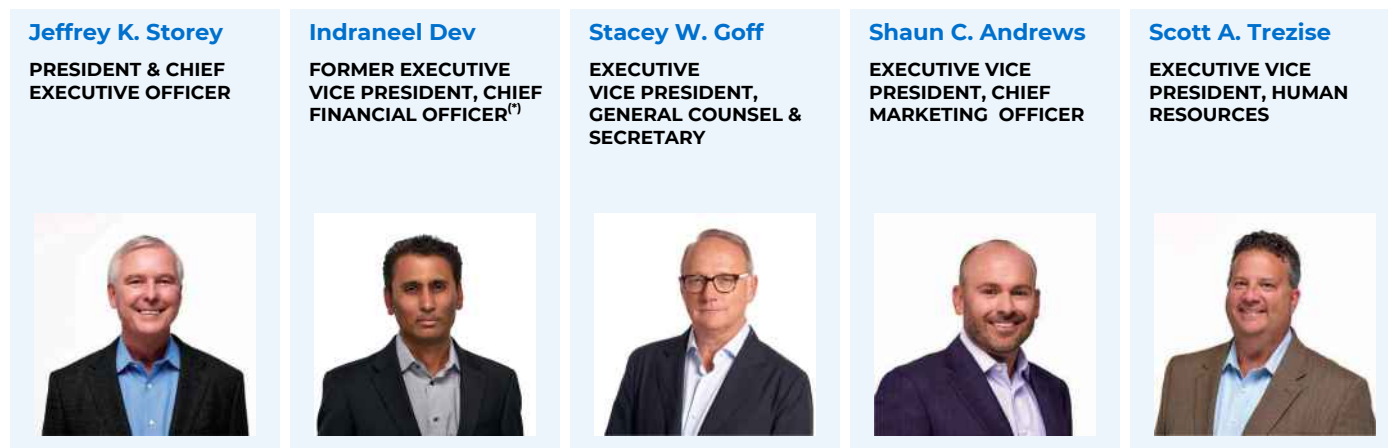
The CD&A is divided into five sections: (1) Executive Summary; (2) Compensation Philosophy and Oversight; (3) Pay and Performance Alignment; (4) Compensation Design, Awards and Payouts; and (5) HRCC Engagement and Compensation Governance. Please refer to the roadmap below in order to navigate this portion of the proxy statement.

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Section one - Executive Summary

As described in our Board Committee section above, the HRCC oversees our executive compensation program. More broadly, the HRCC provides direction to management on compensation programs for all employees with the goal of retaining the skilled talent needed for Lumen to reach its strategic objectives. The HRCC seeks to continuously improve our compensation programs based on changing market conditions, the evolving business environment, and feedback from our shareholders. This CD&A reflects the HRCC's overall philosophy on employee compensation with a focus on compensation for our five NEOs during the last fiscal year.



(*) As previously disclosed and described elsewhere herein, Mr. Dev's employment with Lumen ended effective April 1, 2022.

2021 executive compensation aligned with business performance

As discussed in greater detail in this CD&A, our incentive programs are aligned with our corporate strategy and are paid out based on our performance. In 2021, we had a solid year and our STI plan was funded at 100%.

- As we continued to focus on profitable revenue growth while executing on cost transformation initiatives, we expanded Adjusted EBITDA margins by over 100 basis points and generated Adjusted EBITDA of \$8.4 billion, which was just below our STI target
- Our \$3.7 billion of Free Cash Flow substantially exceeded our Free Cash Flow target for 2021, primarily as a result of lower capital expenditures due to pandemic-related delays in customer decision-making environment and higher demand for more digital, less-capital intensive services
- We achieved \$19.7 billion of Revenue, falling short of our target
- We hit our target for Customer Experience, with positive satisfaction indicators telling us we're doing well in this area

Lumen business highlights

During 2021, we made progress advancing our core business strategy to integrate and upgrade our global network and other assets and technologies into an advanced high-bandwidth, low latency platform that is secure, reliable and fast. To that end, we focused our efforts on strengthening our digital self-service product ordering platforms, expanding our offering of secure edge computing services, creating a more adaptive network, and expanding our network capacity through our Quantum Fiber buildout plan and other initiatives.

Many of our existing and potential enterprise customers were affected by uncertainty in 2021 related to the pandemic, resulting in some delayed decision making which extended sales cycles. Despite this challenging backdrop, we improved our sales and revenue performance throughout the year, and our sales funnel recovered to above pre-pandemic levels by the end of 2021.

We also announced and executed on our key capital allocation priorities:

1. Investing to drive growth
2. Maintaining a \$1.00 per share dividend
3. Staying relatively net leverage neutral through our current investment phase
4. Continued portfolio optimization
5. Evaluating opportunities for additional share repurchases

Investing to drive growth: Improving the revenue trajectory of our business is our top priority, and our objective is to reach top-line growth through our Quantum Fiber buildout and Lumen Platform initiatives. Certain important milestones achieved during 2021 position us to achieve future growth:

- Deployed our edge computing platform designed to cover substantially all of U.S. enterprises with 5 milliseconds or less latency while expanding the platform's bare metal service and storage capabilities
- Expanded our Quantum Fiber network to approximately 400 thousand new addressable locations across our footprint and sized our total addressable opportunity for Quantum Fiber to be more than 12 million locations

Maintaining a \$1.00 per share dividend: We believe that the return of cash to our shareholders in the form of a dividend is an important part of our value proposition, and we are focused on supporting our dividend even as we make the investments necessary to reach our growth objectives. We returned approximately \$1.1 billion to our shareholders during 2021 through dividends.

Staying relatively net leverage neutral through the investment phase: During 2021, we lowered net debt by approximately \$1.5 billion and reduced our net leverage. We exited the year at 3.6 times Net Debt to Adjusted EBITDA.

Continued portfolio optimization: We announced the value-accretive divestitures of our Latin American assets and a 20-state portion of our domestic ILEC footprint for aggregate gross consideration of \$10.2 billion. Upon completion, these transactions will streamline our portfolio, giving us increased focus and incremental capital to drive growth in the remaining areas of the business. We remain open to smart optimization of our assets going forward.

\$8.4B
Adjusted EBITDA

\$3.7B
Free Cash Flow¹

3.6X
Net Debt to
Adjusted EBITDA

Evaluating opportunities for additional share repurchases: We announced and completed a \$1 billion share repurchase program, reducing our share count by approximately 81 million shares and lowering our dividend payment obligations.

For information on how our non-GAAP metrics used above reconcile to GAAP measures and a description of our special items, see Appendix A. For more complete information on Lumen and our recent performance, see the remainder of this proxy statement, including Appendix B.

¹Free Cash Flow excludes cash paid for special items.

WHAT'S NEW



As noted above, on July 26, 2021, we agreed to sell our Latin American business, and on August 3, 2021, we agreed to sell part of our incumbent local exchange carrier (ILEC) business in 20 Midwestern, Southern and Eastern states, for aggregate gross consideration of \$10.2 billion. We currently anticipate that both of these transactions will close during 2022.

Shareholder engagement and 2021 compensation enhancements

At our 2021 annual meeting, we received support from the holders of approximately 91% of the shares voted on our say-on-pay proposal.

Each year we solicit shareholder feedback throughout the year on a wide range of topics, including executive compensation. Our Chairman of the Board (who is also a member of the HRCC), HRCC Chair, NCG Committee Chair and, as appropriate, members of management typically participate in these engagements. These conversations have enabled us to receive input from our shareholders on how best to align the interests of management and the shareholders and enabled many of our shareholders to gain a better understanding of the challenges of recruiting, retaining and motivating top executive talent in a complex, rapidly changing industry that continues to face the challenges of replacing high-margin declining legacy services with lower-margin growing digital services.

With the feedback of our 2020 shareholder engagement in mind, we refined our 2021 long-term incentive plan as follows:

<ul style="list-style-type: none"> Revised our LTI plan metrics for our 2021 awards 	<ul style="list-style-type: none"> Maintained Adjusted EBITDA element, reducing it to 50% weighting 		<ul style="list-style-type: none"> Maintained Relative TSR element, changing it from a modifier to an equal 50% weighting 	
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During our shareholder engagement in spring 2021, we invited shareholders representing 55% of our outstanding shares to engage, resulting in 7 meetings with holders representing 11% of our outstanding shares. We received valuable input on executive compensation, in addition to governance and ESG. We were encouraged by both the constructive feedback and positive support we received regarding our compensation program changes over the last couple of years.

In our fall 2021 shareholder engagement, we invited shareholders representing 58% of our outstanding shares to engage, resulting in 10 meetings with holders representing 8% of our outstanding shares. These discussions were focused on ESG, board diversity and composition, capital allocation and the impact these topics have on our strategic priorities and how we design executive compensation to incentivize our long-term success. These discussions helped to inform our 2022 executive compensation decisions.

We look forward to continuing to engage in productive dialogue with our stakeholders on all governance and stewardship, including compensation.

New independent compensation consultant

In July 2021, the HRCC engaged Semler Brossy Consulting Group, LLC (Semler Brossy) as its new independent compensation consultant after conducting a nationwide search. Semler Brossy replaces Meridian Compensation Partners, LLC (Meridian), which had served as independent compensation consultant to the HRCC for the previous six years.

Section two - Compensation Philosophy and Oversight

Compensation is a critical element in Lumen's overall business strategy for attracting, developing, motivating and retaining executives and key employees who possess the right skills and leadership expertise to execute our corporate strategies. Our transition towards providing more adaptive digital transmission services has placed a greater premium on attracting and retaining personnel with cutting-edge technical skills. We design our compensation programs to reward executives and employees who are critical to our success.

Compensation objectives and design

Our compensation programs are designed to be market competitive and fiscally responsible. Providing incentive compensation opportunities linked to our corporate performance is a key part of our compensation programs, especially for our senior leaders. But our STI and LTI programs extend much further into our organization. For 2021, approximately 23,000 employees participated in our STI program and approximately 1,600 employees received equity grants under our LTI program. For each participant in our incentive programs, including our NEOs, his or her target compensation and performance metrics are determined based on the availability of talent, the criticality of skills, market compensation benchmarks and internal equity considerations.

ALIGNING PERFORMANCE OBJECTIVES WITH STRATEGY

The HRCC selects short-term and long-term plan performance objectives designed to drive execution of our overall business strategies. This process includes engagement with the HRCC's independent compensation consultant, discussing compensation trends, measuring our performance against peers and market influences throughout the year as well as feedback from shareholder engagement regarding executive compensation and incentive design. Key design considerations include:

Incentive Compensation Design

- Aligning performance objectives and metrics with our short- and long-term strategies
- Setting ambitious short-and long-term targets at challenging but reasonably achievable levels that reflect priorities and drive progress toward our long-term vision
- Assessing effectiveness of prior year design and targets
- Ensuring that performance-based compensation rewards performance over multiple time horizons and aligns with long-term shareholder value while discouraging excessive risk taking
- Being responsive to shareholder feedback
- Allowing for the flexibility to make limited adjustments, positive or negative, as may be appropriate
- Monitoring share expense rate and dilution

Target Compensation

- Balancing between cash and equity incentive compensation
- Targeting total compensation at the 50th percentile
- Balancing individual contribution and Company performance
- Retaining employees with essential expertise and skill
- Targeting internal equity by offering comparable pay to employees who make similar contributions and have comparable skill sets and expertise

RIGOROUS DESIGN AND TARGET SETTING PROCESS



Each year over the course of several meetings, the HRCC evaluates our incentive designs for the upcoming plan year and establishes rigorous threshold, target and maximum performance levels for the selected objectives that are rooted in our annual budget, public guidance and long-range strategic plan.


Our incentive design and targets are influenced by:

- Board approved annual and long-range financial plans, which are used to set our STI and LTI targets and inform our external outlook
 - Detailed financial and operational goals and timelines
 - Anticipated timing for execution of our strategic initiatives, new product launches and completion of our pending divestitures
 - Cash flow plan to execute on our capital allocation priorities
 - Prior year strategic goals and actual financial performance
 - Industry and competitive trends
 - Other Company-specific and external factors that influence our business
- Declines in high margin, residential voice and copper-based wireline revenue outweighing increased customer demand for digital services and new products
 - Telco services' margin is significantly greater than the technology services margin – requiring us to simultaneously expand our customer base and services portfolio at a faster rate than the declining telco customer base while also protecting the value of the declining residual legacy voice and copper-based wireline revenue
 - As a result, flat or slightly negative revenue growth is a rigorous goal during this telco to tech evolution
- Adapting to our revenue declines requires us to adjust our cost structure annually
 - Using Adjusted EBITDA as a key financial metric in both our STI and LTI plans, with performance measured over different time horizons, incentivizes management to rapidly adjust our operations to achieve strategic priorities
- The Board's careful review of the degree of difficulty of our compensation goals
- Shareholder feedback and independent compensation consultant observations

Our pay elements

The three core elements of our executive compensation program are base salary, annual STI bonus opportunity (typically paid in cash); and annual LTI grants (equity awards). Our LTI awards are structured as mix of performance-based restricted stock or RSUs (PBRS) and time-based restricted stock or RSUs (TBRS), with heavier weighting on the PBRS portion for our senior leadership team. Each element is described below and includes the performance metrics selected for our 2021 incentive programs.

CEO	Element and Description	Performance Objectives Aligned with Strategy	Metrics and Weighting 2021
<p>Fixed</p> 	<p>Base Salary</p> <p>As with most companies, base salary is annual fixed cash compensation that provides a competitively set and stable component of income to our executives.</p>		
<p>At-Risk</p> 	<p>STI Program</p> <p>STI bonus is annual variable cash compensation based on the achievement of annual performance measures.</p> <p>Alignment to Compensation Philosophy STI provides competitive short-term incentive opportunities for our executives to earn annual bonuses, typically paid in cash, based on performance objectives that, if attained, can reasonably be expected to (i) promote our business and strategic objectives and (ii) correspond to those paid to similarly situated and comparably-skilled executives at peer companies. The HRCC retains discretionary authority over determining any and all amounts to be paid under the STI plan</p>	<p>For 2021, the HRCC maintained the same STI design and elements as the prior year, which remain aligned to the telco to tech transitioning strategies.</p>	<p>Adjusted EBITDA measures the operational performance and profitability of our businesses and is commonly used by industry investors to evaluate our total enterprise value. (50%)</p> <p>Free Cash Flow is a comprehensive measure of our overall financial position. (25%)</p> <p>Revenue generation is critical to our goal of increasing our strategic revenue growth in amounts sufficient to offset our continuing and systemic legacy revenue losses. (15%)</p> <p>Customer Experience is critical to maintain and grow our revenue base. (10%)</p> <p>A positive or negative adjustment for individual performance based on "line of sight" for their specific areas of responsibility and individual objectives. Any positive adjustments for a NEO's individual performance are capped at 20% of the Company performance funding for the STI program. (Individual Performance modifier)</p>

CEO	Element and Description	Performance Objectives Aligned with Strategy	Metrics and Weighting 2021
<p data-bbox="145 215 357 265">Long-Term Incentive Compensation</p>  <p data-bbox="102 582 124 669" style="writing-mode: vertical-rl; transform: rotate(180deg);">At-Risk</p>	<p data-bbox="424 215 571 240">LTI Program</p> <p data-bbox="424 244 804 422">LTI is variable compensation awarded annually in equity that vests over three years from the date of grant, with at least 60% of the award based on the achievement measured against pre-established performance measures for a three-year period.</p> <p data-bbox="424 451 724 476">Alignment to Compensation Philosophy</p> <p data-bbox="424 480 804 994">LTI fosters a culture of ownership, aligns the long-term interests of our executives with our shareholders and helps to retain executives through stock price growth and the creation of long-term value. In addition, the number of shares vesting under our performance-based awards is dependent upon our performance measured against key business objectives over a multi-year period, further strengthening the alignment between executive pay, Company performance and shareholder value creation. The amount of LTI compensation that is ultimately realized depends on how successfully we execute our strategic goals and our overall stock performance.</p>	<p data-bbox="828 215 1085 240">Time-Vested LTI Awards (TBRS)</p> <p data-bbox="828 244 1123 422">Our grants of TBRS are intended to reinforce the link of interests between our executives and our shareholders by focusing on the long-term value of our common stock.</p> <p data-bbox="828 451 1075 476">Performance-Based LTI Awards (PBRs)</p> <p data-bbox="828 480 1136 837">In response to shareholder input and other factors, for our 2021 LTI awards the HRCC reduced our Cumulative Adjusted EBITDA metric to a 50% weighting and, to further strengthen the alignment of executive and shareholder interests, increased the focus on relative TSR by changing it from a modifier to a second, equally-weighted performance metric.</p>	<p data-bbox="1158 215 1481 368">Adjusted EBITDA measures the operational performance and profitability of our businesses and is commonly used by industry investors to evaluate our total enterprise value.</p> <p data-bbox="1158 372 1487 476">Cumulative Adjusted EBITDA measures sustained, cumulative EBITDA performance over a three-year period. (50%)</p> <p data-bbox="1158 501 1487 629">Relative Total Shareholder Return or TSR (3-year) rewards for achieving stock price growth relative to our TSR peer group over a three-year period. (50%)</p>

For a discussion of how the HRCC allocates compensation between these three key components, see section below entitled “Pay and Performance Alignment.”

Section three - Pay and Performance Alignment

In allocating NEO target pay opportunities among the different compensation elements, the HRCC does not adhere to a prescribed formula but generally emphasizes performance-based and at-risk elements. The total target cash compensation opportunity (base salary plus target STI) represents less of each NEO's total target compensation than the total target LTI opportunity, in order to increase alignment with shareholders' interests and motivate performance that creates sustainable long-term shareholder value.







Goal setting

As noted above, STI and performance-based LTI payouts are determined at the end of a performance period based on our achievement of pre-established goals. In order to ensure compensation elements are aligned with both company performance and our evolving corporate strategies, incentive goals and targets are not automatically carried forward from one year to the next. Rather, the HRCC reevaluates performance goals annually, in order to establish goals that are:

- challenging and sufficiently rigorous, based on the information available to us at the time, including the Company's publicly-disseminated annual outlook;
- appropriately tailored to our current business conditions as well as the prevailing business environment more broadly;
- aligned with shareholder interests and recent shareholder input; and
- designed to incentivize our executives to drive our key strategic objectives over the relevant performance period.

Incentive program guidelines

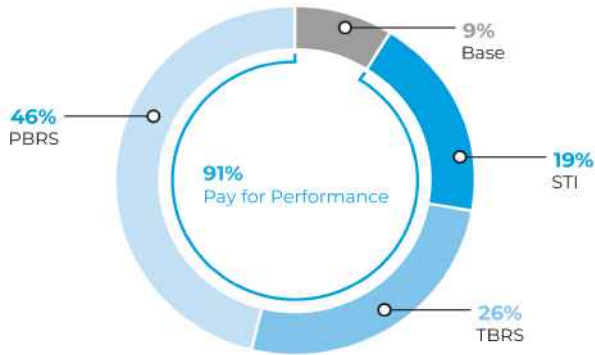
While our incentive goals, targets and payout criteria are designed to measure objective performance over a specified period of time, the HRCC does have the ability to make certain adjustments to our performance calculations. To provide structure and promote consistency in addressing such situations, the HRCC has adopted Guidelines on Administering Incentive Plans (the Guidelines) to aid its goal of reaching balanced STI and LTI payout decisions that align performance with our targets and corporate strategy. As described in the table below, the Guidelines provide four types of potential adjustments to our STI or LTI metrics that can affect the overall payout.

Types of Adjustments Under Our Incentive Program Guidelines	STI	LTI	2021 Adjustments Under Our Incentive Program Guidelines
<p>Mandatory Adjustments to Results. The first type of adjustment occurs after completion of each performance period and in conjunction with our annual external reporting process when the HRCC reviews the financial information and assumptions in order to make certain mandatory adjustments to STI and LTI performance results to eliminate the effects of certain unanticipated, material and special events specified in the Guidelines. Generally, these adjustments have corresponded closely, but not exactly, with the “Non-GAAP Special Items” supplemental schedule included in our earnings release for the corresponding performance period.</p>			<p>For our 2021 STI Plan:</p> <ul style="list-style-type: none"> • See “Appendix A - Non-GAAP Reconciliation” for details on the Non-GAAP Special Items previously reported in our February 9, 2022 earnings release. • Adjustments for 2021 also included the net impact of charges and credits related to the sale of our Texas correctional facility operations.
<p>Discretionary Adjustments to Results. The second type of adjustment provides the HRCC with discretionary authority to adjust STI and LTI performance results based on any other “extraordinary, unusual, or non-recurring transactions or items” to prevent award payouts from being unfairly impacted by such items. In either case, the adjustments may be positive or negative but will only be made if the events were not known on the date the performance goals were established or were not reflected in the forward-looking financial information used to set such goals.</p>			<p>For our 2021 STI Plan:</p> <ul style="list-style-type: none"> • Adjustments for 2021 included the elimination of the effect of foreign currency fluctuations and true-up of bonus accruals for 2021 STI. • These adjustments were not included in adjustments we publicly reported in connection with reporting earnings.
<p>Discretionary Adjustments to STI Payout Percentages. The third type of adjustment, as discussed in greater detail below under “Short Term Incentive Bonuses,” provides the HRCC with additional discretionary authority under the terms of the STI plan to adjust STI payouts. These discretionary adjustments may be made as either a specific feature of a given year’s STI plan established in advance (for example, the capped individual performance modifier included in our 2021 plan design) or as equitable adjustments made in arrears pursuant to the HRCC’s overall authority to authorize final STI payouts.</p>			<p>For our 2021 STI Plan:</p> <ul style="list-style-type: none"> • As described below under “2021 Short-Term Incentive Program—HRCC STI Award Oversight,” the HRCC applied negative discretion to reduce 2021 STI awards by 9.6%.
<p>Mandatory Adjustments to LTI Targets. The final type of adjustment, adopted in early 2022, requires the HRCC to adjust our three-year Cumulative Adjusted EBITDA targets as applied to the performance-based portion of our annual LTI grants to eliminate the effects of changes in tax law, changes in accounting standards and certain specified extraordinary items or events.</p>			<ul style="list-style-type: none"> • None for 2021.

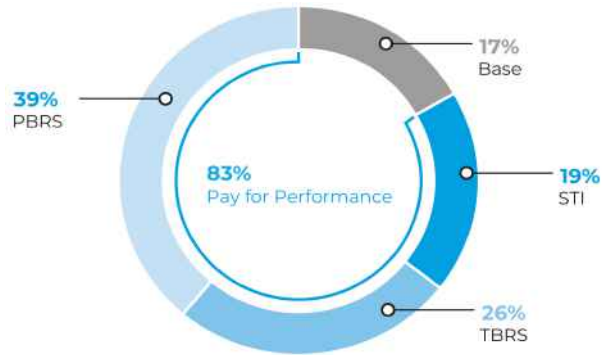
Pay mix

The following chart illustrates the approximate allocation of the total target compensation opportunity for our current CEO and named executive officers (shown as CEO and 2021 NEOs, respectively, below) between elements that are fixed and variable or performance-based pay that is “at risk.” As a result, the actual (or take home) pay that our CEO realizes in a given year may be more or less than his total target compensation for that year, as illustrated in the bar graphs further below.

CEO - Total Target Opportunity



2021 NEOs - Total Target Opportunity

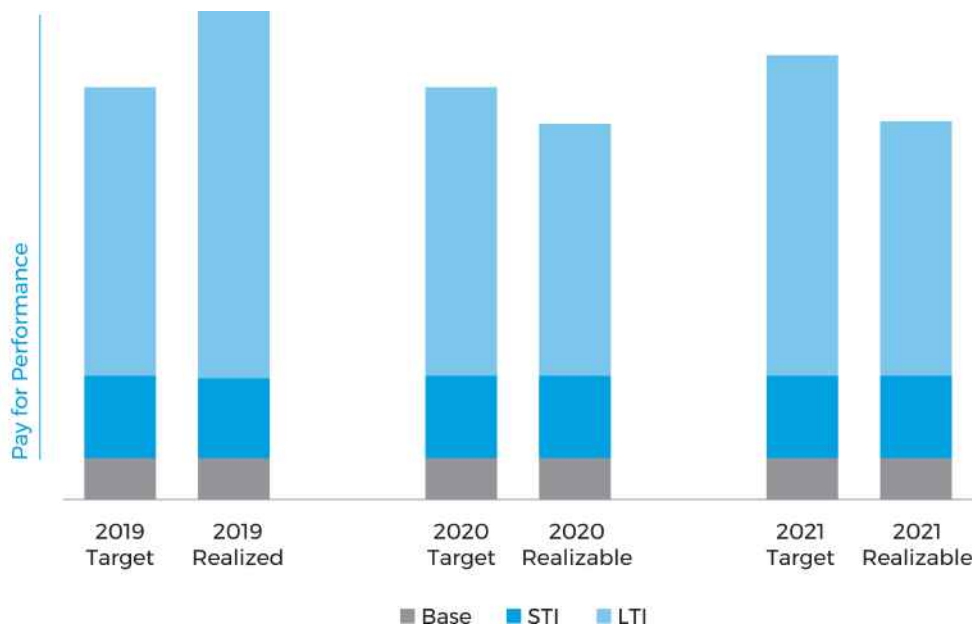


A fixed annual salary (base salary) represents 9% of our CEO’s total target compensation and 17% of our other NEOs’ average target total compensation.

Variable pay, consisting of an STI bonus opportunity and LTI awards, represents 91% of our CEO’s total target compensation and 83% of our other NEOs’ average target total compensation. This portion of pay is considered at-risk since the receipt or value of the award is subject to the attainment of certain performance goals, vesting requirements and overall stock performance. LTI performance-based compensation is the largest component, representing 46% of our CEO’s and 39% of our other NEOs target total compensation, and provides the greatest alignment between our NEO compensation and the interests of our shareholders.

Realized and realizable pay for our CEO

The chart below illustrates the realized¹ and realizable² pay for our CEO, 90% or more of which was at-risk variable compensation (STI, TBRS and PBRS) in each the last three years³. Over the past three years, our CEO's average realized and realizable pay approximated 98.3% of target compensation.



2019 Realized Pay		2020 Realizable Pay		2021 Realizable Pay	
STI:		STI:		STI:	
Company Performance Funding	97%	Company Performance Funding	91%	Company Performance Funding	100%
Individual Performance Multiplier	100%	Individual Performance Multiplier	109.9%	Individual Performance Multiplier	100%
LTI: 2-Year Performance Period		LTI: 3-Year Performance Period		LTI: 3-Year Performance Period	
Adjusted EBITDA run rate	149.9%	Cumulative Adjusted EBITDA	TBD	Cumulative Adjusted EBITDA	TBD
		Relative TSR	TBD	Relative TSR	TBD
Realized Pay:	118.5%	Realized Pay:	91.1%	Realized Pay:	85.1%

¹ Realized Pay measures the actual pay realized by Mr. Storey, excluding one-time awards, by adding together (i) actual salary paid during the year, (ii) STI bonus that was ultimately paid for that year and (iii) the value of time- and performance-based LTI awards that vested.

² Realizable Pay measures the actual pay realizable for Mr. Storey for a given year by adding together the (i) realized pay, as describe in note (1) and (ii) the value of unvested time- and performance-based LTI, at "target" levels, based on our stock price as of March 1, 2022.

³ For further information on our 2019 and 2020 STI performance and 2019 PBRS performance, please see our 2020 and 2021 proxy statements. For further discussion on our 2021 STI payout, see "2021 Short-term incentive program." "TBD" means to be determined upon completion of the performance periods ending on December 31, 2022 and 2023.

Section four - Compensation Design, Awards and Payouts for 2021

Our fiscal 2021 executive compensation program was generally similar to our 2020 program, except for a recalibration of our LTI program metrics.

Target Compensation

As noted previously, the three key elements of our executive compensation program are base salary, STI bonus opportunity and LTI awards (at least 60% of which are PBRs). The HRCC has established target compensation levels for each of our senior officers on each of these three elements, reviewing the pay mix and pay levels at least annually. As of December 31, 2021, the total target compensation opportunities for our NEOs were as follows:

TOTAL TARGET COMPENSATION FOR FISCAL 2021⁽¹⁾

NEO	Base Salary	STI Target Bonus %	STI Target Bonus Opportunity	Total Target Cash	LTI Target ⁽²⁾	Total Target Compensation ⁽³⁾
Mr. Storey	\$1,800,011	200%	\$ 3,600,022	\$5,400,034	\$14,000,000	\$19,400,034
Mr. Dev	750,000	125%	937,500	1,687,500	4,250,000	5,937,500
Mr. Goff	600,018	120%	720,021	1,320,039	2,000,000	3,320,039
Mr. Andrews	550,000	100%	550,000	1,100,000	1,600,000	2,700,000
Mr. Trezise	524,992	100%	524,992	1,049,984	1,500,000	2,549,984

¹ For more complete information presented in accordance with the SEC's rules, see the Summary Compensation Table below.

² The LTI target in this table represents the value of the target levels of equity awards to be granted as of December 31, 2021, which differ from amounts reported in the Summary Compensation Table, which are calculated in accordance with FASB ASC Topic 718.

³ The Total Target Compensation for Messrs. Storey and Trezise was at the 50th percentile of our compensation benchmarking data, and between the 25th and 50th percentile for Messrs. Andrews, Dev and Goff.

Each of these elements is discussed in greater detail below. For more information on how we determined specific pay levels in 2021, see further discussion under the heading “—Compensation Benchmarking Peer Group.”

Base Salary

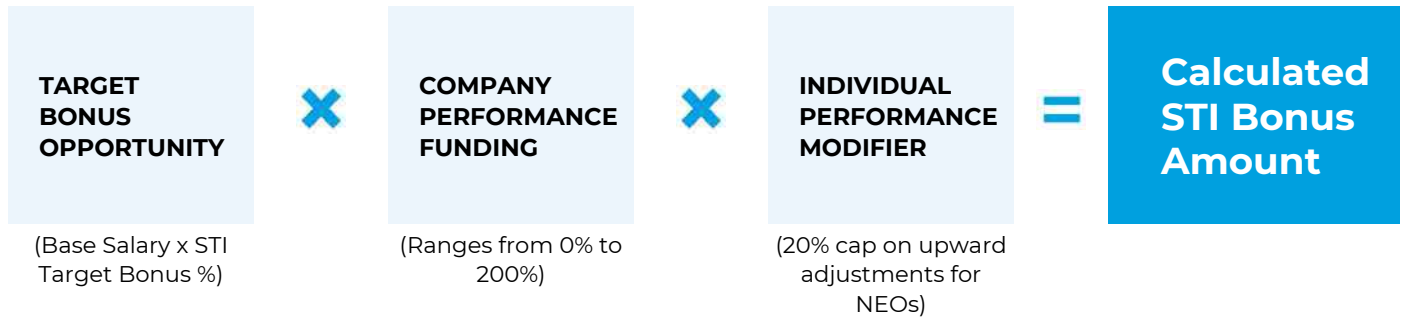
Early each year, the HRCC takes a number of steps in connection with setting annual base salaries, including the review of (i) compensation tally sheets and benchmarking data, (ii) each senior officer's pay and performance relative to other senior officers, (iii) the scope and complexity of the role relative to benchmark data, (iv) the experience and proficiency in the role, the criticality and skill set needed to execute the role and (v) when the officer last received a pay increase.

Annual Review Process (February 2021). During its annual review of executive compensation in February 2021, the HRCC reviewed the compensation benchmarking data for each senior officer, comparing the officer's pay to our peer group. Following this review and discussion, the HRCC increased Mr. Andrew's annual base salary to \$550,000 and left unchanged the base salaries for our other NEOs.

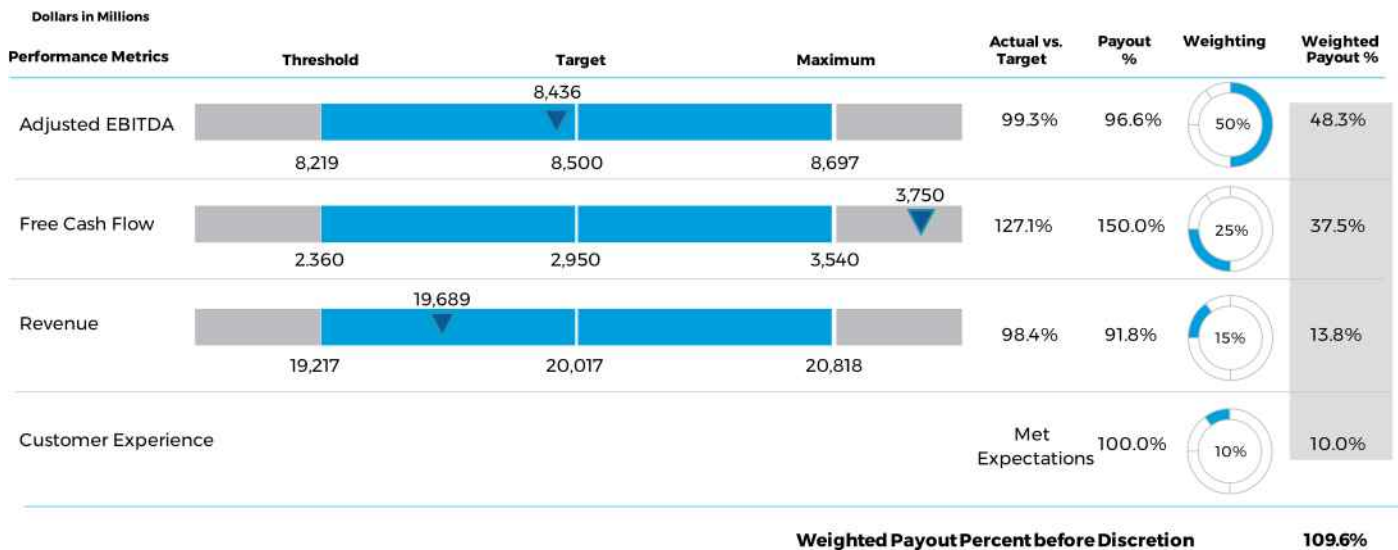
Mid-Year Actions (November 2021). In November 2021, the HRCC reviewed updated compensation benchmarking data for all executive officers and increased the salary of Mr. Trezise to \$524,992 and left unchanged the base salaries for our other NEOs.

2021 Short-term Incentive program

As described below, the 2021 STI design incorporates three components in determining the calculated STI bonus amount (payout) for our NEOs:



This chart below shows our overall level of achievement (Company performance funding) on the financial and qualitative metrics in our 2021 STI plan (before the application of the individual performance modifiers and negative discretion discussed below):



2021 STI PERFORMANCE METRICS

In February 2021, the HRCC approved the 2021 STI Plan metrics and set the “threshold,” “target” and “maximum” target goals for each metric. As discussed in detail below, the 2021 metrics were the same as those used in 2020, but in several instances set at lower levels of targeted performance. The HRCC nonetheless believes these 2021 performance targets were rigorously set at challenging thresholds, after taking into consideration (i) various factors influencing our business, (ii) our Board-approved annual budget and long-range plan, (iii) our publicly disclosed 2021 guidance and (iv) other factors, including, but not limited to, the year-over-year wireline revenue declines as reported in our periodic reports with the SEC and the significant pressure this exerts on achieving the same or higher year-over-year performance (as further discussed under “Section Two - Rigorous Design and Target Setting Process” above).

Adjusted EBITDA (weighted 50%)

ALIGNMENT TO STRATEGY

Adjusted EBITDA remains our most heavily-weighted financial performance objective at 50% for 2021. We believe this metric is aligned with our shareholders’ best interests and our corporate strategy of profitable growth. As described elsewhere, in light of the revenue decline for our higher-margin legacy services, we continuously need to adjust our cost structure - requiring a disciplined focus on Adjusted EBITDA and margins. The metric of Adjusted EBITDA is designed to incentivize and reward our senior officers to focus on the combination of cost savings and profitable revenue growth.

	Target Amount of Adjusted EBITDA ⁽¹⁾	Payout as a % of Target Award	Results:	
Maximum	≥ \$8,967 million	200%	\$8,436 million⁽²⁾ Just below target	ACHIEVED PAYOUT OF 96.6%⁽³⁾
Target	\$8,500 million	100%		
Threshold	\$8,219 million	50%		
Below Threshold	< \$8,219 million	0%		

¹ As used in our 2021 STI plan, adjusted earnings before interest, taxes, depreciation, amortization and stock-based compensation expense ("Adjusted EBITDA") is a non-GAAP metric that excludes certain one time or non-recurring charges or credits and eliminates the effects of certain unanticipated, extraordinary, unusual, or non-recurring transactions or items. See Appendix A for more information.

² As used in our 2021 STI plan, results includes \$4 million of reduced Adjusted EBITDA to reflect the net effect of certain charges or credits to eliminate the impact of certain unanticipated, extraordinary, unusual, or non-recurring transactions or items not reflected in Appendix A. See "Section Three - Incentive Program Guidelines" for more information.

³ The achieved payout percentage is calculated for each financial performance objective based on a corresponding payout scale approved by the HRCC. If the threshold performance level with respect to any particular financial performance objective under our STI program is not attained, the bonus payable to the participating officer with respect to that portion of his or her targeted bonus opportunity will be calculated as zero. If threshold performance is met on any particular metric, each participating officer will earn a reduced portion of his or her target bonus amount for that portion of the award. If the maximum performance level with respect to any particular metric is met or exceeded, each participating officer will earn a maximum of 200% of his or her target bonus amount. Measurement of the attainment of any particular metric is interpolated if actual performance is between (i) the "threshold" and the "target" performance levels or (ii) the "target" and the "maximum" performance levels.

Free Cash Flow (weighted 25%)

ALIGNMENT TO STRATEGY

Free Cash Flow is critical to supporting our key strategic initiatives and our commitment to supporting our dividend and investing in our growth segments.

2021 Goals	Target Amount of Free Cash Flow ⁽¹⁾	Payout as a % of Target Award	Results:	
Maximum	≥ \$3,540 million	150%	\$3,750 million⁽²⁾ Above maximum	ACHIEVED PAYOUT OF 150%
Target	\$2,950 million	100%		
Threshold	\$2,360 million	50%		
Below Threshold	< \$2,360 million	0%		

¹ As used in our 2021 STI plan, Free Cash Flow is a non-GAAP measure of net cash from operating activities less capital expenditures and before dividends, adjusted for certain one-time or non-recurring charges or credits and eliminates the effects of certain unanticipated, extraordinary, unusual, or non-recurring transactions or items. See Appendix A for more information.

² As used in our 2021 STI plan, results include \$8 million of additional Free Cash Flow to reflect the net effect of certain charges or credits to eliminate the impact of certain unanticipated, extraordinary, unusual, or non-recurring transactions or items not reflected in Appendix A. See "Section Three - Incentive Program Guidelines" for more information.

Revenue (weighted 15%)

ALIGNMENT TO STRATEGY

The generation of revenue is critical to our goal of increasing our strategic revenue in amounts sufficient to offset our continuing and systemic legacy revenue losses. Thus, we included Revenue as a metric for 15% for our 2021 STI plan.

The HRCC believes our senior officers are appropriately incentivized to achieve our 2021 revenue targets with a balanced approach, since the majority of our 2021 STI is based on Adjusted EBITDA and free cash flow, which rewards our senior officers for achieving profitable revenue growth.

2021 Goals	Target Amount of Revenue	Payout as a % of Target Award	Results:	
Maximum	≥ \$20,818 million	200%	\$19,689 million⁽¹⁾ Below target	ACHIEVED PAYOUT OF 91.8%
Target	\$20,017 million	100%		
Threshold	\$19,217 million	50%		
Below Threshold	< \$19,217 million	0%		

¹. As used in our 2021 STI plan, results include \$2 million of additional revenue to reflect the net effect of certain charges or credits to eliminate the impact of certain unanticipated, extraordinary, unusual, or non-recurring transactions or items not reflected in Appendix A. See “Section Three - Incentive Program Guidelines” for more information.

Customer Experience (weighted 10%)

ALIGNMENT TO STRATEGY

We are committed to meeting the needs of all our customers. Improving customer satisfaction and service scores, reducing customer inconveniences and decreasing repair times are critical to supporting our goal of improving our revenue trajectories.

We believe the ease of doing business with the Company is a top driver of customer loyalty, which will be reflected in Net Promoter Score (NPS). Customer experience research suggests increased promoter scores will generate increased customer spending within 24 months. As such, the primary measures for Customer Experience performance are NPS and Customer Ease Score (CES)

2021 GOALS

Although there are quantitative metrics involved in Customer Experience, the overall metric is qualitative in nature. Each business unit is charged with improving relationships with our customers and is part of the annual planning process. Our customer experience goals and transformation programs are informed and prioritized using customer data trends and insights. Using regression analysis, we can model which programs drive the greatest improvements for the greatest number of customers. For goal setting, we consider historical Lumen performance trends and industry benchmarks to ensure that we are setting appropriate growth targets by segment.

TARGETS

In February 2021, the HRCC approved the following goals and objectives for our 2021 STI plan:

- Execute Company-wide on transformative programs that truly improve the way we operate in order to improve NPS and CES for each of our business units
- Improve relationship NPS and CES for each of our business units as follows:
 - Enterprise: NPS +6 and CES +4 points
 - Consumer: NPS +3 and CES +2 points
 - Small Business: NPS +3 and CES +2 points

PERFORMANCE HIGHLIGHTS

Enterprise Results

- Relationship NPS +7
- Relationship CES +2
- Transactional scores up year over year

Consumer Results

- Relationship NPS +8
- Relationship CES +3
- Transactional scores up year over year

Small Business Results

- Relationship NPS -1
- Relationship CES flat
- Transactional scores are mixed year over year

Network Operations Performance

- Exceeded Enterprise transactional goals
- Exceeded Consumer transactional goals

**ACHIEVED
PAYOUT OF
100%**

HRCC STI AWARD OVERSIGHT

In February 2022, the HRCC reviewed audited results of the Company's performance as compared to the financial and operational performance targets and respective weighting for the established metrics for our 2021 STI plan and determined that the calculated STI payout based on Company performance (the "Weighted Payout Percent before Discretion") was 109.6% (as confirmed by our Internal Auditors), based on the financial metrics detailed above, before considering each NEO's individual performance modifier as discussed below. After a discussion of the Company's performance for 2021, the HRCC elected to apply discretion to reduce the STI bonus payout by 9.6% for an "at target" or 100% STI bonus funding.

Weighted Payout Percent before Discretion	109.6%
HRCC Applied Discretion	<u>(9.6%)</u>
Company Performance Funding	100.0%

BONUS AMOUNTS

As contemplated by the STI plan and the Guidelines, the HRCC reserves the right to increase or decrease the STI bonus payout level based on their qualitative assessments for each senior officer's performance against certain specific objectives and benchmarks, as well as overall company and individual performance during the year. For 2021, these adjustments are indicated in the "Individual Performance Modifier" heading in the table below. In certain circumstances, the HRCC may apply discretion to modify senior officer compensation, with any upward adjustments for NEOs capped at 20% (or 120% of company performance funding). The HRCC discussed each NEO's 2021 performance and leadership accomplishments and approved the following adjustments to their Individual Performance Modifiers, as quantified in the table below.

NEO	Individual Performance Scorecard	Individual Performance Modifier
Mr. Storey	<ul style="list-style-type: none"> Exceed Expectations - (i) successful negotiation of two value-accretive divestitures, for aggregate gross consideration of \$10.2 billion Met Expectations - (i) solid execution on deleverage plan and (ii) continued improvement in areas of culture and workforce diversity, inclusion, belonging and social responsibility Below Expectations - (i) missed our 2021 product and Revenue goals and (ii) need to improve execution of our revenue growth initiatives 	100%
Mr. Dev	<ul style="list-style-type: none"> Met Expectations - (i) solid execution on deleverage plan and (ii) continued transformation of the Finance organization Below Expectations - (i) missed our 2021 Revenue target and (ii) need to improve execution of our revenue growth initiatives 	100%
Mr. Goff	<ul style="list-style-type: none"> Exceeded Expectations - (i) lead the negotiations, regulatory approvals and integration process for ILEC transaction, (ii) improved internal communications platforms and (iii) highly engaged workforce Met Expectations - (i) delivered high level of service in an efficient and cost effective manner, (ii) favorable litigation and arbitration results and (iii) supporting our strategic initiatives through advice and advocacy across our business 	100%
Mr. Andrews	<ul style="list-style-type: none"> Exceeded Expectations - (i) execution on Edge computing and our platform strategy and (ii) recognizing our top talent and strengthening our talent pipeline Met Expectations - year-over-year increase in workforce diversity Below Expectations - missed our 2021 product and financial goals 	95%
Mr. Trezise	<ul style="list-style-type: none"> Exceeded Expectations - strategic advisor to deliver actionable and innovative people solutions that contribute to building and strengthening our talent pipeline Met Expectations - (i) developing high performance culture, (ii) enhancing the employee experience and (ii) increasing our workforce diversity, inclusion, belonging and social responsibility 	100%

The HRCC approved each NEO's STI bonus as summarized in the table below.

2021 STI BONUS AMOUNTS

NEO	Target Bonus Opportunity ⁽¹⁾		Company Performance Funding ⁽²⁾		Individual Performance Modifier ⁽³⁾		Calculated STI Bonus Amount
Mr. Storey	\$3,600,022	X	100%	X	100%	=	\$3,600,022
Mr. Dev	937,500	X	100%	X	100%	=	937,500
Mr. Goff	720,021	X	100%	X	100%	=	720,021
Mr. Andrews	546,301	X	100%	X	95%	=	518,986
Mr. Trezise	495,694	X	100%	X	100%	=	495,694

¹ Determined based on earned salary and applicable STI target bonus percentage during 2021. The amount for Mr. Andrews reflects a pro-rated amount based on an increase in salary (from \$525,000 to \$550,000), effective as of February 24, 2021. The amount for Mr. Trezise reflects a pro-rated amount based on both an increase in STI target bonus percentage (90% to 100%) and salary (from \$500,011 to \$524,992), effective as of February 24, 2021 and November 17, 2021, respectively.

² Calculated and adjusted as discussed above.

³ See "Bonus amounts" above.

2021 Long-Term Incentive Compensation

For 2021, our annual LTI grants consisted of a mix of time- and performance-based equity awards, as described below.

Form of LTI Award	CEO	Mix Other NEOs	Vesting and Performance Period
Time-Based Restricted Stock or RSUs (TBRS)	36%	40%	One-third vesting each year over three-years; subject to continued service on vesting date.
Performance-Based Restricted Stock or RSUs (PBRS)	64%	60%	Three-year performance period with vesting on March 1, 2024 with payout ranging from 0% to 200% based on achievement as measured against performance metrics subject to continued service through vesting date.

2021 ANNUAL LTI GRANTS

In February 2021, the HRCC reviewed the compensation benchmarking data for all executive officers and increased the target LTI grant values for each of Messrs. Storey, Dev Andrews and Trezise to \$14,000,000, \$4,250,000, \$1,600,000 and \$1,200,000 respectively, and left unchanged the LTI target grant value for Mr. Goff. The HRCC granted annual LTI awards to our NEOs in February 2021 with a similar mix to the awards granted to them in 2020, except for Mr. Storey. For Mr. Storey, the increase in his target LTI grant value was allocated entirely to the performance-based portion of his award, meaning that PBRS now composes 64% of his target LTI grant value with the remaining 36% delivered as TBRS. See further discussion under the heading "Role of Peer Companies" below.

In February 2021, the HRCC granted the LTI awards to each NEO as detailed below.

2021 ANNUAL LTI GRANTS

Named Officer	Time-Vested Restricted Shares or RSUs		Performance-Based Restricted Shares or RSUs		Total Grant Value ⁽⁴⁾
	No. of Shares ⁽¹⁾⁽³⁾	Grant Value ⁽⁴⁾	No. of Shares ⁽²⁾⁽³⁾	Grant Value ⁽⁴⁾	
Mr. Storey ⁽⁵⁾	419,601	\$5,040,000	745,958	\$8,960,000	\$14,000,000
Mr. Dev	142,697	1,700,000	214,047	2,550,000	4,250,000
Mr. Goff	67,152	800,000	100,728	1,200,000	2,000,000
Mr. Andrews	53,721	640,000	80,583	960,000	1,600,000
Mr. Trezise	40,291	480,000	60,437	720,000	1,200,000

¹ For Messrs. Dev, Goff, Andrews and Trezise, represents the number of restricted shares or RSUs granted on February 24, 2021; for Mr. Storey represents the number of RSUs granted on February 26, 2021.

² As discussed under "2021 Annual LTI Performance Metrics" below, the actual number of shares that vest in the future may be lower or higher, depending on the level of performance achieved.

³ Dividends on the shares of restricted stock (or, with respect to RSUs, dividend equivalents) will not be paid on unvested awards but will accrue and be paid or be forfeited in tandem with the vesting of the related shares or RSUs.

⁴ For purposes of these grants, we determined both the number of time-vested and performance-based restricted shares or RSUs by dividing the total grant value granted to the executive by the volume-weighted average closing price of a share of our common stock over the 15-trading-day period ending one trading day prior to the grant date, rounding to the nearest whole share. However, as noted previously, for purposes of reporting these awards in the Summary Compensation Table, our shares of time-vested restricted stock or RSUs are valued based on the closing price of our common stock on the date of grant and our shares of performance-based restricted stock or RSUs are valued as of the grant date based on probable outcomes, as required by applicable accounting and SEC disclosure rules. See footnote 1 to the Summary Compensation Table for more information.

⁵ Mr. Storey's annual grant was awarded on February 26, 2021 in the form of RSUs.

2021 ANNUAL LTI PERFORMANCE METRICS

The 2021 metrics approved by the HRCC in early 2021 were similar to those used in 2020 with the following changes to better align the 2021 LTI plan with our corporate strategy and strike the right balance between performance incentives and long-term shareholder interests.

- **Cumulative Adjusted EBITDA** – Reduced weighting from 100% to 50%. Adjusted EBITDA measures the operational performance and profitability of our businesses as we continue to make progress on our telecommunications to technology transformation strategy.
- **Relative TSR** – Introduced as a new stand-alone metric weighted at 50% in lieu of its prior use as a modifier in our 2020 annual LTI awards. We believe the change improves alignment with shareholder interests by rewarding for our stock performance relative to our peers.

Following the end of the three-year performance period, the number of shares vesting under the PBRS granted in 2021 will be calculated by: (i) determining achievement of the three-year Cumulative Adjusted EBITDA target and (ii) determining achievement of Lumen's TSR performance relative to our TSR Peer Group, each of which is described further below. Each metric is calculated independently with the ultimate payout ranging between 0%-200% of the number granted. Any shares earned under the PBRS will vest in full on March 1, 2024, subject to the holder's continued employment through that date (except as otherwise provided in the applicable award agreement).

CUMULATIVE ADJUSTED EBITDA METRIC (weighted 50%)

ALIGNMENT TO STRATEGY

As noted in our discussion of STI metrics above, in light of the revenue decline for our high-margin, legacy voice and copper wireline services, we annually adjust our cost structure, requiring a disciplined focus on Adjusted EBITDA and margins. The metric of Adjusted EBITDA incentivizes our senior officers to focus on the combination of cost savings and profitable revenue growth. For this reason, the HRCC elected to use Adjusted EBITDA as a performance metric for both 2021 STI and LTI awards, albeit measured over different periods.

RIGOR OF GOAL SETTING

The HRCC based the three-year Cumulative Adjusted EBITDA targets on our long-range plan, which we believe includes significant stretch goals and aligns with market consensus.

The HRCC believes that these targets were set at levels that were both appropriate and sufficiently rigorous, particularly when viewed in light of (i) our industry operating environment, (ii) wireline industry trends, (iii) the competitive landscape, (iv) product lifecycles, (v) our operational initiatives, (vi) our capital allocation priorities and (vii) several other Company-specific items that influence our business.

Performance Level Attainment	Target Amount of Cumulative Adjusted EBITDA ⁽¹⁾	Payout as a % of this Component of Target Award ⁽²⁾
Maximum	≥ Maximum Amount	200%
Target	Target Amount ⁽³⁾	100%
Threshold	Threshold Amount	50%
Below Threshold	< Threshold	0%

¹ Cumulative Adjusted EBITDA is the sum of our Adjusted EBITDA excluding special items (except with adjustments to reflect a 100% bonus accrual for each year) for 2021, 2022 and 2023. See Appendix A for more information.

² Payouts interpolated between defined performance levels.

³ We do not feel it is appropriate to disclose our Cumulative Adjusted EBITDA target as it would constitute competitively sensitive forward-looking guidance.

RELATIVE TSR METRIC (weighted 50%)

ALIGNMENT TO STRATEGY

The HRCC believes a relative metric is an important way to ensure that Lumen's performance is measured appropriately relative to peers. Our Relative TSR performance shares are measured on our percentile rank versus the other 15 companies in our TSR peer group over the three-year period, which could result in a payout of 0-200% of this component of the target award. However, if Lumen's TSR is negative over the three-year period, the payout cannot exceed target regardless of our TSR performance relative to our peers. We believe this cap better aligns the LTI payout with the interests of our shareholders if our TSR is negative over the three-year performance period.

RIGOR OF GOAL SETTING

With the aid of its compensation consultant, the HRCC set a TSR peer group that is focused principally on broader universe of companies we believe investors are considering when they decide whether to invest in us or our industry. As a result, our TSR peer group is comprised of telecommunications, cable and other communications companies that are generally comparable to us in terms of size, markets and operations. For information regarding our TSR peer group, see further discussion under the heading "— TSR Peer Group" below.

	Target	Payout as a % of this Component of Target Award ¹⁾
Maximum	≥ 75th Percentile	200%
Target	50th Percentile	100%
Threshold	25th Percentile	50%
Below Threshold	< 25th Percentile	0%

¹ Payouts interpolated between defined performance levels.

OUTSTANDING PERFORMANCE-BASED LTI AWARDS

Both of the announced divestitures are expected to be completed during 2022, which is during the third and second year of each three-year performance period for our 2020 and 2021 LTI awards, respectively. When each three-year cumulative adjusted EBITDA target for our 2020 and 2021 LTI awards were set in the first quarter of each performance period, we had not yet entered into definitive agreements for these divestitures and thus the targets assumed our continued ownership of those businesses throughout the full three-year performance period. The HRCC is currently evaluating the impact these divestitures will have on our retained business post-close and the performance results for our 2020 and 2021 LTI awards.

SHARE DILUTION, BURN RATE AND STOCK-BASED COMPENSATION EXPENSE

As part of their governance and oversight function, the HRCC approves the LTI grant values for our officers and, under delegated authority, approximately 1,600 eligible employees who participated in our 2021 annual LTI program. The HRCC also closely monitors our share usage, burn rate, dilution and overhang levels.

The annual LTI award value approved and granted by the HRCC, or under delegated authority, has declined by approximately \$38 million from 2019 to 2021. As described elsewhere, our LTI awards have graded vesting and are expensed over a three-year period. The stock-based compensation expense reported in our 10-K (see Appendix B) reflects expense for outstanding awards during that period, generally covering three different annual LTI awards and, to lesser degree, other awards for our LTI participants that were granted upon hire or promotion throughout the year.

On a quarterly basis, the HRCC reviews our share usage and burn rate projections. For the last three years, our burn rate, dilution and overhang levels have been within or below industry benchmark levels.

Other Benefits

As a final component of executive compensation, we provide certain benefits designed to be competitive, in the aggregate, with similar benefits provided by our peers. We summarize these additional benefits below.

RETIREMENT PLANS

We maintain traditional broad-based qualified defined benefit and defined contribution retirement plans for our employees who meet certain eligibility requirements. In addition to these qualified plans, we maintain nonqualified plans that permit our officers to receive or defer supplemental amounts in excess of contribution caps under the Code that limit the amount of benefits highly compensated employees are entitled to receive or contribute under qualified plans. Additional information regarding our retirement plans is provided in the tables and accompanying discussion included below under the heading “Compensation Tables.”

CHANGE OF CONTROL ARRANGEMENTS

We have agreed to provide cash and other severance benefits to each of our executive officers who is terminated under certain specified circumstances following a change of control of Lumen. If triggered, benefits under these change of control agreements include payment of (i) a lump sum cash severance payment equal to a multiple of the officer’s annual cash compensation, (ii) the officer’s STI bonus, based on actual performance and the portion of the year served, (iii) certain welfare benefits for a limited period and (iv) the value or benefit of any LTI compensation, if and to the extent that the exercisability, vesting or payment thereof is accelerated or otherwise enhanced upon a change of control pursuant to the terms of any applicable long-term equity incentive compensation plan or agreement.

Under these agreements, change of control benefits are payable to our executive officers if within a certain specified period following a change in control (referred to as the “protected period”), the officer is terminated without cause or resigns with “good reason,” which is defined to include a diminution of responsibilities, an assignment of inappropriate duties and a transfer of the officer exceeding 50 miles.

The table below shows (i) the length of the “protected period” afforded to officers following a change of control and (ii) the multiple of salary and bonus payment and years of welfare benefits to which officers will be entitled if change of control benefits become payable under our agreements and related policies:

	Protected Period	Multiple of Annual Cash Compensation	Years of Welfare Benefits
CEO	2 years	3 times	3 years
Other Executives	1.5 years	2 times	2 years
Other Officers	1 year	1 time	1 year

For more information on change of control arrangements applicable to our executives, including our rationale for providing these benefits, see “Compensation Tables — Potential Termination Payments — Payments Made Upon a Change of Control.” For information on change of control severance benefits payable to our junior officers and managers, see “— Severance Benefits” in the next subsection below.

SEVERANCE BENEFITS

Our executive severance plan provides cash severance payments equal to two years of total targeted cash compensation (defined as salary plus the targeted amount of annual incentive bonus) for our CEO or one year of total targeted cash compensation for any other senior officer in the event that the senior officer is involuntarily terminated by us without cause in the absence of a change of control.

The table below shows (i) the multiple of salary and bonus payment and (ii) years of welfare benefits to which officers will be entitled if a senior officer is involuntarily terminated by us without cause in the absence of a change of control:

	Multiple of Annual Cash Compensation	Years of Welfare Benefits
CEO	2 times	2 years
Other Executives and Senior Officers	1 time	1 year

Under our executive severance plan, subject to certain conditions and exclusions, more junior officers or managers receive certain specified cash payments and other benefits if they are either (i) involuntarily terminated without cause in the absence of a change of control or (ii) involuntarily terminated without cause or resign with good reason in connection with a change of control. Our full-time non-represented employees not covered by our executive severance plan may, subject to certain conditions, be entitled to certain specified cash severance payments in connection with certain qualifying terminations.

Under a policy that we adopted in 2012, we have committed to seek shareholder approval of any future senior executive severance agreements providing for cash payments, perquisites and accelerated health or welfare benefits with a value greater than 2.99 times the sum of the executive’s base salary plus target bonus.

LIFE INSURANCE BENEFITS

We sponsor a long-standing supplemental life insurance premium reimbursement plan that has been closed to new participants for nearly a decade. Only one of our current senior officers (Mr. Goff) holds supplemental life insurance policies for which we are obligated to pay the premiums. For 2021, we reimbursed Mr. Goff a total of \$10,957 for these premiums.

PERQUISITES

Officers are entitled to be reimbursed for the cost of an annual physical examination, plus related travel expenses.

Our aircraft usage policy permits the CEO to use our aircraft for personal travel up to \$250,000 per year without reimbursing us and permits each other executive officer to use our aircraft for personal travel only if he or she pays for the cost of a flight in accordance with the terms of an Aircraft Timesharing Agreement. In all such cases, personal travel is permitted only if aircraft is available and not needed for superseding business purposes. Periodically, the HRCC reviews the cost associated with the personal use of aircraft by senior management and determines whether or not to alter our aircraft usage policy. In connection with electing to retain this policy, the HRCC has determined that the policy (i) provides valuable and cost-effective benefits to our executives that reside or frequently travel into our corporate headquarters that is located in a small city with limited commercial airline service, (ii) enables our executives to travel in a manner that we believe is more expeditious than commercial airline service and (iii) is being used responsibly by the executives.

For purposes of valuing and reporting the use of our aircraft, we determine the incremental cost of aircraft usage on an hourly basis, calculated in accordance with applicable guidelines of the SEC. The incremental cost of this usage, which may be substantially different than the cost as determined under alternative calculation methodologies, is reported in the Summary Compensation Table appearing below.

For more information on the items under this heading, see the Summary Compensation Table appearing below.

OTHER EMPLOYEE BENEFITS

We maintain certain broad-based employee welfare benefit plans in which the executive officers are generally permitted to participate on terms that are either substantially similar to those provided to all other participants or which provide our executives with enhanced benefits upon their death or disability.

Section five - HRCC Engagement and Compensation Governance

HRCC Human Capital Priorities

Our board recognized that a healthy culture, robust talent strategy, diverse workforce and engaged employee base are essential elements to our long-term success. As such, the HRCC has incorporated regular review and discussion of these topics into its charter. HRCC human capital resources priorities include:

TALENT MANAGEMENT AND DEVELOPMENT

The HRCC is focused on growing and developing talent that is well positioned to meet the business' strategic priorities by supporting our success enablers to (i) be inclusive, (ii) own commitments and (iii) grow themselves, others and Lumen. Our success enablers are embedded in robust processes in the areas of goal setting, quarterly performance discussions, differentiated talent assessments, individual development and growth planning, and skills transformation. These processes are supported by a wide array of technical, sales, product and leadership training programs.

CULTURE SHAPING AND ENGAGEMENT

The HRCC reviews management efforts and metrics to ensure that our culture fosters ethical behavior, promotes high levels of employee engagement and supports a high performance work environment. Our strategy strives to inspire employees with purpose as we demonstrate our many connections to furthering human progress through technology. At least twice a year a detailed engagement survey is completed to measure engagement and is reviewed with the HRCC. Our most recent engagement survey, completed in October 2021, yielded a substantial overall engagement score (67% positive) with a strong level of employee participation (80%).

TALENT ACQUISITION

A new talent selection process was launched mid-year 2021 to support our diversity, inclusion and belonging initiative and effort to continuously improve our culture of inclusion, and increase diverse representation across our U.S. workforce through effective talent selection and hiring processes. As a result of implementing these new processes the representation of diverse new hires increased by 3.4%, and our overall applicant traffic for diverse talent increased by 17.6% from the first to second half of the year despite a severe labor shortage throughout the nation.

The Lumen internship program is a critical diverse talent attraction effort and pipeline for our organization. For the third consecutive year, our Internship program was recognized amongst the Top 100 internship programs and for 2021 we were awarded the coveted top spot – the #1 Internship Program in the country. We also hired a record cohort for diversity with 47% female and more than 50% people of color. Over 60% of the university events we sponsored were minority servicing institutions inclusive of historically black, Asian, Hispanic and female Institutions.

LABOR RELATIONS

With 21% of our U.S. workforce unionized, it is important that proactive efforts are deployed to manage this strategic relationship. In 2021, we were able to negotiate 11 expiring collective bargaining agreements. Lumen constructively partners with union representatives where representation exists and aims to remain union-free where representation does not currently exist.

DIVERSITY, INCLUSION AND BELONGING

In 2021, we were proud to receive positive recognition for our efforts in the area of diversity and inclusion by being included in Forbes Americas Best Employers for Diversity for the second year in a row and for once again receiving a 100% perfect score on the prominent Human Right Campaign Index, which evaluates the LGBTQ climate in an organization. We were also named as a World's Best Employer by Forbes and received several recognitions from diversity focused publications for our efforts in fostering a diverse and inclusive culture and environment. The HRCC continued its oversight on the expanded resource groups and listening circles that we added in 2020 and ensuring that all management practices are positively impacting diversity, inclusion and belonging in the Lumen culture.

HEALTH AND WELLNESS




We have expanded our wellness programs and implemented strategic design changes to our benefit programs that have enabled Lumen to keep employee premiums flat for the last four years. In 2021, we added diabetes management and virtual physical therapy programs to the full suite of wellness and benefit offerings available to our employees.

Role of Human Resources and Compensation Committee

Our highly competitive business requires attracting, developing and retaining a motivated team inspired by leadership, engaged in meaningful work, motivated by growth opportunities and thriving in a culture that embraces diversity, inclusion and belonging. Understanding and anticipating the priorities of our current and future employees is important to realizing our purpose to further human progress through technology. As described above, the HRCC is responsible for overseeing Lumen’s human resources strategies, prioritizing Lumen’s efforts to attract and retain employees and leaders with the skills and experience needed to achieve our strategic objectives in dynamic market conditions and creating an environment promoting equity and diversity. During 2021, the HRCC engaged with management on several issues impacting Lumen’s human capital strategy, including: effective employee engagement; diversity, inclusion and belonging; positive corporate culture, pay equity, executive and employee succession and recruiting and retention.

Year-round engagement informs compensation design and awards

The HRCC’s processes to review and approve our executive compensation programs are both cyclical and ongoing.

1 st quarter 	2 nd quarter 	3 rd quarter 	4 th quarter
<ul style="list-style-type: none"> • At-least quarterly engagement with independent compensation consultant, discussing compensation trends, our performance against peers and market influences; • Quarterly review of year-to-date results and projected performance for the various eligible outstanding incentive programs; and • Quarterly review of anticipated individual eligible award values, including individual NEO tally sheets. 			
<ul style="list-style-type: none"> • Spring shareholder engagement discussing executive compensation (or more often if the opportunity arises) • Implement any program design changes in light of compensation trends, performance against peers, market influences and shareholder feedback, independent compensation consultant observations and current value of prior awards 	<ul style="list-style-type: none"> • Discussion of recent feedback from Annual Shareholders’ Meeting and overall market trends 	<ul style="list-style-type: none"> • Fall shareholder engagement discussing executive compensation (or more often if the opportunity arises) 	<ul style="list-style-type: none"> • Discussions about possible program design changes for the following fiscal year in light of compensation trends, performance against peers, market influences and shareholder feedback, independent compensation consultant observations and current value of prior awards

HRCC Executive Compensation Review Process

The HRCC's annual process for compensation oversight, design and decisions includes

Performance objectives align with strategy

HRCC selects STI and LTI plan performance objectives designed to drive execution of our overall business strategy. This includes engaging an independent compensation consultant, discussing compensation trends, our performance against peers and market influences throughout the year as well as feedback from shareholder engagement regarding executive compensation and incentive design.

Rigorous design and target setting process

The HRCC establishes rigorous threshold, target and maximum performance levels for the selected objectives that are rooted in our annual budget, public guidance and long-range strategic plan. The HRCC takes into consideration various factors influencing our business, including but not limited to, the decline in our wireline revenues and the pace at which revenues are growing for digital services and new products and the continuous need to adjust our cost structure.

Monitor interim performance

Throughout the performance period, the HRCC monitors actual performance and real-time projected payouts of our selected metrics through quarterly updates.

Application of guidelines to administer incentive awards

After the end of the performance period, initial payout projections, as adjusted under the HRCC's long-standing Guidelines, are compared against Company performance for the entirety of the performance period. The HRCC may make further adjustments in accordance with the Guidelines, as discussed above in Section three. The HRCC reviews award values in light of the Guidelines and determines if positive or negative adjustments are necessary to mitigate the impact of extraordinary events.

Performance results and calculated payouts

Upon completion of each fiscal year, after our actual financial performance results are determined, including any adjustments or discretion applied under our Guidelines, the incentive payouts are calculated and reviewed by Internal Audit. Then, individual bonus and equity payouts are determined for our officers based on our LTI and STI programs and the related performance and relevant individual performance considerations.

Role of CEO and management

The HRCC regularly reviews the compensation programs for our senior leadership team including our NEOs and the broader range of participating employees to ensure they achieve our compensation objectives, including aligning executive compensation with our long-term strategy and shareholder interests. This includes using our incentive compensation awards to support our strategic and operating plans. The HRCC closely monitors the compensation programs and pay levels of executives from companies of similar size and complexity, to gauge our compensation programs against market practices and trends to support our efforts to retain and incentivize our executive talent.

The HRCC discusses directly with our CEO in executive session, as appropriate, his performance reviews and assessments for our senior leadership team as well as his recommendations regarding their compensation (including adjustments to base salary, target STI and LTI levels).

Role of Compensation Consultants

The HRCC engages an independent compensation consultant to assist in the design and review of executive compensation programs, to determine whether the HRCC's philosophy and practices are reasonable and compatible with prevailing practices and to provide guidance on specific compensation levels based on industry trends and practices.

During the first half of 2021, Meridian served as the HRCC's independent compensation consultant and actively participated in the design and development of our 2021 executive compensation programs. Meridian, which served as independent consultant to the HRCC for six years, attended all of the HRCC's meetings through May 2021.

As noted above, following a nationwide search, the HRCC appointed Semler Brossy as its new independent compensation consultant in July 2021.

Neither Meridian nor Semler Brossy provides any other services to the Company and neither had a prior relationship with any of our NEOs. As required by SEC rules and NYSE listing standards, the HRCC assessed the independence of both Meridian and Semler Brossy and concluded that their work has not raised any conflicts of interest.

Role of Peer Companies

Each year, with assistance from its independent consultant, the HRCC reviews "peer groups" of other companies comparable to Lumen for purposes of assessing the compensation for our NEOs and other members of senior leadership team (Compensation Benchmarking Peer Group) and our total shareholder return performance (TSR Peer Group).

In making decisions regarding our 2021 executive pay programs, the HRCC engaged in extensive discussions with shareholders and, with the guidance of its compensation consultant, conducted a comprehensive review of peer practices. The HRCC's deliberate approach to setting pay, as described under "Role of Peer Companies," is intended to ensure that our executive compensation program is appropriately calibrated to achieving the complementary goals of delivering value to shareholders and attracting, rewarding and retaining the talent necessary to lead us through our ongoing corporate evolution.

COMPENSATION BENCHMARKING PEER GROUP

Annually, with the assistance of its compensation consultant and management, the HRCC reviews and approves the Compensation Benchmarking Peer Group – a list of peer companies we use in the competitive market analyses of compensation for our NEOs and senior officers.

We believe that our Compensation Benchmarking Peer Group should reflect Lumen's industry, organizational complexity and market for executive talent. However, because we do not believe many companies compete directly with us and are also similarly sized, the list of direct peers is limited.

Further, as we continue to evolve into a technology-focused company, our employee base, peer group, and compensation programs are also evolving. Although in the past we had considerable success in attracting and retaining talent with fiscally prudent market-based pay packages, we now compete with software and other technology-focused companies for a more limited pool of executive talent. As a result, the individuals in that limited candidate pool, who frequently have unique talents and expertise, are able to command much higher levels of compensation than what we have paid historically, making executive recruitment and retention more challenging.

To address these challenges, the HRCC reviews and approves the list of companies that compose our Compensation Benchmarking Peer Group during a two-step process.

In the first step, we identify public companies within our Global Industry Classification Standards (GICS) industry and sub-industry, diversified telecommunications services, cable and satellite and various high technology industries. The following attributes were reviewed and screened in order of importance:

Screening Process

- Revenues (target between one-half and two times our revenue);
- Reasonably comparable enterprise value;
- Reasonably comparable asset base;
- Market capitalization (target between one-fourth and three and one-half times our market cap);
- Disclosed peer of peers and reverse peers; and
- Peer group disclosed by proxy advisors.

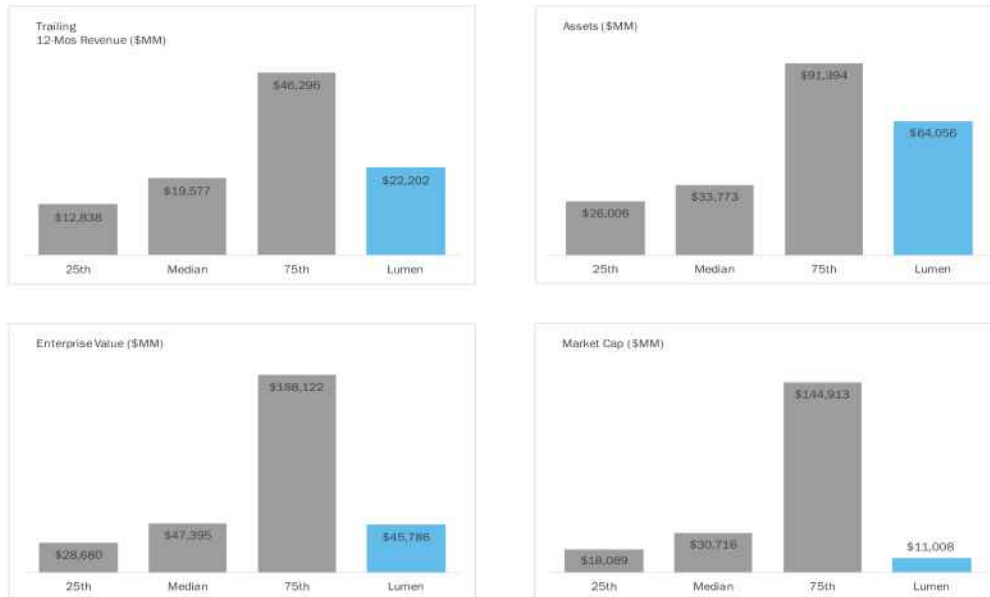
Analysis of Screening Process

- There are a limited number of potential peer companies with comparable revenues, so the annual revenue for some of our peers are more or less than our targeted multiple. The HRCC believes that we are well positioned at the 53rd percentile of peer company revenue. Additionally, all of these companies are direct industry comparisons and included in the peer of peers and proxy advisor peer screens, which further supports their inclusion in our Compensation Benchmarking Peer Group.
- There are very few peers with market capitalization similar to ours. The HRCC, in agreement from its independent consultant, believe revenue is a more appropriate, stable and the most common metric for sizing and selecting peer groups.
- The HRCC believes the use of the median and not the average, for competitive market data mitigates the inclusion of both larger and smaller peer companies.

Outcomes from Screening Process

- As a result of the screening process and based on input from HRCC's independent consultant, the HRCC reviewed the 2020 Compensation Benchmarking Peer Group of 19 companies
- Removed 2 companies:
 - Sprint Corporation due to its acquisition
 - Frontier Communications due to its bankruptcy
- Determined that there were no companies to be added
- Considered eliminating the two smallest and two largest of the 17 companies, to enable the peer group to better match our screening criteria, but ultimately concluded it was more important to attain our overarching goal of a peer group between 15 and 20 companies.
- Therefore, the HRCC deemed it was appropriate to continue and include all 17 peer companies in our 2021 Compensation Benchmarking Peer Group listed below.

Compared to the 2021 Compensation Benchmarking Peer Group, Lumen is ranked at the 53rd percentile of revenue, the 65th percentile of assets, the 49th percentile of enterprise value and the 5th percentile of market capitalization, each as illustrated below.



In the second step, the HRCC’s compensation consultant prepares competitive market analyses using compensation data publicly disclosed by the 2021 Compensation Benchmarking Peer Group and, for executive positions with no publicly disclosed compensation data, the HRCC reviews compensation survey data for companies in the telecommunications industry and general industry that are generally similar to us in size. Based on the median, the HRCC compares our current NEO and senior leadership team compensation to the Compensation Benchmarking Peer Group to determine the relative market value for each position.

Once established, we believe that a well-selected peer group for compensation benchmarking should remain fairly stable for several years to help inform reliable and consistent market positioning, longer-term pay trends and market practices. Our Compensation Benchmarking Peer Group is summarized in the table following discussion of our TSR Peer Group below.

TSR PEER GROUP

We separately maintain a TSR Peer Group for purposes of measuring our relative stock price performance, which impacts payouts under our most recent LTI grants. As discussed above, our Compensation Benchmarking Peer Group is somewhat constrained by the number of companies based on revenue, enterprise value and market cap size. However, our TSR Peer Group is composed of a broader universe of companies we believe investors are considering when evaluating whether to invest in Lumen or our industry because risk profile is likely to be more important to an investor than company size.

During the second half of 2020, in preparation for the 2021 annual LTI grant, the HRCC's independent consultant led an evaluation process to identify and screen relevant public companies to determine our TSR Peer Group, with the desired result of at least 15 to 20 peer companies, as follows:

Screening Process	Analysis of Screening Process	Outcomes from Screening Process
<ul style="list-style-type: none"> The primary consideration when selecting our TSR Peer Group for 2021 was the need to have peers with similar industry, business and risk profiles as ours. Start with a universe of potential similar industry peers with technology, telecommunications, cable and satellite services and various technology industries within our GICS industry and sub-industry; Conduct a historical stock price correlation between Lumen and a potential peer universe based on the industry sectors identified; and Perform back-testing on historical stock performance (including TSR and Beta and impacts of macroeconomic factors that would impact all companies similarly). 	<ul style="list-style-type: none"> The HRCC believes that we are well positioned at: <ul style="list-style-type: none"> the 49th percentile of peer company historical TSR correlation; and the 69th percentile of peer company 3-year leveraged Beta. Our TSR Peer Group is comprised of: <ul style="list-style-type: none"> 12 TSR peers from U.S. technology and telecom industry; and 3 large international integrated telco companies based outside the U.S. (BT Group plc, Orange S.A. and Telefonica S.A.). The three non-U.S. companies were selected to maintain a robust sample of peers (of at least 15 to 20 peer companies) and because the companies are large, complex and provide services similar to ours. 	<ul style="list-style-type: none"> As a result of the screening process and based on input from HRCC's independent consultant, the HRCC reviewed the 17 company TSR Peer Group used for our 2020 annual LTI grants. Removed 2 companies: <ul style="list-style-type: none"> Zayo Group due to its acquisition Frontier Communications due to its bankruptcy Determined that there were no companies to be added Therefore, the HRCC deemed it was appropriate to continue to include all 15 remaining peer companies in our 2021 TSR Peer Group listed below.

The 2021 Compensation Benchmarking and TSR Peer Groups are summarized in the table below.

Our Compensation Benchmarking Peer Group	Common to both groups	Our TSR Peer Group
<p>BCE Inc. Charter Communications Cognizant Technology Solutions Corp DXC Technology Corp HP Inc Oracle Corp QUALCOMM Inc. Seagate Technology plc T-Mobile Western Digital Corp</p>	<p>CISCO Systems Inc Comcast Corporation DISH Network Corp. Liberty Global plc Motorola Solutions, Inc. Telus Corporation Verizon</p>	<p>AT&T, Inc. BT Group, plc EchoStar Corporation Orange, S.A. Telefonica S.A. Telephone & Data Systems Inc. United States Cellular Corporation Viasat, Inc.</p>
<p>17 Compensation Benchmarking peers</p>		<p>15 TSR peers</p>

Our Governance of Executive Compensation

The HRCC and management stay abreast of market trends and best practices through regular consultation with the HRCC's independent consultant and by attending various training programs and forums. In addition to other practices described elsewhere in this proxy, below are a summary and brief descriptions of certain compensation policies and practices.

What We Do

- ✓ Focus on performance-based compensation weighted heavily towards long-term incentive awards
- ✓ Benchmark generally against 50th percentile peer compensation levels
- ✓ Maintain robust stock ownership guidelines applicable to our executive officers and outside directors
- ✓ Annually review our compensation programs to avoid encouraging excessive risk taking
- ✓ Conduct an annual succession planning process for our CEO
- ✓ Conduct an annual "say-on-pay" vote
- ✓ Discuss our executive compensation program during shareholder engagement
- ✓ Maintain a compensation "clawback" policy
- ✓ Impose compensation forfeiture covenants broader than those mandated by law
- ✓ Review the composition of our peer groups at least annually
- ✓ Conduct independent and intensive performance reviews of our senior officers
- ✓ Cap the number of relative TSR performance-based shares that may vest if our own TSR is negative
- ✓ Review realizable pay of our senior officers and total compensation "tally" sheets
- ✓ Require shareholders to approve any future severance agreements valued at more than 2.99 times the executive's target cash compensation

What We Don't Do

- ✗ Maintain a supplemental executive retirement plan
- ✗ Permit our directors or employees to hedge our stock, or our directors or senior officers to pledge our stock
- ✗ Pay dividends on unvested restricted stock or RSUs
- ✗ Permit the HRCC's compensation consultant to provide other services to Lumen
- ✗ Pay, provide or permit:
 - (i) *excessive perquisites,*
 - (ii) *excise tax "gross-up" payments, or*
 - (iii) *single-trigger change of control equity acceleration benefits.*

FORFEITURE AND CLAWBACK OF INCENTIVE COMPENSATION

All incentive compensation earned by our executive officers and other incentive compensation plan participants are subject to certain forfeiture and clawback provisions. The HRCC is authorized to waive these forfeiture and clawback provisions if it determines in its sole discretion that such action is in our best interests.

Equity Compensation. For approximately 20 years, all recipients of our LTI grants have been required to contractually agree to forfeit certain of their awards if at any time during their employment with us or within 18 months after termination of employment they engage in activity contrary or harmful to our interests, as described further below. For unvested equity compensation, the recipient would forfeit any rights to future vestings of certain equity awards. We can clawback previously vested equity by requiring the recipient to return to us any cash, securities or other assets received by them upon the sale of Common Shares they acquired through certain prior equity awards.

Short-Term Incentive Compensation. Our STI plan contains substantially similar forfeiture provisions, under which the recipient would forfeit any rights to future payments of certain STI awards if at any time during their employment with us (or after termination of employment and prior to STI bonus payment) they engage in activity contrary or harmful to our interests, as described further below.

Additional Clawback Provisions for Executive Officers. Our Corporate Governance Guidelines authorize the Board to recover, or “clawback,” compensation from an executive officer if the Board determines that any bonus, incentive payment, equity award or other compensation received by the executive was based on any financial or operating result that was impacted by the executive’s knowing or intentional fraudulent or illegal conduct. Certain provisions of the Sarbanes-Oxley Act of 2002 would require our CEO and CFO to reimburse us for incentive compensation paid or trading profits earned following the release of financial statements that are subsequently restated due to material noncompliance with SEC reporting requirements caused by misconduct.

USE OF EMPLOYMENT AGREEMENTS

We have a long-standing practice of not providing traditional employment agreements to our officers and none of our executives has an employment agreement. However, we do from time to time enter into initial employment offer letters with prospective new employees, including executive officers, some of which include future commitments on our part. Mr. Storey’s offer letter, as amended and restated in 2018, does contain future commitments by the Company, as described in greater detail under “Potential Termination Payments.”

ANTI-HEDGING AND ANTI-PLEDGING POLICIES

Under our insider trading policy, our employees and directors may not:

- purchase or sell short-term options with respect to Lumen shares,
- engage in “short sales” of Lumen shares; or
- engage in hedging transactions involving Lumen shares which allow employees to fix the value of their Lumen shareholdings without all the risks of ownership or cause them to no longer have the same interests or objectives as our other shareholders (including, but not limited to, financial instruments such as prepaid variable forward contracts, equity swaps, collars and exchange funds).

In addition, under our insider trading policy, our senior officers and directors are prohibited from holding our securities in a margin account or otherwise pledging our securities as collateral.

To our knowledge, all of our senior officers and directors are currently in compliance with our anti-hedging and anti-pledging policies.

Deductibility of executive compensation

Section 162(m) of the Code disallows a deduction to public companies for annual compensation over \$1 million paid to a chief executive officer and certain other executive officers (covered employees). Prior to 2018, compensation paid to our covered employees that met the Section 162(m) requirements of “qualified performance-based compensation” was not subject to this deduction limitation. Effective for our taxable year beginning January 1, 2018, Section 162(m) was amended to eliminate the exception for qualified performance-based compensation, subject to transition relief for certain grandfathered arrangements in effect as of November 2, 2017. Although the deductibility of compensation is a consideration evaluated by the HRCC, the HRCC believes it is important to preserve flexibility in designing compensation programs and that the lost deduction on compensation payable in excess of the \$1-million limitation for the NEOs who are covered employees does not outweigh the benefit of being able to attract and retain talented management. Accordingly, the HRCC will continue to retain the discretion to approve compensation that is subject to the \$1-million deductibility limit.

Human Resources and Compensation Committee Report

The HRCC has reviewed and discussed with management the report included above under the heading “Compensation Discussion and Analysis.” Based on this review and discussion, the HRCC recommended to the Board that the Compensation Discussion and Analysis report be included in this proxy statement and incorporated into our Annual Report on Form 10-K for the year ended December 31, 2021.

Submitted by the Human Resources and Compensation Committee of the Board of Directors.

Laurie A. Siegel (Chair)

Martha H. Bejar

Steven T. Clontz

T. Michael Glenn

Michael J. Roberts

COMPENSATION TABLES

SUMMARY COMPENSATION TABLE

The following table sets forth the compensation paid to each of our NEOs in all capacities in which they served for fiscal years 2019, 2020 and 2021.

Summary Compensation Table

Name and Principal Position	Year	Salary	Stock Awards ⁽¹⁾	Non-equity Incentive Plan Compensation ⁽²⁾	Change in Pension Value ⁽³⁾	All Other Compensation ⁽⁴⁾	Total
Jeffrey K. Storey President and CEO	2021	\$1,800,011	\$17,120,198	\$ 3,600,022	—	\$134,550	\$22,654,781
	2020	1,800,011	11,435,870	3,600,022	—	123,330	16,959,233
	2019	1,800,011	11,834,226	3,492,021	—	108,850	17,235,108
Indraneel Dev Former EVP and CFO ⁽⁵⁾	2021	\$ 750,000	\$ 5,194,548	\$937,500	—	\$53,073	\$6,935,121
	2020	734,700	3,630,435	872,756	—	11,400	5,249,291
	2019	650,000	2,535,909	832,260	—	11,200	4,029,369
Stacey W. Goff EVP, General Counsel and Secretary	2021	\$ 600,018	\$ 2,444,501	\$ 720,021	\$ -	\$22,557	\$3,787,097
	2020	600,018	1,815,218	674,876	138,543	22,657	3,251,312
	2019	600,018	1,878,454	698,420	251,876	17,189	3,445,957
Shaun C. Andrews EVP, Chief Marketing Officer	2021	\$ 546,301	\$ 1,955,599	\$ 518,986	—	\$11,600	\$ 3,032,486
	2020	525,000	1,270,652	492,083	—	11,400	2,299,135
	2019	461,442	704,412	492,359	—	19,095	1,677,308
Scott A. Trezise EVP, Human Resources	2021	\$ 503,091	\$ 1,466,698	\$495,694	—	\$11,600	\$2,477,083
	2020	500,011	907,609	429,985	—	11,400	1,849,005
	2019	496,312	751,382	469,111	—	14,350	1,731,155

¹ For 2021, the amounts shown in this column reflect the fair value of annual grants of restricted stock or restricted stock unit awards made to our named executives under our LTI program.

For additional information about these equity grants, see the section entitled, "Long-Term Incentive Compensation" in our CD&A. The fair value of the time-vested and performance-based awards presented in the table above has been determined in accordance with FASB ASC Topic 718, based on the closing trading price of our Common Shares on the day of grant. See Note 12 titled "Stock-based Compensation" of the notes to our audited financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 for an explanation of material assumptions that we used to calculate the fair value of these stock awards. The aggregate value of the LTI awards granted to each named executive in 2021, assuming maximum payout of his performance-based award, would be as follows: Mr. Storey, \$28,932,443, Mr. Dev, \$8,583,979, Mr. Goff, \$4,039,529, Mr. Andrews, \$3,231,628, and Mr. Trezise, \$2,423,715.

² The amounts shown in this column reflect cash payments made under our short-term incentive program for actual performance in the respective years. For additional information, see the section entitled, "2021 STI Program" in our CD&A."

³ Reflects the net change during each of the years reflected in the present value of Mr. Goff's accumulated benefits under the defined benefit plans discussed below under the heading "—Pension Benefits."

⁴ For fiscal 2021, the amounts shown in this column are comprised of (i) personal use of our aircraft; (ii) Company contributions or other allocations to our defined contribution plans; (iii) payments of life insurance premiums under a legacy reimbursement plan, and (iv) personal identity theft protection service, in each case for and on behalf of the named executives as follows:

All Other Compensation - 2021

NEO	Aircraft Use	Contributions to Plans	Insurance Premiums	Identity Theft Protection	Total 2021 All Other Compensation
Mr. Storey	\$114,450	\$11,600	\$ —	\$ 8,500	\$134,550
Mr. Dev	—	53,073	—	—	53,073
Mr. Goff	—	11,600	10,957	—	22,557
Mr. Andrews	—	11,600	—	—	11,600
Mr. Trezise	—	11,600	—	—	11,600

For additional information regarding perquisites, see "Compensation Discussion and Analysis."

⁵ Mr. Dev's employment with Lumen ended effective April 1, 2022.

GRANT OF PLAN BASED AWARDS

The following table presents additional information regarding all equity and non-equity incentive plan awards granted to our NEOs in fiscal 2021.

Grants of Plan-Based Awards

NEO	Type of Award and Grant Date ⁽³⁾	Range of Payouts Under Non-Equity Incentive Plan Awards ⁽¹⁾			Estimated Future Share Payouts Under Equity Incentive Plan Awards ⁽²⁾			All other Stock Awards: Unvested Shares ⁽⁴⁾ (#)	Grant Date Fair Value Awards ⁽⁵⁾
		Threshold (\$)	Target (\$)	Maximum (\$)	Threshold (#)	Target (#)	Maximum (#)		
Mr. Storey	Bonus	\$1,800,011	\$3,600,022	\$7,200,044					
	TBRS							419,601	\$5,307,953
	PBRS - EBITDA				186,490	372,979	745,958		4,718,184
	PBRS - Relative TSR				186,490	372,979	745,958		7,094,061
Mr. Dev	Bonus	\$ 468,750	\$ 937,500	\$1,875,000					
	TBRS							142,697	\$1,805,117
	PBRS - EBITDA				53,512	107,024	214,048		1,353,854
	PBRS - Relative TSR				53,512	107,023	214,046		2,035,577
Mr. Goff	Bonus	\$ 360,011	\$ 720,021	\$1,440,042					
	TBRS							67,152	\$849,473
	PBRS - EBITDA				25,182	50,364	100,728		637,105
	PBRS - Relative TSR				25,182	50,364	100,728		957,923
Mr. Andrews	Bonus	\$ 273,151	\$ 546,301	\$1,092,602					
	TBRS							53,721	\$679,571
	PBRS - EBITDA				20,146	40,292	80,584		509,694
	PBRS - Relative TSR				20,146	40,291	80,582		766,335
Mr. Trezise	Bonus	\$ 247,847	\$ 495,694	\$ 991,388					
	TBRS							40,291	\$509,681
	PBRS - EBITDA				15,110	30,219	60,438		382,270
	PBRS - Relative TSR				15,109	30,218	60,436		574,746

¹ Represents potential payouts under the annual STI bonus program for 2021 for our named executives. The actual amounts paid for 2021 performance are reported in the "Non-Equity Incentive Plan Compensation" column of the Summary Compensation Table. Failure to meet the "threshold" level of performance would result in no payout to the executive.

² Represents the performance-based portion of our annual LTI grants, which were issued to Mr. Storey on February 26, 2021 and all other NEOs on February 24, 2021. Payout under these awards (restricted stock or RSUs) may range between 0-200%. For information regarding the performance metrics on which vesting is contingent, please see note 6 to the "Outstanding Equity Awards" table.

³ Definitions of these terms and information on the grant dates appear elsewhere herein.

⁴ Represents the time-based portion of our annual LTI grants, which were issued to Mr. Storey on February 26, 2021 and all other NEOs on February 24, 2021. These awards (restricted stock or RSUs) will vest one-third per year on March 1 of 2022, 2023, and 2024, subject to the executive's continued employment through the vesting date or as otherwise provided in the award agreement.

⁵ Calculated in accordance with FASB ASC Topic 718 in the manner described in Note 1 to the Summary Compensation Table above.

SHORT-TERM INCENTIVE COMPENSATION. All of our named executives participated in the Lumen Short-Term Incentive ("STI") program for 2021. For more information regarding this program, including the specific performance metrics, see "Compensation Discussion and Analysis— Section four – Compensation Design, Awards and Payouts for 2021."

ANNUAL GRANTS OF LONG-TERM INCENTIVE COMPENSATION. We make annual grants of LTI awards to our executive officers, typically at the HRCC's February meeting. For the past several years, these awards have been 60% performance-based and 40% time-vested, granted in the form of RSUs to Mr. Storey and restricted stock to each other named executive. However, for 2020 and 2021, the performance-based portion of the LTI grant to Mr. Storey was increased to 64% of his total target grant value. For our 2021 program, the time-vested awards will vest one-third per year on March 1 of 2022, 2023, and 2024. The performance-based awards will vest on March 1, 2024, depending upon our achievement of a three-year Cumulative Adjusted EBITDA target and our Relative TSR performance against a peer group. For more information, see Compensation Discussion and Analysis - Section four – Compensation Design, Awards and Payouts for 2021."

For information regarding LTI grants made in prior years, see the disclosure in our proxy statement for the year following the date of grant.

ACCELERATION OF VESTING OF EQUITY AWARDS. All of the equity awards granted in 2021 will vest upon the death or disability of the named executive. In addition, the HRCC may, in its discretion, vest or waive the continued service requirement for a named executive's outstanding equity awards upon his or her retirement (at early or normal retirement age), in whole or in part. Mr. Storey's equity awards may accelerate under certain additional scenarios, as memorialized in his amended and restated offer letter. For more information on these vesting acceleration triggers, see "—Potential Termination Payments—Equity Acceleration Provisions of Mr. Storey's Amended and Restated Offer Letter." In addition, we have entered into change of control agreements with each named executive, which provide that, upon certain terminations of employment following a change of control of the Company, any continued employment requirements to the officer's outstanding LTI awards will be waived, all as described in greater detail below under "—Potential Termination Payments—Payments Made Upon a Change of Control."

DIVIDENDS AND VOTING RIGHTS. All dividends or dividend equivalents related to our LTI awards will be paid to the holder only upon the vesting or issuance of such shares or units. Unless and until forfeited, any shares of restricted stock may be voted by the NEOs. However, holders of RSUs have no voting rights unless and until they are issued shares in settlement of those awards.

FORFEITURE. All of these above-described equity awards are subject to forfeiture if the officer competes with us or engages in certain other activities harmful to us, all as specified further in the forms of incentive agreements that we have filed with the SEC. For more information, see "—Potential Termination Payments."

OUTSTANDING EQUITY AWARDS

The following table summarizes information about all outstanding unvested equity awards held by our named executives as of December 31, 2021.

Outstanding Awards at December 31, 2021⁽¹⁾

Name	Grant Date	Stock Awards		Equity Incentive Awards ⁽²⁾	
		Number of Unvested Shares or Units (#) ⁽⁵⁾	Market Value of Shares that Have Not Vested (\$)	Number of Unvested Shares or Units (#)	Market Value of Unvested Shares or Units (\$)
Mr. Storey	2/28/2019	119,628	\$ 1,501,331	403,476 ⁽⁴⁾	\$5,063,624
	2/26/2020	239,182	3,001,734	538,159 ⁽⁵⁾	6,753,895
	2/26/2021	419,601	5,265,993	745,958 ⁽⁶⁾	9,361,773
Mr. Dev	2/28/2019	25,635	\$ 321,719	86,459 ⁽⁴⁾	\$1,085,060
	2/26/2020	75,931	952,934	170,844 ⁽⁵⁾	2,144,092
	2/24/2021	142,697	1,790,847	214,047 ⁽⁶⁾	2,686,290
Mr. Goff	2/28/2019	18,989	\$ 238,312	64,044 ⁽⁴⁾	\$ 803,752
	2/26/2020	37,966	476,473	85,422 ⁽⁵⁾	1,072,046
	2/24/2021	67,152	842,758	100,728 ⁽⁶⁾	1,264,136
Mr. Andrews	2/28/2019	7,121	\$ 89,369	24,016 ⁽⁴⁾	\$ 301,401
	2/26/2020	26,576	333,529	59,796 ⁽⁵⁾	750,440
	2/24/2021	53,721	674,199	80,583 ⁽⁶⁾	1,011,317
Mr. Trezise	2/28/2019	7,596	\$ 95,330	25,617 ⁽⁴⁾	\$ 321,493
	2/26/2020	18,983	238,237	42,711 ⁽⁵⁾	536,023
	2/24/2021	40,291	505,652	60,437 ⁽⁶⁾	758,484

¹ All information presented in this table is as of December 31, 2021 and does not reflect vesting of outstanding equity awards or issuance of additional awards since such date.

² Represents performance-based equity awards, payouts of which may range between 0-200%. The table above assumes that, as of December 31, 2021, we would perform at "target" levels for our annual 2020 and 2021 awards, such that all performance-based shares granted to each named executive would vest at 100%. With respect to our 2019 performance-based equity awards, the number of shares reported represents the number of shares earned based on actual performance that remained unvested at December 31, 2021 (one-half of total), but which vested on March 1, 2022 (see note 4 below).

³ Represents an annual grant of time-vested restricted stock (for Messrs. Dev, Goff, Andrews and Trezise) or restricted stock units (for Mr. Storey) that will vest in three equal installments on March 1 of each of the first three years following the grant date, subject to the executive's continued employment through the applicable vesting date.

Vesting Dates

Grant Date	Vesting Date
February 28, 2019	March 1, 2022
February 26, 2020	Two equal installments on March 1 of 2022 & 2023
February 24, 2021 for all NEOs except Mr. Storey and February 26, 2021 for Mr. Storey	Three equal installments on March 1 of 2022, 2023, & 2024

⁴ Represents the performance-based portion of our 2019 annual restricted stock or restricted stock unit awards that had not yet vested. The performance period for these awards ended on December 31, 2020. and, based on our two-year Adjusted EBITDA Run Rate performance, we achieved 149.9% of target. One-half of the earned shares vested on March 1, 2021, while the second half (the amounts reported in the table above) vested on March 1, 2022, given that each executive remained employed with us through that date.

⁵ Represents the performance-based portion of our 2020 annual restricted stock or restricted stock unit awards. The number of shares earned will range between 0 to 200% of the number granted, with the number earned determined using a two-step process: (1) between 0 to 200% of target will be earned depending on the Company's cumulative Adjusted EBITDA results for the three-year period from 2020 to 2022 and (2) provided that threshold performance is met or exceeded under step (1), the executives may earn a positive or negative adjustment (+/-20%) based on the Company's relative total shareholder return over the same period against the performance of a peer group of companies in the telecommunications industry. There will be no positive adjustment if our TSR is negative over the three-year period, nor can the total payout exceed 200%. These awards will vest on March 1, 2023, subject to continued employment through the vesting date.

⁶ Represents the performance-based portion of our 2021 annual restricted stock or restricted stock unit awards. The number of shares earned will range between 0 to 200% of the number granted, with the number earned determined depending on the Company's achievement of two separate performance targets for the three-year period from 2021 to 2023: (1) 50% of the total target shares granted will be earned depending on the Company's cumulative Adjusted EBITDA results and (2) 50% of the total target shares granted will be based on the Company's relative total shareholder return against the performance of a peer group of companies in the telecommunications industry. These awards will vest on March 1, 2024, subject to continued employment through the vesting date.

STOCK VESTING TABLE

The following table provides details regarding the equity awards held by our named executives that vested during 2021. Restricted stock or restricted stock units were the only equity awards held by our named executives during 2021.

Stock Vested During 2021

Name	Number of Shares Acquired on Vesting ⁽¹⁾	Value Realized on Vesting ⁽²⁾
Mr. Storey	1,401,337	\$18,168,166
Mr. Dev	205,962	2,538,303
Mr. Goff	171,949	2,111,219
Mr. Andrews	61,907	764,491
Mr. Trezise	67,180	826,470

¹ Represents both time-vested and performance-based equity awards that vested during 2021.

² Based on the closing trading price of the Common Shares on the applicable vesting date.

PENSION BENEFITS

The following table and discussion summarize pension benefits payable to one of our named executives under (i) the Lumen Combined Pension Plan, a qualified retirement plan under Code Section 401(a), which permits eligible participants (including officers) who have completed at least five years of service to receive a pension benefit upon attaining early or normal retirement age and (ii) our non-qualified supplemental defined benefit plan, which is designed to pay supplemental retirement benefits to certain officers in amounts equal to the benefits such officers would otherwise forego due to Code limitations on compensation and benefits under qualified plans. We refer to these particular defined benefit plans below as our "Qualified Plan" and our "Supplemental Plan," respectively and as our "Pension Plans," collectively.

Pension Benefits

NEOs ⁽¹⁾	Plan Name	Number of Years of Credited Service	Present Value of Accumulated Benefit as of 12/31/21	Payments During Last Fiscal Year
Mr. Goff	Qualified Plan	23	\$803,440	\$—
	Supplemental Plan	23	682,578	—

¹ None of Messrs. Storey, Dev, Andrews or Trezise are eligible to participate in these plans since they joined us after both of our Pension Plans were closed to new participants.

² These figures represent accumulated benefits as of December 31, 2021 based on several assumptions, including the assumption that the executive remains employed by us and begins receiving retirement benefits at the normal retirement age of 65, with such accumulated benefits being discounted from the normal retirement age to December 31, 2021 using discount rates ranging between 2.85% and 3.0%. See Note 11 titled "Employee Benefits" of the notes to our audited financial statements included in Appendix B for additional information.

PENSION PLANS. With limited exceptions specified in the Pension Plans, we "froze" our Qualified Plan and Supplemental Plan as of December 31, 2010, which means that no additional monthly pension benefits have accrued under such plans since that date (although service after that date continues to count towards vesting and benefit eligibility and a limited transitional benefit for eligible participants continued to accrue through 2015).

Prior to this freezing of benefit accruals, the aggregate amount of each senior officer's total monthly pension benefit under the Qualified Plan and Supplemental Plan was equal to his years of service since 1999 (up to a maximum of 30 years) multiplied by the sum of (i) 0.5% of his final average pay plus (ii) 0.5% of his final average pay in excess of his Social Security covered compensation, where "final average pay" was defined as his average monthly compensation during the 60 consecutive month period within his last ten years of employment in which he received his highest compensation. Effective December 31, 2010, the Pension Plans were amended to cease all future benefit accruals under the above formula (except where a collective bargaining agreement provides otherwise). In lieu of additional accruals under the above-described formula, each affected participant's accrued benefit as of December 31, 2010 were increased 4% per year, compounded annually through the earlier of December 31, 2015 or the termination of the participant's employment.

Under both Pension Plans, "average monthly compensation" is determined based on the participant's salary plus annual cash incentive bonus. Although the retirement benefits described above are provided through separate plans, we have in the past transferred benefits from the Supplemental Plan to the Qualified Plan and reserve the right to make further similar transfers to the extent allowed under applicable law. The value of benefits transferred to the Qualified Plan, which directly offset the value of benefits in the Supplemental Plan, will be payable to the recipients in the form of enhanced annuities or supplemental benefits and are reflected in the table above under the "Present Value of Accumulated Benefits" column.

The normal form of benefit payment under both of our Pension Plans is (i) in the case of unmarried participants, a monthly annuity payable for the life of the participant and (ii) in the case of married participants, an actuarially equivalent monthly annuity payable for the lifetime of the participant and a survivor annuity payable for the lifetime of the spouse upon the participant's death. Participants may elect optional forms of annuity benefits under each Pension Plan and, in the case of the Qualified Plan, an annuity that guarantees ten years of benefits, all of which are actuarially equivalent in value to the normal form of benefit. The enhanced annuities described in the prior paragraph may be paid in the form of a lump sum, at the participant's election.

The normal retirement age is 65 under both of the Pension Plans. Participants may receive benefits under both of these plans upon "early retirement," which is defined as attaining age 55 with five years of service. Under both of these plans, the benefit payable upon early termination is calculated under formulas that pay between 60% to 100% of the base plan benefit and 48% to 92% of the excess plan benefit, in each case with the lowest percentage applying to early retirement at age 55 and proportionately higher percentages applying to early retirement after age 55. For additional information on early retirement benefits, please see the applicable early retirement provisions of the Pension Plans, copies of which are filed with the SEC.

DEFERRED COMPENSATION

The following table and discussion provide information on our Supplemental Savings Plan, under which certain named officers may elect to defer a portion of their salary in excess of the amounts that may be deferred under our qualified 401(k) plans. Only three of our named executives (Messrs. Dev, Goff and Andrews) have elected to participate in the Supplemental Savings Plan, and of these three, only Mr. Dev made contributions to the plan during 2021.

Deferred Compensation

Executive	Aggregate Balance at December 31, 2020 ⁽¹⁾	Executive Contributions in 2021 ⁽²⁾	Company Contributions in 2021 ⁽³⁾	Aggregate Earnings in 2021 ⁽⁴⁾	Aggregate Withdrawals/Distributions ⁽⁵⁾	Aggregate Balance at December 31, 2021 ⁽¹⁾
Mr. Dev	\$ 65,382	\$ 73,965	\$ 41,473	\$ 15,354	—	\$ 196,174
Mr. Goff	2,977,249	—	—	445,577	—	3,422,827
Mr. Andrews	23,834	—	—	4,043	—	27,877

¹ This figure represents the aggregate balance of each NEO's Supplemental Savings Plan account.

² The amounts in this column reflect contributions under the Supplemental Savings Plan by the officer of salary paid in 2021 and reported as 2021 salary compensation in the Summary Compensation Table.

³ This column includes our partial match of the officer's contribution under the terms of the Supplemental Savings Plan, all of which were included as 2021 compensation in the column of the Summary Compensation Table labeled "All Other Compensation."

⁴ This column represents aggregate earnings in 2021 including interest, dividends and distributions earned with respect to deferred compensation invested by the officers in the manner described in the text below.

Under our Supplemental Savings Plan, certain of our senior officers may defer up to 50% of their salary in excess of the Code limit on annual contributions to a qualified 401(k) plan. For every dollar that an eligible participant contributes to this plan up to 6% of his or her excess salary, we add an amount equal to the total matching percentage then in effect for matching contributions made by us under our qualified 401(k) plan (which for 2021 equaled the sum of all of the initial 1% contributed and half of the next 5% contributed). All amounts contributed under this supplemental plan by the participants or us are allocated among deemed investments that follow the performance of the same broad array of funds offered under our qualified 401(k) plan. This is reflected in the market value of each participant's account. Participants may change their deemed investments in these funds at any time. We reserve the right to transfer benefits from the Supplemental Savings Plan to our qualified 401(k) or retirement plans to the extent allowed under Treasury regulations and other guidance. The value of benefits transferred to our qualified plans directly offsets the value of benefits in the Supplemental Savings Plan. Participants in the Supplemental Savings Plan normally receive payment of their account balances in a lump sum once they cease working full-time for us, subject to any deferrals mandated by federal law.

POTENTIAL TERMINATION PAYMENTS

The materials below discuss payments and benefits that our officers are eligible to receive if they: (i) resign or retire, (ii) are terminated by us, with or without cause, (iii) die or become disabled, or (iv) become entitled to termination benefits following a change of control of Lumen.

Notwithstanding the information appearing below, you should be aware that our officers have agreed to forfeit their equity compensation awards (and profits derived therefrom) if they compete with us or engage in other activity harmful to our interests while employed with us or within 18 months after termination. Certain other compensation might also be recoverable by us under certain circumstances after termination of employment. See "Compensation Discussion and Analysis—Our Governance of Executive Compensation—Forfeiture of Prior Compensation" for more information.

PAYMENTS MADE UPON ALL TERMINATIONS

Regardless of the manner in which our employees' employment terminates prior to a change of control, they are entitled to receive amounts earned during their term of employment (subject to the potential forfeitures discussed above). With respect to each such terminated employee, such amounts include his or her:

- salary through the date of termination, payable immediately following termination in cash;
- annual incentive bonus, but only if such employee served for the entire bonus period or through the date such bonus is payable (unless this service requirement is waived, or more favorable treatment is applicable in the case of retirement, death or disability);
- equity awards that have vested;
- benefits accrued and vested under our qualified and supplemental defined benefit pension plans, with payouts generally occurring at early or normal retirement age;
- vested account balance held in our qualified and supplemental defined contribution plans, which the employee is generally free to receive at the time of termination; and
- rights to continued health care benefits to the extent required by law.

PAYMENTS MADE UPON INVOLUNTARY TERMINATIONS

In addition to benefits described under the heading immediately above, employees involuntarily terminated by us without cause prior to a change of control are also entitled, subject to certain conditions, to:

- payment of their annual incentive bonus or a pro rata portion thereof, depending on their termination date;
- if approved by the HRCC in its discretion, the terminated employee will (i) receive accelerated vesting of all, or a portion of, unvested time-vested equity awards, (ii) be permitted to retain all or a portion of his or her unvested performance-based restricted stock for the remainder of the applicable performance period or (iii) a combination of both; and
- a cash severance payment in the amount described under "Compensation Discussion and Analysis—Section 4—Compensation Design, Awards and Payouts for 2021—Other Benefits—Severance Benefits" plus the receipt of any short-term incentive bonus payable under their applicable bonus plan and outplacement assistance benefits.

None of the benefits listed immediately above are payable if the employee resigns or is terminated for cause.

PAYMENTS MADE UPON RETIREMENT

Employees who retire in conformity with our retirement plans and policies are entitled, subject to certain conditions, to:

- payment of their annual incentive bonus or a pro rata portion thereof, depending on their retirement date;
- post-retirement life, health and welfare benefits; and
- all of the benefits described under the heading “—Payments Made Upon All Terminations.”

In addition, the HRCC has discretion to accelerate the vesting of all, or a portion of, unvested time-vested equity awards or to permit an employee who retires from the Company to retain all or a portion of his or her unvested performance-based equity awards for the remainder of the applicable performance period.

PAYMENTS MADE UPON DEATH OR DISABILITY

Upon death or disability, officers (or their estates) are generally entitled to (without duplication of benefits):

- payments under our disability or life insurance plans, as applicable;
- keep all of their time-vested equity awards, whether vested or unvested;
- vesting of their performance-based equity awards, with performance deemed achieved at target;
- payment of their annual incentive bonus or a pro rata portion thereof, depending on their date of death or disability;
- continued rights to receive (i) life, health and welfare benefits at early or normal retirement age, in the event of disabilities of employees with ten years of prior service, or (ii) health and welfare benefits payable to surviving eligible dependents, in the event of death of employees meeting certain age and service requirements; and
- all of the benefits described under the heading “—Payments Made Upon All Terminations,” except that (i) death benefits under our retirement plans are generally available only to surviving spouses and (ii) benefits payable to mentally disabled employees under our nonqualified defined benefit retirement plans may be paid prior to retirement age.

EQUITY ACCELERATION PROVISIONS OF MR. STOREY’S AMENDED AND RESTATED OFFER LETTER

In conjunction with appointing Mr. Storey as our CEO, we amended and restated our offer letter with him that provides that certain outstanding, unvested equity awards will accelerate upon a “qualifying termination” or, subject to certain conditions, his retirement. A “qualifying termination” is defined in his amended and restated offer letter to include death, “disability,” termination by us without “cause,” or termination by Mr. Storey with “good reason” (each as further defined in the offer letter). Upon a qualifying termination, vesting of all unvested time-vested awards is accelerated and, with respect to performance-based awards, Mr. Storey will be permitted to retain all such awards although they will remain subject to their original performance conditions and payout schedule (except upon his death, when the awards would pay out at target). In addition, upon his retirement, provided that he has given us 90 days’ notice of his intent to retire, Mr. Storey is entitled to receive full-service vesting as well with respect to his annual LTI grants with any performance-based awards remaining subject to their original performance and vesting conditions.

PAYMENTS MADE UPON A CHANGE OF CONTROL

We have entered into agreements that entitle each of our executive officers who are terminated without cause or resign under certain specified circumstances within certain specified periods following any change in control of Lumen to receive (i) a lump sum cash severance payment equal to a multiple of such officer’s annual cash compensation (defined as salary plus the average annual incentive bonus over the past three years) and (ii) the other benefits described under “Compensation Discussion and Analysis—Section 4—Compensation Design, Awards and Payouts for 2021—Other Benefits—Change of Control Arrangements.”

Under Lumen’s above-referenced agreements, a “change in control” of Lumen would be deemed to occur upon: (i) any person (as defined in the Securities Exchange Act of 1934) becoming the beneficial owner of 30% or more of the outstanding Common Shares, (ii) a majority of our directors being replaced, (iii) consummation of certain mergers, substantial asset sales or similar business combinations, or (iv) approval by the shareholders of a liquidation or dissolution of Lumen.

The above-referenced agreements provide the benefits described above if we terminate the officer’s employment without cause or the officer resigns with “good reason,” which we describe further under the heading “Compensation Discussion and Analysis—Our Compensation Program and Components of Pay—Other Benefits—Change of Control Arrangements.” We have filed copies or forms of these agreements with the SEC.

Participants in our supplemental defined benefit plan whose service is terminated within two years of the change in control of Lumen will receive a cash payment equal to the present value of their plan benefits (after providing age and service credits of up to three years if the participant is terminated by us without cause or resigns with "good reason"), determined in accordance with actuarial assumptions specified in the plan. Certain account balances under our qualified retirement plans will also fully vest upon a change of control of Lumen.

Under the terms of our equity incentive plans, incentives granted under those plans will not vest, accelerate, become exercisable or be deemed fully paid unless otherwise provided in a separate agreement, plan or instrument. None of our equity award agreements provide for any such accelerated recognition of benefits solely upon a change of control. Instead, our award agreements provide that any holder of incentives who is terminated by us or our successor without cause or resigns with good reason following a change of control will be entitled to receive full vesting of his or her time-vested restricted shares and continued rights under his or her performance-based restricted shares (on the same terms as if he or she had not been terminated).

We believe the above-described change of control benefits enhance shareholder value because:

- prior to a takeover, these protections help us to recruit and retain talented officers and to help maintain the productivity of our workforce by alleviating concerns over economic security and
- during or after a takeover, these protections (i) help our personnel, when evaluating a possible business combination, to focus on the best interests of Lumen and its shareholders and (ii) reduce the risk that personnel will accept job offers from competitors during takeover discussions.

ESTIMATED POTENTIAL TERMINATION PAYMENTS

The table below provides estimates of the value of payments and benefits that would become payable if our named executives were terminated in the manner described below, in each case based on various assumptions, the most significant of which are described in the table's notes.

Potential Termination Payments

Type of Termination of Employment⁽¹⁾

Name	Type of Termination Payment ⁽²⁾	Type of Termination of Employment ⁽¹⁾				Termination Upon a Change of Control ⁽⁵⁾
		Involuntary Termination Without Cause ⁽³⁾	Retirement ⁽⁴⁾	Disability	Death	
Mr. Storey	Annual Bonus	\$ 3,600,022	\$ 3,600,022	\$ 3,600,022	\$ 3,600,022	\$ 3,600,022
	Equity Awards ⁽⁶⁾	30,948,350	30,948,350	30,948,350	30,948,350	30,948,350
	Pension and Welfare ⁽⁷⁾	57,800	—	—	—	167,400
	Cash Severance ⁽⁸⁾	10,800,067	—	—	—	16,200,101
		\$45,406,239	\$34,548,372	\$34,548,372	\$34,548,372	\$50,915,873
Mr. Dev	Annual Bonus	\$ 937,500	n/a	\$ 937,500	\$ 937,500	\$ 880,839
	Equity Awards ⁽⁶⁾	—	n/a	8,980,943	8,980,943	8,980,943
	Pension and Welfare ⁽⁷⁾	29,700	n/a	—	—	56,400
	Cash Severance ⁽⁸⁾	1,687,500	n/a	—	—	3,375,000
		\$2,654,700	n/a	\$9,918,443	\$9,918,443	\$13,293,182
Mr. Goff	Annual Bonus	\$ 720,021	\$ 720,021	\$ 720,021	\$ 720,021	\$ 697,772
	Equity Awards ⁽⁶⁾	—	—	3,433,341	3,433,341	3,433,341
	Pension and Welfare ⁽⁷⁾	31,200	n/a	—	—	59,400
	Cash Severance ⁽⁸⁾	1,320,039	n/a	—	—	\$2,640,077
		\$2,071,260	n/a	\$4,153,362	\$4,153,362	\$6,830,591
Mr. Andrews	Annual Bonus	\$518,986	n/a	\$518,986	\$518,986	\$ 501,143
	Equity Awards ⁽⁶⁾	—	—	2,148,937	2,148,937	2,148,937
	Pension and Welfare ⁽⁷⁾	29,700	n/a	—	—	56,400
	Cash Severance ⁽⁸⁾	1,100,000	n/a	—	—	2,200,000
		\$1,648,686	n/a	\$2,667,923	\$2,667,923	\$4,906,479
Mr. Trezise	Annual Bonus	\$ 495,694	n/a	\$ 495,694	\$ 495,694	\$ 464,930
	Equity Awards ⁽⁶⁾	—	n/a	2,455,219	2,455,219	2,455,219
	Pension and Welfare ⁽⁷⁾	29,700	n/a	—	—	56,400
	Cash Severance ⁽⁸⁾	1,049,984	n/a	—	—	2,099,968
		\$1,575,378	n/a	\$2,950,913	\$2,950,913	\$5,076,517

¹ All data in the table reflects our estimates of the value of payments and benefits assuming the named officer was terminated on December 31, 2021. The closing price of the Common Shares on such date was \$12.55. The table reflects only estimates of amounts earned or payable through or at such date based on various assumptions. Actual amounts can be determined only at the time of termination. If a named officer voluntarily resigns or is terminated with cause, he will not be entitled to any special or accelerated benefits but will be entitled to receive various payments or benefits that vested before the termination date. The table reflects potential payments based upon a physical disability; additional benefits may be payable in the event of a mental disability.

² As further described above, upon termination of employment, the named officers may become entitled to receive certain special, accelerated or enhanced benefits, including, subject to certain exceptions, the right to receive payment of their annual cash incentive bonus, an acceleration under certain circumstances of the vesting of their outstanding equity awards, current or enhanced pension and welfare benefits, or cash severance payments. The table excludes (i) payments or benefits made under broad-based plans or arrangements generally available to all salaried full-time employees and (ii) benefits, awards or amounts that the officer was entitled to receive prior to termination of employment.

³ The amounts listed in this column reflect payments to which the named officer would be entitled to under our executive severance plan if involuntarily terminated by us without cause (including, for Mr. Storey, by him with good reason, as provided in his amended and restated offer letter) prior to a change of control. The amounts listed in this column would not be payable if the officer voluntarily resigns (for Mr. Storey, without good reason) or is terminated for cause.

⁴ The amounts listed in this column reflect (i) payments to which Mr. Storey and Mr. Goff would be entitled to under the provisions our STI plan and (ii) equity that would be accelerated for Mr. Storey per his amended and restated offer letter (provided he has given us 90 days' notice of his intent to retire). Mr. Goff is eligible to retire early under Lumen's defined benefit pension plans described above under the heading "Executive Compensation —Pension Benefits." The amounts reflected in this column do not reflect the amount of lifetime annuity payments payable upon early retirement, which as of December 31, 2021, Mr. Goff would have been entitled to monthly annuity payments of approximately \$7,061 over his lifetime.

⁵ The information in this column assumes each named officer became entitled on December 31, 2021 to the benefits under Lumen's agreements in existence on such date described above under "—Payments Made Upon a Change of Control" upon an involuntary termination without cause or resignation with good reason. All amounts are based on several assumptions.

⁶ The information in this row (i) reflects the benefit to the named officer arising out of the accelerated vesting of some or all of his restricted stock or RSUs triggered by the termination of employment and (ii) assumes that the HRCC would not approve the acceleration of the restricted stock or RSUs of any named officer in the event of an involuntary termination.

⁷ The information in this row reflects only the incremental benefits that accrue upon an event of termination and excludes benefits that were vested on December 31, 2021. For information on the present value of the named officers' accumulated benefits under our defined benefit pension plans, see "—Pension Benefits," and for information on the aggregate balances of the named officers' non-qualified deferred compensation, see "—Deferred Compensation." As indicated above, the named officer would also be entitled to receive a distribution of his or her 401(k) benefits and various other broad-based benefits.

⁸ The information in this row excludes, in the case of disability or death, payments made by insurance companies.

AMOUNTS PAID TO FORMER EXECUTIVE

As noted previously, Mr. Dev's employment with us ended effective April 1, 2022. Under the terms of our short-term incentive bonus program, Mr. Dev will retain the right to earn a prorated annual incentive bonus for 2022 based on actual performance, payable in 2023. The HRCC determined that Mr. Dev qualified for payments under our executive severance plan. Under that plan, Mr. Dev received a cash severance payment equal to one year of total target compensation (\$1,687,500) and approximately \$22,000 to cover COBRA premium payments during the applicable severance period. In addition to these prior arrangements, and conditioned upon Mr. Dev's execution of a general release, the HRCC exercised its discretion to (i) accelerate vesting of Mr. Dev's time-based restricted stock awards granted in 2020 and 2021 (valued at approximately \$1.5 million on the date of acceleration) and (ii) permit him to continue to hold a portion of his performance-based restricted stock awards granted in 2020 and 2021, which remain subject to their original performance conditions and vesting dates as disclosed above in the "Outstanding Equity Awards" table. The remainder of Mr. Dev's equity awards, including those granted to him in fiscal 2022, were forfeited upon his termination of employment.

CEO Pay Ratio Disclosure

As mandated by federal law and related SEC rules, we are required to disclose a ratio of the pay of our CEO to that of our median employee. For 2021, the total compensation of our CEO, Mr. Storey was \$22,654,781, while the annual total compensation for our median employee was \$75,984. As a result, the ratio of CEO pay to median employee pay was approximately 298 to 1.

We calculated our 2021 pay ratio using the following assumptions:

- Median employee determination. The median employee was determined by reviewing the annual total target compensation (the sum of base salary, target short-term incentive and target long-term incentive awards) as of December 31, 2021 for approximately 36,000 active employees employed on that date, excluding our CEO and employees in Venezuela.
- Median employee identification. The median employee was identified as an engineering project manager, located in the U.S. and with the Company for four years.
- Median employee total compensation calculation. To determine the median pay ratio, we calculated the median employee's pay using the same pay elements and calculation methodology as used in determining the CEO's pay for purposes of disclosure in the Summary Compensation Table.

The SEC rules permit companies to choose between different methodologies for median pay calculations. Other public companies may calculate their pay ratio using a different methodology than ours, and you should not assume our ratio data is comparable to that of other companies.

STOCK OWNERSHIP GUIDELINES

Under our current stock ownership guidelines, our executive officers are required to beneficially own Lumen stock in market value equal to a multiple of their annual salary, as outlined in the table below and each outside director must beneficially own Lumen stock equal in market value to five times the annual cash retainer payable to outside directors.

STOCK OWNERSHIP GUIDELINES

Party	Guideline	Value ⁽¹⁾⁽²⁾
CEO	6X Base Salary	\$10,800,066
Other Executive Officers	3X Base Salary	\$ 1,818,758
Outside Directors	5X Annual Cash Retainer	\$ 500,000

¹ Value for CEO of \$10.8M is based on Mr. Storey's annual salary as of December 31, 2021.

² Value for our other executive officers is based on the average annual salary for such officers as of December 31, 2021.

Each executive officer and outside director have three and five years, respectively, to attain these targets. For any year during which an executive or outside director does not meet his or her ownership target, the executive or director is required to hold 65% of the Lumen stock that he or she acquires through our equity compensation programs, excluding shares sold to pay related taxes.

Other than as noted below, as of December 31, 2021, all of our executive officers and all of our outside directors were in compliance with and in most cases significantly exceeded, our stock ownership guidelines. The two exceptions are Mr. Allen and Mr. Jones. Mr. Allen, who joined our Board on February 25, 2021, has until February 25, 2026 to comply with these guidelines. Mr. Jones, who joined our Board on January 1, 2020, has until January 1, 2025 to comply with these guidelines.

Other Matters

STOCK OWNERSHIP

The following table sets forth information regarding ownership of our Common Shares by the persons known to us to have beneficially owned more than 5% of the outstanding Common Shares on December 31, 2021 (the “investors”), unless otherwise noted.

STOCK OWNERSHIP

Name and Address	Amount and Nature of Beneficial Ownership of Common Shares ⁽¹⁾	Percent of Outstanding Common Shares ⁽¹⁾
The Vanguard Group 100 Vanguard Blvd. Malvern, PA 19355	113,411,515 ⁽²⁾	11.0%
Blackrock, Inc. 55 East 52nd Street New York, NY 10055	95,302,945 ⁽³⁾	9.2%
Temasek Holdings (Private) Limited 60B Orchard Road #06-18 Tower 2 Singapore 238891	72,659,407 ⁽⁴⁾	7.0%
Southeastern Asset Management, Inc. 6410 Poplar Avenue, Suite 900 Memphis, TN 38119	65,689,808 ⁽⁵⁾	6.4%
State Street Corporation State Street Financial Center One Lincoln Street Boston, MA 02111	61,491,951 ⁽⁶⁾	6.0%

¹ The figures and percentages in the table above have been determined in accordance with Rule 13d-3 of the SEC based upon information furnished by the investors, except that we have calculated the percentages in the table based on the actual number of Common Shares outstanding as of the record date, as opposed to the estimated percentages set forth in the reports of such investors referred to below in such notes. In addition to Common Shares, we have outstanding Preferred Shares that vote together with the Common Shares as a single class on all matters. One or more persons beneficially own more than 5% of the Preferred Shares; however, the percentage of total voting power held by such persons is immaterial. For additional information regarding the Preferred Shares, see “Frequently Asked Questions — How many votes may I cast?”

² Based on information contained in a Schedule 13G/A Report dated as of February 9, 2022, that this investor filed with the SEC. In this report, the investor indicated that, as of December 31, 2021, it (i) held sole voting power with respect to none of these shares, (ii) shared voting power with respect to 1,550,639 of these shares, (iii) held sole dispositive power with respect to 109,468,125 of these shares and (iv) shared dispositive power with respect to 3,943,390 of these shares.

³ Based on information contained in a Schedule 13G Report dated as of February 1, 2022, that this investor filed with the SEC. In this report, the investor indicated that, as of December 31, 2021, it (i) shared voting power with respect to none of these shares, (ii) held sole voting power with respect to 86,842,330 of these shares and (iii) held sole dispositive power with respect to all of the above-listed shares.

⁴ Based on information contained in a Schedule 13D/A Report dated as of January 14, 2022, that this investor filed with the SEC. In this report, the investor indicated that, as of January 12, 2022, it shared with four of its subsidiaries or affiliates investment power and held sole voting power with respect to all of the above-listed shares.

⁵ Based on information contained in a Schedule 13D/A Report dated as of November 4, 2021, that this investor filed with the SEC. In this report, the investor indicated that, as of November 3, 2021, it (i) shared voting power with respect to 42,762,140 of these shares, (ii) held sole voting power with respect to 13,615,459 of these shares, (iii) had no voting power with respect to 9,312,209 of these shares, (iv) shared dispositive power with respect to 37,854,212 of these shares and (v) held sole dispositive power with respect to 27,835,596 of these shares.

⁶ Based on information contained in a Schedule 13G/A Report dated as of February 14, 2022, that this investor filed with the SEC. In this report, the investor indicated that, as of December 31, 2021, it (i) held sole voting power with respect to none of these shares, (ii) shared voting power with respect to 46,348,618 of these shares, (iii) held sole dispositive power with respect to none of these shares and (iv) shared dispositive power with respect to 61,417,370 of these shares.

OWNERSHIP OF EXECUTIVE OFFICERS & DIRECTORS

The following table sets forth information, as of the record date, regarding the beneficial ownership of our common stock by our executive officers and directors. It also includes any shares subject to restricted stock units that are scheduled to be issued within sixty days of our record date. Except as otherwise noted, all beneficially owned shares are held with sole voting and investment power and are not pledged to third parties.

OWNERSHIP OF EXECUTIVE OFFICERS & DIRECTORS

	Components of Total Shares Beneficially Owned		Total Shares Beneficially Owned ⁽³⁾⁽⁴⁾	Vested Deferred Stock Units ⁽⁵⁾
	Unrestricted Shares Beneficially Owned ⁽¹⁾	Unvested Restricted Stock ⁽²⁾		
Named Executive Officers				
Mr. Storey ⁽⁶⁾	3,809,100	0	3,809,100	0
Mr. Dev ⁽⁷⁾	487,201	916,964	1,404,165	0
Mr. Goff	347,344	461,123	808,467	0
Mr. Andrews	101,922	339,683	441,605	0
Mr. Trezise	172,278	280,316	452,594	0
Outside Directors				
Mr. Allen	0	0	0	14,536
Ms. Bejar	41,174	3,634	44,808	25,608
Mr. Brown ⁽⁸⁾	70,068	14,536	84,604	0
Mr. Chilton	70,799	14,536	85,335	13,152
Mr. Clontz	285,479	14,536	300,015	0
Mr. Glenn ⁽⁹⁾	129,362	0	129,362	45,681
Mr. Hanks	118,611	14,536	133,147	0
Mr. Jones	16,439	14,536	80,231	0
Mr. Roberts	65,695	14,536	80,231	14,706
Ms. Siegel	75,797	14,536	90,333	0
All executive officers and directors as a group (15 persons)⁽¹⁰⁾				
Overall Total	5,791,269	2,103,472	7,894,741	113,683

¹ This column includes the following number of shares allocated to the individual's account under one of our qualified 401(k) plans: Mr. Storey — 7,251; Mr. Dev — 5,414; Mr. Goff — 3,814; and Mr. Andrews — 2,799. Participants in these plans are entitled to direct the voting of their plan shares, as described in greater detail elsewhere herein.

² Reflects (i) for all shares listed, unvested shares of restricted stock over which the person holds sole voting power but no investment power and (ii) with respect to our performance-based restricted stock granted to our executive officers, the number of shares that will vest if we attain target levels of performance.

³ Excludes (i) restricted stock units that do not vest and settle in shares within 60 days and (ii) "phantom units" held by Mr. Roberts that are payable in cash upon the termination of his service as a director, as described further under "Item No. 1 – Election of Directors — Director Compensation — Other Benefits."

⁴ None of the persons named in the table beneficially owns more than 1% of the outstanding Common Shares. The shares beneficially owned by all directors and executive officers as a group constituted 0.76% of the outstanding Common Shares as of the record date.

⁵ This column reflects vested equity awards deferred by outside directors that will settle in shares at a future date according to the directors election, including the following number of deferred stock units scheduled to vest on May 20, 2022, but will not settle in shares until the director's elected deferral date: Mr. Allen – 14,536; Ms. Bejar – 10,902; Mr. Glenn – 14,536.

⁶ Excludes 2,997,712 unvested restricted stock units held by Mr. Storey.

⁷ As noted above, Mr. Dev's employment with Lumen ended effective April 1, 2022.

⁸ Includes 24,297 shares held by a tax-exempt charitable foundation, as to which Mr. Brown has voting and dispositive powers by virtue of his control of the foundation.

⁹ Includes 77,143 shares held indirectly by Mr. Glenn in a trust.

¹⁰ As described further in the notes above, includes (i) 24,297 shares held beneficially through a foundation and (ii) 77,143 shares held indirectly by trust.

TRANSACTIONS WITH RELATED PARTIES

Review Procedures. Early each year, our management distributes to the Audit and NCG Committees a written report listing payments that exceed a materiality threshold involving parties that have been identified as related parties by our officers and directors through their completion of an annual questionnaire. These transactions do not include regular compensation paid to the officers and directors but would include any payments to the officers and directors outside of regular compensation arrangements. This annual report permits the independent directors to evaluate our material related party transactions.

Recent Transactions. Lumen employs several personnel related by birth or marriage throughout our organization. During 2021, we paid William Adam Hanks, Manager Strategic Analytics, total gross compensation of approximately \$125,572 consisting of approximately \$106,726 in salary, \$15,918 in annual incentive bonuses and \$2,928 in matching contributions to his qualified 401(k) plan account. He was a Lumen employee from 2009 through March 2022 and is the son of Bruce Hanks, our Vice Chairman of the Board. He was the only related party whose 2021 compensation was in excess of the \$120,000 threshold that would require disclosures under the federal proxy rules.

DELINQUENT SECTION 16(A) REPORTS

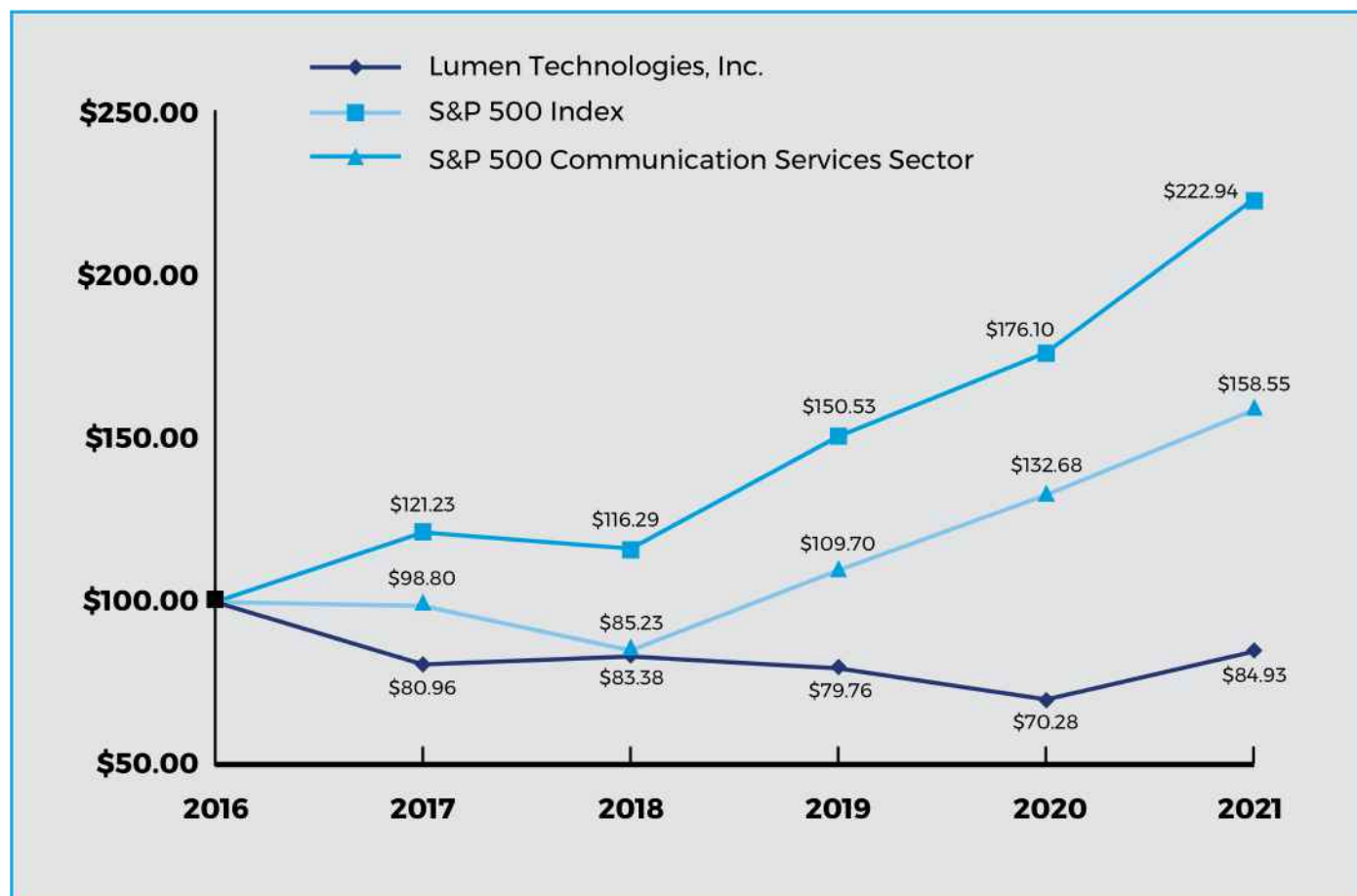
Section 16(a) of the Securities Exchange Act of 1934 requires Lumen's directors, certain officers and greater than 10% shareholders to file with the SEC certain reports regarding their beneficial ownership of our common stock. To our knowledge, based solely on a review of SEC filings and written representations from our officers and directors, we believe that, between January 1, 2021, through the date of this proxy statement, all such reports were filed timely, except for two gift transactions by Mr. Dev, which were reported late on an amendment to his Form 5 for fiscal 2021.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

During the last fiscal year, our HRCC included Laurie Siegel, Martha H. Bejar, Steven T. "Terry" Clontz, T. Michael Glenn, and Michael Roberts. No member of the HRCC served as an officer or employee of the Company or any of our subsidiaries prior to or while serving on the HRCC.

LUMEN PERFORMANCE HISTORY

The graph below compares the cumulative total shareholder return on our Common Shares with the cumulative total return of the S&P 500 Index and the S&P 500 Communication Services Sector Index for the period from December 31, 2016 to December 31, 2021, in each case assuming (i) the investment of \$100 on January 1, 2017, at closing prices on December 31, 2016 and (ii) reinvestment of dividends.



	December 31,					
	2016	2017	2018	2019	2020	2021
Lumen	\$ 100.00	\$ 80.96	\$ 83.38	\$ 79.76	\$ 70.28	\$ 84.93
S&P 500 Index	\$ 100.00	\$ 121.23	\$ 116.29	\$ 150.53	\$ 176.10	\$ 222.94
S&P 500 Communication Services Sector Index ¹	\$ 100.00	\$ 98.80	\$ 85.23	\$ 109.70	\$ 132.68	\$ 158.55

¹ As of December 31, 2021, the S&P 500 Communications Service Sector Index consisted of Omnicom Group, Inc., Twitter Inc., Verizon Communications, Inc., The Walt Disney Company, DISH Network Corp., Alphabet Inc., AT&T Inc., Charter Communications Inc., Match Group Inc., Netflix Inc., Lumen Technologies, Inc., Discovery Inc., Comcast Corp., Activision Blizzard Inc., ViacomCBS Inc., Electronic Arts Inc., Meta Platforms Inc., Take-Two Interactive Software Inc., News Corp., Interpublic Group, Live Nation Entertainment, Inc., T-Mobile US, Inc. and Fox Corp.

Frequently Asked Questions about Voting and the Annual Meeting

Q Why am I receiving these proxy materials?

A Our Board of Directors is soliciting your proxy to vote at our 2022 annual meeting of shareholders because you owned shares of our stock at the close of business on March 24, 2022, the record date for the meeting and are entitled to vote those shares at the annual meeting. This proxy statement was first made available to shareholders on or about April 7, 2022. It is furnished in connection with the solicitation of proxies by our Board to be voted during the annual meeting for the purposes set forth in the accompanying Notice of 2022 Annual Shareholders Meeting.

Q When and how will the meeting be held?

A Date: May 18, 2022

Time: 12:00 noon Central Time

Virtual Meeting Location: virtualshareholdermeeting.com/LUMN2022




Q How may I access these materials?

A We are furnishing proxy materials to our shareholders primarily via the Internet instead of mailing printed copies of those materials to each shareholder. By doing so, we save costs and reduce the environmental impact of our annual meeting. On or about April 7, 2022, we commenced mailing a Notice of Internet Availability of Proxy Materials to most of our shareholders. The Notice contains instructions about how to access our proxy materials and vote online or by telephone. If you previously chose to receive our proxy materials electronically, you will continue to receive access to these materials via email unless you elect otherwise. If you would like to receive a paper copy of our proxy materials, please follow the instructions included in the Notice of Internet Availability of Proxy Materials.

Q What matters will be considered at the meeting?

A The following table summarizes the votes required for passage of each proposal and the effect of abstentions and uninstructed shares held by brokers.

ITEMS FOR CONSIDERATION

Item		Board Voting Recommendation	Vote Required for Approval	Effect of Abstentions	Effect of Uninstructed Shares ¹	Page Reference
ITEM 1 Election of the 11 director nominees named herein		FOR	Affirmative vote of a majority of the votes cast	Not cast	Not cast	14
ITEM 2 Ratify KPMG LLP as our independent auditor for 2022		FOR	Affirmative vote of a majority of the votes cast	Not cast	Discretionary voting	27
ITEM 3 Non-binding advisory vote to approve our executive compensation		FOR	Affirmative vote of a majority of the votes cast	Not cast	Not cast	34

¹ "Uninstructed Shares" refers to shares as to which a broker or custodian receives no voting instructions from the shares' beneficial owner and which, other than as noted below for Item 2, cannot be voted under applicable NYSE standards. Because brokers will have discretionary authority to vote with respect to Item 2, there should be no uninstructed shares for this item.

Q What vote is required to approve these matters?

A For each proposal submitted to the shareholders for a vote, approval requires a vote of the majority of the votes cast. A majority of votes cast means the number of shares cast “for” a proposal exceeds the number of votes cast “against” that proposal. Abstentions will not be counted as votes cast. Uninstructed shares will not be counted as votes cast except with respect to Item #2, Ratifying KPMG as our Independent Auditor, for which brokers and custodians have discretion to vote.

Additionally, unless otherwise directed, all votes attributable to Voting Shares represented by each duly executed and delivered proxy will be cast for the election of each of the above-named nominees. If you wish to give specific instructions with respect to voting for directors, you may do so by indicating your instructions on your proxy or voting instruction card. Under our Bylaws nominating procedures, these nominees are the only individuals who may be elected at the meeting. If for any reason any such nominee should decline or become unable to stand for election as a director, which we do not anticipate, the persons named as proxies may vote instead for another candidate designated by the Board, without re-soliciting proxies.

Q How many votes may I cast?

A You may cast one vote for every share of our Common Stock or Series L Preferred Stock that you owned on the record date, which vote together as a single class on all matters. In this proxy statement, we refer to these shares as our “Common Shares” and “Preferred Shares,” respectively and as our “Voting Shares,” collectively. As of the Record Date, we had 1,032,760,034 Common Shares and 7,018 Preferred Shares issued and outstanding.

Q What is the difference between holding shares as a shareholder of record and as a beneficial owner?

A If shares are registered in your name with our transfer agent, Computershare Investor Services L.L.C., you are the “shareholder of record” of those shares and you may directly vote these shares, together with any shares credited to your account if you are a participant in our automatic dividend reinvestment and stock purchase service.

If your shares are held on your behalf in a stock brokerage account or by a bank or other nominee, you are the “beneficial owner” of shares held in “street name.” We have requested that our proxy materials be made available to you by your broker, bank or nominee, who is considered the shareholder of record of those shares.

Q If I am a shareholder of record, how do I vote?

A If you are a shareholder of record, you may vote yourself or by proxy in any of the following four ways:

- By Internet: visit proxyvote.com and follow the instructions at that site
- By phone: call 1-800-690-6903 and follow the instructions provided;
- By mail: request a paper copy of our proxy materials and, following receipt thereof, mark, sign and date your proxy or voting instructions card and return it to Broadridge Financial Solutions, Inc.
- By Live virtual meeting: vote electronically at the virtual annual meeting – virtualshareholdersmeeting.com/LUMN2022

Prior to the live meeting, if you need additional help with voting, please call proxy support at 866-232-3037 (Toll-free) or 720-358-3640 (International Toll). If you encounter any difficulties accessing the virtual Meeting webcast, please call the technical support number that will be posted on the annual meeting website log-in page.

Unless otherwise noted below, you may vote by telephone or the Internet up until 11:59 p.m. Eastern Time on May 17, 2022, but not thereafter.

Q If I am a beneficial owner of shares held in street name, how do I vote?

A As the beneficial owner, you have the right to instruct your broker, bank or nominee how to vote your shares by using any voting instruction card supplied by them or by following their instructions for voting by telephone, the Internet, or live during the virtual meeting.

Q If I am a benefit plan participant, how do I vote?

A If you beneficially own any of our Common Shares by virtue of participating in our retirement plan, then you will receive separate voting instructions that will enable you to direct the voting of these shares. You are entitled, on a confidential basis, to instruct the trustees how to vote the shares allocated to your plan account. The plans require you to act as a “named fiduciary,” which requires you to exercise your voting rights prudently and in the interests of all plan participants. Plan participants who wish to vote should instruct the trustees how to vote the shares allocated to their plan accounts in accordance with the voting instructions. If you elect not to vote the shares allocated to your accounts, your shares will be voted in the same proportion as voted shares regarding each of the items submitted to a vote at the meeting. Plan participants that wish to revoke their voting instructions must contact the trustee and follow its procedures.

To be counted, your voting instructions for shares held in our retirement plan must be received by 11:59 p.m. Eastern Time on May 15, 2022.

Q How do I participate in the annual meeting?

A This year's annual meeting will be held in a virtual format through a live webcast.

You are entitled to participate in the annual meeting if you were a record shareholder as of the close of business on March 24, 2022, the record date, or hold a valid proxy for the meeting. To be admitted to the annual meeting at proxyvote.com, you must enter the 16-digit control number found next to the label "Control Number" on your Notice of Internet Availability, proxy card, or voting instruction form, or in the email sending you the proxy statement. If you are a beneficial shareholder, you may contact the broker, bank or other institution with whom you hold your account if you have questions about obtaining your Control Number.

The question and answer session of the meeting will include questions submitted in advance of and questions submitted live during the annual meeting. You may submit a question in advance of the meeting at proxyvote.com after logging in with your Control Number. Questions may be submitted during the live virtual annual meeting by following the instructions on your log-in screen.

We encourage you to access the annual meeting before it begins. Online check-in will start approximately 15 minutes before the meeting on May 18, 2022.

Q What can I do if I need technical assistance during the annual meeting?

A The virtual meeting platform is fully supported across browsers (Internet Explorer, Firefox, Chrome and Safari) and devices (desktops, laptops, tablets and cell phones) running the most updated version of applicable software and plugins. If you encounter any difficulties accessing the virtual Meeting webcast, please call the technical support number that will be posted on the annual meeting website log-in page.

Q Who sets the rules regarding conduct at the meeting?

A The Chairman has broad responsibility and legal authority to conduct the meeting in an orderly and timely manner. This authority includes establishing rules for shareholders who wish to address the meeting. Copies of these rules will be available prior to the meeting in the "Events & Presentations" section of our website ir.lumen.com and during the meeting. The Chairman may also exercise broad discretion regarding (i) recognizing shareholders who wish to speak, (ii) determining the extent of discussion on each item of business and (iii) consolidating the Company's response to similar questions. In light of the need to conduct all necessary business and to conclude the meeting within a reasonable period of time, we cannot assure you that each question submitted will be addressed.

Q What is the quorum requirement for the meeting?

A Our Bylaws provide that the presence at the meeting, including by proxy, of a majority of the outstanding Voting Shares constitutes a quorum to organize the meeting. For these purposes, abstentions and uninstructed shares are counted as being present.

Q Can I revoke or change my voting instructions after I deliver them?

A Shareholders of record may revoke their proxy or change their votes at any time before their proxy is voted at the meeting by giving a written revocation notice to our secretary, by timely delivering a proxy bearing a later date or by voting during the virtual meeting. Beneficial shareholders may revoke or change their voting instructions by contacting the broker, bank or nominee that holds their shares.

Q Who pays the cost of soliciting proxies?

A The Board is soliciting the proxy accompanying this proxy statement. Proxies may be solicited by Lumen officers, directors and employees, none of whom will receive any additional compensation for their services. These solicitations may be made personally or by mail, telephone, messenger, email, or other electronic transmission. Lumen will pay persons holding shares of common stock in their names or in the names of nominees, but not owning such shares beneficially, such as brokerages, banks and other fiduciaries, for the expense of forwarding solicitation materials to their principals. Lumen will pay all proxy solicitation costs.

Q Could other matters be considered and voted upon at the meeting?

A Our Board does not expect to bring any matter before the meeting other than those listed in this proxy statement. Further, management has not timely received any notice that a shareholder desires to present any matter for action at the meeting in accordance with our Bylaws (which are described below under “Frequently Asked Questions — What is the deadline to propose actions for consideration at the 2023 annual meeting of shareholders or to nominate individuals to serve as directors?”) and is otherwise unaware of any matter to be considered by shareholders at the meeting other than those matters specified in the accompanying notice of the meeting. Our proxy and voting instruction cards, however, will confer discretionary voting authority with respect to any other matter that may properly come before the meeting. It is the intention of the persons named therein to vote in accordance with their best judgment on any such matter.

Q What happens if the meeting is postponed or adjourned?

A The Chairman may postpone or adjourn the meeting. Your proxy will still be valid and may be voted at the postponed or adjourned meeting. You will still be able to change or revoke your proxy until it is voted in the manner noted above.

Q What is the deadline to propose actions for consideration at the 2023 annual meeting of shareholders or to nominate individuals to serve as directors?

A You may submit proposals, including director nominations, for consideration at future annual meetings of shareholders.

Proxy Statement Proposals. To be eligible for inclusion in our 2023 proxy materials, any shareholder proposal to elect shareholder-nominated candidates as directors or to take any other action at such meeting must be received by December 8, 2022 and must comply with applicable federal proxy rules and our Bylaws. See “Frequently Asked Questions – What information needs to be included in a shareholder notice nominating a director or proposing other action?” These shareholder proposals must be in writing and received by the deadline described above at our principal executive offices at 100 CenturyLink Drive, Monroe, Louisiana 71203, Attention: Stacey W. Goff, Secretary. If we do not receive a shareholder proposal by the deadline described above, we may exclude the proposal from our proxy materials for our 2023 annual meeting.

Other Proposals and Nominations. In addition, our Bylaws require shareholders to furnish timely advance written notice of their intent to nominate a director or bring any other matter before a shareholders’ meeting, whether or not they wish to include their candidate or proposal in our proxy materials. In general, notice must be received in writing by our Secretary, addressed in the manner specified in the immediately-preceding paragraph, between November 19, 2022 and February 17, 2023 and must contain various information specified in our Bylaws. (If the date of the 2023 annual meeting is more than 30 days before or more than 60 days after May 18, 2023, please consult our Bylaws to determine the applicable deadline.) Notices that are not delivered in accordance with our Bylaws may be disregarded by us. For additional information on these procedures, see “Frequently Asked Questions – What information needs to be included in a shareholder notice nominating a director or proposing other action?”

In addition to satisfying the foregoing requirements under our bylaws, to comply with the SEC’s recently-enacted universal proxy rules, shareholders who intend to solicit proxies in support of director nominees other than our nominees must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act no later than March 19, 2023. However, if the date of the 2023 annual meeting is more than 30 days before or after the anniversary date of the 2022 annual meeting, the notice must be provided by the later of the 60th day prior to the 2023 annual meeting or the 10th day following the day on which public announcement of the date of the 2023 annual meeting is first made, as provided by Rule 14a-19. These deadlines assume that the shareholder has not previously filed a proxy statement with the required information.

The above-described advance notice provisions are in addition to and separate from the requirements that a shareholder must meet in order to have a candidate or proposal included in our proxy materials.

Proxies granted by a shareholder will give discretionary authority to the proxy holders to vote on any matters introduced pursuant to the above-described advance notice bylaw provisions, subject to applicable rules of the SEC.

General. The summaries above are qualified in their entirety by reference to the full text of our Bylaws and Rule 14a-19. You may obtain a full copy of our Bylaws by reviewing our reports filed with the SEC, by accessing our website at lumen.com or by contacting our Secretary in the manner specified below.

Q What information needs to be included in a shareholder notice nominating a director or proposing other action?

A If timely notice is provided, our Bylaws permit shareholders to nominate a director or bring other matters before a shareholders' meeting. The written notice required to be sent by any shareholder nominating a director must include various information, including, as to the shareholder giving the notice and the beneficial owner, if any, on whose behalf the nomination is being made: (i) the name and address of such shareholder, any such beneficial owner and any other parties affiliated, associated or acting in concert therewith, (ii) their beneficial ownership interests in our Voting Shares, including disclosure of arrangements that might cause such person's voting, investment or economic interests in our Voting Shares to differ from those of our other shareholders, (iii) certain additional information concerning such parties required under the federal proxy rules, (iv) a description of all agreements with respect to the nomination among the nominating shareholder, any beneficial owner, any person acting in concert with them, each proposed nominee and certain other persons and (v) a representation whether any such person intends to solicit proxies or votes in support of their proposed nominees. With respect to each proposed nominee, the written notice must also, among other things, (i) set forth biographical and other data required under the federal proxy rules and a description of various compensation or other arrangements or relationships between each proposed nominee and the nominating shareholder and its affiliated parties and (ii) furnish both a completed and duly executed questionnaire and a duly executed agreement designed to disclose various aspects of the proposed nominee's background, qualifications and certain specified arrangements with other persons, as well as to receive the proposed nominee's commitment to abide by certain specified agreements and undertakings. We may require a proposed nominee to furnish other reasonable information or certifications. Shareholders interested in bringing before a shareholders' meeting any matter other than a director nomination should consult our Bylaws for additional procedures governing such requests. We may disregard any nomination or submission of any other matter that fails to comply with these Bylaw procedures.

In addition, our Bylaws provide that under certain circumstances a shareholder or group of shareholders may include director candidates that they have nominated in our annual meeting proxy materials. These proxy access provisions of our Bylaws provide, among other things, that a shareholder or group of up to ten shareholders seeking to include director candidates in our annual meeting proxy materials must own 3% or more of our outstanding Common Shares continuously for at least the previous three years. The number of shareholder-nominated candidates appearing in any of our annual meeting proxy materials cannot exceed 20% of the number of directors then serving on the Board. If 20% is not a whole number, the maximum number of shareholder-nominated candidates would be the closest whole number below 20%. Based on the 11 directors constituting our Board immediately following the meeting, two is the maximum number of proxy access candidates that we would be required to include in our 2023 proxy materials for the 2023 annual meeting. The nominating shareholder or group of shareholders also must deliver the information required by our Bylaws and each nominee must meet the qualifications required by our Bylaws.

Shareholder requests to nominate directors or to bring any other matter before our 2023 annual shareholders' meeting, whether or not they wish to include their candidate or proposal in our proxy materials, must be received by our Secretary by the deadlines specified in the response to the preceding question.

The summaries above of the advance notification and proxy access provisions of our Bylaws are qualified in their entirety by reference to the full text of Section 5 of Article IV of our Bylaws. You may obtain a full copy of our Bylaws by reviewing our reports filed with the SEC, by accessing our website at lumen.com, or by contacting our Secretary in the manner specified below under "Other Information."

Other Information

PROXY MATERIALS

As described further above, shareholders will receive only a written notice of how to access our proxy materials and will not receive printed copies of the proxy materials unless requested. If you would like to receive a paper copy of our proxy materials, you should follow the instructions for requesting the materials in the notice.

The full set of our materials include:

- the notice and proxy statement for the meeting,
- a proxy or voting instruction card, and
- our 2021 annual report furnished in the following two parts: (1) our 2021 Annual Financial Report, which constitutes Appendix B to this proxy statement and (2) our CEO's letter appearing at the beginning of this document.

ANNUAL FINANCIAL REPORT

Appendix B includes our 2021 Annual Financial Report, which is excerpted from portions of our Annual Report on Form 10-K for the year ended December 31, 2021, that we filed with the SEC on February 24, 2022. In addition, we have provided you with a copy of or access to our CEO's letter, which precedes this proxy statement at the beginning of this document. Neither of these documents is a part of our proxy soliciting materials.

You may obtain a copy of our Form 10-K report without charge by writing to Stacey W. Goff, Secretary, Lumen Technologies, Inc., 100 CenturyLink Drive, Monroe, Louisiana 71203, or by visiting our website at lumen.com.

You may view online this proxy statement and related materials at proxyvote.com.

By Order of the Board of Directors



Stacey W. Goff Secretary

April 7, 2022

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Appendix A

Non-GAAP Reconciliations

DESCRIPTION OF NON-GAAP METRICS

Pursuant to Regulation G, the company is hereby providing (i) definitions of non-GAAP financial metrics that are used in the sections of the proxy statement under the headings “About Lumen,” “Compensation Discussion & Analysis — Section one — Executive Summary — Lumen Business Highlights” and “Compensation Discussion & Analysis — Section four — Compensation Design, Awards and Payouts for 2021” and (ii) reconciliations of these metrics to the most directly comparable GAAP measures.

The following describes and reconciles those financial measures as reported under accounting principles generally accepted in the United States (GAAP) with those financial measures as adjusted by the items detailed below. These calculations are not prepared in accordance with GAAP and should not be viewed as alternatives to GAAP.

We use the term *Special Items* as a non-GAAP measure to describe items that impacted a period's statement of operations for which investors may want to give special consideration due to their magnitude, nature or both. We do not call these items non-recurring because, while some are infrequent, others may recur in future periods.

In connection with setting performance targets for purposes of executive compensation, the company from time to time uses modified versions of the non-GAAP metrics referred to below. For further information of such modifications, see “Compensation Discussion & Analysis — Section three — Pay and Performance Alignment — Incentive program guidelines.”

Adjusted EBITDA (\$) is defined as net income (loss) from the Statements of Operations before income tax (expense) benefit, total other income (expense), depreciation and amortization, stock-based compensation expense and impairments.

Adjusted EBITDA Margin (%) is defined as Adjusted EBITDA divided by total revenue.

Management believes that Adjusted EBITDA and Adjusted EBITDA Margin are relevant and useful metrics to provide to investors, as they are an important part of our internal reporting and are key measures used by management to evaluate profitability and operating performance of Lumen and to make resource allocation decisions. Management believes such measures are especially important in a capital-intensive industry such as telecommunications. Management also uses Adjusted EBITDA and Adjusted EBITDA Margin (and similarly uses these terms excluding Special Items) to compare our performance to that of our competitors and to eliminate certain non-cash and non-operating items in order to consistently measure from period to period our ability to fund capital expenditures, fund growth, service debt and determine bonuses. Adjusted EBITDA excludes non-cash stock compensation expense and impairments because of the non-cash nature of these items. Adjusted EBITDA also excludes interest income, interest expense and income taxes, and in our view constitutes an accrual-based measure that has the effect of excluding period-to-period changes in working capital and shows profitability without regard to the effects of capital or tax structure. Adjusted EBITDA also excludes depreciation and amortization expense because these non-cash expenses primarily reflect the impact of historical capital investments, as opposed to the cash impacts of capital expenditures made in recent periods, which may be evaluated through cash flow measures. Adjusted EBITDA further excludes the gain (or loss) on extinguishment and modification of debt and net other, income (expense), because these items are not related to the primary business operations of Lumen.

There are material limitations to using Adjusted EBITDA as a financial measure, including the difficulty associated with comparing companies that use similar performance measures whose calculations may differ from our calculations. Additionally, by excluding the above-listed items, Adjusted EBITDA may exclude items that investors believe are important components of our performance. Adjusted EBITDA and Adjusted EBITDA Margin (either with or without Special Items) should not be considered a substitute for other measures of financial performance reported in accordance with GAAP.

Free Cash Flow is defined as net cash provided by (used in) operating activities less capital expenditures as disclosed in the Statements of Cash Flows. Management believes that Free Cash Flow is a relevant metric to provide to investors, as it is an indicator of our ability to generate cash to service our debt. Free Cash Flow excludes cash used for acquisitions, principal repayments and the impact of exchange rate changes on cash and cash equivalents balances.

There are material limitations to using Free Cash Flow to measure our performance as it excludes certain material items that investors may believe are important components of our cash flows. Comparisons of our Free Cash Flow to that of some of its competitors may be of limited usefulness since Lumen does not currently pay a significant amount of income taxes due to net operating loss carryforwards, and therefore, generates higher cash flow than a comparable business that does pay income taxes. Additionally, this financial measure is subject to variability quarter over quarter as a result of the timing of payments related to interest expense, accounts receivable, accounts payable, payroll and capital expenditures. Free Cash Flow (either with or without Special Items) should not be used as a substitute for net change in cash, cash equivalents and restricted cash on the Consolidated Statements of Cash Flows.

Net Debt is defined as total long-term debt, excluding unamortized discounts, premiums and other, net and unamortized debt issuance costs, **minus** cash and cash equivalents.

Net Debt-to-Adjusted EBITDA Ratio is defined as Net Debt, divided by Adjusted EBITDA.

NON-GAAP SPECIAL ITEMS⁽¹⁾

(Unaudited; \$ in millions)

Special Items Impacting Adjusted EBITDA	2021	2020
Consumer and other litigation	\$ 16	24
Severance	3	151
Transaction and separation costs ⁽²⁾	37	—
Real estate transactions ⁽³⁾	(40)	—
Total Special Items impacting Adjusted EBITDA	\$ 16	175

¹ Our 2020 results have been conformed to current period presentation.² Reflects transaction and separation costs associated with the pending sale of our Latin American business for \$2.7 billion announced July 26, 2021 and the pending sale of our ILEC (incumbent local exchange carrier) business in 20 states for \$7.5 billion announced August 3, 2021, and the evaluation of other potential transactions.³ Reflects the (gain) on sale of real estate, net of other impairment or acceleration of costs associated with our real estate rationalization program.**ADJUSTED EBITDA NON-GAAP RECONCILIATION⁽¹⁾**

(Unaudited; \$ in millions)

	2021	2020
Net income	\$ 2,033	(1,232)
Income tax expense	668	450
Total other expense, net	1,584	1,744
Depreciation and amortization expense	4,019	4,710
Stock-based compensation expense	120	175
Goodwill impairment	—	2,642
Adjusted EBITDA	\$ 8,424	8,489
Add back: Severance	\$ 3	151
Add back: Other Special Items ⁽²⁾	16	24
Add back: Transaction and separation costs ⁽²⁾	37	—
Add back: Real estate transactions ⁽²⁾	(40)	—
Adjusted EBITDA excluding Special Items	\$ 8,440	8,664
Total revenue	\$ 19,687	20,712
Adjusted EBITDA margin	42.8 %	41.0 %
Adjusted EBITDA margin excluding Special Items	42.9 %	41.8 %

¹ Our 2020 results have been conformed to current period presentation.² Refer to Non-GAAP Special Items table for details of the Special Items included above.

FREE CASH FLOW RECONCILIATION⁽¹⁾

(Unaudited; \$ in millions)

	2021	2020
Net cash provided by operating activities	\$ 6,501	6,524
Capital expenditures	(2,900)	(3,729)
Free Cash Flow	3,601	2,795
Add back: Severance	70	137
Add back: Consumer and other litigation ⁽²⁾	47	47
Add back: Transaction and separation costs ⁽²⁾	20	—
Add back: Real estate transactions ⁽²⁾	4	—
Free Cash Flow excluding cash Special Items	\$ 3,742	\$ 2,979

¹ Our 2020 results have been conformed to current period presentation.² Refer to Non-GAAP Special Items table for details of the Special Items impacting cash included above.**NET DEBT-TO-ADJUSTED EBITDA RATIO CALCULATION⁽¹⁾**

(Unaudited; \$ in millions)

	2021	2020
Total long-term debt	\$ 30,478	31,837
Exclude: unamortized discounts, premiums and other, net and unamortized debt issuance costs	199	315
Minus: cash and cash equivalents	(394)	(406)
Net debt	30,283	31,746
Adjusted EBITDA excluding Special Items	8,440	8,664
Net Debt-to-Adjusted EBITDA Ratio	3.6	3.7

¹ Our 2020 results have been conformed to current period presentation. As previously disclosed, 2020 results comprised Adjusted EBITDA excluding Integration and Transformation Costs and Special Items of \$8.888 billion and a Net Debt-to-Adjusted EBITDA ratio of 3.6.

Appendix B

Lumen Technologies, Inc. Annual Financial Report December 31, 2021

INDEX TO ANNUAL FINANCIAL REPORT DECEMBER 31, 2021

The materials included in this Appendix B are excerpted from Items 5, 7 and 8 of our Annual Report on Form 10-K for the year ended December 31, 2021. We filed the Form 10-K with the Securities and Exchange Commission on February 24, 2022, and have not updated any of the following excerpted materials for any changes or developments since such date. Please see the Form 10-K for additional information about our business and operations.

Information on Our Common Stock and Dividends	B-2
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Notes To Consolidated Financial Statements*	B-36

* All references to "Notes" in this Appendix B refer to these Notes.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is listed on the New York Stock Exchange ("NYSE") and the Berlin Stock Exchange and is traded under the symbol LUMN and CYTH, respectively.

At February 22, 2022, there were approximately 85,000 stockholders of record, although there were significantly more beneficial holders of our common stock.

As described in greater detail in "Risk Factors" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021, the declaration and payment of dividends is at the discretion of our Board of Directors, and will depend upon our financial results, cash requirements, future prospects and other factors deemed relevant by our Board of Directors.

Issuer Purchases of Equity Securities

Effective August 3, 2021, our Board of Directors authorized a 24-month program to repurchase up to an aggregate of \$1.0 billion of our outstanding common stock. During the three months ended December 31, 2021, we repurchased 7.1 million shares of our outstanding common stock in the open market. These shares were repurchased for an aggregate market price of \$91 million, or an average purchase price of \$12.76 per share. These repurchases exhausted our \$1.0 billion repurchase plan authorized on August 3, 2021. All repurchased common stock has been retired. For additional information, see Note 20—Repurchases of Lumen Common Stock to our consolidated financial statements included in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2021.

The following table contains information about shares of our previously-issued common stock that were repurchased under our above-described Stock Repurchase Program:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs
October 2021	7,108,845	\$ 12.76	7,108,845	\$ —

The following table contains information about shares of our previously-issued common stock that we withheld from employees upon vesting of their stock-based awards during the fourth quarter of 2021 to satisfy the related tax withholding obligations:

Period	Total Number of Shares Withheld for Taxes	Average Price Paid Per Share
October 2021	39,868	\$ 12.71
November 2021	25,586	13.02
December 2021	16,204	12.31
Total	81,658	

Equity Compensation Plan Information

See Item 12 of our Annual Report on Form 10-K for the year ended December 31, 2021.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

All references to "Notes" in this Item 7 of Part II refer to the Notes to Consolidated Financial Statements included in Item 8 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2021. Certain statements in our Annual Report on Form 10-K for the year ended December 31, 2021 constitute forward-looking statements. See "Special Note Regarding Forward-Looking Statements" immediately prior to Item 1 of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021 for factors relating to these statements and "Risk Factors" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021 for a discussion of certain risk factors applicable to our business, financial condition, results of operations, liquidity or prospects.

Overview

We are an international facilities-based technology and communications company focused on providing our business and mass markets customers with a broad array of integrated products and services necessary to fully participate in our rapidly evolving digital world. We operate one of the world's most interconnected networks. Our platform empowers our customers to rapidly adjust digital programs to meet immediate demands, create efficiencies, accelerate market access, and reduce costs – allowing customers to rapidly evolve their IT programs to address dynamic changes. With approximately 190,000 on-net buildings and 500,000 route miles of fiber optic cable globally, we are among the largest providers of communications services to domestic and global enterprise customers. Our terrestrial and subsea fiber optic long-haul network throughout North America, Europe, Latin America and Asia Pacific connects to metropolitan fiber networks that we operate. We provide services in over 60 countries, with most of our revenue being derived in the United States.

Planned Divestiture of the Latin American and ILEC Businesses

On July 25, 2021, affiliates of Level 3 Parent, LLC, an indirect wholly-owned subsidiary of Lumen, agreed to divest their Latin American business in exchange for \$2.7 billion cash, subject to certain working capital, other purchase price adjustments and related transaction expenses (estimated to be approximately \$50 million). On August 3, 2021, Lumen and certain of its subsidiaries agreed to divest a substantial portion of their incumbent local exchange business in exchange for \$7.5 billion, subject to offsets for (i) assumed indebtedness (expected to be approximately \$1.4 billion) and (ii) our transaction expenses, certain of purchaser's transaction expenses, income taxes and certain working capital and other customary purchase price adjustments (currently estimated to aggregate to approximately \$1.7 billion). The actual amount of our net after-tax proceeds from these divestitures could vary substantially from the amounts we currently estimate, particularly if we experience delays in completing the transactions or any of our other assumptions prove to be incorrect. For more information, see (i) Note 2—Planned Divestiture of the Latin American and ILEC Businesses and (ii) the risk factors included in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

Impact of COVID-19 Pandemic

In response to the safety and economic challenges arising out of the COVID-19 pandemic and in a continued attempt to mitigate the negative impact on our stakeholders, we have taken a variety of steps to ensure the availability of our network infrastructure, to promote the safety of our employees and customers, to enable us to continue to adapt and provide our products and services worldwide to our customers, and to strengthen our communities. As vaccination rates increase, we expect to continue revising our responses to the pandemic or take additional steps necessary to adjust to changed circumstances. To date, these steps have included:

- taking the Federal Communications Commission's ("FCC") "Keep Americans Connected Pledge," under which we waived certain late fees and suspended the application of data caps and service terminations for non-payment by certain mass markets customers through the end of the second quarter of 2020;
- establishing new protocols for the safety of our on-site technicians and customers, including our "Safe Connections" program;

- adopting a rigorous employee work-from-home policy and substantially restricting non-essential business travel, each of which remains in place;
- continuously monitoring our network to enhance its ability to respond to changes in usage patterns;
- donating products or services in several of our communities to enhance their abilities to provide necessary support services; and
- taking steps to maintain our internal controls and the security of our systems and data in a remote work environment.

Social distancing, business and school closures, travel restrictions, and other actions taken in response to the pandemic have impacted us, our customers and our business since March 2020. In particular, beginning in the second half of 2020 and continuing into early 2022, we have rationalized our leased footprint and ceased using 39 leased property locations that were underutilized due to the COVID-19 pandemic. The Company determined that we no longer needed the leased space and, due to the limited remaining term on the contracts, concluded that the Company had neither the intent nor ability to sublease the properties. As a result, we incurred accelerated lease costs of approximately \$35 million and \$41 million for the years ended December 31, 2021 and 2020, respectively. In conjunction with our plans to continue to reduce costs, we expect to continue our real estate rationalization efforts and incur additional costs during 2022. Additionally, as discussed further elsewhere herein, the pandemic resulted in (i) increases in certain revenue streams and decreases in others, (ii) increases in allowances for credit losses through the end of 2020, (iii) increases in overtime expenses, (iv) operational challenges resulting from shortages of semiconductors and certain other supplies that we use in our business, and (v) delays in our cost transformation initiatives. We have also experienced delayed decision-making by certain of our customers. Thus far, these changes have not materially impacted our financial performance or financial position. However, we continue to monitor global disruptions and work with our vendors to mitigate supply chain risks.

We intend to reopen our offices in 2022 under a "hybrid" working environment, which will permit some of our employees the flexibility to work remotely at least some of the time for the foreseeable future.

For additional information on the impacts of the pandemic, see (i) the remainder of this item, including "—Liquidity and Capital Resources—Overview of Sources and Uses of Cash" and (ii) Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2021.

Reporting Segments

As previously announced, we completed an internal reorganization of our reporting segments in January 2021. Our reporting segments are currently organized as follows, by customer focus:

- *Business Segment:* Under our Business segment, we provide our products and services under four sales channels:
 - International and Global Accounts ("*IGAM*"): Our IGAM sales channel includes multinational and enterprise customers. We provide our products and services to approximately 350 of our highest potential enterprise customers and to enterprise customers and carriers in three operating regions: Europe Middle East and Africa, Latin America and Asia Pacific.
 - Large Enterprise: Under our large enterprise sales channel, we provide our products and services to large enterprises and the public sector, including the U.S. Federal government, state and local governments and research and education institutions.
 - Mid-Market Enterprise: Under our mid-market enterprise sales channel, we provide our products and services to medium-sized enterprises directly and through our indirect channel partners.

- Wholesale: Under our wholesale sales channel, we provide our products and services to a wide range of other communication providers across the wireline, wireless, cable, voice and data center sectors.
- *Mass Markets Segment*. Under our Mass Markets segment, we provide products and services to consumer and small business customers. At December 31, 2021, we served 4.5 million broadband subscribers under our Mass Markets segment.

See Note 17—Segment Information for additional information.

We categorize our Business segment revenue among the following products and services categories:

- *Compute and Application Services*, which include our Edge Cloud services, IT solutions, Unified Communications and Collaboration ("UC&C"), data center, content delivery network ("CDN") and Managed Security services;
- *IP and Data Services*, which include Ethernet, IP, and VPN data networks, including software-defined wide area networks ("SD WAN") based services, Dynamic Connections and Hyper WAN;
- *Fiber Infrastructure Services*, which include dark fiber, optical services and equipment; and
- *Voice and Other*, which include Time Division Multiplexing ("TDM") voice, private line, and other legacy services.

Under our Mass Markets segment, we provide the following products and services:

- *Consumer Broadband*, which includes high speed fiber-based and lower speed DSL-based broadband services to residential customers;
- *SBC Broadband*, which includes high speed fiber-based and lower speed DSL-based broadband services to small businesses;
- *Voice and Other*, which includes local and long-distance services, state support and other ancillary services; and
- *CAF II*, which consists of Connect America Fund Phase II payments through the end of 2021 to support voice and broadband in FCC-designated high-cost areas.

Trends Impacting Our Operations

In addition to the above-described impact of the pandemic, our consolidated operations have been, and are expected to continue to be, impacted by the following company-wide trends:

- Customers' demand for automated products and services and competitive pressures will require that we continue to invest in new technologies and automated processes to improve the customer experience and reduce our operating expenses.
- The increasingly digital environment and the growth in online video and gaming require robust, scalable network services. We are continuing to enhance our product capabilities and simplify our product portfolio based on demand and profitability to enable customers to have access to greater bandwidth.
- Businesses continue to adopt distributed, global operating models. We are expanding and enhancing our fiber network, connecting more buildings to our network to generate revenue opportunities and reducing our reliance upon other carriers.

- Industry consolidation, coupled with changes in regulation, technology and customer preferences, are significantly reducing demand for our traditional voice services and are pressuring some other revenue streams through volume or rate reductions, while other advances, such as the need for lower latency provided by Edge computing or the implementation of 5G networks, are expected to create opportunities.
- The operating margins of several of our newer, more technologically advanced services, some of which may connect to customers through other carriers, are lower than the operating margins on our traditional, on-net wireline services.
- Declines in our traditional wireline services and other more mature offerings have necessitated right-sizing our cost structures to remain competitive.

The amount of support payments we receive from governmental agencies will decrease substantially after December 31, 2021. This and other developments and trends impacting our operations are discussed elsewhere in this Item 7.

Results of Operations

In this section, we discuss our overall results of operations and highlight special items that are not included in our segment results. In "Segment Results" we review the performance of our two reporting segments in more detail.

Revenue

The following table summarizes our consolidated operating revenue recorded under each of our two segments and in our four above-described revenue sales channels within the Business segment:

	Years Ended December 31,			Years Ended December 31,		
	2021	2020	% Change	2020	2019	% Change
	(Dollars in millions)			(Dollars in millions)		
Business Segment:						
International & Global Accounts	\$ 4,053	4,118	(2)%	4,118	4,172	(1)%
Large Enterprise	3,722	3,915	(5)%	3,915	3,836	2 %
Mid-Market Enterprise	2,729	2,969	(8)%	2,969	3,152	(6)%
Wholesale	3,615	3,815	(5)%	3,815	4,079	(6)%
Business Segment Revenue	14,119	14,817	(5)%	14,817	15,239	(3)%
Mass Markets Segment Revenue	5,568	5,895	(6)%	5,895	6,219	(5)%
Total operating revenue	\$ 19,687	20,712	(5)%	20,712	21,458	(3)%

Our consolidated revenue decreased by \$1.025 billion for the year ended December 31, 2021 as compared to the year ended December 31, 2020 due to revenue declines in all of our above-listed revenue categories. See our segment results below for additional information.

Our consolidated revenue decreased by \$746 million for the year ended December 31, 2020 compared to the year ended December 31, 2019 primarily due to revenue declines in most of our above-listed revenue categories. See our segment results below for additional information.

Operating Expenses

The following table summarizes our operating expenses for the year ended December 31, 2021 and 2020. For information regarding expenses for the year ended December 31, 2019, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 of Part II of our Annual Report Form 10-K for the year ended December 31, 2020:

	Years Ended December 31,		
	2021	2020	% Change
(Dollars in millions)			
Cost of services and products (exclusive of depreciation and amortization)	\$ 8,488	8,934	(5)%
Selling, general and administrative	2,895	3,464	(16)%
Depreciation and amortization	4,019	4,710	(15)%
Goodwill impairment	—	2,642	nm
Total operating expenses	\$ 15,402	19,750	(22)%

nm Percentages greater than 200% and comparisons between positive and negative values or to/from zero values are considered not meaningful.

Cost of Services and Products (exclusive of depreciation and amortization)

Cost of services and products (exclusive of depreciation and amortization) decreased by \$446 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020. This decrease was primarily due to reductions in salaries and wages and other employee-related expense from lower headcount and lower facility and real estate costs.

Selling, General and Administrative

Selling, general and administrative expenses decreased by \$569 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020. The decrease in selling, general and administrative expenses was primarily due to reductions in salaries and wages and other employee-related expense from lower headcount, lower bad debt expense, gain on sale of land and lower marketing and advertising costs.

Depreciation and Amortization

The following table provides detail of our depreciation and amortization expense:

	Years Ended December 31,		
	2021	2020	% Change
(Dollars in millions)			
Depreciation	\$ 2,671	2,963	(10)%
Amortization	1,348	1,747	(23)%
Total depreciation and amortization	\$ 4,019	4,710	(15)%

Depreciation expense decreased by \$292 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020 primarily due to discontinuing the depreciation of the tangible assets reclassified as held for sale of our Latin American and ILEC businesses upon entering into our divestiture agreements. We estimate we would have recorded an additional \$247 million of depreciation expense during the year ended December 31, 2021 if we had not agreed to sell these businesses. In addition, depreciation expense decreased due to the impact of annual rate depreciable life changes of \$151 million, which was partially offset by higher depreciation expense of \$93 million associated with net growth in depreciable assets.

Amortization expense decreased by \$399 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020. The decrease was primarily due to a decrease of \$394 million as a result of certain customer relationship intangible assets becoming fully amortized at the end of the first quarter 2021, decreases of \$29 million associated with net reductions in amortizable assets and a decrease of \$13 million due to discontinuing the amortization of the intangible assets reclassified as held for sale of our Latin American and ILEC businesses upon entering into our divestiture agreements. These decreases were partially offset by \$21 million of accelerated amortization for decommissioned applications and \$22 million of additional amortization expense recognized as a result of reclassification of certain right-of-way assets, as discussed in Note 3—Goodwill, Customer Relationships and Other Intangible Assets.

Further analysis of our segment operating expenses by segment is provided below in "Segment Results."

Goodwill Impairments

We are required to perform impairment tests related to our goodwill annually, which we perform as of October 31, or sooner if an indicator of impairment occurs.

In January 2021, we began reporting under two segments: Business and Mass Markets. See Note 17—Segment Information for more information on these segments and the underlying sales channels. Since effecting this reorganization, we have used five reporting units for goodwill impairment testing, which are (i) Mass Markets, (ii) North America ("NA") Business (iii) Europe, Middle East and Africa region ("EMEA"), (iv) Asia Pacific region ("APAC") and (v) Latin America region ("LATAM"). Our January 2021 reorganization was considered an event or change in circumstance which required an assessment of our goodwill for impairment. We performed a qualitative impairment assessment in the first quarter of 2021 and concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of our reporting units at January 31, 2021. Therefore, we did not have any impairment as of our assessment date.

The reclassification of held for sale assets, as described in Note 2—Planned Divestiture of the Latin American and ILEC Businesses, was considered an event or change in circumstance which required an assessment of our goodwill for impairment as of July 31, 2021. We performed a pre-reclassification goodwill impairment test using our estimated post-divestiture cash flows and carrying value of equity to determine whether there was an impairment prior to the reclassification of these assets to held for sale and to determine the July 31, 2021 fair values to be utilized for goodwill allocation regarding the Latin American and ILEC businesses to be reclassified as assets held for sale. We concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of our reporting units at July 31, 2021.

We also performed a post-reclassification goodwill impairment test using our estimated post-divestiture cash flows and carrying value of equity to determine whether the fair value of our reporting units that will remain following the divestitures exceeded the carrying value of the equity of such reporting units after reclassification of assets held for sale. At July 31, 2021, we estimated the fair value of our remaining reporting units by considering both a market approach and a discounted cash flow method. Based on our assessments performed, we concluded it was more likely than not that the fair value of each of our remaining reporting units exceeded the carrying value of equity of our remaining reporting units at July 31, 2021. Therefore, we concluded we did not have any impairment as of our assessment date.

When we performed our annual impairment test in the fourth quarter of 2021, we concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of our reporting units. Therefore, we concluded no impairment existed as of our annual assessment date in the fourth quarter of 2021. When we performed our impairment tests during the fourth quarter of 2020, we concluded that the estimated fair value of certain of our reporting units was less than our carrying value of equity as of the date of our impairment test during the fourth quarter of 2020. As a result, we recorded non-cash, non-tax-deductible goodwill impairment charges aggregating to \$2.6 billion in the fourth quarter of 2020. Additionally, when we performed impairment tests in January 2019 and March 31, 2019 due to our January 2019 internal reorganization and the decline in our stock price, we concluded that the estimated fair value of our reporting units was less than our carrying value of equity as of the date of each of our impairment tests during the first quarter of 2019. As a result, we recorded a non-cash, non-tax-deductible goodwill impairment charges aggregating to \$6.5 billion in the quarter ended March 31, 2019.

See Note 3—Goodwill, Customer Relationships and Other Intangible Assets for further details on these tests and impairment charges.

Other Consolidated Results

The following tables summarize our total other expense, net and income tax expense:

	Years Ended December 31,		% Change
	2021	2020	
	(Dollars in millions)		
Interest expense	\$ (1,522)	(1,668)	(9)%
Other expense, net	(62)	(76)	(18)%
Total other expense, net	\$ (1,584)	(1,744)	(9)%
Income tax expense	\$ 668	450	48 %

Interest Expense

Interest expense decreased by \$146 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020. The decrease was primarily due to the decrease in average long-term debt from \$33.3 billion to \$30.4 billion and the decrease in the average interest rate of 5.23% to 4.82%.

Other Expense, Net

Other expense, net reflects certain items not directly related to our core operations, including (i) gains and losses on extinguishments of debt, (ii) components of net periodic pension and post-retirement benefit costs, (iii) foreign currency gains and losses, (iv) our share of income from partnerships we do not control, (v) interest income, (vi) gains and losses from non-operating asset dispositions and (vii) other non-core items.

	Years Ended December 31,		% Change
	2021	2020	
	(Dollars in millions)		
Gain (loss) on extinguishment of debt	\$ 8	(105)	nm
Pension and post-retirement net periodic expense	(295)	(31)	nm
Foreign currency (loss) gain	(28)	30	nm
Gain on investment in limited partnership	138	—	nm
Other	115	30	nm
Total other expense, net	\$ (62)	(76)	(18)%

nm Percentages greater than 200% and comparisons between positive and negative values or to/from zero values are considered not meaningful.

The increase of \$264 million in pension and post-retirement net periodic expense for the year ended December 31, 2021 as compared to the year ended December 31, 2020 is primarily driven by settlement charges associated with the acceleration of the recognition of a portion of previously unrecognized actuarial losses in the qualified pension plan. Other expense, net for the year ended December 31, 2021 also included a gain on investment in a limited partnership as a result of the underlying investments held by the limited partnership which began trading in active markets, resulting in an increase to our net asset value of our investment. Other expense, net for the year ended December 31, 2021 also included a distribution from a previously dissolved captive insurance company and other non-core items. See Note 14—Fair Value of Financial Instruments for more information regarding the gain recognized on the investment in a limited partnership.

Income Tax Expense

For the years ended December 31, 2021 and 2020, our effective income tax rate was 24.7% and (57.5)%, respectively. The effective tax rate for the year ended December 31, 2020 includes the \$555 million unfavorable impact of a non-deductible goodwill impairment. See Note 16—Income Taxes and "Critical Accounting Policies and Estimates—Income Taxes" below for additional information.

SEGMENT RESULTS**General**

Reconciliation of segment revenue to total operating revenue is below:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Operating revenue			
Business	\$ 14,119	14,817	15,239
Mass Markets	5,568	5,895	6,219
Total operating revenue	\$ 19,687	20,712	21,458

Reconciliation of segment EBITDA to total adjusted EBITDA is below:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Adjusted EBITDA			
Business	\$ 9,446	9,899	10,277
Mass Markets	4,886	5,118	5,375
Total segment EBITDA	14,332	15,017	15,652
Operations and Other EBITDA	(5,908)	(6,528)	(6,881)
Total adjusted EBITDA	\$ 8,424	8,489	8,771

For additional information on our reportable segments and product and services categories, see Note 17—Segment Information.

BUSINESS SEGMENT

	Years Ended December 31,			Years Ended December 31,		
	2021	2020	% Change	2020	2019	% Change
	(Dollars in millions)			(Dollars in millions)		
Business Segment Product Categories:						
Compute and Application Services	\$ 1,741	1,755	(1)%	1,755	1,735	1%
IP and Data Services	6,212	6,413	(3)%	6,413	6,566	(2)%
Fiber Infrastructure Services	2,248	2,248	—%	2,248	2,157	4%
Voice and Other	3,918	4,401	(11)%	4,401	4,781	(8)%
Total Business Segment Revenue	14,119	14,817	(5)%	14,817	15,239	(3)%
Expenses:						
Total expense	4,673	4,918	(5)%	4,918	4,962	(1)%
Total adjusted EBITDA	\$ 9,446	9,899	(5)%	9,899	10,277	(4)%

Year ended December 31, 2021 compared to the same periods ended December 31, 2020 and December 31, 2019

Business segment revenue decreased \$698 million for the year ended December 31, 2021 compared to December 31, 2020 and decreased \$422 million for the year ended December 31, 2020 compared to December 31, 2019. These changes are primarily due to the following factors:

- Compute and Application Services decreased for the year ended December 31, 2021 compared to December 31, 2020 due to a large customer disconnect for IT Solutions and lower rates for content delivery network services within our IGAM sales channel. Additionally, for the year ended December 31, 2021 compared to December 31, 2020, decreases were driven by declines in Cloud Services within our Large Enterprise and IGAM sales channels. These decreases were partially offset by growth in Managed Security and IT Solutions services to Federal Public Sector customers and an increase in colocation and data center services in our IGAM sales channel.
- Compute and Application Services increased for the year ended December 31, 2020 compared to December 31, 2019 due to growth in Managed Security and IT Solutions services within our Large Enterprise sales channel and growth in UC&C in our IGAM sales channel. These increases were partially offset by declines in IT Solutions services within our IGAM sales channel and declines in Cloud Services within our Large Enterprise sales channel.
- IP and Data Services decreased during both periods due to declines in traditional VPN networks and continued declines in Ethernet sales across all our sales channels, partially offset by an increase in IP services across all our sales channels.
- Fiber Infrastructure Services remained flat for the year ended December 31, 2021 compared to December 31, 2020 and increased for the year ended December 31, 2020 compared to December 31, 2019. Both periods experienced growth in dark fiber and wavelengths sales driven by demand primarily from our IGAM sales channel, which was offset by lower equipment sales in our Large Enterprise sales channel.
- Voice and Other decreased during both periods due to continued decline of legacy voice, private line and other services to customers across all of our sales channels. Additionally, voice services revenue decreased for the year ended December 31, 2021 compared to December 31, 2020, which had benefited from higher COVID-related demand.

The decrease in Business segment revenue for the year ended December 31, 2021 was slightly offset by \$16 million of favorable foreign currency as compared to December 31, 2020. The decrease in Business segment revenue for the year ended December 31, 2020 was also driven by \$42 million of unfavorable foreign currency for the year ended December 31, 2020 as compared to December 31, 2019.

Business segment expense decreased by \$245 million for the year ended December 31, 2021 compared to December 31, 2020 primarily due to lower cost of sales and lower employee-related costs from lower headcount. Business segment expenses decreased by \$44 million for the year ended December 31, 2020 compared to December 31, 2019, primarily due to lower employee-related costs from lower headcount.

Business segment adjusted EBITDA as a percentage of revenue was 67% for the years ended December 31, 2021, 2020 and 2019.

MASS MARKETS SEGMENT

	Years Ended December 31,			Years Ended December 31,		
	2021	2020	% Change	2020	2019	% Change
	(Dollars in millions)			(Dollars in millions)		
Mass Markets Product Categories:						
Consumer Broadband	\$ 2,875	2,909	(1)%	2,909	2,876	1 %
SBG Broadband	156	153	2 %	153	163	(6)%
Voice and Other	2,047	2,341	(13)%	2,341	2,688	(13)%
CAF II	490	492	— %	492	492	— %
Total Mass Markets Segment Revenue	5,568	5,895	(6)%	5,895	6,219	(5)%
Expenses:						
Total expense	682	777	(12)%	777	844	(8)%
Total adjusted EBITDA	\$ 4,886	5,118	(5)%	5,118	5,375	(5)%

Year ended December 31, 2021 compared to the same periods ended December 31, 2020 and December 31, 2019

Mass Markets segment revenue decreased by \$327 million for the year ended December 31, 2021 compared to December 31, 2020 and decreased \$324 million for the year ended December 31, 2020 compared to December 31, 2019, due to the following factors:

- Consumer Broadband revenue decreased for the year ended December 31, 2021 compared to December 31, 2020 and increased for the year ended December 31, 2020 compared to year ended December 31, 2019 driven by continued pressure on legacy products, which was partially or wholly offset by gains in our fiber-based broadband business.
- Voice and Other declined during both periods primarily due to continued legacy voice customer losses and our exit of the Prism video product.

Mass Markets segment expenses decreased by \$95 million for the year ended December 31, 2021 compared to December 31, 2020 and decreased \$67 million for the year ended December 31, 2020 compared to December 31, 2019, primarily due to lower employee-related costs from lower headcount, lower costs of sales driven by the decrease in Prism content costs and higher bad debt expense for the year ended December 31, 2020 due to the COVID-19 induced economic slowdown. These decreases were partially offset by higher network expenses for the year ended December 31, 2021.

Mass Markets segment adjusted EBITDA as a percentage of revenue was 88%, 87% and 86% for the year ended December 31, 2021, 2020 and 2019, respectively.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with accounting principles that are generally accepted in the United States. The preparation of these consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of our assets, liabilities, revenue and expenses. We have identified certain policies and estimates as critical to our business operations and the understanding of our past or present results of operations related to (i) goodwill, customer relationships and other intangible assets; (ii) pension and post-retirement benefits; (iii) loss contingencies and litigation reserves and (iv) income taxes. These policies and estimates are considered critical because they had a material impact, or they have the potential to have a material impact, on our consolidated financial statements and because they require us to make significant judgments, assumptions or estimates. We believe that the estimates, judgments and assumptions made when accounting for the items described below were reasonable, based on information available at the time they were made. However, actual results may differ from those estimates, and these differences may be material.

GOODWILL, CUSTOMER RELATIONSHIPS AND OTHER INTANGIBLE ASSETS

We have a significant amount of goodwill and indefinite-lived intangible assets that are assessed at least annually for impairment. At December 31, 2021, goodwill and intangible assets totaled \$23.0 billion (excluding goodwill and other intangible assets reclassified as assets held for sale), or 40%, of our total assets. The impairment analyses of these assets are considered critical because of their significance to us and our segments.

We have assigned our goodwill balance to our segments at December 31, 2021 as follows:

	Business	Mass Markets	Total
	(Dollars in millions)		
As of December 31, 2021	\$ 11,235	4,751	15,986

Intangible assets arising from business combinations, such as goodwill, customer relationships, capitalized software, trademarks and tradenames, are initially recorded at estimated fair value. We amortize customer relationships primarily over an estimated life of 7 to 14 years, using the straight-line method, depending on the customer. Certain customer relationship intangible assets became fully amortized at the end of the first quarter 2021 using the sum-of-years-digits method, which is no longer used for any of our remaining intangible assets. We amortize capitalized software using the straight-line method primarily over estimated lives ranging up to 7 years. We amortize our other intangible assets using the sum-of-years-digits or straight-line method over an estimated life of 4 to 20 years. Other intangible assets not arising from business combinations are initially recorded at cost. Where there are no legal, regulatory, contractual or other factors that would reasonably limit the useful life of an intangible asset, we classify the intangible asset as indefinite-lived and such intangible assets are not amortized.

Our long-lived intangible assets, other than goodwill, with indefinite lives are assessed for impairment annually, or, under certain circumstances, more frequently, such as when events or changes in circumstances indicate there may be an impairment. These assets are carried at the estimated fair value at the time of acquisition and assets not acquired in acquisitions are recorded at historical cost. However, if their estimated fair value is less than the carrying amount, we recognize an impairment charge for the amount by which the carrying amount of these assets exceeds their estimated fair value.

Our goodwill was derived from numerous acquisitions where the purchase price exceeded the fair value of the net assets acquired.

We are required to reassign goodwill to reporting units whenever reorganizations of our internal reporting structure changes the composition of our reporting units. Goodwill is reassigned to the reporting units using a relative fair value approach. When the fair value of a reporting unit is available, we allocate goodwill based on the relative fair value of the reporting units. When fair value is not available, we utilize an alternative allocation methodology that represents a reasonable approximation of the fair value of the operations being reorganized. For additional information on our segments, see Note 17—Segment Information.

We are required to assess goodwill at least annually, or more frequently, if an event occurs or circumstances change that indicates it is more likely than not the fair values of any of our reporting units were less than their carrying values. In assessing goodwill for impairment, we may first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carry value.

Our annual impairment assessment date for goodwill is October 31, at which date we assess our reporting units. In January 2021, we began reporting under two segments: Business and Mass Markets. See Note 17—Segment Information for more information on these segments and the underlying sales channels. Since effecting this reorganization, we have used five reporting units for goodwill impairment testing, which are (i) Mass Markets (ii) North America ("NA") Business, (iii) Europe, Middle East and Africa region ("EMEA"), (iv) Asia Pacific region ("APAC") and (v) Latin America region ("LATAM"). Prior to this reorganization, we used the following eight reporting units for goodwill impairment testing: consumer, small and medium business, enterprise, wholesale, North America global accounts ("NA GAM"), EMEA, LATAM and APAC.

Our reporting units are not discrete legal entities with discrete full financial statements. Our assets and liabilities are employed in and relate to the operations of multiple reporting units and are allocated to individual reporting units based on their relative revenue or earnings before interest, taxes depreciation and amortization ("EBITDA"). For each reporting unit, we compare its estimated fair value of equity to its carrying value of equity that we assign to the reporting unit. If the estimated fair value of the reporting unit is equal or greater than the carrying value, we conclude that no impairment exists. If the estimated fair value of the reporting unit is less than the carrying value, we record a non-cash impairment equal to the difference. Depending on the facts and circumstances, we typically estimate the fair value of our reporting units by considering either or both of (i) a discounted cash flow method, which is based on the present value of projected cash flows over a discrete projection period and a terminal value, which is based on the expected normalized cash flows of the reporting units following the discrete projection period, and (ii) a market approach, which includes the use of multiples of publicly-traded companies whose services are comparable to ours. With respect to our analysis used in the discounted cash flow method, the timing and amount of projected cash flows under these forecasts require estimates developed from our long-range plan, which is informed by wireline industry trends, the competitive landscape, product lifecycles, operational initiatives, capital allocation plans and other company-specific and external factors that influence our business. These cash flows consider recent historical results and are consistent with the Company's short-term financial forecasts and long-term business strategies. The development of these cash flows, and the discount rate applied to the cash flows, is subject to inherent uncertainties, and actual results could vary significantly from such estimates. Our determination of the discount rate is based on a weighted average cost of capital approach, which uses a market participant's cost of equity and after-tax cost of debt and reflects certain risks inherent in the future cash flows. With respect to a market approach, the fair value of a reporting unit is estimated based upon a market multiple applied to the reporting unit's revenue and EBITDA, adjusted for an appropriate control premium based on recent market transactions. The fair value of reporting units estimated using revenue and EBITDA market multiples are equally weighted to determine the estimated fair value under the market approach. We also reconcile the estimated fair values of the reporting units to our market capitalization to conclude whether the indicated control premium is reasonable in comparison to recent transactions in the marketplace. A decline in our stock price could potentially cause an impairment of goodwill. Changes in the underlying assumptions that we use in allocating the assets and liabilities to reporting units under either the discounted cash flow or market approach method can result in materially different determinations of fair value. We believe the estimates, judgments, assumptions and allocation methods used by us are reasonable, but changes in any of them can significantly affect whether we must incur impairment charges, as well as the size of such charges.

At October 31, 2021, we estimated the fair value of our five above-mentioned reporting units by considering both a market approach and a discounted cash flow method. We reconciled the estimated fair values of the reporting units to our market capitalization as of October 31, 2021 and concluded that the indicated control premium of approximately 42% was reasonable based on recent market transactions. As of October 31, 2021, based on our assessment performed with respect to our five reporting units, the estimated fair value of our equity exceeded the carrying value of equity for our Mass Markets, NA Business, EMEA, LATAM and APAC reporting units by 277%, 8%, 57%, 100% and 125%, respectively. Based on our assessments performed, we concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of those reporting units at October 31, 2021. Therefore, we concluded no impairment existed as of our assessment date.

Our reclassification of held for sale assets, as described in Note 2—Planned Divestiture of the Latin American and ILEC Businesses, was considered an event or change in circumstance which required an assessment of our goodwill for impairment as of July 31, 2021. At July 31, 2021, we estimated the fair value of our five above-mentioned reporting units by considering both a market approach and a discounted cash flow method. We reconciled the estimated fair values of the reporting units to our market capitalization as of July 31, 2021 and concluded that the indicated control premium of approximately 32% was reasonable based on recent market transactions. As of July 31, 2021, based on our assessment performed with respect to our five reporting units, the estimated fair value of our equity exceeded the carrying value of equity for our Mass Markets, NA Business, EMEA, LATAM and APAC reporting units by 150%, 24%, 58%, 100% and 134%, respectively. Based on our assessments performed, we concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of those reporting units at July 31, 2021. Therefore, we concluded no impairment existed as of our assessment date.

At October 31, 2020, we estimated the fair value of our eight above-mentioned reporting units (prior to the January 2021 reorganization) by considering both a market approach and a discounted cash flow method. We reconciled the estimated fair values of the reporting units to our market capitalization as of October 31, 2020 and concluded that the indicated control premium of approximately 33% was reasonable based on recent market transactions. Due to the decline in our stock price at October 31, 2020 and our assessment performed with respect to the reporting units described above, we concluded that our consumer, wholesale, small and medium business and EMEA reporting units were impaired, resulting in a non-cash, non-tax-deductible goodwill impairment charge of \$2.6 billion. As of October 31, 2020, the estimated fair value of equity exceeded the carrying value of equity for our enterprise, NA GAM, LATAM, and APAC reporting units by 2%, 46%, 74% and 23%, respectively. Based on our assessments performed, we concluded it was more likely than not that the fair value of our enterprise, NA GAM, LATAM, and APAC reporting units exceeded the carrying value of equity of those reporting units at October 31, 2020. Therefore, we concluded no impairment existed with respect to those four reporting units as of our assessment date.

At October 31, 2019, we estimated the fair value of our eight above-mentioned reporting units by considering both a market approach and a discounted cash flow method. We reconciled the estimated fair values of the reporting units to our market capitalization as of October 31, 2019 and concluded that the indicated control premium of approximately 45% was reasonable based on recent market transactions. As of October 31, 2019, the estimated fair value of our equity exceeded the carrying value of equity for our consumer, small and medium business, enterprise, wholesale, NA GAM, EMEA, LATAM, and APAC reporting units by 44%, 41%, 53%, 46%, 55%, 5%, 63% and 38%, respectively. Based on our assessments performed, we concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of those reporting units at October 31, 2019. Therefore, we concluded no impairment existed as of our assessment date.

Both our January 2019 internal reorganization and the decline in our stock price indicated the carrying values of our reporting units were more likely than not in excess of their fair values, requiring an impairment test in the first quarter of 2019. Consequently, we evaluated our goodwill in January 2019 and again as of March 31, 2019. Because our low stock price was a key trigger for impairment testing in early 2019, we estimated the fair value of our operations using only the market approach. Applying this approach, we utilized company comparisons and analyst reports within the telecommunications industry which have historically supported a range of fair values derived from annualized revenue and EBITDA multiples between 2.1x and 4.9x and 4.9x and 9.8x, respectively. We selected a revenue and EBITDA multiple for each of our reporting units within this range. We reconciled the estimated fair values of the reporting units to our market capitalization as of the date of each of our impairment tests during the first quarter and concluded that the indicated control premiums of approximately 4.5% and 4.1% were reasonable based on recent market transactions. In the quarter ended March 31, 2019, based on our assessments performed with respect to the reporting units as described above, we concluded that the estimated fair value of certain of our reporting units was

less than our carrying value of equity as of the date of both of our impairment tests during the first quarter. As a result, we recorded non-cash, non-tax-deductible goodwill impairment charges aggregating to \$6.5 billion in the quarter ended March 31, 2019.

For additional information on our goodwill balances by segment, see Note 3—Goodwill, Customer Relationships and Other Intangible Assets.

PENSION AND POST-RETIREMENT BENEFITS

We sponsor a noncontributory qualified defined benefit pension plan (referred to as our qualified pension plan) for a substantial portion of our current and former employees in the United States. In addition to this tax-qualified pension plan, we also maintain several non-qualified pension plans for certain eligible highly compensated employees. We also maintain post-retirement benefit plans that provide health care and life insurance benefits for certain eligible retirees. Due to the insignificant impact of these non-qualified plans on our consolidated financial statements, we have excluded them from the following pension and post-retirement benefits disclosures for 2021, 2020 and 2019.

As of January 1, 2021, our qualified pension plan had a net actuarial loss balance of approximately \$3.0 billion. A portion of this balance was subject to amortization as a component of net periodic expense over the average remaining service period for participating employees expected to receive benefits under the plan. During 2021, our lump sum pension settlement payments exceeded the settlement threshold and as a result we recognized a non-cash settlement charge of \$383 million, accelerating previously unrecognized actuarial losses from our net actuarial loss balance. For our post-retirement benefit plans, the majority of the beginning net actuarial loss balance of \$346 million continued to be deferred during 2021.

In 2020, approximately 59% of the qualified pension plan's January 1, 2020 net actuarial loss balance of \$3.0 billion was subject to amortization as a component of net periodic expense over the average remaining service period of 9 years for participating employees expected to receive benefits under the plan. The other 41% of the qualified pension plan's beginning net actuarial loss balance was treated as indefinitely deferred during 2020. The entire beginning net actuarial loss of \$175 million for the post-retirement benefit plans was treated as indefinitely deferred during 2020.

In 2019, approximately 60% of the qualified pension plan's January 1, 2019 net actuarial loss balance of \$3.0 billion was subject to amortization as a component of net periodic expense over the average remaining service period of 9 years for participating employees expected to receive benefits under the plan. The other 40% of the qualified pension plan's beginning net actuarial loss balance was treated as indefinitely deferred during 2019. The entire beginning net actuarial gain of \$7 million for the post-retirement benefit plans was treated as indefinitely deferred during 2019.

In computing our pension and post-retirement health care and life insurance benefit obligations, our most significant assumptions are the discount rate and mortality rates. In computing our periodic pension expense, our most significant assumptions are the discount rate and the expected rate of return on plan assets. In computing our post-retirement benefit expense, our most significant assumption is the discount rate. Plan assets, and thus the expected rate of return on plan assets, for our post-retirement benefit plans are not significant.

The discount rate for each plan is the rate at which we believe we could effectively settle the plan's benefit obligations as of the end of the year. We selected each plan's discount rate based on a cash flow matching analysis using hypothetical yield curves from U.S. corporate bonds rated high quality and projections of the future benefit payments that constitute the projected benefit obligation for the plans. This process establishes the uniform discount rate that produces the same present value of the estimated future benefit payments as is generated by discounting each year's benefit payments by a spot rate applicable to that year. The spot rates used in this process are derived from a yield curve created from yields on the 60th to 90th percentile of U.S. high quality bonds.

Published mortality rates help predict the expected life of plan participants and are based on historical demographic studies by the Society of Actuaries ("SOA"). The SOA publishes new mortality rates (mortality tables and projection scales) on a regular basis which reflect updates to projected life expectancies in North America. Historically, we have adopted the new projection tables immediately after publication. In 2021, we adopted the revised mortality tables and projection scale released by the SOA, which increased the projected benefit obligation of our benefit plans by approximately \$37 million for the year ended December 31, 2021. The change in the projected benefit obligation of our benefit plans was recognized as part of the net actuarial loss and is included in accumulated other comprehensive loss, a portion of which is subject to amortization over the remaining average estimated life of plan participants, which was approximately 8 years as of December 31, 2021.

The expected rate of return on plan assets is the long-term rate of return we expect to earn on the plans' assets in the future, net of administrative expenses paid from plan assets. The rate of return is determined by the strategic allocation of plan assets and the long-term risk and return forecast for each asset class. The forecasts for each asset class are generated primarily from an analysis of the long-term expectations of various third-party investment management organizations, to which we then add a factor of 50 basis points to reflect the benefit we expect to result from our active management of the assets. The expected rate of return on plan assets is reviewed annually and revised, as necessary, to reflect changes in the financial markets and our investment strategy.

Changes in any of the above factors could significantly impact operating expenses in our consolidated statements of operations and other comprehensive loss in our consolidated statements of comprehensive income (loss) as well as the value of the liability and accumulated other comprehensive loss of stockholders' equity on our consolidated balance sheets.

LOSS CONTINGENCIES AND LITIGATION RESERVES

We are involved in several potentially material legal proceedings, as described in more detail in Note 18—Commitments, Contingencies and Other Items. On a quarterly basis, we assess potential losses in relation to these and other pending or threatened tax and legal matters. For matters not related to income taxes, if a loss is considered probable and the amount can be reasonably estimated, we recognize an expense for the estimated loss. To the extent these estimates are more or less than the actual liability resulting from the resolution of these matters, our earnings will be increased or decreased accordingly. If the differences are material, our consolidated financial statements could be materially impacted.

For matters related to income taxes, if we determine in our judgment that the impact of an uncertain tax position is more likely than not to be sustained upon audit by the relevant taxing authority, then we recognize in our financial statements a benefit for the largest amount that is more likely than not to be sustained. No portion of an uncertain tax position will be recognized if we determine in our judgment that the position has less than a 50% likelihood of being sustained. Though the validity of any tax position is a matter of tax law, the body of statutory, regulatory and interpretive guidance on the application of the law is complex and often ambiguous, particularly in certain of the non-U.S. jurisdictions in which we operate. Because of this, whether a tax position will ultimately be sustained may be uncertain.

INCOME TAXES

Our provision for income taxes includes amounts for tax consequences deferred to future periods. We record deferred income tax assets and liabilities reflecting future tax consequences attributable to (i) tax credit carryforwards, (ii) differences between the financial statement carrying value of assets and liabilities and the tax basis of those assets and liabilities and (iii) tax net operating loss carryforwards, or NOLs. Deferred taxes are computed using enacted tax rates expected to apply in the year in which the differences are expected to affect taxable income. The effect of a change in tax rate on deferred income tax assets and liabilities is recognized in earnings in the period that includes the enactment date.

The measurement of deferred taxes often involves the exercise of considerable judgment related to the realization of tax basis. Our deferred tax assets and liabilities reflect our assessment that tax positions taken in filed tax returns and the resulting tax basis are more likely than not to be sustained if they are audited by taxing authorities. Assessing tax rates that we expect to apply and determining the years when the temporary differences are expected to affect taxable income requires judgment about the future apportionment of our income among the states in which we operate. Any changes in our practices or judgments involved in the measurement of deferred tax assets and liabilities could materially impact our financial condition or results of operations.

In connection with recording deferred income tax assets and liabilities, we establish valuation allowances when necessary to reduce deferred income tax assets to amounts that we believe are more likely than not to be realized. We evaluate our deferred tax assets quarterly to determine whether adjustments to our valuation allowance are appropriate in light of changes in facts or circumstances, such as changes in tax law, interactions with taxing authorities and developments in case law. In making this evaluation, we rely on our recent history of pre-tax earnings. We also rely on our forecasts of future earnings and the nature and timing of future deductions and benefits represented by the deferred tax assets, all of which involve the exercise of significant judgment. At December 31, 2021, we established a valuation allowance of \$1.6 billion primarily related to foreign and state NOLs, based on our determination that it was more likely than not that this amount of these NOLs would expire unused. If forecasts of future earnings and the nature and estimated timing of future deductions and benefits change in the future, we may determine that existing valuation allowances must be revised or eliminated or new valuation allowances created, any of which could materially impact our financial condition or results of operations. See Note 16—Income Taxes.

Liquidity and Capital Resources

OVERVIEW OF SOURCES AND USES OF CASH

We are a holding company that is dependent on the capital resources of our subsidiaries to satisfy our parent company liquidity requirements. Several of our significant operating subsidiaries have borrowed funds either on a standalone basis or as part of a separate restricted group with certain of its subsidiaries or affiliates. The terms of the instruments governing the indebtedness of these borrowers or borrowing groups may restrict our ability to access their accumulated cash. In addition, our ability to access the liquidity of these and other subsidiaries may be limited by tax, legal and other considerations.

At December 31, 2021, we held cash and cash equivalents of \$394 million, which includes cash and cash equivalents classified as held for sale, and we also had \$2.0 billion of borrowing capacity available under our revolving credit facility. We typically use our revolving credit facility as a source of liquidity for operating activities and our other cash requirements. We had approximately \$89 million of cash and cash equivalents outside the United States at December 31, 2021. We currently believe that there are no material restrictions on our ability to repatriate cash and cash equivalents into the United States, and that we may do so without paying or accruing U.S. taxes. Other than transactions related to our Latin American divestiture, we do not currently intend to repatriate to the United States any of our foreign cash and cash equivalents from operating entities.

In response to COVID-19, the U.S. Congress passed the CARES Act on March 27, 2020. Under the CARES Act, we deferred \$134 million of our 2020 payroll taxes, \$67 million of which were repaid in 2021, with the remainder to be repaid in installments over 2022.

Our executive officers and our Board of Directors periodically review our sources and potential uses of cash in connection with our annual budgeting process. Generally speaking, our principal funding source is cash from operating activities, and our principal cash requirements include operating expenses, capital expenditures, income taxes, debt repayments, dividends, periodic securities repurchases, periodic pension contributions and other benefits payments. The impact of the pending sale of our Latin American and ILEC businesses is further described below.

Based on our current capital allocation objectives, during 2022 we project expending approximately \$3.2 billion to \$3.4 billion of capital expenditures and approximately \$1.00 per share for cash dividends on our common stock (based on the assumptions described below under "Dividends").

For the 12 month period ending December 31, 2022, we project that our fixed commitments will include (i) \$125 million of scheduled term loan amortization payments, (ii) \$31 million of finance lease and other fixed payments (which includes \$2 million of finance lease obligations that have been reclassified as held for sale) and (iii) \$1.4 billion of debt maturities.

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. We may also draw on our revolving credit facility as a source of liquidity for operating activities and to give us additional flexibility to finance our capital investments, repayments of debt, pension contributions and other cash requirements.

For additional information, see "Risk Factors—Financial Risks" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

IMPACT OF THE PLANNED DIVESTITURE OF THE LATIN AMERICAN AND ILEC BUSINESSES

As discussed in Note 2—Planned Divestiture of the Latin American and ILEC Businesses, we entered into definitive agreements to divest our Latin American and ILEC businesses on July 25, 2021 and August 3, 2021, respectively. As further described elsewhere herein, these transactions are expected to provide us with a substantial amount of cash proceeds upon closing, but ultimately will reduce our base of income-generating assets that generate our recurring cash from operating activities that we use to fund our cash requirements.

CAPITAL EXPENDITURES

We incur capital expenditures on an ongoing basis to expand and improve our service offerings, enhance and modernize our networks and compete effectively in our markets. We evaluate capital expenditure projects based on a variety of factors, including expected strategic impacts (such as forecasted impact on revenue growth, productivity, expenses, service levels and customer retention) and our expected return on investment. The amount of capital investment is influenced by, among other things, current and projected demand for our services and products, cash flow generated by operating activities, cash required for other purposes and regulatory considerations (such as governmentally-mandated infrastructure buildout requirements).

Our capital expenditures continue to be focused on enhancing network operating efficiencies and supporting new service developments. For more information on our capital spending, see (i) "—Overview of Sources and Uses of Cash" above, (ii) "Cash Flow Activities—Investing Activities" below and (iii) Item 1 of Part 1 of our Annual Report on Form 10-K for the year ended December 31, 2021.

DEBT AND OTHER FINANCING ARRANGEMENTS

Subject to market conditions, we expect to continue to issue debt securities from time to time in the future to refinance a substantial portion of our maturing debt, including issuing debt securities of certain of our subsidiaries to refinance their maturing debt to the extent feasible and consistent with our capital allocation strategies. The availability, interest rate and other terms of any new borrowings will depend on the ratings assigned by credit rating agencies, among other factors.

As of the date of our Annual Report on Form 10-K for the year ended December 31, 2021, the credit ratings for the senior secured and unsecured debt of Lumen Technologies, Inc., Level 3 Financing, Inc. and Qwest Corporation were as follows:

Borrower	Moody's Investors Service, Inc.	Standard & Poor's	Fitch Ratings
Lumen Technologies, Inc.:			
Unsecured	B2	BB-	BB
Secured	Ba3	BBB-	BB+
Level 3 Financing, Inc.:			
Unsecured	Ba3	BB	BB
Secured	Ba1	BBB-	BBB-
Qwest Corporation:			
Unsecured	Ba2	BBB-	BB

Our credit ratings are reviewed and adjusted from time to time by the rating agencies. Any future changes in the senior unsecured or secured debt ratings of us or our subsidiaries could impact our access to capital or borrowing costs. See "Risk Factors—Financial Risks" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

NET OPERATING LOSS CARRYFORWARDS

As of December 31, 2021, Lumen Technologies had approximately \$2.9 billion of federal net operating loss carryforwards ("NOLs"), which for U.S. federal income tax purposes can be used to offset future taxable income. These NOLs are primarily related to federal NOLs we acquired through the Level 3 acquisition on November 1, 2017 and are subject to limitations under Section 382 of the Internal Revenue Code and related U.S. Treasury Department regulations. We maintain a Section 382 rights agreement designed to safeguard through late 2023 our ability to use those NOLs. Assuming we can continue using these NOLs in the amounts projected, we expect to utilize a substantial portion of our NOLs to offset taxable gains generated by the completion of our pending divestitures. The amounts of our near-term future tax payments will depend upon many factors, including our future earnings and tax circumstances and the impact of any corporate tax reform or taxable transactions. Based on current laws and our current assumptions and projections, we estimate our cash income tax liability related to 2022 will be approximately \$100 million. If, as expected, we use a substantial portion of our NOLs in 2022 to offset divestiture-related gains, we anticipate that our cash income tax liabilities will increase substantially in future periods.

We cannot assure you we will be able to use our NOL carryforwards fully. See "Risk Factors—Financial Risks—We may not be able to fully utilize our NOLs" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

DIVIDENDS

We currently expect to continue our current practice of paying quarterly cash dividends in respect of our common stock subject to our Board of Directors' discretion to modify or terminate this practice at any time and for any reason without prior notice. Our current quarterly common stock dividend rate is \$0.25 per share, as approved by our Board of Directors, which we believe is a payout rate which enables us to balance our multiple objectives of managing and investing in our business deleveraging our balance sheet and returning a substantial portion of our cash to our shareholders. Assuming continued authorization by our Board during 2022 at this rate of \$0.25 per share, our average total dividend paid each quarter would be approximately \$257 million based on the number of our currently outstanding shares (which figure (i) assumes no increases or decreases in the number of shares and (ii) includes dividend payments in connection with the anticipated vesting of currently outstanding equity awards). Dividend payments upon the vesting of equity incentive awards was \$29 million during the year ended December 31, 2021. See "Risk Factors—Business Risks" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

STOCK REPURCHASES

Effective August 3, 2021, our Board of Directors authorized a 24-month program to repurchase up to an aggregate of \$1.0 billion of our outstanding common stock (the "August 2021 stock repurchase program"). During the year ended December 31, 2021, we repurchased 80.9 million shares of our outstanding common stock in the open market for an aggregate market price of \$1.0 billion, or an average purchase price of \$12.36 per share, thereby fully exhausting the program authorized on August 3, 2021. All repurchased common stock has been retired.

REVOLVING FACILITIES AND OTHER DEBT INSTRUMENTS

At December 31, 2021, we had \$12.4 billion of outstanding consolidated secured indebtedness, \$17.8 billion of outstanding consolidated unsecured indebtedness (including long-term debt reclassified as liabilities held for sale, but excluding finance lease obligations, unamortized premiums, net and unamortized debt issuance costs) and \$2.0 billion of unused borrowing capacity under our revolving credit facility, as discussed further below.

Under our amended and restated credit agreement dated as of January 31, 2020 (the "Amended Credit Agreement"), we maintained at December 31, 2021 (i) a \$2.2 billion senior secured revolving credit facility, under which we owed \$200 million as of such date, and (ii) \$6.3 billion of senior secured term loan facilities. For additional information, see (i) "—Overview of Sources and Uses of Cash," and (ii) Note 7—Long-Term Debt and Credit Facilities.

At December 31, 2021, we had \$21 million of letters of credit outstanding under our \$225 million uncommitted letter of credit facility. Additionally, under separate facilities maintained by one of our affiliates, we had outstanding letters of credit, or other similar obligations, of approximately \$67 million as of December 31, 2021, of which \$5 million was collateralized by cash that is reflected on our consolidated balance sheets as restricted cash.

In addition to its indebtedness under our Amended Credit Agreement, Lumen Technologies is indebted under its outstanding senior notes, and several of its subsidiaries are indebted under separate credit facilities or senior notes. For information on the terms and conditions of other debt instruments of ours and our subsidiaries, including financial and operating covenants, see (i) Note 7—Long-Term Debt and Credit Facilities and (ii) "—Other Matters" below.

PENSION AND POST-RETIREMENT BENEFIT OBLIGATIONS

We are subject to material obligations under our existing defined benefit pension plans and post-retirement benefit plans. At December 31, 2021, the accounting unfunded status of our qualified and non-qualified defined benefit pension plans and our qualified post-retirement benefit plans was \$1.2 billion and \$2.8 billion, respectively. For additional information about our pension and post-retirement benefit arrangements, see "Critical Accounting Policies and Estimates—Pension and Post-retirement Benefits" in Item 7 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2021 and Note 11—Employee Benefits.

Benefits paid by our qualified pension plan are paid through a trust that holds all of the plan's assets. Based on current laws and circumstances, we do not expect any contributions to be required for our qualified pension plan during 2022. The amount of required contributions to our qualified pension plan in 2023 and beyond will depend on a variety of factors, most of which are beyond our control, including earnings on plan investments, prevailing interest rates, demographic experience, changes in plan benefits and changes in funding laws and regulations. We occasionally make voluntary contributions to our plans in addition to required contributions and reserve the right to do so in the future. We last made a voluntary contribution to the trust for our qualified pension plan during 2018. We currently do not expect to make a voluntary contribution to the trust for our qualified pension plan in 2022.

Substantially all of our post-retirement health care and life insurance benefits plans are unfunded and are paid by us with available cash. As described further in Note 11—Employee Benefits, aggregate benefits paid by us under these plans (net of participant contributions and direct subsidy receipts) were \$203 million, \$211 million and \$241 million for the years ended December 31, 2021, 2020 and 2019, respectively. For additional information on our expected future benefits payments for our post-retirement benefit plans, see Note 11—Employee Benefits.

For 2021, our expected annual long-term rates of return on the pension plan assets and post-retirement health care and life insurance benefit plan assets, net of administrative expenses, were 5.5% and 4.0%, respectively. For 2022, our expected annual long-term rates of return on these assets are 5.5% and 4.0%, respectively. However, actual returns could be substantially different.

Our pension plan contains provisions that allow us, from time to time, to offer lump sum payment options to certain former employees in settlement of their future retirement benefits. We record an accounting settlement charge, consisting of the recognition of certain deferred costs of the pension plan, associated with these lump sum payments only if, in the aggregate, they exceed the sum of the annual service and interest costs for the plan's net periodic pension benefit cost, which represents the settlement accounting threshold. As of December 31, 2021, lump sum pension settlement payments exceeded the settlement threshold. As a result, for the year ended December 31, 2021 we recognized a non-cash settlement charge of \$383 million to accelerate the recognition of a portion of the previously unrecognized actuarial losses in the qualified pension plan, which has been allocated and reflected in other expense, net in our consolidated statement of operations for the year ended December 31, 2021. The amount of any future non-cash settlement charges after 2021 will be dependent on several factors, including the total amount of our future lump sum benefit payments.

On October 19, 2021, we, as sponsor of the Combined Pension Plan, along with the Plan's independent fiduciary, entered into an agreement committing the Plan to use a portion of its plan assets to purchase an annuity from an insurance company (the "Insurer") to transfer \$1.4 billion of the Plan's pension liabilities. This agreement irrevocably transferred to the Insurer future Plan benefit obligations for approximately 22,600 U.S. Lumen participants ("Transferred Participants") effective on December 31, 2021. This annuity transaction was funded entirely by existing Plan assets and is intended to provide equivalent benefits to the Transferred Participants. The Insurer is committed to assume responsibility for administrative and customer service support, including distribution of payments to the Transferred Participants.

As of January 1, 2022, a new pension plan (the "Lumen Pension Plan") was spun off from the Combined Pension Plan in anticipation of the pending sale of the ILEC business, as described further in Note 2—Planned Divestiture of the Latin American and ILEC Businesses. See additional information on this subsequent event in Note 11—Employee Benefits for more information.

FUTURE CONTRACTUAL OBLIGATIONS

Our estimated future obligations as of December 31, 2021 include both current and long term obligations. These amounts include liabilities that have been reclassified as liabilities held for sale on our consolidated balance sheet. We have a current obligation of \$1.6 billion and a long-term obligation of \$29.0 billion of long-term debt (excluding unamortized premiums, net and unamortized debt issuance costs). Under our operating leases, we have a current obligation of \$464 million and a long-term obligation of \$1.5 billion. We have current obligations related to right-of-way agreements and purchase commitments of \$660 million and a long-term obligation of \$2.0 billion. Additionally, we have a current obligation for asset retirement obligation of \$22 million and a long-term obligation of \$172 million. Finally, our pension and post-retirement benefit plans have an unfunded benefit obligation, of which \$216 million is classified as current and \$3.8 billion is classified as long-term.

FEDERAL BROADBAND SUPPORT PROGRAMS

Since 2015, we have been receiving approximately \$500 million annually through Phase II of the CAF, a program that ended on December 31, 2021. In connection with the CAF funding, we were required to meet certain specified infrastructure buildout requirements in 33 states by the end of 2021, which required substantial capital expenditures.

In early 2020, the FCC created the RDOF, which is a new federal support program designed to replace the CAF Phase II program. On December 7, 2020, the FCC allocated in its RDOF Phase I auction \$9.2 billion in support payments over 10 years to deploy high speed broadband to over 5.2 million unserved locations. We won bids for RDOF Phase I support payments of \$26 million, annually. We expect our support payments under the RDOF Phase I program will begin soon after our anticipated receipt of the FCC's approval of our pending application. Assuming we timely complete our pending divestiture of the ILEC business assets on the terms described herein, we expect a portion of these payments will accrue to the purchaser of that business. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses.

For additional information on these programs, see (i) "Business—Regulation of Our Business" in Item 1 of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021 and (ii) "Risk Factors—Financial Risks" in Item 1A of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

Federal officials have proposed changes to current programs and laws that could impact us, including proposals designed to increase broadband access, increase competition among broadband providers, lower broadband costs and re-adopt "net neutrality" rules similar to those adopted under the Obama Administration. In November 2021, the U.S. Congress enacted legislation that appropriated \$65 billion to improve broadband affordability and access, primarily through federally funded state grants. As of the date of our Annual Report on Form 10-K for the year ended December 31, 2021, the U.S. Department of Commerce is still developing guidance regarding these grants, so it is premature to speculate on the potential impact of this legislation on us.

CASH FLOW ACTIVITIES

The following tables summarize our consolidated cash flow activities for the year ended December 31, 2021 and 2020. For information regarding cash flow activities for the year ended December 31, 2019, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 of Part II of our Annual Report Form 10-K for the year ended December 31, 2020.

	Years Ended December 31,		Increase / (Decrease)
	2021	2020	
	(Dollars in millions)		
Net cash provided by operating activities	\$ 6,501	6,524	(23)
Net cash used in investing activities	(2,712)	(3,564)	(852)
Net cash used in financing activities	(3,807)	(4,250)	(443)

Operating Activities

Net cash provided by operating activities decreased by \$23 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020 primarily due to decreased collections on accounts receivable, partially offset by decreased payments on accounts payable. Cash provided by operating activities is subject to variability period over period as a result of timing differences, including with respect to the collection of receivables and payments of interest expense, accounts payable and bonuses.

For additional information about our operating results, see "Results of Operations" above.

Investing Activities

Net cash used in investing activities decreased by \$852 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020 primarily due to a decrease in capital expenditures.

Financing Activities

Net cash used in financing activities decreased by \$443 million for the year ended December 31, 2021 as compared to the year ended December 31, 2020 primarily due to lower payments of long-term debt and proceeds from our revolving line of credit, partially offset by lower net proceeds from issuance of long-term debt and repurchases of common stock.

See Note 7—Long-Term Debt and Credit Facilities for additional information on our outstanding debt securities.

OTHER MATTERS

We have cash management and loan arrangements with a majority of our income-generating subsidiaries, in which a substantial portion of the aggregate cash of those subsidiaries' is periodically advanced or loaned to us or our service company affiliate. Although we periodically repay these advances to fund the subsidiaries' cash requirements throughout the year, at any given point in time we may owe a substantial sum to our subsidiaries under these arrangements. In accordance with generally accepted accounting principles, these arrangements are reflected in the balance sheets of our subsidiaries, but are eliminated in consolidation and therefore not recognized on our consolidated balance sheets.

We also are involved in various legal proceedings that could substantially impact our financial position. See Note 18—Commitments, Contingencies and Other Items for additional information.

Market Risk

As of December 31, 2021, we are exposed to market risk from changes in interest rates on our variable rate long-term debt obligations and fluctuations in certain foreign currencies.

Management periodically reviews our exposure to interest rate fluctuations and periodically implements strategies to manage the exposure. From time to time, we have used derivative instruments to (i) swap our exposure to variable interest rates for fixed interest rates or (ii) to swap obligations to pay fixed interest rates for variable interest rates. We have established policies and procedures for risk assessment and the approval, reporting and monitoring of derivative instrument activities. As of December 31, 2021, we did not hold or issue derivative financial instruments for trading or speculative purposes.

In 2019, we executed swap transactions that reduced our exposure to floating rates with respect to \$4.0 billion principal amount of floating rate debt, maturing on March 31, 2022 and June 30, 2022. See Note 15—Derivative Financial Instruments to our consolidated financial statements in Item 1 of Part I of our Annual Report on Form 10-K for the year ended December 31, 2021 for additional disclosure regarding our hedging arrangements.

As of December 31, 2021, we had approximately \$9.8 billion floating rate debt potentially subject to LIBOR, \$4.0 billion of which was subject to the above-described hedging arrangements. A hypothetical increase of 100 basis points in LIBOR relating to our \$5.8 billion of unhedged floating rate debt would, among other things, decrease our annual pre-tax earnings by approximately \$58 million. Additionally, our credit agreements contain language about a possible change from LIBOR to an alternative index.

We conduct a portion of our business in currencies other than the U.S. dollar, the currency in which our consolidated financial statements are reported. Our European subsidiaries and certain Latin American subsidiaries use the local currency as their functional currency, as the majority of their revenue and purchases are transacted in their local currencies. Certain Latin American countries previously designated as highly inflationary economies use the U.S. dollar as their functional currency. Although we continue to evaluate strategies to mitigate risks related to the effect of fluctuations in currency exchange rates, we will likely recognize gains or losses from international transactions. Accordingly, changes in foreign currency rates relative to the U.S. dollar could adversely impact our operating results.

Certain shortcomings are inherent in the method of analysis presented in the computation of exposures to market risks. Actual values may differ materially from those disclosed by us from time to time if market conditions vary from the assumptions used in the analyses performed. These analyses only incorporate the risk exposures that existed at December 31, 2021.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The information in "Management's Discussion and Analysis of Financial Condition and Results of Operations—Market Risk" in Item 7 of Part II of our Annual Report on Form 10-K for the year ended December 31, 2021 is incorporated herein by reference.

Item 8. Consolidated Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors
Lumen Technologies, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Lumen Technologies, Inc. and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholders' equity for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, 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, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 24, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a 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.

Testing of revenue

As discussed in Note 4 to the consolidated financial statements, the Company recorded \$19.7 billion of operating revenues for the year ended December 31, 2021. The processing and recording of revenue are reliant upon multiple information technology (IT) systems.

We identified the evaluation of the sufficiency of audit evidence over revenue as a critical audit matter. Complex auditor judgment was required in evaluating the sufficiency of audit evidence over revenue due to the large volume of data and the number and complexity of the revenue accounting systems. Specialized skills and knowledge were needed to test the IT systems used for the processing and recording of revenue.

The following are the primary procedures we performed to address this critical audit matter. We applied auditor judgment to determine the nature and extent of procedures to be performed over the processing and recording of revenue, including the IT systems tested. We evaluated the design and tested the operating effectiveness of certain internal controls related to the processing and recording of revenue. This included manual and automated controls over the IT systems used for the processing and recording of revenue. For a selection of transactions, we compared the amount of revenue recorded to a combination of Company internal data, executed contracts, and other relevant third-party data. In addition, we involved IT professionals with specialized skills and knowledge who assisted in the design and performance of audit procedures related to certain IT systems used by the Company for the processing and recording of revenue. We evaluated the sufficiency of audit evidence obtained by assessing the results of procedures performed, including the relevance and reliability of evidence obtained.

/s/ KPMG LLP

We have served as the Company's auditor since 1977.

Denver, Colorado

February 24, 2022

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors Lumen Technologies, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Lumen Technologies, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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 Company as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), cash flows, and stockholders' equity for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements), and our report dated February 24, 2022 expressed an unqualified opinion on those consolidated financial statements.

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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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/ KPMG LLP

Denver, Colorado
February 24, 2022

Lumen Technologies, Inc.
Consolidated Statements of Operations

	Years Ended December 31,		
	2021	2020	2019
(Dollars in millions, except per share amounts, and shares in thousands)			
OPERATING REVENUE	\$ 19,687	20,712	21,458
OPERATING EXPENSES			
Cost of services and products (exclusive of depreciation and amortization)	8,488	8,934	9,134
Selling, general and administrative	2,895	3,464	3,715
Depreciation and amortization	4,019	4,710	4,829
Goodwill impairment	—	2,642	6,506
Total operating expenses	15,402	19,750	24,184
OPERATING INCOME (LOSS)	4,285	962	(2,726)
OTHER EXPENSE			
Interest expense	(1,522)	(1,668)	(2,021)
Other expense, net	(62)	(76)	(19)
Total other expense, net	(1,584)	(1,744)	(2,040)
INCOME (LOSS) BEFORE INCOME TAXES	2,701	(782)	(4,766)
Income tax expense	668	450	503
NET INCOME (LOSS)	\$ 2,033	(1,232)	(5,269)
BASIC AND DILUTED EARNINGS (LOSS) PER COMMON SHARE			
BASIC	\$ 1.92	(1.14)	(4.92)
DILUTED	\$ 1.91	(1.14)	(4.92)
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING			
BASIC	1,059,541	1,079,130	1,071,441
DILUTED	1,066,778	1,079,130	1,071,441

See accompanying notes to consolidated financial statements.

Lumen Technologies, Inc.
Consolidated Statements of Comprehensive Income (Loss)

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
NET INCOME (LOSS)	\$ 2,033	(1,232)	(5,269)
OTHER COMPREHENSIVE INCOME (LOSS):			
Items related to employee benefit plans:			
Change in net actuarial loss, net of \$(134), \$26, and \$60 tax	424	(92)	(195)
Settlement charges recognized in net income (loss), net of \$(93), \$— and \$— tax	290	—	—
Change in net prior service cost, net of \$(5), \$(12), and \$(4) tax	14	33	13
Curtailment loss, net of \$—, \$(1), and \$— tax	—	3	—
Reclassification of realized loss on interest rate swaps to net income (loss), net of \$(20), \$(16), and \$— tax	63	46	2
Unrealized holding loss on interest rate swaps, net of \$—, \$29, and \$12 tax	(1)	(86)	(41)
Foreign currency translation adjustment, net of \$30, \$(43), and \$(6) tax	(135)	(37)	2
Other comprehensive income (loss)	655	(133)	(219)
COMPREHENSIVE INCOME (LOSS)	\$ 2,688	(1,365)	(5,488)

See accompanying notes to consolidated financial statements.

Lumen Technologies, Inc.
Consolidated Balance Sheets

	As of December 31,	
	2021	2020
	(Dollars in millions and shares in thousands)	
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 354	406
Accounts receivable, less allowance of \$114 and \$191	1,544	1,962
Assets held for sale	8,809	—
Other	829	808
Total current assets	11,536	3,176
Property, plant and equipment, net of accumulated depreciation of \$19,271 and \$31,596	20,895	26,338
GOODWILL AND OTHER ASSETS		
Goodwill	15,986	18,870
Other intangible assets, net	6,970	8,219
Other, net	2,606	2,791
Total goodwill and other assets	25,562	29,880
TOTAL ASSETS	\$ 57,993	59,394
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Current maturities of long-term debt	\$ 1,554	2,427
Accounts payable	758	1,134
Accrued expenses and other liabilities		
Salaries and benefits	860	1,008
Income and other taxes	228	314
Current operating lease liabilities	385	379
Interest	278	291
Other	232	328
Liabilities held for sale	2,257	—
Current portion of deferred revenue	617	753
Total current liabilities	7,169	6,634
LONG-TERM DEBT	27,428	29,410
DEFERRED CREDITS AND OTHER LIABILITIES		
Deferred income taxes, net	4,049	3,342
Benefit plan obligations, net	3,710	4,556
Other	3,797	4,290
Total deferred credits and other liabilities	11,556	12,188
COMMITMENTS AND CONTINGENCIES (Note 18)		
STOCKHOLDERS' EQUITY		
Preferred stock — non-redeemable, \$25.00 par value, authorized 2,000 and 2,000 shares, issued and outstanding 7 and 7 shares	—	—
Common stock, \$1.00 par value, authorized 2,200,000 and 2,200,000 shares, issued and outstanding 1,023,512 and 1,096,921 shares	1,024	1,097
Additional paid-in capital	18,972	20,909
Accumulated other comprehensive loss	(2,158)	(2,813)
Accumulated deficit	(5,998)	(8,031)
Total stockholders' equity	11,840	11,162
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 57,993	59,394

See accompanying notes to consolidated financial statements.

Lumen Technologies, Inc.
Consolidated Statements of Cash Flows

	Years Ended December 31,		
	2021	2020	2019
(Dollars in millions)			
OPERATING ACTIVITIES			
Net income (loss)	\$ 2,033	(1,232)	(5,269)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	4,019	4,710	4,829
Goodwill impairment	—	2,642	6,506
Deferred income taxes	598	366	440
Provision for uncollectible accounts	105	189	145
Net (gain) loss on early retirement and modification of debt	(8)	105	(72)
Stock-based compensation	120	175	162
Changes in current assets and liabilities:			
Accounts receivable	(8)	115	(5)
Accounts payable	(261)	(543)	(261)
Accrued income and other taxes	(69)	27	20
Other current assets and liabilities, net	(353)	(262)	(32)
Retirement benefits	163	(111)	(12)
Changes in other noncurrent assets and liabilities, net	283	246	245
Other, net	(121)	97	(16)
Net cash provided by operating activities	6,501	6,524	6,680
INVESTING ACTIVITIES			
Capital expenditures	(2,900)	(3,729)	(3,628)
Proceeds from sale of property, plant and equipment and other assets	135	153	93
Other, net	53	12	(35)
Net cash used in investing activities	(2,712)	(3,564)	(3,570)
FINANCING ACTIVITIES			
Net proceeds from issuance of long-term debt	1,881	4,361	3,707
Payments of long-term debt	(3,598)	(7,315)	(4,157)
Net proceeds from (payments on) revolving line of credit	50	(100)	(300)
Dividends paid	(1,087)	(1,109)	(1,100)
Repurchases of common stock	(1,000)	—	—
Other, net	(53)	(87)	(61)
Net cash used in financing activities	(3,807)	(4,250)	(1,911)
Net (decrease) increase in cash, cash equivalents and restricted cash	(18)	(1,290)	1,199
Cash, cash equivalents and restricted cash at beginning of period	427	1,717	518
Cash, cash equivalents and restricted cash at end of period	\$ 409	427	1,717

Supplemental cash flow information:

Income taxes (paid) refunded, net	\$	(112)	28	34
Interest paid (net of capitalized interest of \$53, \$75 and \$72)	\$	(1,487)	(1,627)	(2,028)

Supplemental non-cash information regarding investing activities:

Sale of property, plant and equipment in exchange for note receivable		56	—	—
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Supplemental non-cash information regarding financing activities:

Purchase of software subscription in exchange for installment debt		77	—	—
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Cash, cash equivalents and restricted cash:

Cash and cash equivalents	\$	354	406	1,690
Cash and cash equivalents included in Assets held for sale		40	—	—
Restricted cash included in Other current assets		2	3	3
Restricted cash included in Other, net noncurrent assets		13	18	24
Total	\$	409	427	1,717

See accompanying notes to consolidated financial statements.

Lumen Technologies, Inc.
Consolidated Statements of Stockholders' Equity

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions except per share amounts)		
COMMON STOCK			
Balance at beginning of period	\$ 1,097	1,090	1,080
Issuance of common stock through dividend reinvestment, incentive and benefit plans	8	7	10
Repurchases of common stock	(81)	—	—
Balance at end of period	1,024	1,097	1,090
ADDITIONAL PAID-IN CAPITAL			
Balance at beginning of period	20,909	21,874	22,852
Repurchases of common stock	(919)	—	—
Shares withheld to satisfy tax withholdings	(45)	(40)	(37)
Stock-based compensation and other, net	122	187	163
Dividends declared	(1,095)	(1,112)	(1,104)
Balance at end of period	18,972	20,909	21,874
ACCUMULATED OTHER COMPREHENSIVE LOSS			
Balance at beginning of period	(2,813)	(2,680)	(2,461)
Other comprehensive income (loss)	655	(133)	(219)
Balance at end of period	(2,158)	(2,813)	(2,680)
ACCUMULATED DEFICIT			
Balance at beginning of period	(8,031)	(6,814)	(1,643)
Net income (loss)	2,033	(1,232)	(5,269)
Cumulative effect of adoption of ASU 2016-13, Measurement of Credit Losses, net of \$(2) tax	—	9	—
Cumulative effect of adoption of ASU 2016-02, Leases, net of \$(37) tax	—	—	96
Other	—	6	2
Balance at end of period	(5,998)	(8,031)	(6,814)
TOTAL STOCKHOLDERS' EQUITY	\$ 11,840	11,162	13,470
DIVIDENDS DECLARED PER COMMON SHARE	\$ 1.00	1.00	1.00

See accompanying notes to consolidated financial statements.

Lumen Technologies, Inc. Notes to Consolidated Financial Statements

References in the Notes to "Lumen Technologies" or "Lumen," "we," "us," the "Company," and "our" refer to Lumen Technologies, Inc. and its consolidated subsidiaries, unless the context otherwise requires. References in the Notes to "Level 3" refer to Level 3 Parent, LLC and its predecessor, Level 3 Communications, Inc., which we acquired on November 1, 2017.

(I) BACKGROUND AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

General

We are an international facilities-based technology and communications company engaged primarily in providing a broad array of integrated products and services to our business and mass markets customers. Our specific products and services are detailed in Note 4—Revenue Recognition.

Basis of Presentation

The accompanying consolidated financial statements include our accounts and the accounts of our subsidiaries in which we have a controlling interest. Intercompany amounts and transactions with our consolidated subsidiaries have been eliminated. In connection with our acquisition of Level 3 in 2017, we acquired its deconsolidated Venezuela subsidiary and due to exchange restrictions and other conditions have assigned no value to this subsidiary's assets. Additionally, we have excluded this subsidiary from our consolidated financial statements.

To simplify the overall presentation of our consolidated financial statements, we report immaterial amounts attributable to noncontrolling interests in certain of our subsidiaries as follows: (i) income attributable to noncontrolling interests in other expense, net, (ii) equity attributable to noncontrolling interests in additional paid-in capital and (iii) cash flows attributable to noncontrolling interests in other, net financing activities.

We reclassified certain prior period amounts to conform to the current period presentation, including the categorization of our revenue and expenses in our segment reporting for 2021, 2020 and 2019. See Note 17—Segment Information for additional information. These changes had no impact on total operating revenue, total operating expenses or net income (loss) for any period.

Operating Expenses

Our current definitions of operating expenses are as follows:

- *Cost of services and products (exclusive of depreciation and amortization)* are expenses incurred in providing products and services to our customers. These expenses include: employee-related expenses directly attributable to operating and maintaining our network (such as salaries, wages, benefits and professional fees); facilities expenses (which include third-party telecommunications expenses we incur for using other carriers' networks to provide services to our customers); rents and utilities expenses; equipment sales expenses (such as data integration and modem expenses); and other expenses directly related to our operations; and
- *Selling, general and administrative expenses* are corporate overhead and other operating expenses. These expenses include: employee-related expenses (such as salaries, wages, internal commissions, benefits and professional fees) directly attributable to selling products or services and employee-related expenses for administrative functions; marketing and advertising; property and other operating taxes and fees; external commissions; litigation expenses associated with general matters; bad debt expense; and other selling, general and administrative expenses.

These expense classifications may not be comparable to those of other companies.

Summary of Significant Accounting Policies

USE OF ESTIMATES

Our consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles. These accounting principles require us to make certain estimates, judgments and assumptions. We believe that the estimates, judgments and assumptions we make when accounting for specific items and matters are reasonable, based on information available at the time they are made. These estimates, judgments and assumptions can materially affect the reported amounts of assets, liabilities and components of stockholders' equity as of the dates of the consolidated balance sheets, as well as the reported amounts of revenue, expenses and components of cash flows during the periods presented in our other consolidated financial statements. We also make estimates in our assessments of potential losses in relation to threatened or pending tax and legal matters. See Note 16—Income Taxes and Note 18—Commitments, Contingencies and Other Items for additional information.

For matters not related to income taxes, if a loss contingency is considered probable and the amount can be reasonably estimated, we recognize an expense for the estimated loss. If we have the potential to recover a portion of the estimated loss from a third party, we make a separate assessment of recoverability and reduce the estimated loss if recovery is also deemed probable.

For matters related to income taxes, if we determine that the impact of an uncertain tax position is more likely than not to be sustained upon audit by the relevant taxing authority, then we recognize a benefit for the largest amount that is more likely than not to be sustained. No portion of an uncertain tax position will be recognized if the position has less than a 50% likelihood of being sustained. Interest is recognized on the amount of unrecognized benefit from uncertain tax positions.

For all of these and other matters, actual results could differ materially from our estimates.

ASSETS HELD FOR SALE

We classify assets and related liabilities as held for sale when: (i) management has committed to a plan to sell the assets, (ii) the net assets are available for immediate sale, (iii) there is an active program to locate a buyer and (iv) the sale and transfer of the net assets is probable within one year. Assets and liabilities held for sale are presented separately on our consolidated balance sheets with a valuation allowance, if necessary, to recognize the net carrying amount at the lower of cost or fair value, less costs to sell. Depreciation of property, plant and equipment and amortization of finite-lived intangible assets and right-of-use assets are not recorded while these assets are classified as held for sale. For each period that assets are classified as being held for sale, they are tested for recoverability. Unless otherwise specified, the amounts and information presented in the notes do not include assets and liabilities that have been reclassified as held for sale as of December 31, 2021. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for additional information.

REVENUE RECOGNITION

We earn most of our consolidated revenue from contracts with customers, primarily through the provision of communications and other services. Revenue from contracts with customers is accounted for under Accounting Standards Codification ("ASC") 606. We also earn revenue from leasing arrangements (primarily fiber capacity and colocation agreements) and governmental subsidy payments, which are not accounted for under ASC 606.

Revenue is recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to receive in exchange for those goods or services. Revenue is recognized based on the following five-step model:

- Identification of the contract with a customer;
- Identification of the performance obligations in the contract;

- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, we satisfy a performance obligation.

We provide an array of communications services to business and residential customers, including local voice, VPN, Ethernet, data, broadband, private line (including special access), network access, transport, voice, information technology, video and other ancillary services. We provide these services to a wide range of businesses, including global, enterprise, wholesale, government, and small and medium business customers. Certain contracts also include the sale of equipment, which is not significant to our business.

We recognize revenue for services when we provide the applicable service or when control of a product is transferred. Recognition of certain payments received in advance of services being provided is deferred. These advance payments may include certain activation and certain installation charges. If the activation and installation charges are not separate performance obligations, we recognize them as revenue over the actual or expected contract term using historical experience, which ranges from one to five years depending on the service. In most cases, termination fees or other fees on existing contracts that are negotiated in conjunction with new contracts are deferred and recognized over the new contract term.

For access services, we generally bill fixed monthly charges one month in advance to customers and recognize revenue as service is provided over the contract term in alignment with the customer's receipt of service. For usage and other ancillary services, we generally bill in arrears and recognize revenue as usage or delivery occurs. In most cases, the amount invoiced for our service offerings constitutes the price that would be billed on a standalone basis.

In certain cases, customers may be permitted to modify their contracts. We evaluate the change in scope or price to identify whether the modification should be treated as a separate contract, whether the modification is a termination of the existing contract and creation of a new contract, or if it is a change to the existing contract.

Customer contracts are evaluated to determine whether the performance obligations are separable. If the performance obligations are deemed separable and separate earnings processes exist, the total transaction price that we expect to receive with the customer is allocated to each performance obligation based on its relative standalone selling price. The revenue associated with each performance obligation is then recognized as earned.

We periodically sell optical capacity on our network. These transactions are generally structured as indefeasible rights of use, commonly referred to as IRUs, which are the exclusive right to use a specified amount of capacity or fiber for a specified term, typically 10 to 20 years. In most cases, we account for the cash consideration received on transfers of optical capacity as ASC 606 revenue which is adjusted for the time value of money and is recognized ratably over the term of the agreement. Cash consideration received on transfers of dark fiber is accounted for as non-ASC 606 lease revenue, which we also recognize ratably over the term of the agreement. We do not recognize revenue on any contemporaneous exchanges of our optical capacity assets for other non-owned optical capacity assets.

In connection with offering products and services provided to the end user by third-party vendors, we review the relationship between us, the vendor and the end user to assess whether revenue should be reported on a gross or net basis. In assessing whether revenue should be reported on a gross or net basis, we consider whether we act as a principal in the transaction and control the goods and services used to fulfill the performance obligations associated with the transaction.

We have service level commitments pursuant to contracts with certain of our customers. To the extent that we determine that such service levels were not achieved or may not have been achieved, we estimate the amount of credits to be issued and record a corresponding reduction to revenue in the period that the service level commitment was not met.

Customer payments are made based on billing schedules included in our customer contracts, which is typically on a monthly basis.

We defer (or capitalize) incremental contract acquisition and fulfillment costs and recognize (or amortize) such costs over the average contract life. Our deferred contract costs for our customers have average amortization periods of approximately 30 months for mass markets customers and 29 months for business customers. These deferred costs are periodically monitored to reflect any significant change in assumptions.

See Note 4—Revenue Recognition for additional information.

ADVERTISING COSTS

Costs related to advertising are expensed as incurred and included in selling, general and administrative expenses in our consolidated statements of operations. Our advertising expense was \$56 million, \$56 million and \$62 million for the years ended December 31, 2021, 2020 and 2019, respectively.

LEGAL COSTS

In the normal course of our business, we incur costs to hire and retain external legal counsel to advise us on regulatory, litigation and other matters. Subject to certain exceptions, we expense these costs as the related services are received.

INCOME TAXES

We file a consolidated federal income tax return with our eligible subsidiaries. The provision for income taxes reflects taxes currently payable, tax consequences deferred to future periods and adjustments to our liabilities for uncertain tax positions. We record deferred income tax assets and liabilities reflecting future tax consequences attributable to tax net operating loss carryforwards ("NOLs"), tax credit carryforwards and differences between the financial statement carrying value of assets and liabilities and the tax basis of those assets and liabilities. Deferred taxes are computed using enacted tax rates expected to apply in the year in which the differences are expected to affect taxable income. The effect on deferred income tax assets and liabilities of a change in tax rate is recognized in earnings in the period that includes the enactment date.

We establish valuation allowances when necessary to reduce deferred income tax assets to the amounts that we believe are more likely than not to be recovered. Each quarter we evaluate the need to retain or adjust each valuation allowance on our deferred tax assets. See Note 16—Income Taxes for additional information.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents include highly liquid investments that are readily convertible into cash and are not subject to significant risk from fluctuations in interest rates. As a result, the value at which cash and cash equivalents are reported in our consolidated financial statements approximates their fair value. In evaluating investments for classification as cash equivalents, we require that individual securities have original maturities of ninety days or less and that individual investment funds have dollar-weighted average maturities of ninety days or less. To preserve capital and maintain liquidity, we invest with financial institutions we deem to be of sound financial condition and in high quality and relatively risk-free investment products. Our cash investment policy limits the concentration of investments with specific financial institutions or among certain products and includes criteria related to credit worthiness of any particular financial institution.

Book overdrafts occur when we have issued checks but they have not yet been presented to our controlled disbursement bank accounts for payment. Disbursement bank accounts allow us to delay funding of issued checks until the checks are presented for payment. Until the issued checks are presented for payment, the book overdrafts are included in accounts payable on our consolidated balance sheets. This activity is included in the operating activities section in our consolidated statements of cash flows. There were no book overdrafts included in accounts payable at December 31, 2021 or 2020.

RESTRICTED CASH

Restricted cash consists primarily of cash and investments that collateralize our outstanding letters of credit and certain performance and operating obligations. Restricted cash and securities are recorded as current or non-current assets in the consolidated balance sheets depending on the duration of the restriction and the purpose for which the restriction exists. Restricted securities are stated at cost which approximated their fair value as of December 31, 2021 and 2020.

ACCOUNTS RECEIVABLE AND ALLOWANCE FOR CREDIT LOSSES

Accounts receivable are recognized based upon the amount due from customers for the services provided or at cost for purchased and other receivables, less an allowance for credit losses. We use a loss rate method to estimate our allowance for credit losses. For more information on our methodology for estimating our allowance for credit losses, see Note 6—Credit Losses on Financial Instruments.

We generally consider our accounts past due if they are outstanding over 30 days. Our past due accounts are written off against our allowance for credit losses when collection is considered to be not probable. Any recoveries of accounts previously written off are generally recognized as a reduction in bad debt expense in the period received. The carrying value of accounts receivable net of the allowance for credit losses approximates fair value. Accounts receivable balances acquired in a business combination are recorded at fair value for all balances receivable at the acquisition date and at the invoiced amount for those amounts invoiced after the acquisition date.

PROPERTY, PLANT AND EQUIPMENT

We record property, plant and equipment acquired in connection with our acquisitions based on its estimated fair value as of its acquisition date plus the estimated value of any associated legally or contractually required retirement obligations. We record purchased and constructed property, plant and equipment at cost, plus the estimated value of any associated legally or contractually required retirement obligations. We depreciate the majority of our property, plant and equipment using the straight-line group method over the estimated useful lives of groups of assets, but depreciate certain of our assets using the straight-line method over the estimated useful lives of the specific asset. Under the straight-line group method, assets dedicated to providing telecommunications services (which comprise the majority of our property, plant and equipment) that have similar physical characteristics, use and expected useful lives are pooled for purposes of depreciation and tracking. The equal life group procedure is used to establish each pool's average remaining useful life. Generally, under the straight-line group method, when an asset is sold or retired in the course of normal business activities, the cost is deducted from property, plant and equipment and charged to accumulated depreciation without recognition of a gain or loss. A gain or loss is recognized in our consolidated statements of operations only if a disposal is unusual. Leasehold improvements are amortized over the shorter of the useful lives of the assets or the expected lease term. Expenditures for maintenance and repairs are expensed as incurred. Interest is capitalized during the construction phase of network and other internal-use capital projects. Employee-related costs for construction of network and other internal use assets are also capitalized during the construction phase. Property, plant and equipment supplies used internally are carried at average cost, except for significant individual items which are carried at actual cost.

We perform annual internal reviews to evaluate the reasonableness of the depreciable lives for our property, plant and equipment. Our reviews utilize models that take into account actual usage, physical wear and tear, replacement history, assumptions about technology evolution and, in certain instances, actuarially determined probabilities to estimate the remaining useful life of our asset base. Our remaining useful life assessments evaluate the possible loss in service value of assets that may precede the physical retirement. Assets shared among many customers may lose service value as those customers reduce their use of the asset. However, the asset is not retired until all customers no longer utilize the asset and we determine there is no alternative use for the asset.

We have asset retirement obligations associated with the legally or contractually required removal of a limited group of property, plant and equipment assets from leased properties and the disposal of certain hazardous materials present in our owned properties. When an asset retirement obligation is identified, usually in association with the acquisition of the asset, we record the fair value of the obligation as a liability. The fair value of the obligation is also capitalized as property, plant and equipment and then amortized over the estimated remaining useful life of the associated asset. Where the removal obligation is not legally binding, the net cost to remove assets is expensed in the period in which the costs are actually incurred.

We review long-lived tangible assets for impairment whenever facts and circumstances indicate that the carrying amounts of the assets may not be recoverable. For assessment purposes, long-lived assets are grouped with other assets and liabilities at the lowest identifiable level for which we generate cash flows independently of other groups of assets and liabilities, absent a material change in operations. An impairment loss is recognized only if the carrying amount of the asset group is not recoverable and exceeds its estimated fair value. Recoverability of the asset group to be held and used is assessed by comparing the carrying amount of the asset group to the estimated undiscounted future net cash flows expected to be generated by the asset group. If the asset group's carrying value is not recoverable, we recognize an impairment charge for the amount by which the carrying amount of the asset group exceeds its estimated fair value.

GOODWILL, CUSTOMER RELATIONSHIPS AND OTHER INTANGIBLE ASSETS

Intangible assets arising from business combinations, such as goodwill, customer relationships, capitalized software, trademarks and trade names, are initially recorded at estimated fair value. We amortize customer relationships primarily over an estimated life of 7 to 14 years, using the straight-line method, depending on the type of customer. Certain customer relationship intangible assets became fully amortized at the end of the first quarter 2021 using the sum-of-years-digits method, which is no longer used. We amortize capitalized software using the straight-line method primarily over estimated lives ranging up to 7 years. We amortize our other intangible assets using the straight-line method over an estimated life of 4 to 20 years. Other intangible assets not arising from business combinations are initially recorded at cost. Where there are no legal, regulatory, contractual or other factors that would reasonably limit the useful life of an intangible asset, we classify the intangible asset as indefinite-lived and such intangible assets are not amortized.

Internally used software, whether purchased or developed by us, is capitalized and amortized using the straight-line method over its estimated useful life. We have capitalized certain costs associated with software such as costs of employees devoted to software development and external direct costs for materials and services. Costs associated with software to be used for internal purposes are expensed until the point at which the project has reached the development stage. Subsequent additions, modifications or upgrades to internal-use software are capitalized only to the extent that they allow the software to perform a task it previously did not perform. Software maintenance, data conversion and training costs are expensed in the period in which they are incurred. We review the remaining economic lives of our capitalized software annually. Capitalized software is included in other intangible assets, net, in our consolidated balance sheets.

Our long-lived intangible assets, other than goodwill, with indefinite lives are assessed for impairment annually, or, under certain circumstances, more frequently, such as when events or changes in circumstances indicate there may be an impairment. These assets are carried at the estimated fair value at the time of acquisition and assets not acquired in acquisitions are recorded at historical cost. However, if their estimated fair value is less than the carrying amount, we recognize an impairment charge for the amount by which the carrying amount of these assets exceeds their estimated fair value.

We are required to assess goodwill for impairment at least annually, or more frequently, if an event occurs or circumstances change that indicates it is more likely than not that the fair values of any of our reporting units were less than their carrying values. We are required to write-down the value of goodwill in periods in which the recorded carrying value of equity exceeds the fair value of equity. Our reporting units are not discrete legal entities with discrete full financial statements. Therefore, the equity carrying value and future cash flows are assessed each time a goodwill impairment assessment is performed on a reporting unit. To do so, we assign our assets, liabilities and cash flows to reporting units using reasonable and consistent allocation methodologies, which entail various estimates, judgments and assumptions.

We are required to reassign goodwill to reporting units whenever reorganizations of our internal reporting structure changes the composition of our reporting units. Goodwill is reassigned to the reporting units using a relative fair value approach. When the fair value of a reporting unit is available, we allocate goodwill based on the relative fair value of the reporting units. When fair value is not available, we utilize an alternative allocation methodology that represents a reasonable approximation of the fair value of the operations being reorganized.

For more information, see Note 3—Goodwill, Customer Relationships and Other Intangible Assets.

DERIVATIVES AND HEDGING

From time to time we have used derivative instruments to hedge exposure to interest rate risks arising from fluctuation in interest rates. We account for derivative instruments in accordance with ASC 815, *Derivatives and Hedging*, which establishes accounting and reporting standards for derivative instruments. We do not use derivative financial instruments for speculative purposes.

Derivatives are recognized in the consolidated balance sheets at their fair values. When we become a party to a derivative instrument and intend to apply hedge accounting, we formally document the hedge relationship and the risk management objective for undertaking the hedge which includes designating the instrument for financial reporting purposes as a fair value hedge, a cash flow hedge, or a net investment hedge.

We evaluate the effectiveness of our variable-to-fixed interest rate swap agreements described in Note 15—Derivative Financial Instruments (designated as cash-flow hedges) qualitatively on a quarterly basis. The change in the fair value of the interest rate swaps is reflected in Accumulated Other Comprehensive Loss (“AOCI”) and is subsequently reclassified into earnings in the period the hedged transaction affects earnings, by virtue of qualifying as effective cash flow hedges. For more information see Note 15—Derivative Financial Instruments.

PENSION AND POST-RETIREMENT BENEFITS

We recognize the funded status of our defined benefit and post-retirement plans as an asset or a liability on our consolidated balance sheets. Each year's actuarial gains or losses are a component of our other comprehensive loss, which is then included in our accumulated other comprehensive loss. Pension and post-retirement benefit expenses are recognized over the period in which the employee renders service and becomes eligible to receive benefits. We make significant assumptions (including the discount rate, expected rate of return on plan assets, mortality and health care trend rates) in computing the pension and post-retirement benefits expense and obligations. See Note 11—Employee Benefits for additional information.

FOREIGN CURRENCY

Local currencies of our foreign subsidiaries are the functional currencies for financial reporting purposes except for certain foreign subsidiaries, primarily in Latin America. For operations outside the United States that have functional currencies other than the U.S. dollar, assets and liabilities are translated to U.S. dollars at period-end exchange rates, and revenue, expenses and cash flows are translated using average monthly exchange rates. A significant portion of our non-United States subsidiaries use either the British pound, the Euro or the Brazilian Real as their functional currency, each of which experienced significant fluctuations against the U.S. dollar during the years ended December 31, 2021, 2020 and 2019. We recognize foreign currency translation gains and losses as a component of accumulated other comprehensive loss in stockholders' equity and in our consolidated statements of comprehensive income (loss) in accordance with accounting guidance for foreign currency translation. Prior to the announcement of our divestitures as discussed in Note 2—Planned Divestiture of the Latin American and ILEC Businesses, we considered the majority of our investments in our foreign subsidiaries to be long-term in nature. Our foreign currency transaction gains (losses), including where transactions with our non-United States subsidiaries are not considered to be long-term in nature, are included within other expense, net on our consolidated statements of operations. See the description of our Assets Held for Sale policy above for more information on assets in foreign subsidiaries to be divested.

COMMON STOCK

As of December 31, 2021, we had 36 million shares authorized for future issuance under our equity incentive plans.

PREFERRED STOCK

Holders of outstanding Lumen Technologies preferred stock are entitled to receive cumulative dividends, receive preferential distributions equal to \$25 per share plus unpaid dividends upon Lumen's liquidation and vote as a single class with the holders of common stock.

SECTION 382 RIGHTS PLAN

We maintain a Section 382 Rights Plan to protect our U.S. federal net operating loss carryforwards from certain Internal Revenue Code Section 382 limitations. Under the plan, one preferred stock purchase right was distributed for each share of our outstanding common stock as of the close of business on February 25, 2019, and those rights currently trade in tandem with the common stock until they expire or detach under the plan. This plan was designed to deter trading that would result in a change of control (as defined in Code Section 382), and therefore protect our ability to use our historical federal net operating losses in the future.

DIVIDENDS

The declaration and payment of dividends is at the discretion of our Board of Directors.

Recently Adopted Accounting Pronouncements

During 2021, we adopted Accounting Standards Update ("ASU") 2020-09, "*Debt (Topic 470) Amendments to SEC Paragraphs Pursuant to SEC Release No. 33-10762*" ("ASU 2020-09"), ASU 2020-01, "*Investments - Equity Securities (Topic 321), Investments - Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815) - Clarifying the Interactions between Topic 321, Topic 323, and Topic 815*" ("ASU 2020-01"), and ASU 2019-12, "*Simplifying the Accounting for Income Taxes (Topic 740)*" ("ASU 2019-12"). During 2020, we adopted ASU 2016-13, "*Measurement of Credit Losses on Financial Instruments*" ("ASU 2016-13"). During 2019, we adopted ASU 2016-02, "*Leases (ASC 842)*" ("ASU 2016-02").

Each of these is described further below.

DEBT

On January 1, 2021, we adopted ASU 2020-09. This ASU amends and supersedes various SEC guidance to reflect SEC Release No. 33-10762, which includes amendments to the financial disclosure requirements applicable to registered debt offerings that include credit enhancements, such as subsidiary guarantees. The adoption of ASU 2020-09 did not have a material impact to our consolidated financial statements.

INVESTMENTS

On January 1, 2021, we adopted ASU 2020-01. This ASU, among other things, clarifies that a company should consider observable transactions that require a company to either apply or discontinue the equity method of accounting under Topic 323, Investments - Equity Method and Joint Ventures, for the purposes of applying the measurement alternative in accordance with Topic 321 immediately before applying or upon discontinuing the equity method. As of December 31, 2021, we determined there was no application or discontinuation of the equity method during the reporting periods covered in our Annual Report on Form 10-K for the year ended December 31, 2021. The adoption of ASU 2020-01 did not have a material impact to our consolidated financial statements.

INCOME TAXES

On January 1, 2021, we adopted ASU 2019-12. This ASU removes certain exceptions for investments, intra-period allocations and interim calculations, and adds guidance to reduce complexity in accounting for income taxes. The adoption of ASU 2019-12 did not have a material impact to our consolidated financial statements.

MEASUREMENT OF CREDIT LOSSES ON FINANCIAL INSTRUMENTS

We adopted ASU 2016-13 on January 1, 2020, and recognized a cumulative adjustment to our accumulated deficit as of the date of adoption of \$9 million, net of tax effect of \$2 million. Please refer to Note 6—Credit Losses on Financial Instruments for more information.

LEASES

We adopted ASU 2016-02 on January 1, 2019, using the non-comparative transition option pursuant to ASU 2018-11 and recognized ASC 842's cumulative effect transition adjustment (discussed below) as of January 1, 2019. In addition, we elected to apply the practical expedients permitted under the transition guidance within the new standard, which among other things (i) allowed us to carry forward the historical lease classification; (ii) did not require us to reassess whether any expired or existing contracts are or contain leases under the new definition of a lease; and (iii) did not require us to reassess whether previously capitalized initial direct costs for any existing leases would qualify for capitalization under ASC 842. We also elected to apply the practical expedient related to land easements, allowing us to carry forward our accounting treatment for land easements on existing agreements. We did not elect to apply the hindsight practical expedient regarding the likelihood of exercising a lessee purchase option or assessing any impairment of right-of-use assets for existing leases.

On March 5, 2019, the Financial Accounting Standards Board ("FASB") issued ASU 2019-01, "*Leases (ASC 842): Codification Improvements*", ("ASU 2019-01") effective for public companies for fiscal years beginning after December 15, 2019. The new ASU aligns the guidance in ASC 842 for determining fair value of the underlying asset by lessors that are not manufacturers or dealers, with that of existing guidance. As a result, the fair value of the underlying asset at lease commencement is its cost, reflecting any volume or trade discounts that may apply. However, if there has been a significant lapse of time between when the underlying asset is acquired and when the lease commences, the definition of *fair value* (in ASC 820, "*Fair Value Measurement*") should be applied. We adopted ASU 2019-01 as of January 1, 2019.

We recorded a \$96 million cumulative adjustment (net of tax of \$37 million) to accumulated deficit as of January 1, 2019, for the impact of the new accounting standards.

Recently Issued Accounting Pronouncement

In November 2021, the FASB issued ASU 2021-10, "*Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance*" ("ASU 2021-10"). These amendments are expected to increase transparency in financial reporting by requiring business entities to disclose information about certain types of government assistance they receive. ASU 2021-10 will become effective for us in the first quarter of fiscal 2022 and early adoption is permitted. As of December 31, 2021, we do not expect the cumulative effect of initially applying ASU 2021-10 in the first quarter of fiscal 2022 will have a material impact to our consolidated financial statements.

In October 2021, the FASB issued ASU 2021-08, "*Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*" ("ASU 2021-08"), which requires entities to apply Topic 606 to recognize and measure contract assets and contract liabilities in a business combination. ASU 2021-08 will become effective for us in the first quarter of fiscal 2023 and early adoption is permitted. As of December 31, 2021, we do not expect the cumulative effect of initially applying ASU 2021-08 on January 1, 2023 will have a material impact to our consolidated financial statements.

In July 2021, the FASB issued ASU 2021-05, "*Leases (Topic 842): Lessors—Certain Leases with Variable Lease Payments*" ("ASU 2021-05"), which amends the lease classification requirements for lessors to align them with practice under ASC Topic 840. Under this ASU, lessors should classify and account for a lease with variable lease payments that do not depend on a reference index or a rate as an operating lease if certain criteria are met; and when a lease is classified as operating, the lessor does not recognize a net investment in the lease, does not derecognize the underlying asset, and, therefore, does not recognize a selling profit or loss. ASU 2021-05 will become effective for us in the first quarter of fiscal 2022 and early adoption is permitted. As of December 31, 2021, we do not expect the cumulative effect of initially applying ASU 2021-05 on January 1, 2022 will have a material impact to our consolidated financial statements.

In January 2021, the FASB issued ASU 2021-01, "*Reference Rate Reform (Topic 848): Scope*" ("ASU 2021-01"), which clarifies that certain optional expedients and exceptions in Topic 848 for contract modifications and hedge accounting apply to derivatives that are affected by the discounting transition. ASU 2021-01 also amends the expedients and exceptions in Topic 848 to capture the incremental consequences of the scope clarification and to tailor the existing guidance to derivative instruments affected by the discounting transition. These amendments are effective immediately and may be applied prospectively to contract modifications made and hedging relationships entered into or evaluated on or before December 31, 2022. ASU 2021-01 provides option guidance for a limited time to ease the potential burden in accounting for reference rate reform. Based on our review of our key material contracts through December 31, 2021, we do not expect ASU 2021-01 will have a material impact to our consolidated financial statements.

In August 2020, the FASB issued ASU 2020-06, "*Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging— Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*", which simplifies accounting for convertible instruments by removing major separation models required under the current ASC. Consequently, more convertible debt instruments will be reported as a single liability instrument and more convertible preferred stock as a single equity instrument with no separate accounting for embedded conversion features. ASU 2020-06 will become effective for us in the first quarter of fiscal 2022 and early adoption is permitted. As of December 31, 2021, we do not expect the cumulative effect of initially applying ASU 2020-06 on January 1, 2022 will have a material impact to our consolidated financial statements.

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting" ("ASU 2020-04" or "Reference Rate Reform"), designed to ease the burden of accounting for contract modifications related to the global market-wide reference rate transition period. Subject to certain criteria, ASU 2020-04 provides qualifying entities the option to apply expedients and exceptions to contract modifications and hedging accounting relationships made until December 31, 2022. These amendments are effective immediately and may be applied prospectively to contract modifications made and hedging relationships entered into or evaluated on or before December 31, 2022. ASU 2020-04 provides optional guidance for a limited time to ease the potential burden in accounting for reference rate reform. Based on our review of our key material contracts through December 31, 2021, we do not expect ASU 2020-04 will have a material impact to our consolidated financial statements.

(2) PLANNED DIVESTITURE OF THE LATIN AMERICAN AND ILEC BUSINESSES

On July 25, 2021, affiliates of Level 3 Parent, LLC, an indirect wholly-owned subsidiary of Lumen Technologies, Inc., entered into a definitive agreement to divest Lumen's Latin American business to an affiliate of a fund advised by Stonepeak Partners LP in exchange for \$2.7 billion cash, subject to certain working capital, other purchase price adjustments and related transaction expenses (estimated to be approximately \$50 million). Level 3 Parent, LLC anticipates closing the transaction mid-year 2022, upon receipt of all requisite regulatory approvals in the U.S. and certain countries where the Latin American business operates, as well as the satisfaction of other customary conditions.

On August 3, 2021, we and certain of our affiliates entered into a definitive agreement to divest our incumbent local exchange ("ILEC") business conducted within 20 Midwestern and Southern states to an affiliate of funds advised by Apollo Global Management, Inc. In exchange, we would receive \$7.5 billion, subject to offsets for (i) assumed indebtedness (expected to be approximately \$1.4 billion) and (ii) certain purchaser's transaction expenses along with working capital, tax, other customary purchase price adjustments and related transaction expenses (estimated to be approximately \$1.7 billion). We anticipate closing the transaction mid-year 2022 upon receipt of all regulatory approvals and the satisfaction of other customary closing conditions.

The actual amount of our net after-tax proceeds from these divestitures could vary substantially from the amounts we currently estimate, particularly if we experience delays in completing the transactions or if any of our other assumptions prove to be incorrect.

We do not believe these divestiture transactions represent a strategic shift for Lumen. Therefore, neither divested business meets the criteria to be classified as a discontinued operation. As a result, we will continue to report our operating results for the Latin American and ILEC businesses (the "disposal groups") in our consolidated operating results until the transactions are closed. The pre-tax net income of the disposal groups is estimated to be and reported as follows in the tables below:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Latin American business pre-tax net income	\$ 214	160	30
ILEC business pre-tax net income	851	649	655
Total disposal groups pre-tax net income	\$ 1,065	809	685

As of December 31, 2021 in the accompanying consolidated balance sheet, the assets and liabilities of our Latin American and ILEC businesses are classified as held for sale and are measured at the lower of (i) the carrying value when we classified the disposal groups as held for sale and (ii) the fair value of the disposal groups, less costs to sell. Effective with the designation of both disposal groups as held for sale on July 25, 2021 and August 3, 2021, respectively, we suspended recording depreciation of property, plant and equipment and amortization of finite-lived intangible assets and right-of-use assets while these assets are classified as held for sale. We estimate that we would have recorded an additional \$272 million of depreciation, intangible amortization, and amortization of right-of-use assets for the year ended December 31, 2021 if the Latin American and ILEC businesses did not meet the held for sale criteria.

As a result of our evaluation of the recoverability of the carrying value of the assets and liabilities held for sale relative to the agreed upon sales price, adjusted for costs to sell, we did not record any estimated loss on disposal during the year ended December 31, 2021. The recoverability of each disposal group will be re-evaluated each reporting period until the closing of each transaction.

The principal components of the held for sale assets and liabilities are as follows:

	December 31, 2021		
	Latin American Business	ILEC Business	Total
(Dollars in millions)			
Assets held for sale			
Cash and cash equivalents	\$ 39	1	40
Accounts receivable, less allowance of \$3, \$21 and \$24	83	227	310
Other current assets	81	45	126
Property, plant and equipment, net accumulated depreciation of \$434, \$8,303 and \$8,737	1,591	3,491	5,082
Goodwill ⁽¹⁾	239	2,615	2,854
Other intangible assets, net	126	158	284
Other non-current assets	75	38	113
Total assets held for sale	\$ 2,234	6,575	8,809
Liabilities held for sale			
Accounts payable	\$ 101	64	165
Salaries and benefits	23	25	48
Income and other taxes	27	24	51
Interest	—	10	10
Current portion of deferred revenue	26	90	116
Other current liabilities	7	35	42
Long-term debt, net of discounts ⁽²⁾	—	1,377	1,377
Deferred income taxes, net	129	—	129
Pension and other post-retirement benefits ⁽³⁾	2	56	58
Other non-current liabilities	120	141	261
Total liabilities held for sale	\$ 435	1,822	2,257

¹ The assignment of goodwill was based on the relative fair values of the applicable reporting units prior to being reclassified as held for sale.

² Long-term debt, net of discounts, includes \$1.4 billion of Embarq Senior notes, \$117 million of related unamortized discounts and \$57 million of long-term finance lease obligations.

³ Excludes pension obligation of approximately \$2.5 billion for the ILEC business as of December 31, 2021, which will be transferred to the purchaser of the ILEC business upon closing. As of December 31, 2021, approximately \$2.2 billion, or 88%, of this pension obligation is expected to be funded through the transfer of Lumen pension plan assets to the purchaser. The remaining portion of the obligation is expected to be separately funded with cash paid by Lumen at the time of closing. See Note 11—Employee Benefits for additional information.

(3) GOODWILL, CUSTOMER RELATIONSHIPS AND OTHER INTANGIBLE ASSETS

Goodwill, customer relationships and other intangible assets consisted of the following:

	As of December 31,	
	2021	2020
	(Dollars in millions)	
Goodwill	\$ 15,986	18,870
Indefinite-lived intangible assets	\$ 9	278
Other intangible assets subject to amortization:		
Customer relationships, less accumulated amortization of \$11,740 and \$11,060	5,365	6,344
Capitalized software, less accumulated amortization of \$3,624 and \$3,279	1,459	1,520
Trade names, patents and other, less accumulated amortization of \$160 and \$120	137	77
Total other intangible assets, net	\$ 6,970	8,219

As of December 31, 2021, the gross carrying amount of goodwill, customer relationships, indefinite-lived and other intangible assets was \$38.5 billion.

When we acquired Embarq Corporation ("Embarq") in 2009, we acquired certain right-of-way assets and, because there were no legal, regulatory, contractual or other factors that would reasonably limit the useful life of these assets, we classified them as indefinite-lived and, as such, initially did not amortize these assets. Our recent digital transformation efforts and continued focus on our fiber-based infrastructure assets have prompted management to reassess and ultimately change the accounting treatment of these indefinite-lived assets to align with our focus on growth products versus our declining copper-based products. As a result, during the first quarter of 2021, we reclassified an indefinite-lived intangible asset to finite-lived intangible asset. As of January 1, 2021 we began amortizing the \$268 million asset over its estimated nine-year remaining life. On August 3, 2021, upon entering into a definitive agreement to divest our ILEC business, we reclassified \$169 million of the \$268 million asset as held for sale. At this time, we discontinued recording amortization on the portion of the finite-lived intangible assets that had been reclassified as held for sale (see Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information). The above-described change in the estimated remaining economic life of these assets, as modified by the subsequent reclassification of a portion thereof, resulted in an increase in amortization expense of approximately \$22 million for the year ending December 31, 2021. The increase in amortization expense, net of tax, reduced consolidated net income (loss) by approximately \$17 million, or \$0.02 per basic and diluted common share, for the year ended December 31, 2021.

Our goodwill was derived from numerous acquisitions where the purchase price exceeded the fair value of the net assets acquired.

We assess our goodwill and other indefinite-lived intangible assets for impairment annually, or, under certain circumstances, more frequently, such as when events or changes in circumstances indicate there may be impairment. Our annual impairment assessment date for indefinite-lived intangible assets other than goodwill is December 31. We completed our qualitative assessment of our indefinite-lived intangible assets other than goodwill as of December 31, 2021 and 2020 and concluded it is more likely than not that our indefinite-lived intangible assets are not impaired; thus, no impairment charge for these assets was recorded in 2021 or 2020. We are required to write down the value of goodwill only when our assessment determines the carrying value of equity of any of our reporting units exceeds its fair value. Our annual impairment assessment date for goodwill is October 31, at which date we assess our reporting units.

Since our internal reorganization described in Note 17—Segment Information we have used five reporting units for goodwill impairment testing, which are (i) Mass Markets, (ii) North America ("NA") Business (iii) Europe, Middle East and Africa region ("EMEA"), (iv) Asia Pacific region ("APAC") and (v) Latin America region ("LATAM"). At October 31, 2020 and 2019, we used eight reporting units for goodwill impairment testing, which were consumer, small and medium business, enterprise, wholesale, North American global accounts ("NA GAM"), EMEA, LATAM and APAC.

Our reporting units are not discrete legal entities with discrete full financial statements. Our assets and liabilities are employed in and relate to the operations of multiple reporting units. For each reporting unit, we compare its estimated fair value of equity to its carrying value of equity that we assign to the reporting unit. If the estimated fair value of the reporting unit is greater than the carrying value, we conclude that no impairment exists. If the estimated fair value of the reporting unit is less than the carrying value, we record a non-cash impairment equal to the excess amount. Depending on the facts and circumstances, we typically estimate the fair value of our reporting units by considering either or both of (i) a discounted cash flow method, which is based on the present value of projected cash flows over a discrete projection period and a terminal value, which is based on the expected normalized cash flows of the reporting units following the discrete projection period, and (ii) a market approach, which includes the use of market multiples of publicly-traded companies whose services are comparable to ours.

At October 31, 2021, we estimated the fair value of our five above-mentioned reporting units by considering both a market approach and a discounted cash flow method. As of October 31, 2021, we determined that the estimated fair value of equity exceeded the carrying value of equity for our Mass Markets, NA Business, EMEA, LATAM and APAC reporting units by 277%, 8%, 57%, 100% and 125%, respectively. Based on our assessments performed, we concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of those reporting units at October 31, 2021. Therefore, we concluded no impairment existed as of our assessment date.

Our reclassification of held for sale assets, as described in Note 2—Planned Divestiture of the Latin American and ILEC Businesses, was considered an event or change in circumstance which required an assessment of our goodwill for impairment as of July 31, 2021. We performed a pre-reclassification goodwill impairment test to determine whether there was an impairment prior to the reclassification of these assets and to determine the July 31, 2021 fair values to be utilized for goodwill allocation regarding the Latin American and ILEC businesses to be reclassified as assets held for sale. We concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of those reporting units at July 31, 2021. We also performed a post-reclassification goodwill impairment test using our estimated post-divestiture cash flows and carrying value of equity to evaluate whether the fair value of our reporting units that will remain following the divestitures exceeds the carrying value of the equity of such reporting units after reclassification of assets held for sale. At July 31, 2021, we estimated the fair value of our five above-mentioned reporting units by considering both a market approach and a discounted cash flow method. As of July 31, 2021, we determined that the estimated fair value of equity exceeded the carrying value of equity for our Mass Markets, NA Business, EMEA, LATAM and APAC reporting units by 150%, 24%, 58%, 100% and 134%, respectively. Based on our assessments performed, we concluded it was more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of our reporting units at July 31, 2021. Therefore, we concluded no impairment existed as of our assessment date.

Our January 2021 reorganization was considered an event or change in circumstance which required an assessment of our goodwill for impairment. We performed a qualitative impairment assessment in the first quarter of 2021 and concluded it is more likely than not that the fair value of each of our reporting units exceeded the carrying value of equity of those reporting units at January 31, 2021. Therefore, we concluded no impairment existed as of our assessment date.

At October 31, 2020, we estimated the fair value of our eight above-mentioned reporting units (prior to the January 2021 reorganization) by considering both a market approach and a discounted cash flow method. We discounted the projected cash flows for our consumer, enterprise, wholesale, small and medium business and NA GAM reporting units using a rate that represented their weighted average cost of capital, which we determined to be approximately 7.6% as of the assessment date (which comprised an after-tax cost of debt of 2.5% and a cost of equity of 10.7%). We discounted the projected cash flows of our EMEA, LATAM and APAC reporting units using a rate that represents their estimated weighted average cost of capital, which we determined to be approximately 8.0%, 14.3% and 10.1%, respectively, as of the measurement date (which was comprised of an after-tax cost of debt of 2.9%, 6.9% and 3.9% and a cost of equity of 11.2%, 18.8% and 14.0%, respectively). We utilized company comparisons and analyst reports within the telecommunications industry which have historically supported a range of fair values derived from annualized revenue and earnings before interest, taxes, depreciation and amortization ("EBITDA") multiples between 2.0x and 5.5x and 4.8x and 12.5x, respectively. We selected a revenue and EBITDA multiple for each of our reporting units, resulting in an overall company revenue and EBITDA multiple of 2.3x and 5.7x, respectively. We also reconciled the estimated fair values of the reporting units to our market capitalization as of October 31, 2020 and concluded that the indicated control premium of approximately 33% was reasonable based on recent market transactions. Due to the decline in our stock price at October 31, 2020 and our assessment performed with respect to the reporting units described above, we concluded that the estimated fair value of our consumer, wholesale, small and medium business and EMEA reporting units was less than our carrying value of equity for those reporting units. As a result, these reporting units were impaired, resulting in a non-cash, non-tax-deductible goodwill impairment charge of \$2.6 billion. See the table below for the impairment charges by segment. As of October 31, 2020, the estimated fair value of equity exceeded the carrying value of equity for our enterprise, NA GAM, LATAM and APAC reporting units by 2%, 46%, 74% and 23%, respectively. Based on our assessments performed, we concluded that the goodwill assigned to our enterprise, NA GAM, LATAM and APAC reporting units was not impaired at October 31, 2020.

At October 31, 2019, we estimated the fair value of our eight above-mentioned reporting units (prior to the January 2021 reorganization) by considering both a market approach and a discounted cash flow method. As of October 31, 2019, based on our assessment performed with respect to our eight reporting units, the estimated fair value of equity exceeded the carrying value of equity for our consumer, small and medium business, enterprise, wholesale, NA GAM, EMEA, LATAM, and APAC reporting units by 44%, 41%, 53%, 46%, 55%, 5%, 63% and 38%, respectively. Based on our assessments performed, we concluded that the goodwill for our eight reporting units was not impaired as of October 31, 2019.

Both our January 2019 internal reorganization and the decline in our stock price indicated the carrying values of our reporting units were more likely than not in excess of their fair values, requiring an impairment test in the first quarter of 2019. Because our low stock price was a key trigger for impairment testing during the first quarter of 2019, we estimated the fair value of our operations in such quarter using only the market approach. Applying this approach, we utilized company comparisons and analyst reports within the telecommunications industry which have historically supported a range of fair values derived from annualized revenue and EBITDA (earnings before interest, taxes, depreciation and amortization) multiples between 2.1x and 4.9x and 4.9x and 9.8x, respectively. We selected a revenue and EBITDA multiple for each of our reporting units within this range. We reconciled the estimated fair values of the reporting units to our market capitalization as of the date of each of our impairment tests during the first quarter of 2019 and concluded that the indicated control premium of approximately 4.5% and 4.1% was reasonable based on recent market transactions. In the quarter ended March 31, 2019, based on our assessments performed with respect to the reporting units as described above, we concluded that the estimated fair value of certain of our reporting units was less than our carrying value of equity as of the date of both of our impairment tests during the first quarter. As a result, we recorded non-cash, non-tax-deductible goodwill impairment charges aggregating to \$6.5 billion in the quarter ended March 31, 2019. See the table below for the impairment charges by segment.

The following table shows the rollforward of goodwill assigned to our reportable segments (including the January 2021 reorganization discussed above) from December 31, 2019 through December 31, 2021.

	International and Global Accounts	Enterprise	Small and Medium Business	Wholesale	Consumer	Business	Mass Markets	Total
(Dollars in millions)								
As of December 31, 2019 ⁽¹⁾	\$ 2,670	4,738	3,259	3,813	7,054	—	—	21,534
Effect of foreign currency exchange rate change and other	(15)	—	(7)	—	—	—	—	(22)
Impairment	(100)	—	(444)	(699)	(1,399)	—	—	(2,642)
As of December 31, 2020 ⁽¹⁾	2,555	4,738	2,808	3,114	5,655	—	—	18,870
January 2021 reorganization	(2,555)	(4,738)	(2,808)	(3,114)	(5,655)	12,173	6,697	—
Reclassified as held for sale ⁽²⁾	—	—	—	—	—	(913)	(1,946)	(2,859)
Effect of foreign currency exchange rate change and other	—	—	—	—	—	(25)	—	(25)
As of December 31, 2021 ⁽¹⁾	\$ —	—	—	—	—	11,235	4,751	15,986

¹ Goodwill at December 31, 2021, December 31, 2020 and December 31, 2019 is net of accumulated impairment losses of \$7.7 billion, \$12.9 billion and \$10.3 billion, respectively. The change in accumulated impairment losses at December 31, 2021 is a result of amounts reclassified as held for sale related to our planned divestitures.

² Includes \$2.9 billion of goodwill, net of accumulated impairment loss reclassified as held for sale related to our pending divestitures. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses.

For additional information on our segments, see Note 17—Segment Information.

As of December 31, 2021, the weighted average remaining useful lives of our finite-lived intangible assets were approximately 7 years in total, approximately 8 years for customer relationships, 4 years for capitalized software and 1 year for trade names.

Total amortization expense for finite-lived intangible assets for the years ended December 31, 2021, 2020 and 2019 was \$1.3 billion, \$1.7 billion and \$1.7 billion, respectively.

We estimate that total amortization expense for finite-lived intangible assets for the years ending December 31, 2022 through 2026 will be as provided in the table below. As a result of reclassifying our Latin American and ILEC businesses as being held for sale on our December 31, 2021 consolidated balance sheet, the amounts presented below do not include future amortization expense for intangible assets of the businesses to be divested. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

	(Dollars in millions)	
2022	\$	1,034
2023		940
2024		849
2025		798
2026		721

(4) REVENUE RECOGNITION**Product and Service Categories**

Since the first quarter of 2021, we have categorized our products and services revenue among the following categories for the Business segment:

- *Compute and Application Services*, which include our Edge Cloud services, IT solutions, Unified Communications and Collaboration ("UC&C"), data center, content delivery network ("CDN") and Managed Security services;
- *IP and Data Services*, which include Ethernet, IP, and VPN data networks, including software-defined wide area networks ("SD WAN") based services, Dynamic Connections and Hyper WAN;
- *Fiber Infrastructure Services*, which include dark fiber, optical services and equipment; and
- *Voice and Other*, which include Time Division Multiplexing ("TDM") voice, private line and other legacy services.

Since the first quarter of 2021, we have categorized our products and services revenue among the following categories for the Mass Markets segment:

- *Consumer Broadband*, which includes high speed fiber-based and lower speed DSL-based broadband services to residential customers;
- *Small Business Group ("SBC") Broadband*, which includes high speed fiber-based and lower speed DSL-based broadband services to small businesses;
- *Voice and Other*, which include primarily local and long-distance services, professional services and other ancillary services; and
- *Connect America Fund ("CAF") II*, which consists of CAF Phase II payments through the end of 2021 to support voice and broadband in FCC-designated high-cost areas.

Reconciliation of Total Revenue to Revenue from Contracts with Customers

The following tables provide total revenue by segment, sales channel and product category. They also provide the amount of revenue that is not subject to ASC 606, "Revenue from Contracts with Customers" ("ASC 606"), but is instead governed by other accounting standards:

	Year Ended December 31, 2021		
	Total Revenue	Adjustments for Non-ASC 606 Revenue ⁽¹⁾	Total Revenue from Contracts with Customers
	(Dollars in millions)		
Business Segment by Sales Channel and Product Category			
International and Global Accounts ("IGAM")			
Compute and Application Services	\$ 715	(280)	435
IP and Data Services	1,708	—	1,708
Fiber Infrastructure	886	(129)	757
Voice and Other	744	—	744
Total IGAM Revenue	4,053	(409)	3,644
Large Enterprise			
Compute and Application Services	698	(63)	635
IP and Data Services	1,554	—	1,554
Fiber Infrastructure	521	(50)	471
Voice and Other	949	—	949
Total Large Enterprise Revenue	3,722	(113)	3,609
Mid-Market Enterprise			
Compute and Application Services	139	(31)	108
IP and Data Services	1,754	(5)	1,749
Fiber Infrastructure	218	(8)	210
Voice and Other	618	—	618
Total Mid-Market Enterprise Revenue	2,729	(44)	2,685
Wholesale			
Compute and Application Services	189	(159)	30
IP and Data Services	1,196	—	1,196
Fiber Infrastructure	623	(118)	505
Voice and Other	1,607	(252)	1,355
Total Wholesale Revenue	3,615	(529)	3,086
Business Segment by Product Category			
Compute and Application Services	1,741	(533)	1,208
IP and Data Services	6,212	(5)	6,207
Fiber Infrastructure	2,248	(305)	1,943
Voice and Other	3,918	(252)	3,666
Total Business Segment Revenue	14,119	(1,095)	13,024
Mass Markets Segment by Product Category			
Consumer Broadband	2,875	(211)	2,664
SBG Broadband	156	(16)	140
Voice and Other	2,047	(80)	1,967
CAF II	490	(490)	—
Total Mass Markets Revenue	5,568	(797)	4,771
Total Revenue	\$ 19,687	(1,892)	17,795
Timing of revenue			
Goods and services transferred at a point in time		\$	138
Services performed over time			17,657
Total revenue from contracts with customers		\$	17,795

Year Ended December 31, 2020		
Total Revenue	Adjustments for Non-ASC 606 Revenue ⁽¹⁾	Total Revenue from Contracts with Customers
(Dollars in millions)		

Business Segment by Sales Channel and Product Category

International and Global Accounts ("IGAM")			
Compute and Application Services	\$ 772	(265)	507
IP and Data Services	1,731	—	1,731
Fiber Infrastructure	822	(110)	712
Voice and Other	793	—	793
Total IGAM Revenue	4,118	(375)	3,743
Large Enterprise			
Compute and Application Services	663	(82)	581
IP and Data Services	1,588	(2)	1,586
Fiber Infrastructure	590	(46)	544
Voice and Other	1,074	(2)	1,072
Total Large Enterprise Revenue	3,915	(132)	3,783
Mid-Market Enterprise			
Compute and Application Services	137	(16)	121
IP and Data Services	1,845	(6)	1,839
Fiber Infrastructure	218	(9)	209
Voice and Other	769	—	769
Total Mid-Market Enterprise Revenue	2,969	(31)	2,938
Wholesale			
Compute and Application Services	183	(161)	22
IP and Data Services	1,249	—	1,249
Fiber Infrastructure	618	(121)	497
Voice and Other	1,765	(258)	1,507
Total Wholesale Revenue	3,815	(540)	3,275
Business Segment by Product Category			
Compute and Application Services	1,755	(524)	1,231
IP and Data Services	6,413	(8)	6,405
Fiber Infrastructure	2,248	(286)	1,962
Voice and Other	4,401	(260)	4,141
Total Business Segment Revenue	14,817	(1,078)	13,739
Mass Markets Segment by Product Category			
Consumer Broadband	2,909	(221)	2,688
SBG Broadband	153	(15)	138
Voice and Other	2,341	(109)	2,232
CAF II	492	(492)	—
Total Mass Markets Revenue	5,895	(837)	5,058
Total Revenue	\$ 20,712	(1,915)	18,797
Timing of revenue			
Goods and services transferred at a point in time		\$	250
Services performed over time			18,547
Total revenue from contracts with customers		\$	18,797

	Year Ended December 31, 2019		
	Total Revenue	Adjustments for Non-ASC 606 Revenue ⁽¹⁾	Total Revenue from Contracts with Customers
	(Dollars in millions)		
Business Segment by Sales Channel and Product Category			
International and Global Accounts ("IGAM")			
Compute and Application Services	\$ 790	(265)	525
IP and Data Services	1,764	—	1,764
Fiber Infrastructure	785	(99)	686
Voice and Other	833	—	833
Total IGAM Revenue	4,172	(364)	3,808
Large Enterprise			
Compute and Application Services	610	(89)	521
IP and Data Services	1,589	—	1,589
Fiber Infrastructure	524	(44)	480
Voice and Other	1,113	(1)	1,112
Total Large Enterprise Revenue	3,836	(134)	3,702
Mid-Market Enterprise			
Compute and Application Services	147	(11)	136
IP and Data Services	1,894	—	1,894
Fiber Infrastructure	219	(20)	199
Voice and Other	892	(1)	891
Total Mid-Market Enterprise Revenue	3,152	(32)	3,120
Wholesale			
Compute and Application Services	188	(168)	20
IP and Data Services	1,319	—	1,319
Fiber Infrastructure	629	(122)	507
Voice and Other	1,943	(279)	1,664
Total Wholesale Revenue	4,079	(569)	3,510
Business Segment by Product Category			
Compute and Application Services	1,735	(533)	1,202
IP and Data Services	6,566	—	6,566
Fiber Infrastructure	2,157	(285)	1,872
Voice and Other	4,781	(281)	4,500
Total Business Segment Revenue	15,239	(1,099)	14,140
Mass Markets Segment by Product Category			
Consumer Broadband	2,876	(215)	2,661
SBG Broadband	163	(4)	159
Voice and Other	2,688	(143)	2,545
CAF II	492	(492)	—
Total Mass Markets Revenue	6,219	(854)	5,365
Total Revenue	\$ 21,458	(1,953)	19,505
Timing of revenue			
Goods and services transferred at a point in time		\$	221
Services performed over time			19,284
Total revenue from contracts with customers		\$	19,505

¹ Includes regulatory revenue and lease revenue not within the scope of ASC 606.

Customer Receivables and Contract Balances

The following table provides balances of customer receivables, contract assets and contract liabilities, net of amounts reclassified as held for sale, as of December 31, 2021 and December 31, 2020:

	December 31, 2021	December 31, 2020
	(Dollars in millions)	
Customer receivables ⁽¹⁾⁽²⁾	\$ 1,493	1,889
Contract assets ⁽³⁾	73	108
Contract liabilities ⁽⁴⁾	680	950

¹ Reflects gross customer receivables of \$1.6 billion and \$2.1 billion, net of allowance for credit losses of \$102 million and \$174 million, at December 31, 2021 and December 31, 2020, respectively.

² As of December 31, 2021, amount excludes customer receivables, net reclassified as held for sale of \$288 million.

³ As of December 31, 2021, amount excludes contract assets reclassified as held for sale of \$9 million.

⁴ As of December 31, 2021, amount excludes contract liabilities reclassified as held for sale of \$161 million.

Contract liabilities are consideration we have received from our customers or billed in advance of providing goods or services promised in the future. We defer recognizing this consideration as revenue until we have satisfied the related performance obligation to the customer. Contract liabilities include recurring services billed one month in advance and installation and maintenance charges that are deferred and recognized over the actual or expected contract term, which typically ranges from one to five years depending on the service. Contract liabilities are included within deferred revenue in our consolidated balance sheets. During the years ended December 31, 2021 and December 31, 2020, we recognized \$605 million and \$672 million, respectively, of revenue that was included in contract liabilities of \$950 million and \$1.0 billion as of January 1, 2021 and 2020, respectively.

Performance Obligations

As of December 31, 2021, our estimated revenue expected to be recognized in the future related to performance obligations associated with existing customer contracts that are partially or wholly unsatisfied is approximately \$6.2 billion. We expect to recognize approximately 77% of this revenue through 2024, with the balance recognized thereafter.

These amounts exclude (i) the value of unsatisfied performance obligations for contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed (for example, uncommitted usage or non-recurring charges associated with professional or technical services to be completed), (ii) contracts that are classified as leasing arrangements that are not subject to ASC 606 and (iii) the value of unsatisfied performance obligations for contracts which relate to our planned divestiture.

Contract Costs

The following tables provide changes in our contract acquisition costs and fulfillment costs:

	December 31, 2021	
	Acquisition Costs	Fulfillment Costs
	(Dollars in millions)	
Beginning of period balance	\$ 289	216
Costs incurred	176	151
Amortization	(209)	(149)
Reclassified as held for sale ⁽¹⁾	(34)	(32)
End of period balance	\$ 222	186

	December 31, 2020	
	Acquisition Costs	Fulfillment Costs
	(Dollars in millions)	
Beginning of period balance	\$ 326	221
Costs incurred	181	141
Amortization	(218)	(146)
End of period balance	\$ 289	216

¹ Represents the amounts reclassified as held for sale as of December 31, 2021 related to our planned divestitures. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses.

Acquisition costs include commission fees paid to employees as a result of obtaining contracts. Fulfillment costs include third party and internal costs associated with the provision, installation and activation of telecommunications services to customers, including labor and materials consumed for these activities.

Deferred acquisition and fulfillment costs are amortized based on the transfer of services on a straight-line basis over the average contract life of approximately 30 months for mass markets customers and 29 months for business customers. Amortized fulfillment costs are included in cost of services and products and amortized acquisition costs are included in selling, general and administrative expenses in our consolidated statements of operations. The amount of these deferred costs that are anticipated to be amortized in the next 12 months are included in other current assets on our consolidated balance sheets. The amount of deferred costs expected to be amortized beyond the next twelve months is included in other non-current assets on our consolidated balance sheets. Deferred acquisition and fulfillment costs are assessed for impairment on an annual basis.

(5) LEASES

We primarily lease to or from third parties various office facilities and colocation facilities, equipment and dark fiber. Leases with an initial term of 12 months or less are not recorded on our consolidated balance sheets; we recognize lease expense for these leases on a straight-line basis over the lease term.

We determine if an arrangement is a lease at inception and whether that lease meets the classification criteria of a finance or operating lease. Lease-related assets, or right-of-use assets, are recognized at the lease commencement date at amounts equal to the respective lease liabilities. Lease-related liabilities are recognized at the present value of the remaining contractual fixed lease payments, discounted using our incremental borrowing rates. As part of the present value calculation for the lease liabilities, we use an incremental borrowing rate as the rates implicit in the leases are not readily determinable. The incremental borrowing rates used for lease accounting are based on our unsecured rates, adjusted to approximate the rates at which we could borrow on a collateralized basis over a term similar to the recognized lease term. We apply the incremental borrowing rates to lease components using a portfolio approach based upon the length of the lease term and the reporting entity in which the lease resides. Operating lease expense is recognized on a straight-line basis over the lease term, while variable lease payments are expensed as incurred. Operating lease assets are included in other, net under goodwill and other assets on our consolidated balance sheets. Noncurrent operating lease liabilities are included in other under deferred credits and other liabilities on our consolidated balance sheets.

Some of our lease arrangements contain lease components, non-lease components (including common-area maintenance costs) and executory costs (including real estate taxes and insurance costs). We generally account for each component separately based on the estimated standalone price of each component. For colocation leases, we account for the lease and non-lease components as a single lease component.

Many of our lease agreements contain renewal options; however, we do not recognize right-of-use assets or lease liabilities for renewal periods unless we determine that we are reasonably certain of renewing the lease. Certain leases also include options to purchase the leased property. The depreciable life of assets and leasehold improvements are limited by the expected lease term, unless there is a transfer of title or purchase option reasonably certain to be exercised. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants.

Lease expense consisted of the following:

	Years Ended December 31,	
	2021	2020
	(Dollars in millions)	
Operating and short-term lease cost	\$ 535	729
Finance lease cost:		
Amortization of right-of-use assets	37	36
Interest on lease liability	16	12
Total finance lease cost	53	48
Total lease cost	\$ 588	777

We primarily lease various equipment, office facilities, retail outlets, switching facilities and other network sites. These leases, with few exceptions, provide for renewal options and escalations that are either fixed or based on the consumer price index. Any rent abatements, along with rent escalations, are included in the computation of rent expense calculated on a straight-line basis over the lease term. The lease term for most leases includes the initial non-cancelable term plus any term under renewal options that we believe are reasonably assured.

During the years ended December 31, 2021 and 2020, we rationalized our lease footprint and ceased using 23 and 16 underutilized leased property locations, respectively. We determined that we no longer needed the leased space and, due to the limited remaining term on the contracts, concluded that we had neither the intent nor ability to sublease the properties. For the years ended December 31, 2021 and 2020, we incurred accelerated lease costs of approximately \$35 million and \$41 million, respectively. In conjunction with our plans to continue to reduce costs, we expect to continue our real estate rationalization efforts and may incur additional accelerated lease costs in future periods.

For the years ended December 31, 2021, 2020 and 2019, our gross rental expense, including the accelerated lease costs discussed above, was \$588 million, \$777 million and \$733 million, respectively. We also received sublease rental income for the years ended December 31, 2021, 2020 and 2019 of \$25 million, \$25 million and \$24 million, respectively.

Supplemental consolidated balance sheet information and other information related to leases is included below:

Leases (Dollars in millions)	Classification on the Balance Sheet	As of December 31,	
		2021	2020
Assets			
Operating lease assets	Other, net	\$ 1,451	1,699
Finance lease assets	Property, plant and equipment, net of accumulated depreciation	314	329
Total leased assets		\$ 1,765	2,028
Liabilities			
Current			
Operating	Current operating lease liabilities	\$ 385	379
Finance	Current maturities of long-term debt	19	26
Noncurrent			
Operating	Other	1,171	1,405
Finance	Long-term debt	251	267
Total lease liabilities		\$ 1,826	2,077
Weighted-average remaining lease term (years)			
Operating leases		6.8	6.7
Finance leases		13.1	12.1
Weighted-average discount rate			
Operating leases		5.54%	6.01%
Finance leases		4.89%	4.94%

At December 31, 2021, we classified certain operating and finance lease assets and liabilities as held for sale and discontinued recording amortization on the related right-of-use assets on the Latin American and ILEC businesses. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

Supplemental consolidated cash flow statement information related to leases is included below:

	Years Ended December 31,	
	2021	2020
(Dollars in millions)		
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows for operating leases	\$ 525	566
Operating cash flows for finance leases	15	14
Financing cash flows for finance leases	52	40
Supplemental lease cash flow disclosures:		
Operating lease right-of-use assets obtained in exchange for new operating lease liabilities	\$ 165	375
Right-of-use assets obtained in exchange for new finance lease liabilities	94	124

As of December 31, 2021, maturities of lease liabilities were as follows:

	Operating Leases	Finance Leases
	(Dollars in millions)	
2022	\$ 457	33
2023	355	28
2024	253	28
2025	198	28
2026	149	28
Thereafter	490	223
Total lease payments	1,902	368
Less: interest	(346)	(98)
Total	1,556	270
Less: current portion	(385)	(19)
Long-term portion	\$ 1,171	251

As of December 31, 2021, we had entered into a \$15 million finance lease with a deferred commencement date.

Operating Lease Income

Lumen Technologies leases various dark fiber, office facilities, colocation facilities, switching facilities, other network sites and service equipment to third parties under operating leases. Lease and sublease income are included in operating revenue in the consolidated statements of operations.

For the years ended December 31, 2021, 2020 and 2019, our gross rental income was \$1.2 billion, \$1.3 billion and \$1.4 billion, respectively, which represents 6%, 6% and 7% respectively, of our operating revenue for the years ended December 31, 2021, 2020 and 2019.

(6) CREDIT LOSSES ON FINANCIAL INSTRUMENTS

In accordance with ASC 326, "*Financial Instruments - Credit Losses*", we aggregate financial assets with similar risk characteristics to align our expected credit losses with the credit quality or deterioration over the life of such assets. We periodically monitor certain risk characteristics within our aggregated financial assets and revise their composition accordingly, to the extent internal and external risk factors change. Financial assets that do not share risk characteristics with other financial assets are evaluated separately. Our financial assets measured at amortized cost primarily consist of accounts receivable.

We use a loss rate method to estimate our allowance for credit losses. Our determination of the current expected credit loss rate begins with our review of historical loss experience as a percentage of accounts receivable. We measure our historical loss period based on the average days to recognize accounts receivable as credit losses. When asset specific characteristics and current conditions change from those in the historical period, due to changes in our credit and collections strategy, certain classes of aged balances, or credit loss and recovery policies, we perform a qualitative and quantitative assessment to adjust our historical loss rate. We use regression analysis to develop an expected loss rate using historical experience and economic data over a forecast period. We measure our forecast period based on the average days to collect payment on billed accounts receivable. To determine our current allowance for credit losses, we combine the historical and expected credit loss rates and apply them to our period end accounts receivable.

If there is an unexpected deterioration of a customer's financial condition or an unexpected change in economic conditions (including changes caused by COVID-19 or other macroeconomic events), we assess the need to adjust the allowance for credit losses. Any such resulting adjustments would affect earnings in the period that adjustments are made.

The assessment of the correlation between historical observed default rates, current conditions and forecasted economic conditions requires judgment. Alternative interpretations of these factors could have resulted in different conclusions regarding the allowance for credit losses. The amount of credit loss is sensitive to changes in circumstances and forecasted economic conditions. Our historical credit loss experience, current conditions and forecast of economic conditions may also not be representative of the customers' actual default experience in the future, and we may use methodologies that differ from those used by other companies.

In conjunction with our January 2021 internal reorganization, as referenced in Note 17—Segment Information, we pooled certain assets with similar credit risk characteristics based on the nature of our customers, their industry, policies used to grant credit terms and their historical and expected credit loss patterns. Additionally, we reassessed our historical loss period for the segment portfolio reorganization.

The following tables present the activity of our allowance for credit losses by accounts receivable portfolio for the years ended December 31, 2021 and December 31, 2020:

	Business	Mass Markets	Total
	(Dollars in millions)		
Beginning balance at January 1, 2021 ⁽¹⁾	\$ 109	82	191
Provision for expected losses	50	55	105
Write-offs charged against the allowance	(76)	(101)	(177)
Recoveries collected	13	6	19
Reclassified as held for sale ⁽²⁾	(8)	(16)	(24)
Ending balance at December 31, 2021	\$ 88	26	114

	Business	Consumer	Total
	(Dollars in millions)		
Beginning balance at January 1, 2020 ⁽³⁾	\$ 58	37	95
Provision for expected losses	115	74	189
Write-offs charged against the allowance	(74)	(59)	(133)
Recoveries collected	24	18	42
Foreign currency exchange rate changes adjustment	(2)	—	(2)
Balance at December 31, 2020	\$ 121	70	191

¹ As described in Note 17—Segment Information, we completed an internal reorganization in January 2021. As a result of this change, allowance for credit losses previously included in the Consumer and Business portfolio of \$70 million related to consumer and \$12 million related to our small business group, respectively, were reclassified to the Mass Markets allowance for credit losses on January 1, 2021.

² Represents the amounts reclassified as held for sale related to our pending divestitures. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses.

³ The beginning balance for the year ended December 31, 2020 includes the cumulative effect of \$11 million for the adoption of the new credit loss standard.

For the year ended December 31, 2021, we decreased our allowance for credit losses for our business and mass markets accounts receivable portfolios primarily due to higher write-off activity during 2021, along with the easing of prior delays due to COVID-19 related restrictions from 2020 and lower receivable balances.

For the year ended December 31, 2020, we increased our allowance for credit losses for our business and consumer accounts receivable portfolios due to an increase during the period in historical and expected loss experience in certain classes of aged balances, which were predominantly attributable to the COVID-19 induced economic slowdown. Decreased write-offs (net of recoveries) were driven by COVID-19 regulations and programs, which further contributed to the increase in our allowance for credit losses for the year ended December 31, 2020.

(7) LONG-TERM DEBT AND CREDIT FACILITIES

The following chart reflects the consolidated long-term debt of Lumen Technologies, Inc. and its subsidiaries as of the dates indicated below, including unamortized discounts and premiums and unamortized debt issuance costs, but excluding intercompany debt:

	Interest Rates ⁽¹⁾	Maturities ⁽¹⁾	As of December 31,	
			2021	2020
(Dollars in millions)				
Senior Secured Debt: ⁽²⁾				
<i>Lumen Technologies, Inc.</i>				
Revolving Credit Facility	LIBOR + 2.00%	2025	\$ 200	150
Term Loan A ⁽³⁾	LIBOR + 2.00%	2025	1,050	1,108
Term Loan A-1 ⁽³⁾	LIBOR + 2.00%	2025	300	316
Term Loan B ⁽⁴⁾	LIBOR + 2.25%	2027	4,900	4,950
Senior notes	4%	2027	1,250	1,250
<i>Subsidiaries:</i>				
<i>Level 3 Financing, Inc.</i>				
Tranche B 2027 Term Loan ⁽⁵⁾	LIBOR + 1.75%	2027	3,111	3,111
Senior notes	3.400% - 3.875%	2027 - 2029	1,500	1,500
<i>Embarq Corporation subsidiaries</i>				
First mortgage bonds	7.125% - 8.375%	2023 - 2025	138	138
Senior Notes and Other Debt:				
<i>Lumen Technologies, Inc.</i>				
Senior notes	4.500% - 7.650%	2022 - 2042	8,414	8,645
<i>Subsidiaries:</i>				
<i>Level 3 Financing, Inc.</i>				
Senior notes	3.625% - 5.375%	2025 - 2029	5,515	5,515
<i>Qwest Corporation</i>				
Senior notes	6.500% - 7.750%	2025 - 2057	1,986	3,170
Term loan ⁽⁶⁾	LIBOR + 2.00%	2027	215	215
<i>Qwest Capital Funding, Inc.</i>				
Senior notes	6.875% - 7.750%	2028 - 2031	255	352
<i>Embarq Corporation and subsidiary</i>				
Senior notes ⁽⁷⁾	7.995%	2036	—	1,437
Finance lease and other obligations	Various	Various	347	295
Unamortized premiums (discounts), net			21	(78)
Unamortized debt issuance costs			(220)	(237)
Total long-term debt			28,982	31,837
Less current maturities			(1,554)	(2,427)
Long-term debt, excluding current maturities			\$ 27,428	29,410

¹ As of December 31, 2021.

² See the remainder of this Note for a description of certain parent or subsidiary guarantees and liens securing this debt.

³ Term Loans A and A-1 had interest rates of 2.104% and 2.147% as of December 31, 2021 and December 31, 2020, respectively.

⁴ Term Loan B had interest rates of 2.354% and 2.397% as of December 31, 2021 and December 31, 2020, respectively.

⁵ The Level 3 Tranche B 2027 Term Loan had interest rates of 1.854% and 1.897% as of December 31, 2021 and December 31, 2020, respectively.

⁶ The Qwest Corporation Term Loan had interest rates of 2.110% and 2.150% as of December 31, 2021 and December 31, 2020, respectively.

⁷ As of December 31, 2021, the Embarq Senior notes have been reclassified as held for sale. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

Long-Term Debt Maturities

Set forth below is the aggregate principal amount of our long-term debt as of December 31, 2021 (excluding unamortized premiums (discounts), net, unamortized debt issuance costs and intercompany debt) maturing during the following years. As a result of reclassifying our Latin American and ILEC businesses as being held for sale on our December 31, 2021 consolidated balance sheet, the amounts presented below do not include maturities of the debt obligations of those businesses. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

	(Dollars in millions) ⁽¹⁾	
2022	\$	1,554
2023		977
2024		1,158
2025		3,127
2026		2,062
2027 and thereafter		20,303
Total long-term debt	\$	29,181

¹ As of December 31, 2021, these amounts exclude \$1.5 billion of debt and finance lease obligations that have been reclassified as held for sale. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

Debt of Lumen Technologies, Inc. and its Subsidiaries

At December 31, 2021, most of our outstanding consolidated debt had been incurred by Lumen Technologies, Inc. or one of the following four other primary borrowers or “borrowing groups,” each of which has borrowed funds either on a standalone basis or as part of a separate restricted group with certain of its subsidiaries:

- Level 3 Financing, Inc., including its parent guarantor Level 3 Parent, LLC, and one or more subsidiary guarantors;
- Qwest Corporation;
- Qwest Capital Funding, Inc., including its parent guarantor, Qwest Communications International Inc.; and
- Embarq Corporation.

Each of these borrowers or borrowing groups has entered into one or more credit agreements with certain financial institutions or other institutional lenders, or issued senior notes. Certain of these debt instruments are described further below.

Amended and Restated Credit Agreement

On January 31, 2020, we amended and restated our credit agreement dated June 19, 2017 (as so amended and restated, the "Amended Credit Agreement"). At December 31, 2021, the Amended Credit Agreement consisted of the following facilities:

- a \$2.2 billion senior secured revolving credit facility ("the Revolving Credit Facility");
- a \$1.05 billion senior secured Term Loan A credit facility;
- a \$300 million senior secured Term Loan A-1 credit facility with CoBank, ACB; and
- a \$4.9 billion senior secured Term Loan "B" credit facility (the term loan facilities and the Revolving Credit Facility being referred to collectively as the "Amended Secured Credit Facilities").

Loans under the Term Loan A and A-1 facilities and the Revolving Credit Facility bear interest at a rate equal to, at our option, the Eurodollar rate or the alternative base rate (each as defined in the Amended Credit Agreement) plus an applicable margin between 1.50% to 2.25% per annum for Eurodollar loans and 0.50% to 1.25% per annum for alternative base rate loans, depending on our then current total leverage ratio. Loans under the Term Loan B facility bear interest at the Eurodollar rate plus 2.25% per annum or the alternative base rate plus 1.25% per annum. Loans under each of the term loan facilities require certain specified quarterly amortization payments and certain specified mandatory prepayments in connection with certain asset sales and debt issuances and out of excess cash flow, among other things, subject in each case to certain significant exceptions.

Borrowings under the Revolving Credit Facility and the Term Loan A and A-1 facilities mature on January 31, 2025. Borrowings under the Term Loan B facility mature on March 15, 2027.

All of Lumen's obligations under the Amended Secured Credit Facilities are guaranteed by certain of its subsidiaries. The guarantees by certain of those guarantors are secured by a first priority security interest in substantially all assets (including certain subsidiaries stock) directly owned by them, subject to certain exceptions and limitations.

A portion of the Revolving Credit Facility in an amount not to exceed \$250 million is available for swingline loans, and a portion in an amount not to exceed \$800 million is available for the issuance of letters of credit.

Lumen Technologies is permitted under the Amended Credit Agreement to request certain incremental borrowings subject to the satisfaction of various conditions and to certain other limitations. Any incremental borrowings would be subject to the same terms and conditions under the Amended Credit Agreement.

The above described January 2020 amendments and related refinancing transactions discussed under "—Repayments" below resulted in an aggregate net loss of \$67 million from modification and extinguishment of the debt.

Term Loans and Certain Other Debt of Subsidiaries**QWEST CORPORATION**

On October 23, 2020, Qwest Corporation borrowed \$215 million under a variable-rate term loan with CoBank ACB and used the resulting net proceeds to pay off its previous \$100 million term loan with CoBank ACB. Additionally, on October 26, 2020, Qwest Corporation used the remaining net proceeds to partially facilitate the redemption of the remaining \$160 million aggregate principal amount of its outstanding 6.625% Notes due 2055. The outstanding unpaid principal amount of this new term loan plus any accrued and unpaid interest is due on October 23, 2027. Interest is paid at least quarterly based upon either the London Interbank Offered Rate ("LIBOR") or the base rate (as defined in the credit agreement) plus an applicable margin between 1.50% to 2.50% per annum for LIBOR loans and 0.50% to 1.50% per annum for base rate loans depending on Qwest Corporation's then current senior unsecured long-term debt rating.

LEVEL 3 FINANCING, INC.

At December 31, 2021, Level 3 Financing, Inc. owed \$3.111 billion under a senior secured Tranche B 2027 Term Loan, which matures on March 1, 2027. The Tranche B 2027 Term Loan carries an interest rate, in the case of base rate borrowings, equal to (i) the greater of the Prime Rate, the Federal Funds Effective Rate plus 50 basis points, or LIBOR plus 100 basis points (with all such terms and calculations as defined or further specified in the credit agreement) plus (ii) 0.75% per annum. Any Eurodollar borrowings under the Tranche B 2027 Term Loan bear interest at LIBOR plus 1.75% per annum.

The Tranche B 2027 Term Loan requires certain specified mandatory prepayments in connection with certain asset sales and other transactions, subject to certain significant exceptions. The obligations of Level 3 Financing, Inc. under the Tranche B 2027 Term Loan are, subject to certain exceptions, secured by certain assets of Level 3 Parent, LLC and certain of its material domestic telecommunication subsidiaries. Also, Level 3 Parent, LLC and certain of its subsidiaries have guaranteed the obligations of Level 3 Financing, Inc. under the Tranche B 2027 Term Loan.

EMBARQ SUBSIDIARIES

At December 31, 2021 and 2020, one of our Embarq subsidiaries had outstanding first mortgage bonds. These first mortgage bonds are secured by substantially all of the property, plant and equipment of the issuing subsidiary.

Revolving Letters of Credit

We use various financial instruments in the normal course of business. These instruments include letters of credit, which are conditional commitments issued on our behalf in accordance with specified terms and conditions. Lumen Technologies maintains an uncommitted \$225 million revolving letter of credit facility separate from the letter of credit facility included in the Revolving Credit Facility noted above. Letters of credit issued under this uncommitted facility are backed by credit enhancements in the form of secured guarantees issued by certain of our subsidiaries. As of December 31, 2021 and 2020, our outstanding letters of credit totaled \$88 million and \$97 million, respectively, and we had no letters of credit outstanding under our Revolving Credit Facility.

As of December 31, 2021, Level 3 Parent, LLC had outstanding letters of credit or other similar obligations of approximately \$9 million, of which \$5 million was collateralized by cash that is reflected on the consolidated balance sheet as restricted cash. As of December 31, 2020, Level 3 Parent, LLC had outstanding letters of credit or other similar obligations of approximately \$18 million of which \$11 million was collateralized by cash that is reflected on the consolidated balance sheet as restricted cash. None of our conditional commitments under our outstanding letters of credit are reflected as debt on our balance sheets.

Senior Notes

Lumen's consolidated indebtedness at December 31, 2021 included (i) senior secured notes issued by Lumen Technologies, Inc. and Level 3 Financing, Inc. and (ii) senior unsecured notes issued by Lumen Technologies, Inc., Level 3 Financing, Inc., Qwest Corporation, Qwest Capital Funding, Inc. and Embarq Corporation. All of these notes carry fixed interest rates and all principal is due on the notes' respective maturity dates, which rates and maturity dates are summarized in the table above. The Lumen Technologies, Inc. secured senior notes are guaranteed by the same domestic subsidiaries that guarantee the Amended Credit Agreement. The senior notes issued by Level 3 Financing, Inc. are guaranteed by its parent, Level 3 Parent, LLC and one or more of its affiliates. The senior notes issued by Qwest Capital Funding, Inc. are guaranteed by its parent, Qwest Communications International Inc. Except for a limited number of senior notes issued by Qwest Corporation, the issuer generally can redeem the notes, at its option, in whole or in part, (i) pursuant to a fixed schedule of pre-established redemption prices, (ii) pursuant to a "make whole" redemption price or (iii) under certain other specified limited conditions. Under certain circumstances in connection with a "change of control" of Lumen Technologies, it will be required to make an offer to repurchase each series of these senior notes (other than two of its older series of notes) at a price of 101% of the principal amount redeemed, plus accrued and unpaid interest. Also, under certain circumstances in connection with a "change of control" of Level 3 Parent, LLC or Level 3 Financing, Inc., Level 3 Financing will be required to make an offer to repurchase each series of its outstanding senior notes at a price of 101% of the principal amount redeemed, plus accrued and unpaid interest.

Repayments

2021

During 2021, Lumen Technologies and its affiliates redeemed approximately \$1.1 billion of their respective debt obligations, which primarily included a \$900 million redemption of Level 3 Financing, Inc. senior notes and a \$235 million redemption of Qwest Corporation senior notes. These transactions resulted in a net gain of \$8 million.

Additionally, during 2021, Lumen Technologies (i) repaid at maturity approximately \$2.8 billion of its consolidated debt obligations, which primarily included a \$1.2 billion repayment at maturity of Lumen senior unsecured notes, a \$97 million repayment at maturity of Qwest Capital Funding, Inc. senior notes and a \$950 million repayment at maturity of Qwest Corporation senior notes, (ii) made \$125 million of scheduled amortization payments under our term loans and (iii) made payments on its Revolving Credit Facility.

2020

During 2020, Lumen Technologies and its affiliates redeemed approximately \$6.2 billion of their respective debt obligations, which primarily included \$1.3 billion of Lumen Technologies credit agreement debt, \$2.8 billion of Qwest Corporation senior notes, \$78 million of Lumen Technologies senior notes and \$2.0 billion of Level 3 Financing, Inc. senior notes. These transactions resulted in a net loss of \$109 million, including the \$67 million loss resulting from the modification of the Amended Credit Agreement discussed above.

Additionally, during 2020, Lumen Technologies (i) repaid at maturity \$973 million aggregate principal amount of its outstanding senior notes and (ii) made \$125 million of scheduled amortization payments under our term loans.

New Issuances

2021

On June 15, 2021, Lumen Technologies, Inc. issued \$1.0 billion aggregate principal amount of 5.375% Senior Notes due 2029 (the "2029 Notes"). The net proceeds were used, together with cash on hand, to repay at maturity our outstanding \$1.2 billion 6.450% Senior Notes, Series S, due 2021.

On January 13, 2021, Level 3 Financing, Inc. issued \$900 million aggregate principal amount of 3.750% Sustainability-Linked Senior Notes due 2029 (the "Sustainability-Linked Notes"). The net proceeds were used, together with cash on hand, to redeem \$900 million of our outstanding senior note indebtedness. The Sustainability-Linked Notes are guaranteed by Level 3 Parent, LLC and Level 3 Communications, LLC.

2020
On November 27, 2020, Lumen Technologies, Inc. issued \$1.0 billion of 4.500% Senior Notes due 2029. The proceeds from this offering were used to redeem outstanding senior notes of Qwest Corporation and reduce borrowings under the Revolving Credit Facility.

On August 12, 2020, Level 3 Financing, Inc., issued \$840 million aggregate principal amount of its 3.625% Senior Notes due 2029 (the "2029 Notes"). Level 3 Financing, Inc. used the net proceeds from this offering to redeem certain of its outstanding senior note indebtedness. The 2029 Notes are guaranteed by Level 3 Parent, LLC and Level 3 Communications, LLC.

On June 15, 2020, Level 3 Financing, Inc., issued \$1.2 billion aggregate principal amount of its 4.250% Senior Notes due 2028 (the "2028 Notes"). Level 3 Financing, Inc. used the net proceeds from this offering to redeem certain of its outstanding senior note indebtedness. The 2028 Notes are guaranteed by Level 3 Parent, LLC and Level 3 Communications, LLC.

On January 24, 2020, Lumen Technologies, Inc. issued \$1.25 billion aggregate principal amount of its 4.000% Senior Secured Notes due 2027 (the "2027 Notes"). Lumen Technologies, Inc. used the net proceeds from this offering to repay a portion of the outstanding indebtedness under its Term Loan B facility. The 2027 Notes are guaranteed by each of Lumen's domestic subsidiaries that guarantees Lumen's Amended Credit Agreement, subject to various exceptions and limitations. While the 2027 Notes are not secured by any of the assets of Lumen Technologies, Inc., certain of the note guarantees are secured by a first priority security interest in substantially all of the assets of such guarantors (including the stock of certain of their respective subsidiaries), which assets also secure obligations under the Amended Credit Agreement on a pari passu basis.

Interest Expense

Interest expense includes interest on total long-term debt. The following table presents the amount of gross interest expense, net of capitalized interest:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Interest expense:			
Gross interest expense	\$ 1,575	1,743	2,093
Capitalized interest	(53)	(75)	(72)
Total interest expense	\$ 1,522	1,668	2,021

Covenants

LUMEN TECHNOLOGIES, INC.

With respect to the Term Loan A and A-1 facilities and the Revolving Credit Facility, the Amended Credit Agreement requires us to maintain (i) a maximum total leverage ratio of not more than 4.75 to 1.00 and (ii) a minimum consolidated interest coverage ratio of at least 2.00 to 1.00, with such ratios being determined and calculated in the manner described in the Amended Credit Agreement.

The Amended Secured Credit Facilities contain various representations and warranties and extensive affirmative and negative covenants. Such covenants include, among other things and subject to certain significant exceptions, restrictions on our ability to declare or pay dividends, repurchase stock, repay certain other indebtedness, create liens, incur additional indebtedness, make investments, engage in transactions with our affiliates, dispose of assets and merge or consolidate with any other person.

The senior unsecured notes of Lumen Technologies, Inc. were issued under four separate indentures. These indentures restrict our ability to (i) incur, issue or create liens upon the property of Lumen Technologies, Inc. and (ii) consolidate with or merge into, or transfer or lease all or substantially all of our assets to any other party. These indentures do not contain any provisions that restrict the issuance of new securities in the event of a material adverse change to us. The senior secured notes of Lumen Technologies, Inc. were issued under a separate indenture that contains a more restrictive set of covenants. As indicated above under "Senior Notes", Lumen Technologies, Inc. will be required to offer to purchase certain of its long-term debt securities issued under its indentures under certain circumstances in connection with a "change of control" of Lumen Technologies, Inc.

LEVEL 3 COMPANIES

The term loan, senior secured notes and senior unsecured notes of Level 3 Financing, Inc. contain various representations and extensive affirmative and negative covenants. Such covenants include, among other things and subject to certain significant exceptions, restrictions on their ability to declare or pay dividends, repay certain other indebtedness, create liens, incur additional indebtedness, make investments, engage in transactions with their affiliates, dispose of assets and merge or consolidate with any other person. Also, as indicated above under "Senior Notes", Level 3 Financing, Inc. will be required to offer to repurchase or repay certain of its long-term debt under certain circumstances in connection with a "change of control" of Level 3 Financing or Level 3 Parent, LLC.

QWEST COMPANIES

Under its term loan, Qwest Corporation must maintain a debt to EBITDA (earnings before interest, taxes, depreciation and amortization) ratio of not more than 2.85 to 1.00, as determined and calculated in the manner described in the applicable term loan documentation. The term loan also contains a negative pledge covenant, which generally requires Qwest Corporation to secure equally and ratably any advances under the term loan if it pledges assets or permits liens on its property for the benefit of other debtholders.

The senior notes of Qwest Corporation were issued under indentures dated April 15, 1990 and October 15, 1999. These indentures contain restrictions on the incurrence of liens and the consummation of certain transactions substantially similar to the above-described covenants in Lumen's indentures (but contain no mandatory repurchase provisions). The senior notes of Qwest Capital Funding, Inc. were issued under an indenture dated June 29, 1998 containing terms substantially similar to those set forth in Qwest Corporation's indentures.

EMBARQ

Embarq's senior notes (which, as indicated above, were classified as held for sale at December 31, 2021) were issued pursuant to an indenture dated as of May 17, 2006. While Embarq is generally prohibited from creating liens on its property unless its senior notes are secured equally and ratably, Embarq can create liens on its property without equally and ratably securing its senior notes so long as the sum of all indebtedness so secured does not exceed 15% of Embarq's consolidated net tangible assets. The indenture also contains restrictions on the consummation of certain transactions substantially similar to Lumen's above-described covenants (but without mandatory repurchase provision), as well as certain customary covenants to maintain properties and pay all taxes and lawful claims.

IMPACT OF COVENANTS

The debt covenants applicable to Lumen Technologies, Inc. and its subsidiaries could have a material adverse impact on their ability to operate or expand their respective businesses, to pursue strategic transactions, or to otherwise pursue their plans and strategies. The covenants of the Level 3 companies may significantly restrict the ability of Lumen Technologies, Inc. to receive cash from the Level 3 companies, to distribute cash from the Level 3 companies to other of Lumen's affiliated entities, or to enter into other transactions among Lumen's wholly-owned entities.

Certain of the debt instruments of Lumen Technologies, Inc. and its subsidiaries contain cross payment default or cross acceleration provisions. When present, these provisions could have a wider impact on liquidity than might otherwise arise from a default or acceleration of a single debt instrument.

The ability of Lumen Technologies, Inc. and its subsidiaries to comply with the financial covenants in their respective debt instruments could be adversely impacted by a wide variety of events, including unforeseen contingencies, many of which are beyond their control.

Compliance

As of December 31, 2021, Lumen Technologies, Inc. believes it and its subsidiaries were in compliance with the provisions and financial covenants in their respective material debt agreements in all material respects.

Guarantees

Lumen Technologies does not guarantee the debt of any unaffiliated parties, but, as noted above, as of December 31, 2021 certain of its largest subsidiaries guaranteed (i) its debt outstanding under its Amended Secured Credit Facilities, its senior secured notes and its \$225 million letter of credit facility and (ii) the outstanding term loans or senior notes issued by certain other subsidiaries. As further noted above, several of the subsidiaries guaranteeing these obligations have pledged substantially all of their assets to secure their respective guarantees.

(8) ACCOUNTS RECEIVABLE

The following table presents details of our accounts receivable balances:

	As of December 31,	
	2021	2020
	(Dollars in millions)	
Trade and purchased receivables	\$ 1,281	1,717
Earned and unbilled receivables	315	345
Other	62	91
Total accounts receivable	1,658	2,153
Less: allowance for credit losses	(114)	(191)
Accounts receivable, less allowance	\$ 1,544	1,962

We are exposed to concentrations of credit risk from our customers. We generally do not require collateral to secure our receivable balances. We have agreements with other communications service providers whereby we agree to bill and collect on their behalf for services rendered by those providers to our customers within our local service area. We purchase accounts receivable from other communications service providers primarily on a recourse basis and include these amounts in our accounts receivable balance. We have not experienced any significant loss associated with these purchased receivables.

The following table presents details of our allowance for credit losses accounts:

	Beginning Balance	Additions	Deductions	Ending Balance
	(Dollars in millions)			
2021	\$ 191	105	(182)	114
2020 ⁽¹⁾	106	189	(104)	191
2019	142	145	(181)	106

¹ On January 1, 2020, we adopted ASU 2016-13 "Measurement of Credit Losses on Financial Instruments" and recognized a cumulative adjustment to our accumulated deficit as of the date of adoption of \$9 million, net of \$2 million tax effect. This adjustment is included within "Deductions." See Note 6—Credit Losses on Financial Instruments for more information.

(9) PROPERTY, PLANT AND EQUIPMENT

Net property, plant and equipment is composed of the following:

	Depreciable Lives	As of December 31,	
		2021	2020
(Dollars in millions)			
Land	N/A	\$ 751	848
Fiber, conduit and other outside plant ⁽¹⁾	15-45 years	15,366	26,522
Central office and other network electronics ⁽²⁾	3-10 years	15,394	20,692
Support assets ⁽³⁾	3-30 years	7,181	8,261
Construction in progress ⁽⁴⁾	N/A	1,474	1,611
Gross property, plant and equipment		40,166	57,934
Accumulated depreciation		(19,271)	(31,596)
Net property, plant and equipment		\$ 20,895	26,338

¹ Fiber, conduit and other outside plant consists of fiber and metallic cable, conduit, poles and other supporting structures. Fiber, conduit and other outside plant decreased as of December 31, 2021 compared to December 31, 2020 due to the retirement of a portion of our copper-based infrastructure being replaced with our Quantum Fiber infrastructure.

² Central office and other network electronics consists of circuit and packet switches, routers, transmission electronics and electronics providing service to customers.

³ Support assets consist of buildings, cable landing stations, data centers, computers and other administrative and support equipment.

⁴ Construction in progress includes inventory held for construction and property of the aforementioned categories that has not been placed in service as it is still under construction.

At December 31, 2021, we classified \$5.1 billion of certain property, plant and equipment, net as held for sale and discontinued recording depreciation on these disposal groups. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

We recorded depreciation expense of \$2.7 billion, \$3.0 billion and \$3.1 billion for the years ended December 31, 2021, 2020 and 2019, respectively.

Asset Retirement Obligations

As of December 31, 2021 and 2020, our asset retirement obligations balance was primarily related to estimated future costs of removing equipment from leased properties and estimated future costs of properly disposing of asbestos and other hazardous materials upon remodeling or demolishing buildings. Asset retirement obligations are included in other long-term liabilities on our consolidated balance sheets.

Our fair value estimates were determined using the discounted cash flow method.

The following table provides asset retirement obligation activity:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Balance at beginning of year	\$ 199	197	190
Accretion expense	10	10	11
Liabilities settled	(13)	(8)	(14)
Change in estimate	(2)	—	10
Reclassified as held for sale ⁽¹⁾	(12)	—	—
Balance at end of year	\$ 182	199	197

¹ Represents the amounts reclassified as held for sale related to our planned divestitures. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses.

The 2019 and 2021 changes in estimates referred to in the table above were offset against gross property, plant and equipment.

(10) SEVERANCE

Periodically, we reduce our workforce and accrue liabilities for the related severance costs. These workforce reductions result primarily from the progression or completion of our post-acquisition integration plans, increased competitive pressures, cost reduction initiatives, process improvements through automation and reduced workload demands due to reduced demand for certain services.

We report severance liabilities within accrued expenses and other liabilities - salaries and benefits in our consolidated balance sheets and report severance expenses in selling, general and administrative expenses in our consolidated statements of operations. As described in Note 17—Segment Information, we do not allocate these severance expenses to our segments.

Changes in our accrued liabilities for severance expenses were as follows:

	Severance	
	(Dollars in millions)	
Balance at December 31, 2019	\$	89
Accrued to expense		151
Payments, net		(137)
Balance at December 31, 2020		103
Accrued to expense		3
Payments, net		(70)
Balance at December 31, 2021	\$	36

(11) EMPLOYEE BENEFITS**Pension, Post-Retirement and Other Post-Employment Benefits**

We sponsor various defined benefit pension plans (qualified and non-qualified) which, in the aggregate, cover a substantial portion of our employees including legacy CenturyLink, legacy Level 3, legacy Qwest Communications International Inc. ("Qwest") and legacy Embarq employees. Pension benefits for participants of the Lumen Combined Pension Plan ("Combined Pension Plan") who are represented by a collective bargaining agreement are based on negotiated schedules. All other participants' pension benefits are based on each individual participant's years of service and compensation. We also maintain non-qualified pension plans for certain current and former highly compensated employees. We maintain post-retirement benefit plans that provide health care and life insurance benefits for certain eligible retirees. We also provide other post-employment benefits for certain eligible former employees. We use a December 31 measurement date for all our plans.

PENSION BENEFITS

United States funding laws require a company with a pension shortfall to fund the annual cost of benefits earned in addition to a seven-year amortization of the shortfall. Our funding policy for our Combined Pension Plan is to make contributions with the objective of accumulating ample assets to pay all qualified pension benefits when due under the terms of the plan. The accounting unfunded status of the Combined Pension Plan was \$1.1 billion and \$1.7 billion as of December 31, 2021 and 2020, respectively.

We made no voluntary cash contributions to the Combined Pension Plan in 2021 and 2020, respectively, and paid \$5 million of benefits directly to participants of our non-qualified pension plans in 2021 and 2020, respectively.

Benefits paid by the Combined Pension Plan are paid through a trust that holds all of the Plan's assets. The amount of required contributions to the Combined Pension Plan in 2022 and beyond will depend on a variety of factors, most of which are beyond our control, including earnings on plan investments, prevailing interest rates, demographic experience, changes in plan benefits and changes in funding laws and regulations. Based on current laws and circumstances, we do not believe we are required to make any contributions to the Combined Pension Plan in 2022. We do not expect to make voluntary contributions to the trust for the Combined Pension Plan in 2022. We estimate that in 2022 we will pay \$4 million of benefits directly to participants of our non-qualified pension plans.

We recognize in our consolidated balance sheets the funded status of the legacy Level 3 defined benefit post-retirement plans. The net unfunded status of these plans was \$17 million and \$33 million, as of December 31, 2021 and 2020, respectively. Additionally, as previously mentioned, we sponsor unfunded non-qualified pension plans for certain current and former highly-compensated employees. The net unfunded status of our non-qualified pension plans was \$46 million and \$51 million for the years ended December 31, 2021 and 2020, respectively. Due to the insignificant impact of these pension plans on our consolidated financial statements, we have predominantly excluded them from the remaining employee benefit disclosures in this Note, unless specifically stated.

POST-RETIREMENT BENEFITS

Our post-retirement benefit plans provide post-retirement benefits to qualified retirees and allow (i) eligible employees retiring before certain dates to receive benefits at no or reduced cost and (ii) eligible employees retiring after certain dates to receive benefits on a shared cost basis. The post-retirement benefits not paid by the trusts are funded by us and we expect to continue funding these post-retirement obligations as benefits are paid. The accounting unfunded status of our qualified post-retirement benefit plan was \$2.8 billion and \$3.0 billion as of December 31, 2021 and 2020, respectively.

Assets in the post-retirement trusts were substantially depleted as of December 31, 2016; as of December 31, 2019 the Company ceased to pay certain post-retirement benefits through the trusts. No contributions were made to the post-retirement trusts in 2021 nor 2020. Starting in 2020, benefits were paid directly by us with available cash. In 2021, we paid \$203 million of post-retirement benefits, net of participant contributions and direct subsidies. In 2022, we currently expect to pay directly \$217 million of post-retirement benefits, net of participant contributions and direct subsidies.

We expect our expected health care cost trend to range from 5.00% to 5.75% in 2022 and grading to 4.50% by 2025. Our post-retirement benefit cost, for certain eligible legacy Qwest retirees and certain eligible legacy CenturyLink retirees, is capped at a set dollar amount. Therefore, those health care benefit obligations are not subject to increasing health care trends after the effective date of the caps.

Expected Cash Flows

The Combined Pension Plan payments, post-retirement health care benefit payments and premiums, and life insurance premium payments are either distributed from plan assets or paid by us. The estimated benefit payments provided below are based on actuarial assumptions using the demographics of the employee and retiree populations and have been reduced by estimated participant contributions.

	Combined Pension Plan	Post-Retirement Benefit Plans	Medicare Part D Subsidy Receipts
(Dollars in millions)			
Estimated future benefit payments:			
2022	\$ 850	220	(3)
2023	729	216	(3)
2024	706	211	(3)
2025	686	206	(3)
2026	664	200	(3)
2027 - 2031	2,978	899	(10)

Net Periodic Benefit Expense (Income)

We utilize a full yield curve approach in connection with estimating the service and interest components of net periodic benefit expense by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the relevant projected cash flow.

The actuarial assumptions used to compute the net periodic benefit expense for our Combined Pension Plan and post-retirement benefit plans are based upon information available as of the beginning of the year, as presented in the following table.

	Combined Pension Plan			Post-Retirement Benefit Plans		
	2021	2020	2019	2021	2020	2019
Actuarial assumptions at beginning of year:						
Discount rate	1.70% - 2.88%	2.79% - 3.55%	3.94% - 4.44%	1.58% - 2.60%	1.69% - 3.35%	3.84% - 4.38%
Rate of compensation increase	3.25%	3.25%	3.25%	N/A	N/A	N/A
Expected long-term rate of return on plan assets ⁽¹⁾	5.50%	6.50%	6.50%	4.00%	4.00%	4.00%
Initial health care cost trend rate	N/A	N/A	N/A	6.25% / 5.00%	6.50% / 5.00%	6.50% / 5.00%
Ultimate health care cost trend rate	N/A	N/A	N/A	4.50%	4.50%	4.50%
Year ultimate trend rate is reached	N/A	N/A	N/A	2025	2025	2025

N/A - Not applicable

¹ Rates are presented net of projected fees and administrative costs.

Net periodic benefit expense (income) for our Combined Pension Plan includes the following components:

	Combined Pension Plan Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Service cost	\$ 56	59	56
Interest cost	201	324	436
Expected return on plan assets	(535)	(593)	(618)
Settlement charges	383	—	—
Special termination benefits charge	6	13	6
Recognition of prior service credit	(9)	(9)	(8)
Recognition of actuarial loss	184	202	223
Net periodic pension expense (income)	\$ 286	(4)	95

Net periodic benefit expense for our post-retirement benefit plans includes the following components:

	Post-Retirement Plans Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Service cost	\$ 14	14	15
Interest cost	47	69	110
Expected return on plan assets	—	(1)	(1)
Recognition of prior service cost	15	16	16
Recognition of actuarial loss	4	—	—
Curtailment loss	—	8	—
Net periodic post-retirement benefit expense	\$ 80	106	140

Service costs for our Combined Pension Plan and post-retirement benefit plans are included in the cost of services and products and selling, general and administrative line items on our consolidated statements of operations and all other costs listed above are included in other expense, net on our consolidated statements of operations for the years ended December 31, 2021, 2020 and 2019. Additionally, a portion of the service cost is also allocated to certain assets under construction, which are capitalized and reflected as part of property, plant and equipment in our consolidated balance sheets. As a result of ongoing efforts to reduce our workforce, we recognized one-time charges in 2021 of \$6 million, in 2020 of \$21 million and in 2019 of \$6 million for curtailment and special termination benefit enhancements paid to certain eligible employees upon voluntary retirement.

Our pension plan contains provisions that allow us, from time to time, to offer lump sum payment options to certain former employees in settlement of their future retirement benefits. We record an accounting settlement charge, consisting of the recognition of certain deferred costs of the pension plan associated with these lump sum payments only if, in the aggregate, they exceed or are probable to exceed the sum of the annual service and interest costs for the plan's net periodic pension benefit cost, which represents the settlement accounting threshold. The lump sum pension settlement payments for 2021 exceeded the settlement threshold. In addition, during the fourth quarter of 2021, we executed an annuity purchase contract with a third party insurer that triggered additional settlement activity (see "Pension Annuitization" section below for further information). As a result, we recognized a non-cash settlement charge of \$383 million as of December 31, 2021 to accelerate the recognition of a portion of the previously unrecognized actuarial losses in the qualified pension plan, which is reflected in other expense, net in our consolidated statement of operations for the year ended December 31, 2021. This non-cash charge reduced our recorded net income and increased our recorded accumulated deficit, with an offset to accumulated other comprehensive loss in shareholders' equity for the year ended December 31, 2021. The amount of any future non-cash settlement charges after 2021 will be dependent on several factors, including the total amount of our future lump sum benefit payments.

Benefit Obligations

The actuarial assumptions used to compute the funded status for the plans are based upon information available as of December 31, 2021 and 2020 and are as follows:

	Combined Pension Plan December 31,		Post-Retirement Benefit Plans December 31,	
	2021	2020	2021	2020
Actuarial assumptions at end of year:				
Discount rate	2.85%	2.43%	2.84%	2.40%
Rate of compensation increase	3.25%	3.25%	N/A	N/A
Initial health care cost trend rate	N/A	N/A	5.75% / 5.00%	6.25% / 5.00%
Ultimate health care cost trend rate	N/A	N/A	4.50%	4.50%
Year ultimate trend rate is reached	N/A	N/A	2025	2025

N/A - Not applicable

In 2021, 2020 and 2019, we adopted the revised mortality tables and projection scales released by the Society of Actuaries, which increased the projected benefit obligation of our benefit plans by \$37 million for 2021 and decreased the projected benefit obligation of our benefit plans by \$3 million and \$4 million for 2020 and 2019, respectively. The change in the projected benefit obligation of our benefit plans was recognized as part of the net actuarial loss and is included in accumulated other comprehensive loss, a portion of which is subject to amortization over the remaining estimated life of plan participants, which was approximately 8 years as of December 31, 2021.

The short-term and long-term interest crediting rates during 2021 for cash balance components of the Combined Pension Plan were 1.5% and 3.5%, respectively.

The following tables summarize the change in the benefit obligations for the Combined Pension Plan and post-retirement benefit plans:

	Combined Pension Plan Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Change in benefit obligation			
Benefit obligation at beginning of year	\$ 12,202	12,217	11,594
Service cost	56	59	56
Interest cost	201	324	436
Plan amendments	(13)	(3)	(9)
Special termination benefits charge	6	13	6
Actuarial (gain) loss	(337)	749	1,249
Benefits paid from plan assets	(766)	(1,157)	(1,115)
Settlement payments and annuity purchase	(1,671)	—	—
Benefit obligation at end of year	\$ 9,678	12,202	12,217

	Post-Retirement Benefit Plans Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Change in benefit obligation			
Benefit obligation at beginning of year	\$ 3,048	3,037	2,977
Service cost	14	14	15
Interest cost	47	69	110
Participant contributions	41	46	52
Direct subsidy receipts	3	6	7
Actuarial (gain) loss	(125)	134	180
Curtailement loss	—	4	—
Benefits paid by company	(247)	(255)	(300)
Benefits paid from plan assets	—	(7)	(4)
Benefit obligation at end of year	\$ 2,781	3,048	3,037

Pension Annuitization

On October 19, 2021, we, as sponsor of the Combined Pension Plan, along with the Plan's independent fiduciary, entered into an agreement committing the Plan to use a portion of its plan assets to purchase an annuity from an insurance company (the "Insurer") to transfer approximately \$1.4 billion of the Plan's pension liabilities. This agreement irrevocably transferred to the Insurer future Plan benefit obligations for approximately 22,600 U.S. Lumen participants ("Transferred Participants") effective on December 31, 2021. This annuity transaction was funded entirely by existing Plan assets.

The Insurer assumed responsibility for administrative and customer service support, including distribution of payments to the Transferred Participants. Transferred Participants' benefits were not reduced as a result of this transaction.

Plan Assets

We maintain plan assets for our Combined Pension Plan and certain post-retirement benefit plans. As previously noted, assets in the post-retirement benefit plan trusts were substantially depleted as of December 31, 2016. Fair value of post-retirement benefit plan assets of December 31, 2021, 2020 and 2019 was \$5 million, \$5 million and \$13 million, respectively. Due to the insignificance of these assets on our consolidated financial statements, we have predominantly excluded them from the disclosures of plan assets in this Note, unless otherwise indicated.

The following table summarizes the change in the fair value of plan assets for the Combined Pension Plan:

	Combined Pension Plan Years Ended December 31,		
	2021	2020	2019
(Dollars in millions)			
Change in plan assets			
Fair value of plan assets at beginning of year	\$ 10,546	10,493	10,033
Return on plan assets	422	1,210	1,575
Benefits paid from plan assets	(766)	(1,157)	(1,115)
Settlement payments and annuity purchase	(1,671)	—	—
Fair value of plan assets at end of year	\$ 8,531	10,546	10,493

The expected rate of return on plan assets is the long-term rate of return we expect to earn on the plan's assets, net of administrative expenses paid from plan assets. It is determined annually based on the strategic asset allocation and the long-term risk and return forecast for each asset class.

Our investment objective for the Combined Pension Plan assets is to achieve an attractive risk-adjusted return over time that will provide for the payment of benefits and minimize the risk of large losses. We employ a liability-aware investment strategy designed to reduce the volatility of pension assets relative to pension liabilities. This strategy is evaluated frequently and is expected to evolve over time with changes in the funded status and other factors. Approximately 55% of plan assets is targeted to long-duration investment grade bonds and interest rate sensitive derivatives and 45% is targeted to diversified equity, fixed income and private market investments that are expected to outperform the liability with moderate funded status risk. At the beginning of 2022, our expected annual long-term rate of return on pension assets before consideration of administrative expenses is assumed to be 6.0%. Administrative expenses, including projected PBGC (Pension Benefit Guaranty Corporation) premiums reduce the annual long-term expected return net of administrative expenses to 5.5%.

Permitted investments: Plan assets are managed consistent with the restrictions set forth by the Employee Retirement Income Security Act of 1974, as amended.

Fair Value Measurements: Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between independent and knowledgeable parties who are willing and able to transact for an asset or liability at the measurement date. We use valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs when determining fair value and then we rank the estimated values based on the reliability of the inputs used following the fair value hierarchy set forth by the FASB. For additional information on the fair value hierarchy, see Note 14—Fair Value of Financial Instruments.

At December 31, 2021, we used the following valuation techniques to measure fair value for assets. There were no changes to these methodologies during 2021:

- Level 1—Assets were valued using the closing price reported in the active market in which the individual security was traded. U.S. Treasury securities are valued at the bid price reported in an active market in which the security is traded. Variation margin due from/(to) brokers is valued at the expected next day cash settlement amount.

- Level 2—Assets were valued using quoted prices in markets that are not active, broker dealer quotations, and other methods by which all significant inputs were observable at the measurement date. Fixed income securities primarily utilize observable market information and are based on a spread to U.S. Treasury securities and consider yields available on comparable securities of issuers with similar credit ratings, the new issue market for similar securities, secondary trading markets and dealer quotes. Option adjusted spread models are utilized to evaluate fixed income securities that have early redemption features. Derivative securities traded over the counter are valued based on gains or losses due to fluctuations in indices, interest rates, foreign currency exchange rates, security prices or other underlying factors. Repurchase agreements are valued based on expected settlement per the contract terms.
- Level 3—Assets were valued using unobservable inputs in which little or no market data exists as reported by the respective institutions at the measurement date. Valuation methods may consider a range of factors, including estimates based on the assumptions of the investment entity or actuarial assumptions of insurers for valuing Group Annuity Contracts.

The plan's assets are invested in various asset categories utilizing multiple strategies and investment managers. Interests in commingled funds are fair valued using a practical expedient to the net asset value ("NAV") per unit (or its equivalent) of each fund. The NAV reported by the fund manager is based on the market value of the underlying investments owned by each fund, minus its liabilities, divided by the number of shares outstanding. Commingled funds can be redeemed at NAV, with a frequency that includes, daily, monthly, quarterly, semi-annually and annually. These commingled funds include redemption notice periods between same day and 180 days. Investments in private funds, primarily limited partnerships, represent long-term commitments with a fixed maturity date and are also valued at NAV. The plan has unfunded commitments related to certain private fund investments, which in aggregate are not material to the plan. Valuation inputs for these private fund interests are generally based on assumptions and other information not observable in the market. Underlying investments held in funds are aggregated and are classified based on the fund mandate. Investments held in separate accounts are individually classified.

The table below present the fair value of plan assets by category and the input levels used to determine those fair values at December 31, 2021. It is important to note that the asset allocations do not include market exposures that are gained with derivatives. Investments include dividend and interest receivables, pending trades and accrued expenses.

	Fair Value of Combined Pension Plan Assets at December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
Assets				
Investment grade bonds ^(a)	\$ 862	3,744	—	4,606
High yield bonds ^(b)	—	172	6	178
Emerging market bonds ^(c)	64	169	—	233
U.S. stocks ^(d)	330	3	5	338
Non-U.S. stocks ^(e)	256	—	—	256
Multi-asset strategies ^(l)	41	—	—	41
Derivatives ^(m)	—	1	—	1
Cash equivalents and short-term investments ^(o)	2	379	—	381
Total investments, excluding investments valued at NAV	\$ 1,555	4,468	11	6,034
Liabilities				
Repurchase agreements ⁽ⁿ⁾	\$ —	(193)	—	(193)
Investments valued at NAV				2,690
Total pension plan assets			\$	8,531

The table below present the fair value of plan assets by category and the input levels used to determine those fair values at December 31, 2020. It is important to note that the asset allocations do not include market exposures that are gained with derivatives. Investments include dividend and interest receivable, pending trades and accrued expenses.

	Fair Value of Combined Pension Plan Assets at December 31, 2020			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
Assets				
Investment grade bonds ^(a)	\$ 726	4,066	—	4,792
High yield bonds ^(b)	—	262	6	268
Emerging market bonds ^(c)	218	172	—	390
U.S. stocks ^(d)	653	—	2	655
Non-U.S. stocks ^(e)	593	1	—	594
Multi-asset strategies ^(l)	199	—	—	199
Cash equivalents and short-term investments ^(o)	—	281	—	281
Total investments, excluding investments valued at NAV	\$ 2,389	4,782	8	7,179
Liabilities				
Derivatives ^(m)	\$ —	(1)	—	(1)
Investments valued at NAV				3,368
Total pension plan assets			\$	10,546

The table below presents the fair value of plan assets valued at NAV by category for our Combined Pension Plan at December 31, 2021 and 2020.

	Fair Value of Plan Assets Valued at NAV	
	Combined Pension Plan at December 31,	
	2021	2020
	(Dollars in millions)	
Investment grade bonds ^(a)	\$ 127	352
High yield bonds ^(b)	70	25
U.S. stocks ^(d)	71	192
Non-U.S. stocks ^(e)	398	308
Emerging market stocks ^(f)	11	81
Private equity ^(g)	348	283
Private debt ^(h)	495	505
Market neutral hedge funds ⁽ⁱ⁾	141	222
Directional hedge funds ^(j)	241	254
Real estate ^(k)	420	543
Multi-asset strategies ^(l)	38	375
Cash equivalents and short-term investments ^(o)	330	228
Total investments valued at NAV	\$ 2,690	3,368

Below is an overview of the asset categories and the underlying strategies used in the preceding tables:

- ^(a) *Investment grade bonds* represent investments in fixed income securities as well as commingled bond funds comprised of U.S. Treasury securities, agencies, corporate bonds, mortgage-backed securities, asset-backed securities and commercial mortgage-backed securities.
- ^(b) *High yield bonds* represent investments in below investment grade fixed income securities as well as commingled high yield bond funds.
- ^(c) *Emerging market bonds* represent investments in securities issued by governments and other entities located in emerging countries as well as registered mutual funds and commingled emerging market bond funds.
- ^(d) *U.S. stocks* represent investments in stocks of U.S. based companies as well as commingled U.S. stock funds.
- ^(e) *Non-U.S. stocks* represent investments in stocks of companies based in developed countries outside the U.S. as well as commingled funds.
- ^(f) *Emerging market stocks* represent investments in commingled funds comprised of stocks of companies located in emerging markets.
- ^(g) *Private equity* represents non-public investments in domestic and foreign buy out and venture capital funds. Private equity funds are primarily structured as limited partnerships and are valued according to the valuation policy of each partnership, subject to prevailing accounting and other regulatory guidelines.
- ^(h) *Private debt* represents non-public investments in distressed or mezzanine debt funds and pension group insurance contracts.

- (i) *Market neutral hedge funds* hold investments in a diversified mix of instruments that are intended in combination to exhibit low correlations to market fluctuations. These investments are typically combined with futures to achieve uncorrelated excess returns over various markets.
- (j) *Directional hedge funds*—This asset category represents investments that may exhibit somewhat higher correlations to market fluctuations than the market neutral hedge funds. Investments in hedge funds include both direct investments and investments in diversified funds of funds.
- (k) *Real estate* represents investments in commingled funds and limited partnerships that invest in a diversified portfolio of real estate properties.
- (l) *Multi-asset strategies* represent broadly diversified strategies that have the flexibility to tactically adjust exposures to different asset classes through time.
- (m) *Derivatives* include exchange traded futures contracts as well as privately negotiated over the counter contracts. The market values represent gains or losses that occur due to differences between stated contract terms and fluctuations in underlying market instruments.
- (n) *Repurchase Agreements* includes contracts where the security owner sells a security with the agreement to buy it back at a future date and price.
- (o) *Cash equivalents and short-term investments* represent investments that are used in conjunction with derivatives positions or are used to provide liquidity for the payment of benefits or other purposes.

Derivative instruments: Derivative instruments are used to reduce risk as well as provide return. The gross notional exposure of the derivative instruments directly held by the Combined Pension Plan is shown below. The notional amount of the derivatives corresponds to market exposure but does not represent an actual cash investment.

	Gross Notional Exposure	
	Combined Pension Plan Years Ended December 31,	
	2021	2020
	(Dollars in millions)	
<u>Derivative instruments:</u>		
Exchange-traded U.S. equity futures	\$ 108	84
Exchange-traded Treasury and other interest rate futures	1,688	1,033
Exchange-traded Foreign currency futures	11	12
Exchange-traded EURO futures	5	6
Interest rate swaps	127	124
Credit default swaps	132	43
Index swaps	1,036	1,297
Foreign exchange forwards	93	769
Options	654	222

Concentrations of Risk: Investments, in general, are exposed to various risks, such as significant world events, interest rate, credit, foreign currency and overall market volatility risk. These risks are managed by broadly diversifying assets across numerous asset classes and strategies with differing expected returns, volatilities and correlations. Risk is also broadly diversified across numerous market sectors and individual companies. Financial instruments that potentially subject the plans to concentrations of counterparty risk consist principally of investment contracts with high quality financial institutions. These investment contracts are typically collateralized obligations and/or are actively managed, limiting the amount of counterparty exposure to any one financial institution. Although the investments are well diversified, the value of plan assets could change materially depending upon the overall market volatility, which could affect the funded status of the plan.

The table below presents a rollforward of the Combined Pension Plan assets valued using Level 3 inputs:

	Combined Pension Plan Assets Valued Using Level 3 Inputs			
	High Yield Bonds	U.S. Stocks	Private Debt	Total
(Dollars in millions)				
Balance at December 31, 2019	\$ 5	1	16	22
Acquisitions (dispositions)	1	—	(17)	(16)
Actual return on plan assets	—	1	1	2
Balance at December 31, 2020	6	2	—	8
Actual return on plan assets	—	3	—	3
Balance at December 31, 2021	\$ 6	5	—	11

Certain gains and losses are allocated between assets sold during the year and assets still held at year-end based on transactions and changes in valuations that occurred during the year. These allocations also impact our calculation of net acquisitions and dispositions.

For the year ended December 31, 2021, the investment program produced actual gains on Combined Pension Plan assets of \$422 million as compared to expected returns of \$535 million, for a difference of \$113 million. For the year ended December 31, 2020, the investment program produced actual gains on Combined Pension Plan assets of \$1.2 billion as compared to the expected returns of \$593 million, for a difference of \$618 million. The short-term annual returns on plan assets will almost always be different from the expected long-term returns and the plans could experience net gains or losses, due primarily to the volatility occurring in the financial markets during any given year.

Unfunded Status

The following table presents the unfunded status of the Combined Pension Plan and post-retirement benefit plans:

	Combined Pension Plan		Post-Retirement Benefit Plans	
	Years Ended December 31,		Years Ended December 31,	
	2021	2020	2021	2020
	(Dollars in millions)			
Benefit obligation	\$ (9,678)	(12,202)	(2,781)	(3,048)
Fair value of plan assets	8,531	10,546	5	5
Unfunded status	(1,147)	(1,656)	(2,776)	(3,043)
Current portion of unfunded status	—	—	(212)	(228)
Non-current portion of unfunded status	\$ (1,147)	(1,656)	(2,564)	(2,815)

The current portion of our post-retirement benefit obligations is recorded on our consolidated balance sheets in accrued expenses and other current liabilities-salaries and benefits.

Accumulated Other Comprehensive Loss-Recognition and Deferrals

The following table presents cumulative items not recognized as a component of net periodic benefits expense as of December 31, 2020, items recognized as a component of net periodic benefits expense in 2021, additional items deferred during 2021 and cumulative items not recognized as a component of net periodic benefits expense as of December 31, 2021. The items not recognized as a component of net periodic benefits expense have been recorded on our consolidated balance sheets in accumulated other comprehensive loss:

	As of and for the Years Ended December 31,				
	2020	Recognition of Net Periodic Benefits Expense	Deferrals	Net Change in AOCL	2021
(Dollars in millions)					
Accumulated other comprehensive (loss) income					
Pension plans:					
Net actuarial (loss) gain	\$ (2,993)	186	243	429	(2,564)
Settlement charge	—	383	—	383	383
Prior service benefit (cost)	41	(9)	13	4	45
Deferred income tax benefit (expense)	755	(137)	(59)	(196)	559
Total pension plans	(2,197)	423	197	620	(1,577)
Post-retirement benefit plans:					
Net actuarial (loss) gain	(346)	4	125	129	(217)
Prior service (cost) benefit	(20)	15	—	15	(5)
Curtailement loss	4	—	—	—	4
Deferred income tax benefit (expense)	90	(5)	(31)	(36)	54
Total post-retirement benefit plans	(272)	14	94	108	(164)
Total accumulated other comprehensive (loss) income	\$ (2,469)	437	291	728	(1,741)

The following table presents cumulative items not recognized as a component of net periodic benefits expense as of December 31, 2019, items recognized as a component of net periodic benefits expense in 2020, additional items deferred during 2020 and cumulative items not recognized as a component of net periodic benefits expense as of December 31, 2019. The items not recognized as a component of net periodic benefits expense have been recorded on our consolidated balance sheets in accumulated other comprehensive loss:

	As of and for the Years Ended December 31,				
	2019	Recognition of Net Periodic Benefits Expense	Deferrals	Net Change in AOCL	2020
(Dollars in millions)					
Accumulated other comprehensive (loss) income					
Pension plans:					
Net actuarial (loss) gain	\$ (3,046)	203	(150)	53	(2,993)
Prior service benefit (cost)	47	(9)	3	(6)	41
Deferred income tax benefit (expense)	770	(47)	32	(15)	755
Total pension plans	(2,229)	147	(115)	32	(2,197)
Post-retirement benefit plans:					
Net actuarial (loss) gain	(175)	—	(171)	(171)	(346)
Prior service (cost) benefit	(71)	16	35	51	(20)
Curtailment loss	—	4	—	4	4
Deferred income tax benefit (expense)	62	(5)	33	28	90
Total post-retirement benefit plans	(184)	15	(103)	(88)	(272)
Total accumulated other comprehensive (loss) income	\$ (2,413)	162	(218)	(56)	(2,469)

Medicare Prescription Drug, Improvement and Modernization Act of 2003

We sponsor post-retirement health care plans with several benefit options that provide prescription drug benefits that we deem actuarially equivalent to or exceeding Medicare Part D. We recognize the impact of the federal subsidy received under the Medicare Prescription Drug, Improvement and Modernization Act of 2003 in the calculation of our post-retirement benefit obligation and net periodic post-retirement benefit expense.

Other Benefit Plans

HEALTH CARE AND LIFE INSURANCE

We provide health care and life insurance benefits to essentially all of our active employees. We are largely self-funded for the cost of the health care plan. Our health care benefit expense for current employees was \$309 million, \$307 million and \$381 million for the years ended December 31, 2021, 2020 and 2019, respectively. Union-represented employee benefits are based on negotiated collective bargaining agreements. Employees contributed \$120 million, \$133 million, \$148 million for the years ended December 31, 2021, 2020 and 2019, respectively. Our group basic life insurance plans are fully insured and the premiums are paid by us.

401(K) PLANS

We sponsor a qualified defined contribution plan covering substantially all of our U.S. employees. Under this plan, employees may contribute a percentage of their annual compensation up to certain maximums, as defined by the plan and by the Internal Revenue Service. Currently, we match a percentage of employee contributions in cash. At December 31, 2021 and 2020, the assets of the plan included approximately 10 million and 11 million shares of our common stock, respectively, all of which were the result of the combination of previous employer match and participant directed contributions. We recognized expenses related to this plan of \$96 million, \$101 million and \$113 million for the years ended December 31, 2021, 2020 and 2019, respectively.

DEFERRED COMPENSATION PLANS

We sponsored non-qualified deferred compensation plans for various groups that included certain of our current and former highly compensated employees. The value of liabilities related to these plans was not significant.

SUBSEQUENT EVENT

As of January 1, 2022, a new pension plan (the "Lumen Pension Plan") was spun off from the Lumen Combined Pension Plan in anticipation of the sale of the ILEC business, as described further in Note 2—Planned Divestiture of the Latin American and ILEC Businesses. The Lumen Pension Plan covers approximately 2,500 active plan participants along with 19,000 other participants, resulting in a pension benefit obligation of \$2.5 billion and assets of \$2.2 billion allocated to the Lumen Pension Plan. In addition, the December 31, 2021 actuarial (loss) gain and prior service cost included in accumulated other comprehensive loss was allocated to the Lumen Pension Plan or the Lumen Combined Pension Plan. The amounts allocated to the Lumen Pension Plan are subject to adjustment up to the closing of the sale of the ILEC business. We will recognize pension costs related to both plans during 2022 until the sale of the ILEC business, at which time balances related to the Lumen Pension Plan will be included in the calculation of our gain on the sale of the business.

(12) STOCK-BASED COMPENSATION

We maintain an equity incentive program that allows our Board of Directors (through its Compensation Committee or a senior officer acting under delegated authority) to grant incentives to certain employees and outside directors in one or more forms, including: incentive and non-qualified stock options, stock appreciation rights, restricted stock awards, restricted stock units and market and performance shares. Stock options generally expire ten years from the date of grant. There was an insignificant amount of outstanding stock options as of December 31, 2020 and none as of December 31, 2021.

Restricted Stock Awards and Restricted Stock Unit Awards

For equity based restricted stock and restricted stock unit awards that contain only service conditions for vesting (time-based awards), we calculate the award fair value based on the closing price of Lumen Technologies common stock on the accounting grant date. We also grant equity-based awards that contain service conditions as well as additional market or performance conditions. For awards having both service and market conditions, the award fair value is calculated using Monte-Carlo simulations. Awards with service as well as market or performance conditions specify a target number of shares for the award, although each recipient ultimately has the opportunity to receive between 0% and 200% of the target number of shares. For awards with service and market conditions, the percentage received is based on our total shareholder return over the three-year service period versus that of selected peer companies. For awards with service and performance conditions, the percentage received depends upon the attainment of one or more financial performance targets during the two- or three-year service period.

The following table summarizes activity involving restricted stock and restricted stock unit awards for the year ended December 31, 2021:

	Number of Shares	Weighted- Average Grant Date Fair Value
	(in thousands)	
Non-vested at December 31, 2020	21,508	\$ 12.37
Granted	13,908	13.95
Vested	(11,161)	13.56
Forfeited	(1,828)	12.58
Non-vested at December 31, 2021	22,427	12.74

During 2021, we granted 13.9 million shares of restricted stock and restricted stock unit awards at a weighted-average price of \$13.95. During 2020, we granted 17.8 million shares of restricted stock and restricted stock unit awards at a weighted-average price of \$12.08. During 2019, we granted 9.8 million shares of restricted stock and restricted stock unit awards at a weighted-average price of \$12.41. The total fair value of restricted stock that vested during 2021, 2020 and 2019, was \$139 million, \$126 million and \$118 million, respectively. We do not estimate forfeitures, but recognize them as they occur.

Compensation Expense and Tax Benefit

We recognize compensation expense related to our market and performance stock-based awards with graded vesting that only have a service condition on a straight-line basis over the requisite service period for the entire award. Total compensation expense for all stock-based payment arrangements for the years ended December 31, 2021, 2020 and 2019, was \$120 million, \$175 million and \$162 million, respectively. Our tax benefit recognized in the consolidated statements of operations for our stock-based payment arrangements for the years ended December 31, 2021, 2020 and 2019, was \$29 million, \$43 million and \$39 million, respectively. At December 31, 2021, there was \$14.7 million of total unrecognized compensation expense related to our stock-based payment arrangements, which we expect to recognize over a weighted-average period of 1.5 years.

(13) EARNINGS (LOSS) PER COMMON SHARE

Basic and diluted earnings (loss) per common share for the years ended December 31, 2021, 2020 and 2019 were calculated as follows:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions, except per share amounts, shares in thousands)		
Income (Loss) (Numerator)			
Net Income (Loss)	\$ 2,033	(1,232)	(5,269)
Net income (loss) applicable to common stock for computing basic earnings (loss) per common share	2,033	(1,232)	(5,269)
Net income (loss) as adjusted for purposes of computing diluted earnings (loss) per common share	\$ 2,033	(1,232)	(5,269)
Shares (Denominator):			
Weighted average number of shares:			
Outstanding during period	1,077,393	1,096,284	1,088,730
Non-vested restricted stock	(17,852)	(17,154)	(17,289)
Weighted average shares outstanding for computing basic earnings (loss) per common share	1,059,541	1,079,130	1,071,441
Incremental common shares attributable to dilutive securities:			
Shares issuable under convertible securities	10	—	—
Shares issuable under incentive compensation plans	7,227	—	—
Number of shares as adjusted for purposes of computing diluted earnings (loss) per common share	1,066,778	1,079,130	1,071,441
Basic earnings (loss) per common share	\$ 1.92	(1.14)	(4.92)
Diluted earnings (loss) per common share ⁽¹⁾	\$ 1.91	(1.14)	(4.92)

¹ For the years ended December 31, 2020 and December 31, 2019, we excluded from the calculation of diluted loss per share 5.3 million shares and 3.0 million shares, respectively, potentially issuable under incentive compensation plans or convertible securities, as their effect, if included, would have been anti-dilutive.

Our calculation of diluted earnings (loss) per common share excludes shares of common stock that are issuable upon exercise of stock options when the exercise price is greater than the average market price of our common stock. We also exclude unvested restricted stock awards that are antidilutive as a result of unrecognized compensation cost. Such shares were 3.2 million, 3.2 million and 6.8 million for 2021, 2020 and 2019, respectively.

(14) FAIR VALUE OF FINANCIAL INSTRUMENTS

Our financial instruments consist of cash, cash equivalents, restricted cash, accounts receivable, accounts payable, long-term debt, excluding finance lease and other obligations, interest rate swap contracts and certain investments. Due primarily to their short-term nature, the carrying amounts of our cash, cash equivalents, restricted cash, accounts receivable and accounts payable approximate their fair values.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between independent and knowledgeable parties who are willing and able to transact for an asset or liability at the measurement date. We use valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs when determining fair value and then we rank the estimated values based on the reliability of the inputs used following the fair value hierarchy set forth by the FASB.

We determined the fair values of our long-term debt, including the current portion, based on quoted market prices where available or, if not available, based on inputs other than quoted market prices in active markets that are either directly or indirectly observable such as discounted future cash flows using current market interest rates.

The three input levels in the hierarchy of fair value measurements are defined by the FASB generally as follows:

Input Level	Description of Input
Level 1	Observable inputs such as quoted market prices in active markets.
Level 2	Inputs other than quoted prices in active markets that are either directly or indirectly observable.
Level 3	Unobservable inputs in which little or no market data exists.

The following table presents the carrying amounts and estimated fair values of our financial liabilities as of December 31, 2021:

	Input Level	As of December 31, 2021		As of December 31, 2020	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
(Dollars in millions)					
Long-term debt, excluding finance lease and other obligations ⁽¹⁾	2	\$ 28,635	29,221	31,542	33,217
Interest rate swap contracts (see Note 15)	2	25	25	107	107

¹ As of December 31, 2021, these amounts exclude \$1.4 billion of carrying amount and \$1.6 billion of fair value of debt that has been reclassified as held for sale. See Note 2—Planned Divestiture of the Latin American and ILEC Businesses for more information.

Investment Held at Net Asset Value

We hold an investment in a limited partnership that functions as holding company for a portion of the colocation and data center business that we divested in 2017. The limited partnership solely holds investments in those entities and has sole discretion as to the amount and timing of distributions of the underlying assets. Our investment did not have a readily determinable fair value as of December 31, 2020. As such, our investment in the limited partnership was previously accounted for under the cost method of accounting. As of December 31, 2021, the underlying investments held by the limited partnership began trading in active markets and as such, we elected to account for our investment in the limited partnership using net asset value ("NAV") as a practical expedient. As of December 31, 2021 the limited partnership is subject to a lock-up agreement that restricts the sale of certain underlying assets. The restriction is set to terminate in 2022.

	As of December 31, 2021		As of December 31, 2020	
	NAV		Cost	
(Dollars in millions)				
Investment in limited partnership ⁽¹⁾	\$	299		161

¹ For the year ended December 31, 2021, we recognized \$138 million of gain on investment, reflected in other expense, net in our consolidated statement of operations for the year ended December 31, 2021.

(15) DERIVATIVE FINANCIAL INSTRUMENTS

From time to time, we use derivative financial instruments, primarily interest rate swaps, to manage our exposure to fluctuations in interest rates. Our primary objective in managing interest rate risk is to decrease the volatility of our earnings and cash flows affected by changes in the underlying rates. We have floating rate long-term debt (see Note 7—Long-Term Debt and Credit Facilities). These obligations expose us to variability in interest payments due to changes in interest rates. If interest rates increase, our interest expense increases. Conversely, if interest rates decrease, our interest expense also decreases. We have designated our currently outstanding interest rate swap agreements as cash flow hedges. As described further below, under these hedges, we receive variable-rate amounts from a counterparty in exchange for us making fixed-rate payments over the lives of the agreements without exchange of the underlying notional amount. The change in the fair value of the interest rate swap agreements is reflected in accumulated other comprehensive income ("AOCI") and, as described below, is subsequently reclassified into earnings in the period that the hedged transaction affects earnings by virtue of qualifying as effective cash flow hedges. We do not use derivative financial instruments for speculative purposes.

In February 2019, we entered into five variable-to-fixed interest rate swap agreements to hedge the interest payments on \$2.5 billion notional amount of floating rate debt. The five interest rate swap agreements are with different counterparties; one for \$700 million and the other four for \$450 million each. The transactions were effective beginning March 31, 2019 and mature March 31, 2022. Under the terms of these interest rate swap transactions, we receive interest payments based on one month floating LIBOR terms and pay interest at the fixed rate of 2.48%.

In June 2019, we entered into six variable-to-fixed interest rate swap agreements to hedge the interest payments on \$1.5 billion notional amount of floating rate debt. The six interest rate swap agreements are with different counterparties for \$250 million each. The transactions were effective beginning June 30, 2019 and mature June 30, 2022. Under the terms of these interest rate swap transactions, we receive interest payments based on one month floating LIBOR terms and pay interest at the fixed rate of 1.58%.

As of December 31, 2021, 2020 and 2019, we evaluated the effectiveness of our hedges quantitatively and determined that hedges in effect on such dates qualified as effective hedge relationships.

We may be exposed to credit-related losses in the event of non-performance by counterparties. The counterparties to any of the financial derivatives we enter into are major institutions with investment grade credit ratings. We evaluate counterparty credit risk before entering into any hedge transaction and continue to closely monitor the financial market and the risk that our counterparties will default on their obligations as part of our quarterly qualitative effectiveness evaluation.

Amounts accumulated in AOCI related to derivatives are indirectly recognized in earnings as periodic settlement payments are made throughout the term of the swaps.

The table below presents the fair value of our derivative financial instruments as well as their classification on the consolidated balance sheets at December 31, 2021 and December 31, 2020 as follows (in millions):

Derivatives designated as	Balance Sheet Location	December 31,	
		2021	2020
		Fair Value	
Cash flow hedging contracts	Other current and noncurrent liabilities	\$ 25	107

The amount of unrealized losses recognized in AOCI consists of the following (in millions):

Derivatives designated as hedging instruments	2021	2020	2019
Cash flow hedging contracts			
Years Ended December 31,	\$ 1	115	53

The amount of realized losses reclassified from AOCI to the statement of operations consists of the following (in millions):

Derivatives designated as hedging instruments	2021	2020	2019
Cash flow hedging contracts			
Years Ended December 31,	\$ 83	62	2

Amounts currently included in AOCI will be reclassified into earnings prior to the ongoing settlements of these cash flow hedging contracts on March 31, 2022 or June 30, 2022. We estimate that \$25 million of net losses on the interest rate swaps (based on the estimated LIBOR curve as of December 31, 2021) will be reflected in our consolidated statements of operations within the next 12 months.

(16) INCOME TAXES

The components of the income tax expense are as follows:

	Years Ended December 31,		
	2021	2020	2019
(Dollars in millions)			
Income tax expense:			
Federal			
Current	\$ 5	5	7
Deferred	514	338	376
State			
Current	42	50	15
Deferred	72	55	81
Foreign			
Current	23	29	35
Deferred	12	(27)	(11)
Total income tax expense	\$ 668	450	503

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Income tax expense was allocated as follows:			
Income tax expense in the consolidated statements of operations:			
Attributable to income	\$ 668	450	503
Stockholders' equity:			
Tax effect of the change in accumulated other comprehensive loss	\$ 222	17	(62)

The following is a reconciliation from the statutory federal income tax rate to our effective income tax rate:

	Years Ended December 31,		
	2021	2020	2019
	(Percentage of pre-tax income (loss))		
Statutory federal income tax rate	21.0 %	21.0 %	21.0 %
State income taxes, net of federal income tax benefit	3.3 %	(10.8)%	(1.6)%
Goodwill impairment	— %	(71.0)%	(28.6)%
Change in liability for unrecognized tax position	0.1 %	(0.6)%	(0.2)%
Legislative changes to GILTI	— %	1.8 %	— %
Nondeductible executive stock compensation	0.2 %	(1.6)%	(0.1)%
Change in valuation allowance	— %	2.6 %	— %
Net foreign income taxes	0.6 %	(0.6)%	(0.5)%
Research and development credits	(0.5)%	1.6 %	0.1 %
Other, net	— %	0.1 %	(0.7)%
Effective income tax rate	24.7 %	(57.5)%	(10.6)%

The effective tax rate for the year ended December 31, 2020 includes a \$555 million unfavorable impact of non-deductible goodwill impairments, a \$14 million favorable impact in tax regulations passed in 2020 allowing a high tax exception related to our tax exposure of Global Intangible Low-Taxed Income ("GILTI"), as well as a \$20 million benefit related to the release of previously established valuation allowances against capital losses. The effective tax rate for the year ended December 31, 2019 reflects a \$1.4 billion unfavorable impact of non-deductible goodwill impairments.

The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets and deferred tax liabilities were as follows:

	As of December 31,	
	2021	2020
(Dollars in millions)		
Deferred tax assets		
Post-retirement and pension benefit costs	\$ 978	1,164
Net operating loss carryforwards	2,463	3,138
Other employee benefits	96	119
Other	554	604
Gross deferred tax assets	4,091	5,025
Less valuation allowance	(1,566)	(1,538)
Net deferred tax assets	2,525	3,487
Deferred tax liabilities		
Property, plant and equipment, primarily due to depreciation differences	(3,941)	(3,882)
Goodwill and other intangible assets	(2,473)	(2,755)
Gross deferred tax liabilities	(6,414)	(6,637)
Net deferred tax liability	\$ (3,889)	(3,150)

Of the \$3.9 billion and \$3.2 billion net deferred tax liability at December 31, 2021 and 2020, respectively, \$4.0 billion and \$3.3 billion is reflected as a long-term liability and \$160 million and \$191 million is reflected as a net noncurrent deferred tax asset, in other, net on our consolidated balance sheets at December 31, 2021 and 2020, respectively.

At December 31, 2021, we had federal NOLs of \$2.9 billion, net of limitations of Section 382 of the Internal Revenue Code ("Section 382") and uncertain tax positions, for U.S. federal income tax purposes. If unused, the NOLs will expire between 2026 and 2037. The U.S. federal net operating loss carryforwards expire as follows:

Expiring December 31,	Amount (Dollars in millions)
2026	\$ 741
2027	375
2028	637
2029	645
2030	668
2031	733
2032	348
2033	238
2037	2,976
NOLs per return	7,361
Uncertain tax positions	(4,457)
Financial NOLs	\$ 2,904

We expect to use substantially all of these tax attributes to reduce our future federal tax liabilities, although the timing of that use will depend upon our future earnings and future tax circumstances.

At December 31, 2021 we had state net operating loss carryforwards of \$16 billion (net of uncertain tax positions). We also had foreign NOL carryforwards of \$6 billion. Our acquisitions of Level 3, Qwest and SAVVIS, Inc. caused "ownership changes" within the meaning of Section 382 for the acquired companies. As a result, our ability to use these NOLs and tax credits are subject to annual limits imposed by Section 382.

We establish valuation allowances when necessary to reduce the deferred tax assets to amounts we expect to realize. As of December 31, 2021, a valuation allowance of \$1.6 billion was established as it is more likely than not that this amount of net operating loss, capital loss and tax credit carryforwards will not be utilized prior to expiration. Our valuation allowance at December 31, 2021 and 2020 is primarily related to foreign and state NOL carryforwards. This valuation allowance increased by \$28 million during 2021, primarily due to the impact of adjustments related to the planned divestiture of our Latin American business.

A reconciliation of the change in our gross unrecognized tax benefits (excluding both interest and any related federal benefit) from January 1 to December 31 for 2021 and 2020 is as follows:

	2021	2020
	(Dollars in millions)	
Unrecognized tax benefits at beginning of year	\$ 1,474	1,538
Increase in tax positions of the current year netted against deferred tax assets	1	18
Increase in tax positions of prior periods netted against deferred tax assets	—	5
Decrease in tax positions of the current year netted against deferred tax assets	(101)	(86)
Decrease in tax positions of prior periods netted against deferred tax assets	(1)	(5)
Increase in tax positions taken in the current year	4	4
Increase in tax positions taken in the prior year	2	1
Decrease due to payments/settlements	(3)	(1)
Decrease from the lapse of statute of limitations	(1)	—
Unrecognized tax benefits at end of year	\$ 1,375	1,474

The total amount (including both interest and any related federal benefit) of unrecognized tax benefits that, if recognized, would impact the effective income tax rate was \$273 million and \$267 million at December 31, 2021 and 2020, respectively.

Our policy is to reflect interest expense associated with unrecognized tax benefits in income tax expense. We had accrued interest (presented before related tax benefits) of approximately \$24 million and \$23 million at December 31, 2021 and 2020, respectively.

We, or at least one of our subsidiaries, file income tax returns in the U.S. federal jurisdiction and various states and foreign jurisdictions. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2002. The Internal Revenue Service and state and local taxing authorities reserve the right to audit any period where net operating loss carryforwards are available.

Based on our current assessment of various factors, including (i) the potential outcomes of these ongoing examinations, (ii) the expiration of statute of limitations for specific jurisdictions, (iii) the negotiated settlement of certain disputed issues, and (iv) the administrative practices of applicable taxing jurisdictions, it is reasonably possible that the related unrecognized tax benefits for uncertain tax positions previously taken may decrease by up to \$3 million within the next 12 months. The actual amount of such decrease, if any, will depend on several future developments and events, many of which are outside our control.

(17) SEGMENT INFORMATION

In early 2021, Jeff Storey, our chief executive officer, who serves as chief operating decision maker ("CODM"), made changes to our segment and customer-facing sales channel reporting categories to align with operational changes designed to better support our customers. Since these changes, we have reported two segments: Business and Mass Markets. The Business segment includes four sales channels: International and Global Accounts, Large Enterprise, Mid-Market Enterprise and Wholesale. These changes also include both the creation of new product categories and the realignment of products and services within previously reported product categories to better reflect product life cycles and our go-to-market approach. For Business segment revenue, we report the following product categories: Compute and Application Services, IP and Data Services, Fiber Infrastructure Services and Voice and Other, in each case through the sales channels outlined above. For Mass Markets segment revenue, we report the following product categories: Consumer Broadband, SBG Broadband, Voice and Other and CAF II. See detailed descriptions of these product and service categories in Note 4—Revenue Recognition.

As described in more detail below, our segments are managed based on the direct costs of providing services to their customers and directly associated selling, general and administrative costs (primarily salaries and commissions). Shared costs are managed separately and included in "Operations and Other" in the tables below. As referenced above, we reclassified certain prior period amounts to conform to the current period presentation. See Note 1—Background and Summary of Significant Accounting Policies for additional detail on these changes.

At December 31, 2021, we had the following two reportable segments:

- *Business Segment:* Under our Business segment, we provide our products and services under four distinct sales channels to meet the needs of our enterprise and commercial customers; and
- *Mass Markets Segment:* Under our Mass Markets segment, we provide products and services to consumer and small business customers.

The following tables summarize our segment results for 2021, 2020 and 2019 based on the segment categorization we were operating under at December 31, 2021.

	Year Ended December 31, 2021				
	Business	Mass Markets	Total Segments	Operations and Other	Total
	(Dollars in millions)				
Revenue:	\$ 14,119	5,568	19,687	—	19,687
Expenses:					
Cost of services and products	3,484	152	3,636	4,852	8,488
Selling, general and administrative	1,189	530	1,719	1,176	2,895
Less: stock-based compensation	—	—	—	(120)	(120)
Total expense	4,673	682	5,355	5,908	11,263
Total adjusted EBITDA	\$ 9,446	4,886	14,332	(5,908)	8,424

Year Ended December 31, 2020

	Business	Mass Markets	Total Segments	Operations and Other	Total
(Dollars in millions)					
Revenue:	\$ 14,817	5,895	20,712	—	20,712
Expenses:					
Cost of services and products	3,649	203	3,852	5,082	8,934
Selling, general and administrative	1,269	574	1,843	1,621	3,464
Less: stock-based compensation	—	—	—	(175)	(175)
Total expense	4,918	777	5,695	6,528	12,223
Total adjusted EBITDA	\$ 9,899	5,118	15,017	(6,528)	8,489

Year Ended December 31, 2019

	Business	Mass Markets	Total Segments	Operations and Other	Total
(Dollars in millions)					
Revenue:	\$ 15,239	6,219	21,458	—	21,458
Expenses:					
Cost of services and products	3,598	214	3,812	5,322	9,134
Selling, general and administrative	1,364	630	1,994	1,721	3,715
Less: stock-based compensation	—	—	—	(162)	(162)
Total expense	4,962	844	5,806	6,881	12,687
Total adjusted EBITDA	\$ 10,277	5,375	15,652	(6,881)	8,771

Revenue and Expenses

Our segment revenue includes all revenue from our two segments as described in more detail above. Our segment revenue is based upon each customer's classification. We report our segment revenue based upon all services provided to that segment's customers. Our segment expenses include specific cost of service expenses incurred as a direct result of providing services and products to segment customers, along with selling, general and administrative expenses that are directly associated with specific segment customers or activities. We have not allocated assets or debt to specific segments.

The following items are excluded from our segment results, because they are centrally managed and not monitored by or reported to our CODM by segment:

- network expenses not incurred as a direct result of providing services and products to segment customers;
- centrally managed expenses such as Finance, Human Resources, Legal, Marketing, Product Management and IT, which are reported as "Other operating expenses" in the table below;
- depreciation and amortization expense;
- goodwill or other impairments;
- interest expense;
- stock-based compensation; and
- other income and expense items are not monitored as a part of our segment operations.

The following table reconciles total segment adjusted EBITDA to net income (loss) for the years ended December 31, 2021, 2020 and 2019:

	Years Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Total segment adjusted EBITDA	\$ 14,332	15,017	15,652
Depreciation and amortization	(4,019)	(4,710)	(4,829)
Goodwill impairment	—	(2,642)	(6,506)
Operations and other expenses	(5,908)	(6,528)	(6,881)
Stock-based compensation	(120)	(175)	(162)
Operating income (loss)	4,285	962	(2,726)
Total other expense, net	(1,584)	(1,744)	(2,040)
Income (loss) before income taxes	2,701	(782)	(4,766)
Income tax expense	668	450	503
Net income (loss)	\$ 2,033	(1,232)	(5,269)

We do not have any single customer that comprises more than 10% of our consolidated total operating revenue.

The assets we hold outside of the U.S. represent less than 10% of our total assets. Revenue from sources outside of the U.S. comprises less than 10% of our total operating revenue.

(18) COMMITMENTS, CONTINGENCIES AND OTHER ITEMS

We are subject to various claims, legal proceedings and other contingent liabilities, including the matters described below, which individually or in the aggregate could materially affect our financial condition, future results of operations or cash flows. As a matter of course, we are prepared to both litigate these matters to judgment as needed, as well as to evaluate and consider reasonable settlement opportunities.

Irrespective of its merits, litigation may be both lengthy and disruptive to our operations and could cause significant expenditure and diversion of management attention. We review our litigation accrual liabilities on a quarterly basis, but in accordance with applicable accounting guidelines only establish accrual liabilities when losses are deemed probable and reasonably estimable and only revise previously-established accrual liabilities when warranted by changes in circumstances, in each case based on then-available information. As such, as of any given date we could have exposure to losses under proceedings as to which no liability has been accrued or as to which the accrued liability is inadequate. Amounts accrued for our litigation and non-income tax contingencies at December 31, 2021 and December 31, 2020 aggregated to approximately \$103 million and \$141 million, respectively, and are included in other current liabilities, other liabilities, or liabilities held for sale in our consolidated balance sheets as of such dates. The establishment of an accrual does not mean that actual funds have been set aside to satisfy a given contingency. Thus, the resolution of a particular contingency for the amount accrued could have no effect on our results of operations but nonetheless could have an adverse effect on our cash flows.

In this Note, when we refer to a class action as "putative" it is because a class has been alleged, but not certified in that matter.

Principal Proceedings

SHAREHOLDER CLASS ACTION SUIT

Lumen and certain Lumen Board of Directors members and officers were named as defendants in a putative shareholder class action lawsuit filed on June 12, 2018 in the Boulder County District Court of the state of Colorado, captioned Houser et al. v. CenturyLink, et al. The complaint asserts claims on behalf of a putative class of former Level 3 shareholders who became CenturyLink, Inc. shareholders as a result of our acquisition of Level 3. It alleges that the proxy statement provided to the Level 3 shareholders failed to disclose various material information of several kinds, including information about strategic revenue, customer loss rates, and customer account issues, among other items. The complaint seeks damages, costs and fees, rescission, rescissory damages, and other equitable relief. In May 2020, the court dismissed the complaint. Plaintiffs appealed that decision, and the appeal is pending.

STATE TAX SUITS

Since 2012, a number of Missouri municipalities have asserted claims in the Circuit Court of St. Louis County, Missouri, alleging that we and several of our subsidiaries have underpaid taxes. These municipalities are seeking, among other things, declaratory relief regarding the application of business license and gross receipts taxes and back taxes from 2007 to the present, plus penalties and interest. In a February 2017 ruling in connection with one of these pending cases, the court entered an order awarding plaintiffs \$4 million and broadening the tax base on a going-forward basis. We appealed that decision to the Missouri Supreme Court. In December 2019, it affirmed the circuit court's order in some respects and reversed it in others, remanding the case to the circuit court for further proceedings. The Missouri Supreme Court's decision reduced our exposure in the case. In a June 2021 ruling in one of the pending cases, another trial court awarded the cities of Columbia and Joplin approximately \$55 million, plus statutory interest. We have appealed that decision to the Missouri Court of Appeals. That appeal is pending. If the trial court's decision is not overturned or modified in light of the Missouri Supreme Court's decision, it will result in a tax liability to us in excess of our reserved accruals established for these matters. We continue to vigorously defend against these claims.

BILLING PRACTICES SUITS

In June 2017, a former employee filed an employment lawsuit against us claiming that she was wrongfully terminated for alleging that we charged some of our retail customers for products and services they did not authorize. Thereafter, based in part on the allegations made by the former employee, several legal proceedings were filed, including consumer class actions in federal and state courts, a series of securities investor class actions in federal courts and several shareholder derivative actions in federal and Louisiana state courts. The derivative cases were brought on behalf of CenturyLink, Inc. against certain current and former officers and directors of the Company and seek damages for alleged breaches of fiduciary duties.

The consumer class actions, the securities investor class actions, and the federal derivative actions were transferred to the U.S. District Court for the District of Minnesota for coordinated and consolidated pretrial proceedings as In Re: CenturyLink Sales Practices and Securities Litigation. We have settled the consumer and securities investor class actions. Those settlements are final. The derivative actions remain pending.

We have engaged in discussions regarding related claims with a number of state attorneys general, and have entered into agreements settling certain of the consumer practices claims asserted by state attorneys general. While we do not agree with allegations raised in these matters, we have been willing to consider reasonable settlements where appropriate.

DECEMBER 2018 OUTAGE PROCEEDINGS

We experienced an outage on one of our transport networks that impacted voice, IP, 911, and transport services for some of our customers between the 27th and 29th of December 2018. We believe that the outage was caused by a faulty network management card from a third-party equipment vendor.

The FCC and four states (both Washington Utilities and Transportation Commission ("WUTC") and the Washington Attorney General; the Montana Public Service Commission; the Nebraska Public Service Commission; and the Wyoming Public Service Commission) initiated formal investigations. In November 2020, following the FCC's release of a public report on the outage, we negotiated a settlement which was released by the FCC in December 2020. The amount of the settlement was not material to our financial statements.

In December 2020, the Staff of the WUTC filed a complaint against us based on the December 2018 outage, seeking penalties owed for alleged violations of Washington regulations and laws. We have denied the allegations and will defend the claims asserted.

PERUVIAN TAX LITIGATION

In 2005, the Peruvian tax authorities ("SUNAT") issued tax assessments against one of our Peruvian subsidiaries asserting \$26 million, of additional income tax withholding and value-added taxes ("VAT"), penalties and interest for calendar years 2001 and 2002 on the basis that the Peruvian subsidiary incorrectly documented its importations. In May 2021, the Company paid the remaining amount on the fractioning regimes entered into by the Company to pay the amount assessed while it was appealed.

We challenged the assessments via administrative and then judicial review processes. In October 2011, the highest administrative review tribunal (the Tribunal) decided the central issue underlying the 2002 assessments in SUNAT's favor. We appealed the Tribunal's decision to the first judicial level, which decided the central issue in favor of Level 3. SUNAT and we filed cross-appeals with the court of appeal. In May 2017, the court of appeal issued a decision reversing the first judicial level. In June 2017, we filed an appeal of the decision to the Supreme Court of Justice, the final judicial level. Oral argument was held before the Supreme Court of Justice in October 2018. A decision on this case is pending.

In October 2013, the Tribunal decided the central issue underlying the 2001 assessments in SUNAT's favor. We appealed that decision to the first judicial level in Peru, which decided the central issue in favor of SUNAT. In June 2017, we filed an appeal with the court of appeal. In November 2017, the court of appeals issued a decision affirming the first judicial level and we filed an appeal of the decision to the Supreme Court of Justice. Oral argument was held before the Supreme Court of Justice in June 2019. In May 2021, the Company was served with a favorable and final decision from the Supreme Court of Justice. The Company is working with SUNAT to provide additional information before SUNAT submits its plan for complying with the Supreme Court of Justice's decision.

BRAZILIAN TAX CLAIMS

The São Paulo and Rio de Janeiro state tax authorities have issued tax assessments against our Brazilian subsidiaries for the Tax on Distribution of Goods and Services ("ICMS"), mainly with respect to revenue from leasing certain assets and revenue from the provision of Internet access services by treating such activities as the provision of communications services, to which the ICMS tax applies. We filed objections to these assessments in both states, arguing among other things that neither the lease of assets nor the provision of Internet access qualifies as communication services subject to ICMS.

We have appealed to the respective state judicial courts the decisions by the respective state administrative courts that rejected our objections to these assessments. In cases in which state lower courts ruled partially in our favor finding that the lease assets are not subject to ICMS, and in connection, the State appealed those rulings. In other cases, the assessment was affirmed at the first administrative level and our appeal to the second administrative level is pending. Other assessments are still pending state judicial decisions.

We are vigorously contesting all such assessments in both states and view the assessment of ICMS on revenue from equipment leasing and Internet access to be without merit. These assessments, if upheld, could result in a loss of up to \$46 million as of December 31, 2021, in excess of the reserved accruals established for these matters.

QUI TAM ACTION

Level 3 was notified in late 2017 of a qui tam action pending against Level 3 Communications, Inc. and others in the U.S. District Court for the Eastern District of Virginia, captioned United States of America ex rel., Stephen Bishop v. Level 3 Communications, Inc. et al. The amended complaint alleged that Level 3, principally through two former employees, submitted false claims and made false statements to the government in connection with two government contracts. The relator sought damages in this lawsuit of approximately \$50 million. The case was settled in the second quarter of 2021 for an immaterial amount. This matter is now fully resolved.

Other Proceedings, Disputes and Contingencies

From time to time, we are involved in other proceedings incidental to our business, including patent infringement allegations, regulatory hearings relating primarily to our rates or services, actions relating to employee claims, various tax issues, environmental law issues, grievance hearings before labor regulatory agencies and miscellaneous third-party tort actions or commercial disputes.

We are currently defending several patent infringement lawsuits asserted against us by non-practicing entities, many of which are seeking substantial recoveries. These cases have progressed to various stages and one or more may go to trial within the next 12 months if they are not otherwise resolved. Where applicable, we are seeking full or partial indemnification from our vendors and suppliers. As with all litigation, we are vigorously defending these actions and, as a matter of course, are prepared to litigate these matters to judgment, as well as to evaluate and consider all reasonable settlement opportunities.

We are subject to various foreign, federal, state and local environmental protection and health and safety laws. From time to time, we are subject to judicial and administrative proceedings brought by various governmental authorities under these laws. Several such proceedings are currently pending, but none is reasonably expected to exceed \$300,000 in fines and penalties.

The outcome of these other proceedings described under this heading is not predictable. However, based on current circumstances, we do not believe that the ultimate resolution of these other proceedings, after considering available defenses and any insurance coverage or indemnification rights, will have a material adverse effect on us.

The matters listed in this Note do not reflect all of our contingencies. The ultimate outcome of the above-described matters may differ materially from the outcomes anticipated, estimated, projected or implied by us in certain of our statements appearing above in this Note, and proceedings currently viewed as immaterial by us may ultimately materially impact us.

Right-of-Way

At December 31, 2021, our future rental commitments and Right-of-Way agreements were as follows:

	Right-of-Way Agreements	
	(Dollars in millions)	
2022	\$	246
2023		99
2024		84
2025		74
2026		71
2027 and thereafter		962
Total future minimum payments	\$	1,536

Purchase Commitments

We have several commitments primarily for marketing activities and support services from a variety of vendors to be used in the ordinary course of business totaling \$1.1 billion at December 31, 2021. Of this amount, we expect to purchase \$414 million in 2022, \$386 million in 2023 through 2024, \$91 million in 2025 through 2026 and \$188 million in 2027 and thereafter. These amounts do not represent our entire anticipated purchases in the future, but represent only those items for which we were contractually committed as of December 31, 2021.

Amounts included in the Right-of-Way table and in the purchase commitments disclosed above are inclusive of contractual obligations related to our Latin American and ILEC businesses to be divested.

(19) OTHER FINANCIAL INFORMATION**Other Current Assets**

The following table presents details of other current assets in our consolidated balance sheets:

	As of December 31,		
	2021	2020	
	(Dollars in millions)		
Prepaid expenses	\$	295	290
Income tax receivable		22	7
Materials, supplies and inventory		96	105
Contract assets		45	66
Contract acquisition costs		142	173
Contract fulfillment costs		106	114
Note receivable		56	—
Receivable for sale of land		56	—
Other		11	53
Total other current assets ⁽¹⁾	\$	829	808

¹ As of December 31, 2021, other current assets exclude \$126 million that have been reclassified as held for sale.

Included in accounts payable at December 31, 2021 and 2020 were \$248 million and \$329 million, respectively, associated with capital expenditures.

(20) REPURCHASES OF LUMEN COMMON STOCK

Effective August 3, 2021, our Board of Directors authorized a 24-month program to repurchase up to an aggregate of \$1.0 billion of our outstanding common stock. During the year ended December 31, 2021, we repurchased under this program 80.9 million shares of our outstanding common stock in the open market for an aggregate market price of \$1.0 billion, or an average purchase price of \$12.36 per share, thereby fully exhausting the program. All repurchased common stock has been retired. As a result, common stock and additional paid-in capital were reduced as of December 31, 2021 by \$81 million and \$919 million, respectively.

(21) ACCUMULATED OTHER COMPREHENSIVE LOSS**Information Relating to 2021**

The table below summarizes changes in accumulated other comprehensive loss recorded on our consolidated balance sheet by component for the year ended December 31, 2021:

	Pension Plans	Post-Retirement Benefit Plans	Foreign Currency Translation Adjustment and Other	Interest Rate Swap	Total
(Dollars in millions)					
Balance at December 31, 2020	\$ (2,197)	(272)	(265)	(79)	(2,813)
Other comprehensive income (loss) before reclassifications	197	94	(135)	(1)	155
Amounts reclassified from accumulated other comprehensive loss	423	14	—	63	500
Net current-period other comprehensive income (loss)	620	108	(135)	62	655
Balance at December 31, 2021	\$ (1,577)	(164)	(400)	(17)	(2,158)

The table below presents further information about our reclassifications out of accumulated other comprehensive loss by component for the year ended December 31, 2021:

	Decrease (Increase) in Net Income	Affected Line Item in Consolidated Statement of Operations
(Dollars in millions)		
Year Ended December 31, 2021		
Interest rate swaps	\$ 83	Interest expense
Income tax benefit	(20)	Income tax expense
Net of tax	\$ 63	
Amortization of pension & post-retirement plans ⁽¹⁾		
Net actuarial loss	\$ 190	Other expense, net
Settlement charge	383	Other expense, net
Prior service cost	6	Other expense, net
Total before tax	579	
Income tax benefit	(142)	Income tax expense
Net of tax	\$ 437	

¹ See Note 11—Employee Benefits for additional information on our net periodic benefit (expense) income related to our pension and post-retirement plans.

Information Relating to 2020

The table below summarizes changes in accumulated other comprehensive loss recorded on our consolidated balance sheet by component for the year ended December 31, 2020:

	Pension Plans	Post-Retirement Benefit Plans	Foreign Currency Translation Adjustment and Other	Interest Rate Swap	Total
(Dollars in millions)					
Balance at December 31, 2019	\$ (2,229)	(184)	(228)	(39)	(2,680)
Other comprehensive loss before reclassifications	(115)	(103)	(37)	(86)	(341)
Amounts reclassified from accumulated other comprehensive loss	147	15	—	46	208
Net current-period other comprehensive income (loss)	32	(88)	(37)	(40)	(133)
Balance at December 31, 2020	\$ (2,197)	(272)	(265)	(79)	(2,813)

The table below presents further information about our reclassifications out of accumulated other comprehensive loss by component for the year ended December 31, 2020:

Year Ended December 31, 2020	(Decrease) Increase in Net Loss	Affected Line Item in Consolidated Statement of Operations
(Dollars in millions)		
Interest rate swap	\$ 62	Interest expense
Income tax benefit	(16)	Income tax expense
Net of tax	\$ 46	
Amortization of pension & post-retirement plans ⁽¹⁾		
Net actuarial loss	\$ 203	Other expense, net
Prior service cost	7	Other expense, net
Curtailment loss	4	Other expense, net
Total before tax	214	
Income tax benefit	(52)	Income tax expense
Net of tax	\$ 162	

¹ See Note 11—Employee Benefits for additional information on our net periodic benefit (expense) income related to our pension and post-retirement plans.

(22) LABOR UNION CONTRACTS

As of December 31, 2021, approximately 21% of our employees were represented by the Communication Workers of America ("CWA") or the International Brotherhood of Electrical Workers ("IBEW"). Approximately 9% of our represented employees are subject to collective bargaining agreements that are scheduled to expire over the 12 month period ending December 31, 2022.

(23) DIVIDENDS

Our Board of Directors declared the following dividends payable in 2021 and 2020:

Date Declared	Record Date	Dividend Per Share	Total Amount	Payment Date
			(in millions)	
November 18, 2021	11/29/2021	\$ 0.25	\$ 251	12/10/2021
August 19, 2021	8/30/2021	0.25	264	9/10/2021
May 20, 2021	6/1/2021	0.25	272	6/11/2021
February 25, 2021	3/8/2021	0.25	276	3/19/2021
November 19, 2020	11/30/2020	0.25	274	12/11/2020
August 20, 2020	8/31/2020	0.25	274	9/11/2020
May 20, 2020	6/1/2020	0.25	274	6/12/2020
February 27, 2020	3/9/2020	0.25	274	3/20/2020

The declaration of dividends is solely at the discretion of our Board of Directors, which may change or terminate our dividend practice at any time for any reason without prior notice. On February 24, 2022, our Board of Directors declared a quarterly cash dividend of \$0.25 per share.

Corporate Headquarters

100 CenturyLink Drive
Monroe, Louisiana 71203
General Information: 318-388-9000

Transfer Agent

For address changes, stock transfers, name changes, registration changes, lost stock certificates and stock holdings, please contact:

Computershare Investor Services L.L.C.
Post Office Box 505000
Louisville, Kentucky 40233
1-800-969-6718
www.computershare.com/lumen

Auditors

KPMG LLP
1225 17th Street, Suite 800
Denver, Colorado 80202

Investor Relations

Inquiries by securities analysts, investment professionals and shareholders about Lumen Technologies, Inc. common stock, including requests for any SEC or other shareholder reports should be directed to:

investor.relations@lumen.com
ir.lumen.com

Annual Report

After the close of each fiscal year, Lumen Technologies, Inc. submits an Annual Report on Form 10-K to the SEC containing certain additional information about its business. A copy of the 10-K report may be obtained without charge by addressing your request to Stacey W. Goff, Secretary, Lumen Technologies, Inc., 100 CenturyLink Drive, Monroe, Louisiana 71203, or by visiting our website at www.lumen.com.

Common Stock

Lumen common stock is traded on the New York Stock Exchange under the symbol LUMN.

As of the Record Date, we had 1,032,760,034 shares of common stock and 7,018 shares of Series L preferred stock issued and outstanding. There were 84,801 shareholders of record.

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Communications to the Board

Communication with shareholders and other interested parties is an important part of the governance process. Any shareholder or other stakeholder who wishes to contact the Board, Chairman or any Director can send correspondence to:

Write: P.O. Box 5061 ; Monroe, Louisiana 71211
Email: boardinquiries@lumen.com



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