



2023 Annual Report
www.tdsinc.com



Bridging the Digital Divide

Since our founding over 50 years ago, TDS has been committed to bringing high-quality communications services to unserved and underserved communities in suburban and rural America.



Through partnerships with nonprofit organizations, original research, and associate volunteerism, we're addressing the digital divide and providing critical resources in local communities. Since 2009, UScellular has invested nearly \$47 million in monetary donations, resources, and countless experiences to nonprofit organizations across the country.

We are building better communities by supporting STEM education and helping build a healthier digital future.

Supporting Education

We know that STEM education and technology go hand-in-hand. Our partnerships with organizations like Boys & Girls Club of America, Girls Who Code and YWCA have provided students with access,

mentorship, and hands-on STEM education to ensure they have the important tools to reach their full potential. In 2021, we also launched UScellular's *After School Access Project* with a pledge to provide up to \$13 million in hotspots and service in 2022, and we extended the commitment in 2023 with up to an additional \$13 million in hotspots and service.

Building a Healthier Digital Future

At UScellular, our network and portfolio of devices and solutions help people build strong connections with friends, family, and communities. UScellular believes that our phones are meant to bring us closer to what matters most. Through initiatives like the "Phones Down for 5" challenge and tutorials for changing phone settings to "US Mode" to limit digital distractions, we are helping people create better relationships with their technology and helping families navigate the digital world together.



As TDS Telecom expands its fiber footprint, it also continually advocates for support to bring better services to locations through federal and state programs and state broadband grants. From hands-on volunteering to in-kind and direct financial support, TDS Telecom takes a vested interest in the growth and success of our communities.

TDS Telecom

TDS Telecom is doubling down on its commitment to improve rural broadband by receiving Enhanced Alternative Connect America Cost Model (E-ACAM) support from the Federal Communications Commission (FCC). The program will provide the company with \$1.3 billion in revenue over the next 15 years in exchange for delivering increased internet speeds of 100/20 Mbps to about 270,000 locations in 24 states*. The federal funding is on top of more than \$51 million received in state grants from 2013-2023 to provide enhanced broadband services to nearly 27,000 service addresses in six states.

*As of the initial FCC offer received in September 2023

Committed to our Community

Through its TDS Cares initiatives, TDS continues to give back to the communities it serves through donations, sponsorships, and volunteerism. In 2023, the company donated more than \$1 million to worthy organizations, and associates volunteered more than 1,400 hours.

Dear Shareholders,

2023 was a dynamic year for the TDS Family of Businesses. We made significant investments in initiatives aimed at strengthening our competitive position and furthering the efficiency of our operations. We are confident that the strategic actions we have taken will enable us to advance our mission of providing outstanding communications services to our customers and to meet the needs of our shareholders, our associates, and our communities.

UScellular

As UScellular celebrated its 40th anniversary in 2023, we are proud of how our associates have continued to serve customers, communities, stakeholders and each other over the years. As always, UScellular remains steadfast in its commitment to connecting people to what matters most. UScellular increased Postpaid Average Revenue Per User (ARPU) by 2%. Additionally, UScellular drove strong results in fixed wireless, with significant growth in both revenues and customer acquisition. In 2023, UScellular surpassed \$100 million in third-party tower rental revenues, marking a significant milestone for the company. Despite facing challenges in mobility subscriber growth, UScellular successfully balanced subscriber objectives with financial goals, and enhanced profitability in 2023 with year-over-year increases in both Operating Cash Flow and Adjusted EBITDA. This accomplishment was made possible through disciplined expense management and a focus on operational efficiency across every major category.

Looking ahead to 2024, UScellular's operational priorities will continue to focus on balancing subscriber growth with financial discipline. Retention offers will be a priority throughout the year, ensuring that our valued customers receive the best possible experience as we continue leaning into our "Built For US" brand. Additionally, UScellular is committed to continuing network enhancements through a multi-year mid-band spectrum deployment. As it is deployed, the addition of mid-band spectrum will enable us to provide an even better experience for our mobility and fixed wireless customers.

Finally, in August of 2023 the boards of directors of TDS and UScellular decided to initiate a process to explore strategic alternatives for UScellular. At the time of this letter's printing, the review remains active and on-going. The management of both companies and the boards remain committed to pursuing the path that is in the best interest of the company and its shareholders.

TDS Telecom

Building on the success of our fiber growth strategy, TDS Telecom is making significant strides in expanding our network capabilities and delivering high-speed broadband services to communities across the nation. In 2023, TDS Telecom achieved a record year by completing 217,000 new marketable fiber service addresses, expanding our footprint by 12%, a testament to the dedication and hard work of our Telecom team. Furthermore, total broadband connections grew by 6%, driven primarily by expansion markets. Total operating revenues increased by 1% for the full year, driven by growth in residential revenue offsetting declines in commercial and wholesale revenues.

To address the broadband needs of our most rural markets, TDS Telecom secured Enhanced A-CAM funding, providing \$90 million of annual regulatory revenue support for the next 15 years in exchange for delivering high-speed broadband to approximately 270,000 addresses*. This initiative reaffirms our commitment to bridging the digital divide and ensuring that all communities have access to essential broadband services.

Looking forward, TDS Telecom remains focused on transforming itself into a fiber broadband company through investments in all market types. In 2024, we are prioritizing projects to ensure prudent capital management while continuing to deliver on our commitment to expanding our fiber footprint and driving penetration rates in the markets we have already launched. We are planning to deliver approximately 125,000 new marketable fiber service addresses in 2024, demonstrating our ongoing dedication to providing cutting-edge connectivity solutions to our customers.

OneNeck IT Solutions

OneNeck IT Solutions made solid progress toward its strategy of becoming a secure hybrid IT solution provider to the mid-market achieving year-over-year revenue growth in its colocation, cloud, and professional services lines of business. Providing high-quality services and a strong focus on customer success drove high customer satisfaction. Strengthened partnerships with key OEM partners and newly emerging sales channels have positioned OneNeck IT Solutions to expand its customer base in 2024.

Environmental, Social and Governance (ESG)

Corporate responsibility has been a hallmark of the TDS family of companies since our founding over 50 years ago. Our deep-seated commitment to ESG continues to evolve. For the first time, the company published its Scope 1 and Scope 2 greenhouse gas emissions across the TDS Family of Companies. Additionally, we remain focused on important ESG topics such as human capital management, safeguarding our networks and services through cybersecurity programs, designing reliable and redundant networks and protecting customer privacy.

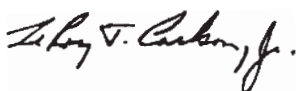
Committed to our customers and our shareholders

TDS strives to maintain a financially secure foundation for the enterprise. This allows each of our businesses to pursue growth opportunities and capital allocation priorities that are intended to strengthen their competitive positions, improve customer satisfaction, and provide returns for our shareholders over time.

Thank you

The commitment and innovation demonstrated by the associates of the TDS Family of Businesses have been instrumental in delivering outstanding services, products, and customer experiences. We are grateful to our shareholders for their continuous support of our long-term growth strategies.

Very truly yours,



LeRoy T. Carlson, Jr.
President and Chief Executive Officer



Walter C. D. Carlson
Chair of the Board

*The current revenue and address estimate reflect the initial FCC offer received in September 2023; revenue and address commitments are expected to be finalized with the FCC by the end of 2025

Telephone and Data Systems, Inc.

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Telephone and Data Systems, Inc. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Executive Overview

The following Management’s Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and notes of Telephone and Data Systems, Inc. (TDS) for the year ended December 31, 2023, and with the description of TDS’ business included herein. Certain numbers included herein are rounded to millions for ease of presentation; however, certain calculated amounts and percentages are determined using the unrounded numbers.

This report contains statements that are not based on historical facts, which may be identified by words such as “believes,” “anticipates,” “estimates,” “expects,” “plans,” “intends,” “projects,” “will” and similar expressions. These statements constitute and represent “forward looking statements” as this term is defined in the Private Securities Litigation Reform Act of 1995. Such forward looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be significantly different from any future results, events or developments expressed or implied by such forward looking statements. See the disclosure under the heading Private Securities Litigation Reform Act of 1995 Safe Harbor Cautionary Statement elsewhere in this report for additional information.

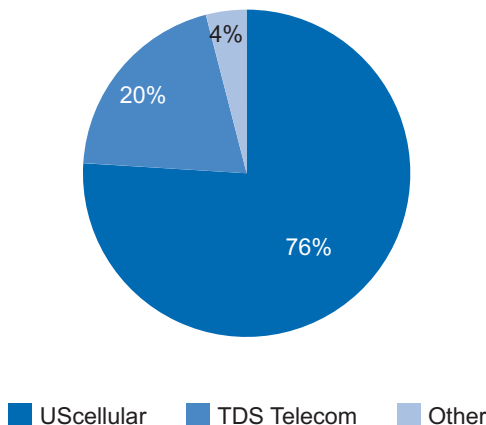
The accounting policies of TDS conform to accounting principles generally accepted in the United States of America (GAAP). However, TDS uses certain “non-GAAP financial measures” in the MD&A. A discussion of the reasons TDS determines these metrics to be useful and reconciliations of these measures to their most directly comparable measures determined in accordance with GAAP are included in the disclosure under the heading Supplemental Information Relating to Non-GAAP Financial Measures within the MD&A of this report.

The following MD&A omits discussion of 2022 compared to 2021. Refer to Management’s Discussion and Analysis of Financial Condition and Results of Operations in TDS’ Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 16, 2023, for that discussion.

General

TDS is a diversified telecommunications company that provides high-quality communications services to approximately 6 million connections nationwide. TDS provides wireless services through its 83%-owned subsidiary, United States Cellular Corporation (UScellular). TDS also provides broadband, video and voice services through its wholly-owned subsidiary, TDS Telecommunications LLC (TDS Telecom). TDS operates entirely in the United States. See Note 19 — Business Segment Information in the Notes to Consolidated Financial Statements for additional information about TDS’ segments.

2023 Operating Revenues by Segment



TDS Mission and Strategy

TDS' mission is to provide outstanding communications services to its customers and meet the needs of its shareholders, its people, and its communities. In pursuing this mission, TDS seeks to grow its businesses, create opportunities for its associates, support the communities it serves, and build value over the long term for its shareholders. Since its founding, TDS has been committed to bringing high-quality communications services to rural and underserved communities. TDS continues to make progress on developing and enhancing its Environmental, Social and Governance (ESG) program, including the publication of the most recent TDS ESG Report in July 2023, which is available on the TDS website.

TDS' historical long-term strategy has been to re-invest the majority of its operating capital in its businesses to strengthen their competitive positions and financial performance, while also returning value to TDS shareholders primarily through the payment of a regular quarterly cash dividend. It is uncertain at this time how the strategic alternatives review for UScellular, TDS' available opportunities to reinvest in its businesses, or TDS' ongoing liquidity needs may impact TDS' long-term strategy, including with regard to the payment of dividends, in future periods.

During 2023, TDS paid regular quarterly cash dividends to common and preferred shareholders of \$83 million and \$70 million, respectively. TDS increased the dividend per Common Share paid to its investors by 3% in 2023 and in February 2024, TDS increased its first quarter dividend per Common Share another 3%. During 2023, TDS repurchased 545,990 Common Shares for \$6 million at an average cost per share of \$10.09. As of December 31, 2023, the maximum dollar value of TDS Common Shares that may yet be purchased under TDS' program was \$132 million. There is no assurance that TDS will continue to increase the dividend rate or pay dividends and no assurance that TDS will make any significant amount of share repurchases in the future.

Recent Development

On August 4, 2023, TDS and UScellular announced that the Boards of Directors of both companies have decided to initiate a process to explore a range of strategic alternatives for UScellular. During 2023, TDS incurred third-party expenses of \$13 million related to the strategic alternatives review. At this time, TDS cannot predict the ultimate outcome of such process or estimate the potential impact of such process on the financial statements.

Significant Financial Matter

Net loss attributable to TDS common shareholders was \$569 million and \$7 million for the years ended December 31, 2023 and 2022, respectively. Such net losses include a non-cash charge related to the TDS Telecom Goodwill impairment of \$547 million (\$511 million, net of tax impacts), which was recorded during the three months ended December 31, 2023. The conclusion that this impairment was required was made in connection with the review and preparation of the financial statements. See Note 7 — Intangible Assets for a detailed discussion regarding the Goodwill impairment. Refer to Supplemental Information to Non-GAAP Financial Measures within this MD&A for a reconciliation of the Goodwill impairment, net of tax.

Terms Used by TDS

The following is a list of definitions of certain industry terms that are used throughout this document:

- **4G LTE** – fourth generation Long-Term Evolution, which is a wireless technology that enables more network capacity for more data per user as well as faster access to data compared to third generation (3G) technology.
- **5G** – fifth generation wireless technology that helps address customers’ growing demand for data services and creates opportunities for new services requiring high speed and reliability as well as low latency.
- **Account** – represents an individual or business financially responsible for one or multiple associated connections. An account may include a variety of types of connections such as handsets and connected devices.
- **Alternative Connect America Cost Model (ACAM)** – a USF support mechanism for certain carriers, which provides revenue support through 2028. This support comes with an obligation to build defined broadband speeds to a certain number of locations.
- **Auctions 105, 107, 108 and 110** – Auction 105 was an FCC auction of 3.5 GHz wireless spectrum licenses that started in July 2020 and concluded in September 2020. Auction 107 was an FCC auction of 3.7-3.98 GHz wireless spectrum licenses that started in December 2020 and concluded in February 2021. Auction 110 was an FCC auction of 3.45-3.55 GHz wireless spectrum licenses that started in October 2021 and concluded in January 2022. Auction 108 is an FCC auction of 2.5 GHz wireless spectrum licenses that started in July 2022 and concluded in August 2022.
- **Broadband Connections** – refers to the individual customers provided internet access through various transmission technologies, including fiber, coaxial and copper.
- **Broadband Penetration** – metric which is calculated by dividing total broadband connections by total service addresses.
- **Churn Rate** – represents the percentage of the connections that disconnect service each month. These rates represent the average monthly churn rate for each respective period.
- **Connected Devices** – non-handset devices that connect directly to the UScellular network. Connected devices include products such as tablets, wearables, modems, fixed wireless, and hotspots.
- **Coronavirus Aid, Relief, and Economic Security (CARES) Act** – economic relief package signed into law on March 27, 2020 to address the public health and economic impacts of COVID-19, including a variety of tax provisions.
- **DOCSIS** – Data Over Cable Service Interface Specification is an international telecommunications standard that permits the addition of high-bandwidth data transfer to an existing cable TV (CATV) system. DOCSIS 3.1 is a system specification that increases data transmission rates.
- **EBITDA** – refers to earnings before interest, taxes, depreciation, amortization and accretion and is used in the non-GAAP metric Adjusted EBITDA throughout this document. See Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for additional information.
- **Eligible Telecommunications Carrier (ETC)** – designation by states for providing specified services in “high cost” areas which enables participation in universal service support mechanisms.
- **Enhanced Alternative Connect America Cost Model (E-ACAM)** – a USF support mechanism for certain carriers, which provides revenue support through 2038. This support comes with an obligation to provide 100 megabits per second (Mbps) of download speed and 20 Mbps of upload speed (100/20 Mbps) to a certain number of locations.
- **Expansion Markets** – markets utilizing fiber networks in areas where TDS does not serve as the incumbent service provider.
- **Free Cash Flow** – non-GAAP metric defined as Cash flows from operating activities less Cash paid for additions to property, plant and equipment and less Cash paid for software license agreements. See Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for additional information.
- **Gross Additions** – represents the total number of new connections added during the period, without regard to connections that were terminated during that period.
- **Incumbent Markets** – markets where TDS is positioned as the traditional local telephone or cable company.
- **IPTV** – internet protocol television.
- **Net Additions (Losses)** – represents the total number of new connections added during the period, net of connections that were terminated during that period.
- **OIBDA** – refers to operating income before depreciation, amortization and accretion and is used in the non-GAAP metric Adjusted OIBDA throughout this document. See Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for additional information.
- **Postpaid Average Revenue per Account (Postpaid ARPA)** – metric which is calculated by dividing total postpaid service revenues by the average number of postpaid accounts and by the number of months in the period.
- **Postpaid Average Revenue per User (Postpaid ARPU)** – metric which is calculated by dividing total postpaid service revenues by the average number of postpaid connections and by the number of months in the period.
- **Residential Revenue per Connection** – metric which is calculated by dividing total residential revenue by the average number of residential connections and by the number of months in the period.
- **Retail Connections** – individual lines of service associated with each device activated by a postpaid or prepaid customer. Connections are associated with all types of devices that connect directly to the UScellular network.
- **Service Addresses** – number of single residence homes, multi-dwelling units, and business locations that are capable of being connected to the TDS network, based on best available information.
- **Universal Service Fund (USF)** – a system of telecommunications collected fees and support payments managed by the FCC intended to promote universal access to telecommunications services in the United States.
- **Video Connections** – represents the individual customers provided video services.
- **Voice Connections** – refers to the individual circuits connecting a customer to TDS’ central office facilities that provide voice services or the billable number of lines into a building for voice services.

- **VoLTE** – Voice over Long-Term Evolution is a technology specification that defines the standards and procedures for delivering voice communications and related services over 4G LTE networks.

Results of Operations — TDS Consolidated

The following discussion and analysis compares financial results for the year ended December 31, 2023, to the year ended December 31, 2022

Year Ended December 31,	2023	2022	2023 vs. 2022
(Dollars in millions)			
Operating revenues			
UScellular	\$ 3,906	\$ 4,169	(6)%
TDS Telecom	1,028	1,020	1 %
All other ¹	226	224	1 %
Total operating revenues	5,160	5,413	(5)%
Operating expenses			
UScellular	3,767	4,100	(8)%
TDS Telecom	1,551	954	63 %
All other ¹	256	237	8 %
Total operating expenses	5,574	5,291	5 %
Operating income (loss)			
UScellular	139	69	N/M
TDS Telecom	(523)	66	N/M
All other ¹	(30)	(13)	N/M
Total operating income	(414)	122	N/M
Investment and other income (expense)			
Equity in earnings of unconsolidated entities	159	159	—
Interest and dividend income	20	17	19 %
Interest expense	(244)	(174)	(40)%
Other, net	2	1	94 %
Total investment and other income (expense)	(63)	3	N/M
Income (loss) before income taxes			
	(477)	125	N/M
Income tax expense	10	53	(81)%
Net income (loss)			
	(487)	72	N/M
Less: Net income attributable to noncontrolling interests, net of tax	13	10	28 %
Net income (loss) attributable to TDS shareholders			
	(500)	62	N/M
TDS Preferred Share dividends	69	69	—
Net loss attributable to TDS common shareholders			
	\$ (569)	\$ (7)	N/M
Adjusted OIBDA (Non-GAAP) ²	\$ 1,086	\$ 1,080	1 %
Adjusted EBITDA (Non-GAAP) ²	\$ 1,267	\$ 1,257	1 %
Capital expenditures ³	\$ 1,197	\$ 1,285	(7)%

N/M - Percentage change not meaningful

¹ Consists of corporate and other operations and intercompany eliminations.

² Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

³ Refer to Liquidity and Capital Resources within this MD&A for additional information on Capital expenditures.

Refer to individual segment discussions in this MD&A for additional details on operating revenues and expenses at the segment level.

Equity in earnings of unconsolidated entities

Equity in earnings of unconsolidated entities represents TDS' share of net income from entities in which it has a noncontrolling interest and that are accounted for using the equity method or the net asset value practical expedient. TDS' investment in the Los Angeles SMSA Limited Partnership (LA Partnership) contributed pre-tax income of \$65 million for both 2023 and 2022. See Note 8 — Investments in Unconsolidated Entities in the Notes to Consolidated Financial Statements for additional information.

Interest expense

Interest expense increased in 2023 due primarily to interest rate increases on variable rate debt. See Market Risk for additional information regarding maturities of long-term debt and weighted average interest rates.

Income tax expense

Income tax expense decreased in 2023 due primarily to the decrease in Income (loss) before income taxes driven by the impairment of Goodwill, a portion of which is amortizable for tax purposes, and therefore provides a reduction in deferred tax expense.

See Note 5 — Income Taxes in the Notes to Consolidated Financial Statements for additional information.

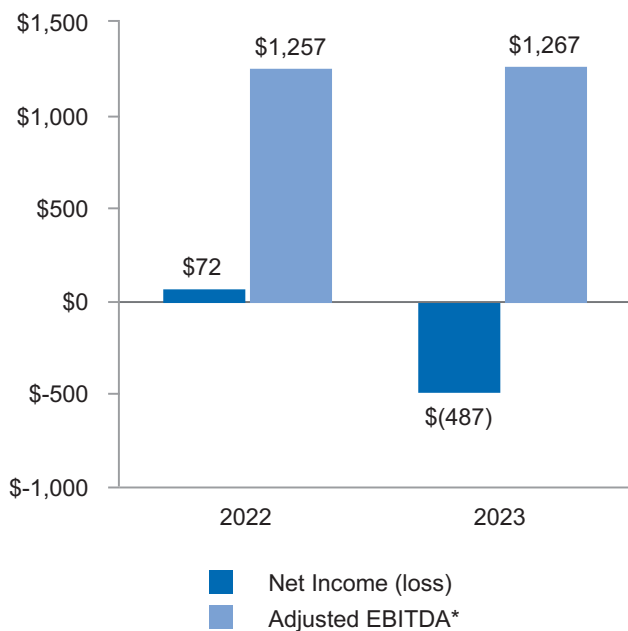
Net income attributable to noncontrolling interests, net of tax

Year Ended December 31,	2023	2022
(Dollars in millions)		
UScellular noncontrolling public shareholders'	\$ 9	\$ 6
Noncontrolling shareholders' or partners'	4	4
Net income attributable to noncontrolling interests, net of tax	<u>\$ 13</u>	<u>\$ 10</u>

Net income attributable to noncontrolling interests, net of tax includes the noncontrolling public shareholders' share of UScellular's net income, the noncontrolling shareholders' or partners' share of certain UScellular subsidiaries' net income and other TDS noncontrolling interests.

Earnings

(Dollars in millions)



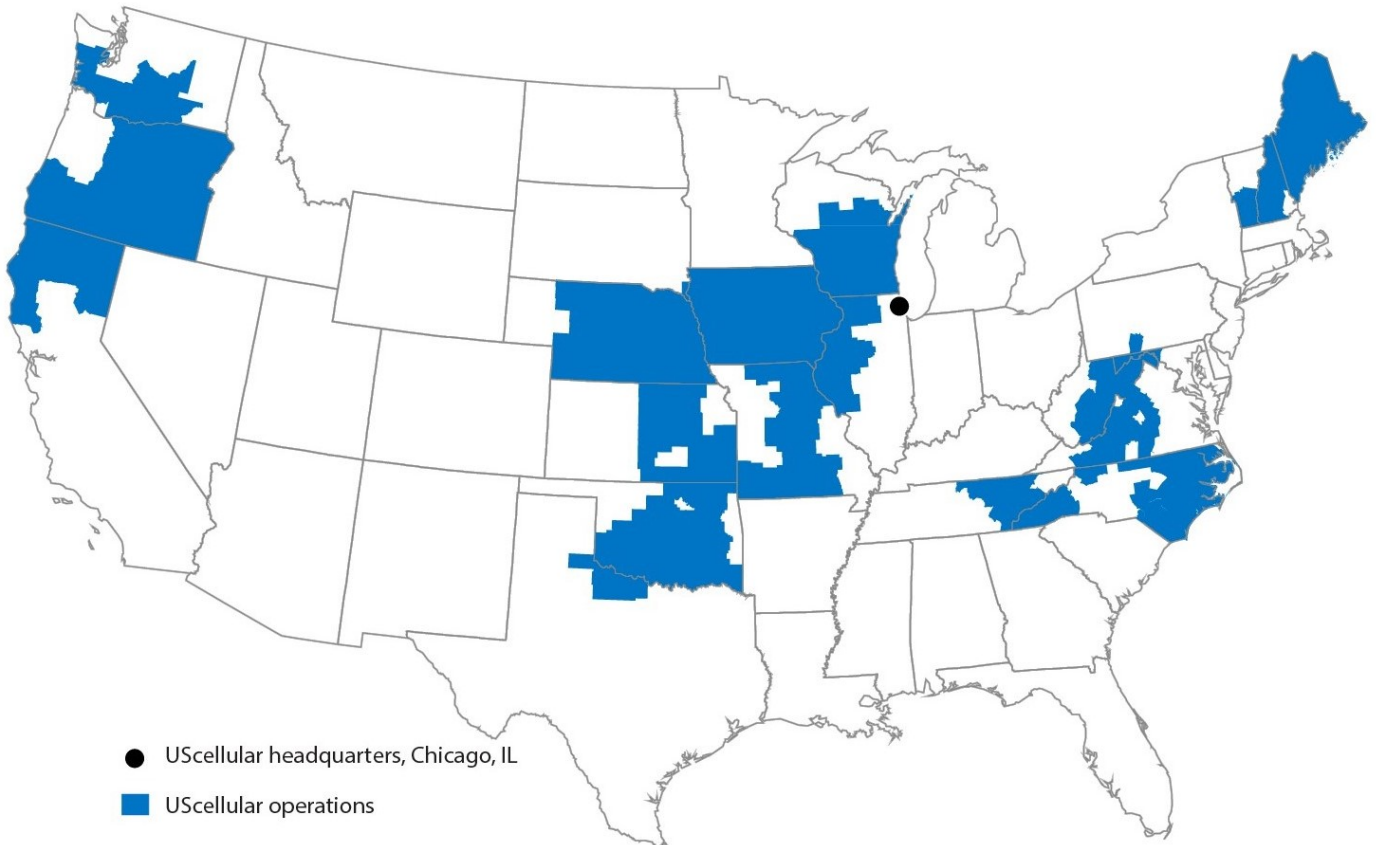
Net income (loss) decreased in 2023 due primarily to the impairment of the TDS Telecom Goodwill as well as lower operating revenues and higher interest expense, partially offset by lower cash operating and tax expenses. Adjusted EBITDA increased in 2023 due primarily to lower operating expenses, partially offset by lower operating revenues.

*Represents a non-GAAP financial measure. Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

Business Overview

UScellular owns, operates, and invests in wireless markets throughout the United States. UScellular is an 83%-owned subsidiary of TDS. UScellular's strategy is to attract and retain customers by providing a high-quality network, outstanding customer service, and competitive devices, plans and pricing - all provided with a community focus.

OPERATIONS



- Serves customers with 4.6 million retail connections including 4.1 million postpaid and 0.5 million prepaid connections
- Operates in 21 states
- Employs approximately 4,300 associates
- Owns 4,373 towers
- Operates 7,000 cell sites in service

UScellular Mission and Strategy

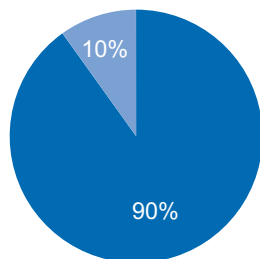
UScellular's mission is to connect its customers to what matters most to them. This includes providing exceptional wireless communication services which enhance consumers' lives, increase the competitiveness of local businesses, and improve the efficiency of government operations in the markets UScellular serves.

UScellular's strategy is to attract and retain customers by providing a high-quality network, outstanding customer service, and competitive devices, plans and pricing - all provided with a local community focus. Strategic efforts include:

- UScellular offers economical and competitively priced service plans and devices to its customers and is focused on increasing revenues from sales of related products such as device protection plans and from new services such as fixed wireless home internet. In addition, UScellular is focused on increasing tower rent revenues and expanding its solutions available to business and government customers.
- UScellular continues to enhance its network capabilities, including by deploying 5G technology. 5G technology helps address customers' growing demand for data services and creates opportunities for new services requiring high speed and reliability as well as low latency. UScellular's initial 5G deployment has predominantly used low-band spectrum to launch 5G services in portions of substantially all of its markets. During 2023, UScellular continued to invest in 5G with a focus on deployment of mid-band spectrum, which will largely overlap portions of areas already covered with low-band 5G service. 5G service deployed over mid-band spectrum will further enhance speed and capacity for UScellular's mobility and fixed wireless services.
- UScellular assesses its existing wireless interests on an ongoing basis with a goal of improving the competitiveness of its operations and maximizing its profitability. As part of this strategy, UScellular may seek attractive opportunities to acquire and divest wireless spectrum as deemed necessary.

Operational Overview — UScellular

Retail Connections Composition As of December 31, 2023



■ Postpaid ■ Prepaid

As of December 31,	2023	2022
Retail Connections – End of Period		
Postpaid	4,106,000	4,247,000
Prepaid	451,000	493,000
Total	<u>4,557,000</u>	<u>4,740,000</u>

Year Ended December 31,	2023	2022	2023 vs. 2022
Postpaid Activity and Churn			
Gross Additions			
Handsets	339,000	397,000	(15)%
Connected Devices	178,000	162,000	10 %
Total Gross Additions	<u>517,000</u>	<u>559,000</u>	(8)%
Net Additions (Losses)			
Handsets	(145,000)	(110,000)	(32)%
Connected Devices	7,000	(23,000)	N/M
Total Net Additions (Losses)	<u>(138,000)</u>	<u>(133,000)</u>	(4)%
Churn			
Handsets	1.10 %	1.12 %	
Connected Devices	2.77 %	2.95 %	
Total Churn	1.31 %	1.34 %	

N/M - Percentage change not meaningful

Total postpaid handset net losses increased in 2023 due primarily to lower gross additions resulting from aggressive industry-wide competition.

Total postpaid connected device net additions increased in 2023 due primarily to higher demand for fixed wireless home internet as well as decreases in tablet and mobile hotspot churn.

Postpaid Revenue

Year Ended December 31,	2023	2022	2023 vs. 2022
Average Revenue Per User (ARPU)	\$ 51.01	\$ 50.14	2%
Average Revenue Per Account (ARPA)	\$ 130.91	\$ 130.39	–

Postpaid ARPU increased in 2023 due to favorable plan and product offering mix and an increase in device protection plan revenues, partially offset by an increase in promotional discounts.

Postpaid ARPA was relatively flat in 2023 due to the impacts to Postpaid ARPU, offset by a decrease in the number of connections per account.

Financial Overview — UScellular

The following discussion and analysis compares financial results for the year ended December 31, 2023, to the year ended December 31, 2022.

Year Ended December 31,	2023	2022	2023 vs. 2022
(Dollars in millions)			
Retail service ¹	\$ 2,742	\$ 2,793	(2)%
Inbound roaming	32	67	(52)%
Other	270	265	2 %
Service revenues	3,044	3,125	(3)%
Equipment sales	862	1,044	(17)%
Total operating revenues	3,906	4,169	(6)%
System operations (excluding Depreciation, amortization and accretion reported below)	740	755	(2)%
Cost of equipment sold	988	1,216	(19)%
Selling, general and administrative	1,368	1,408	(3)%
Depreciation, amortization and accretion	656	700	(6)%
Loss on impairment of licenses	—	3	N/M
(Gain) loss on asset disposals, net	17	19	(9)%
(Gain) loss on sale of business and other exit costs, net	—	(1)	N/M
(Gain) loss on license sales and exchanges, net	(2)	—	N/M
Total operating expenses	3,767	4,100	(8)%
Operating income	\$ 139	\$ 69	N/M
Net income	\$ 58	\$ 35	67 %
Adjusted OIBDA (Non-GAAP) ²	\$ 818	\$ 790	4 %
Adjusted EBITDA (Non-GAAP) ²	\$ 986	\$ 956	3 %
Capital expenditures ³	\$ 611	\$ 717	(15)%

N/M - Percentage change not meaningful

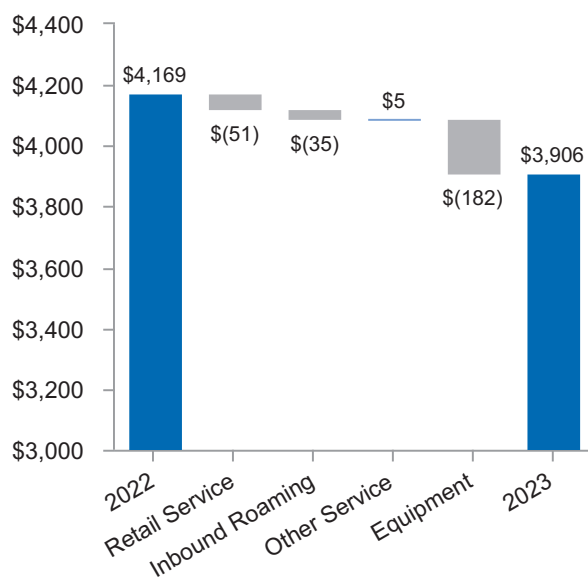
¹ UScellular recorded an adjustment to correct a prior period error related to the recognition of discounts for certain Prepaid customers, which decreased Service revenue by \$5 million in 2023. This adjustment was not material to any of the periods impacted.

² Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

³ Refer to Liquidity and Capital Resources within this MD&A for additional information on Capital expenditures.

Operating Revenues

(Dollars in millions)



Service revenues consist of:

- Retail Service – Postpaid and prepaid charges for voice, data and value-added services and cost recovery surcharges
- Inbound Roaming – Consideration from other wireless carriers whose customers use UScellular’s wireless systems when roaming
- Other Service – Amounts received from the Federal USF, third-party tower rental revenues, miscellaneous other service revenues and Internet of Things (IoT)

Equipment revenues consist of:

- Sales of wireless devices and related accessories to new and existing customers, agents, and third-party distributors

Key components of changes in the statement of operations line items were as follows:

Total operating revenues

Retail service revenues decreased in 2023 primarily as a result of a decrease in average postpaid and prepaid connections, partially offset by an increase in Postpaid ARPU as previously discussed in the Operational Overview section.

Inbound roaming revenues decreased in 2023, primarily driven by lower data revenues resulting from lower rates.

Other service revenues increased in 2023, resulting from increases in tower rental revenues, partially offset by declines in miscellaneous revenues.

Equipment sales revenues decreased in 2023, due primarily to a decline in smartphone upgrades and gross additions, partially offset by a higher average price of new smartphone sales.

Wireless service providers have been aggressive promotionally and on price to attract and retain customers. This includes both traditional carriers and cable companies operating as mobile virtual network operators (MVNOs). UScellular expects promotional aggressiveness by traditional carriers and pricing pressures from cable companies to continue into the foreseeable future. Operating revenues and Operating income have been negatively impacted in current and prior periods, and may be negatively impacted in future periods, by competitive promotional offers to new and existing customers.

Total operating expenses

Total operating expenses in 2023 include \$9 million of severance and related expenses associated with a reduction in workforce that was recorded in the first quarter of 2023. These severance expenses are included in System operations expenses and Selling, general and administrative expenses.

System operations expenses

System operations expenses decreased in 2023, due primarily to decreases in roaming and customer usage expenses, partially offset by an increase in maintenance, utility, and cell site expenses. The decrease in roaming expense was driven by a decrease in roaming rates partially offset by an increase in usage.

Cost of equipment sold

Cost of equipment sold decreased in 2023, due primarily to a decline in smartphone upgrades and gross additions, partially offset by a higher average cost per unit sold.

Selling, general and administrative expenses

Selling, general and administrative expenses decreased in 2023, due primarily to decreases in bad debts expense, commissions, facilities and employee-related expenses, partially offset by an increase in advertising expenses as well as \$8 million of expenses related to the strategic alternatives review.

Depreciation, amortization and accretion

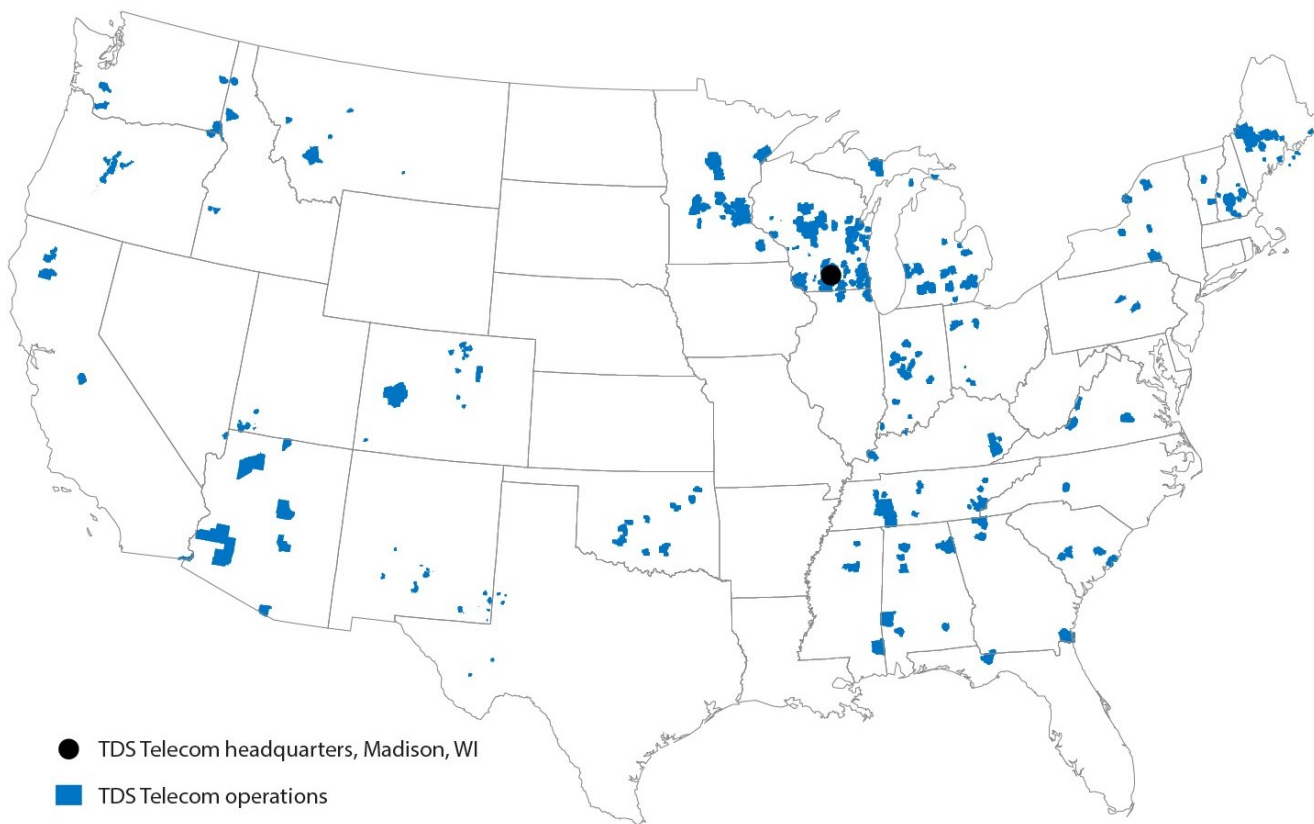
Depreciation, amortization and accretion expenses decreased in 2023 due primarily to enhancements that extended the useful life of a software platform.



Business Overview

TDS Telecom owns, operates and invests in high-quality networks, services and products in a mix of small to mid-sized urban, suburban and rural communities throughout the United States. TDS Telecom is a wholly-owned subsidiary of TDS and provides a wide range of broadband, video and voice communications services to residential, commercial and wholesale customers, with the constant focus on delivering outstanding customer service.

OPERATIONS



- Serves 1.2 million connections in 32 states.
- Employs approximately 3,600 associates.

TDS Telecom Mission and Strategy

TDS Telecom's mission is to create a better world by providing high-quality communications services to connect people and businesses, support education, and strengthen communities.

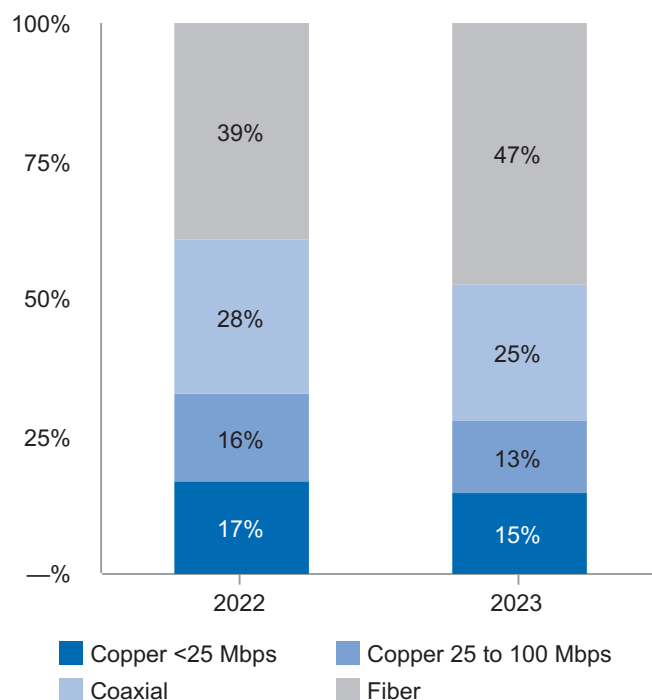
TDS Telecom's strategic efforts include:

- TDS Telecom strives to provide high-quality broadband services in its markets with the ability to provide value-added bundling with video and voice service options. TDS Telecom focuses on driving growth by investing in fiber deployment primarily in its expansion markets and also in its incumbent markets that have historically utilized copper and coaxial cable technologies.
- TDS Telecom seeks to grow its operations by creating clusters of markets in attractive, growing locations and may seek to acquire and/or divest of assets to support its strategy.

Operational Overview — TDS Telecom

Total Service Address Mix

As of December 31,



TDS Telecom increased its service addresses 12% from a year ago to 1.7 million as of December 31, 2023, through network expansion.

TDS Telecom offers 1Gig+ service to 72% of its total footprint as of December 31, 2023, compared to 66% a year ago.

As of December 31,	2023	2022	2023 vs. 2022
Residential connections			
Broadband			
Wireline, Incumbent	244,800	249,100	(2)%
Wireline, Expansion	92,200	56,100	64 %
Cable	202,900	204,800	(1)%
Total Broadband	<u>539,800</u>	<u>510,000</u>	6 %
Video	131,500	135,300	(3)%
Voice	281,600	291,600	(3)%
Total Residential Connections	<u>952,900</u>	<u>936,900</u>	2 %
Commercial connections	210,200	236,000	(11)%
Total connections	<u>1,163,100</u>	<u>1,173,000</u>	(1)%

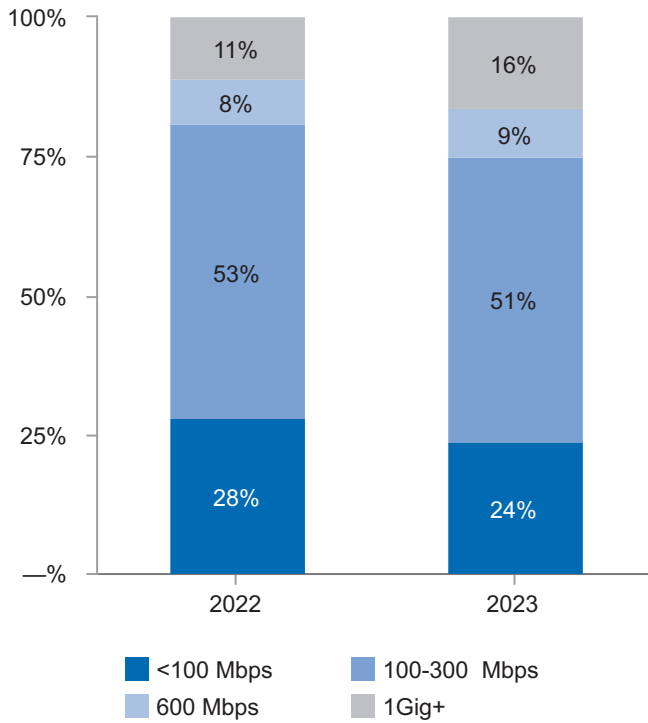
Numbers may not foot due to rounding.

Total connections decreased due to legacy voice, video, and competitive local exchange carrier (CLEC) connections declines, partially offset by broadband connection growth.

A majority of TDS Telecom's residential customers take advantage of bundling options as 56% of customers subscribe to more than one service.

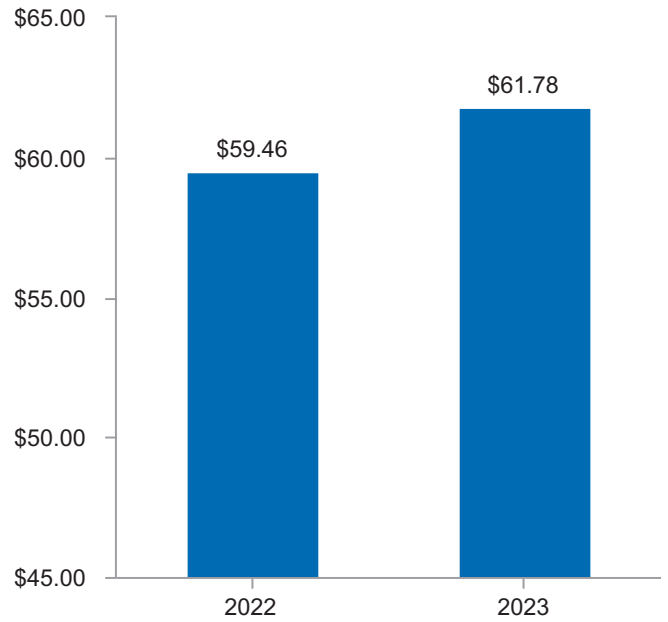
Residential Broadband Connections by Speed

As of December 31,



Residential Revenue per Connection

For the year ended December 31,



Residential broadband customers continue to choose higher speeds with 76% taking speeds of 100 Mbps or greater and 16% choosing 1Gig+.

Total residential revenue per connection increased 4% for 2023, due to price increases and product mix changes, partially offset by increased promotional activity.

Financial Overview — TDS Telecom

The following discussion and analysis compares financial results for the year ended December 31, 2023, to the year ended December 31, 2022.

Year Ended December 31,	2023	2022	2023 vs. 2022
(Dollars in millions)			
Residential			
Wireline, Incumbent	\$ 352	\$ 350	1 %
Wireline, Expansion	75	49	53 %
Cable	273	270	1 %
Total residential	700	669	5 %
Commercial	155	173	(10)%
Wholesale	172	177	(3)%
Total service revenues	1,027	1,019	1 %
Equipment revenues	1	1	(12)%
Total operating revenues	1,028	1,020	1 %
Cost of services (excluding Depreciation, amortization and accretion reported below)	423	418	1 %
Cost of equipment and products	—	1	(26)%
Selling, general and administrative	326	313	4 %
Depreciation, amortization and accretion	245	215	14 %
Loss on impairment of goodwill	547	—	N/M
(Gain) loss on asset disposals, net	10	7	31 %
Total operating expenses	1,551	954	63 %
Operating income (loss)	\$ (523)	\$ 66	N/M
Net income (loss)	\$ (483)	\$ 53	N/M
Adjusted OIBDA (Non-GAAP) ¹	\$ 279	\$ 288	(3)%
Adjusted EBITDA (Non-GAAP) ¹	\$ 285	\$ 291	(2)%
Capital expenditures ²	\$ 577	\$ 556	4 %

Numbers may not foot due to rounding.

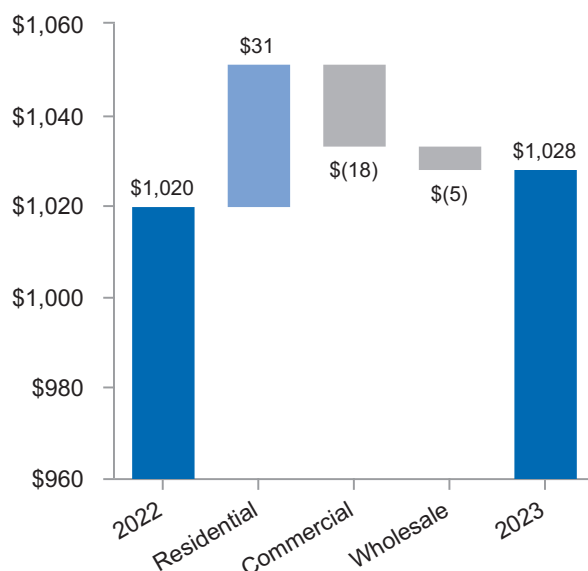
N/M - Percentage change not meaningful.

¹ Refer to Supplemental Information Relating to Non-GAAP Financial Measures within this MD&A for a reconciliation of this measure.

² Refer to Liquidity and Capital Resources within this MD&A for additional information on Capital expenditures.

Operating Revenues

(Dollars in millions)



Residential revenues consist of:

- Broadband services
- Video services, including IPTV, traditional cable programming and satellite offerings
- Voice services

Commercial revenues consist of:

- High-speed and dedicated business internet services
- Video services
- Voice services

Wholesale revenues consist of:

- Network access services primarily to interexchange and wireless carriers for carrying data and voice traffic on TDS Telecom's networks
- Federal and state regulatory support, including ACAM

Key components of changes in the statement of operations items were as follows:

Total operating revenues

Residential revenues increased for 2023 due primarily to price increases and growth in broadband connections, partially offset by promotional activity and a decline in voice and video connections.

Commercial revenues decreased for 2023 due primarily to declining connections in CLEC markets.

Cost of services

Cost of services increased for 2023 due primarily to higher video programming costs, information processing costs, and employee-related expenses, partially offset by a decrease in cost to provide legacy services.

Selling, general and administrative

Selling, general and administrative expenses increased for 2023 due primarily to increases to support current and future growth, including employee-related expenses, information processing, and advertising and marketing expenses.

Depreciation, amortization and accretion

Depreciation, amortization and accretion increased for 2023 due primarily to increased capital expenditures on new fiber assets and customer premise equipment.

Loss on impairment of goodwill

During the fourth quarter of 2023, TDS Telecom recorded a \$547 million loss on impairment of Goodwill. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information.

Liquidity and Capital Resources

Sources of Liquidity

TDS and its subsidiaries operate capital-intensive businesses. TDS incurred negative free cash flow in the year ended December 31, 2023, has incurred negative free cash flow in prior periods, and expects to continue to incur negative free cash flow in future periods. In the past, TDS' existing cash and investment balances, funds available under its financing agreements, preferred share offerings, and cash flows from operating and certain investing and financing activities, including sales of assets or businesses, provided sufficient liquidity and financial flexibility for TDS to meet its day-to-day operating needs and debt service requirements, to finance the build-out and enhancement of markets, pay dividends and to fund acquisitions. There is no assurance that this will be the case in the future.

TDS believes that existing cash and investment balances, funds available under its financing agreements, its ability to obtain future external financing, potential dispositions and expected cash flows from operating and investing activities will provide sufficient liquidity for TDS to meet its day-to-day operating needs and debt service requirements. In addition, TDS retains the ability, as described below, to reduce its capital and operating expenditures to ameliorate its funding needs.

TDS may require substantial additional funding for, among other uses, capital expenditures, making additional investments including new technologies, fiber deployments and E-ACAM builds, acquisitions of providers of telecommunications services, wireless spectrum license acquisitions, agreements to purchase goods or services, leases, repurchases of shares, or payment of dividends. It may be necessary from time to time to increase the size of its existing credit facilities, to amend existing or put in place new credit agreements, to obtain other forms of financing, issue equity securities, or to divest assets in order to fund potential expenditures. TDS' liquidity would be adversely affected if it is unable to obtain short or long-term financing on acceptable terms.

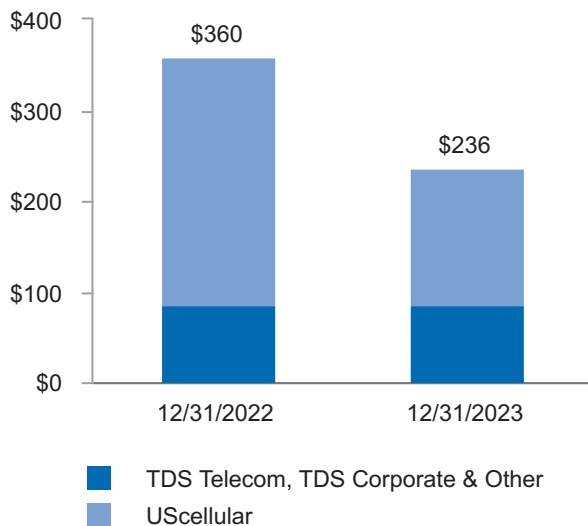
TDS will continue to monitor the rapidly changing business and market conditions and is taking and intends to take appropriate actions, as necessary, to meet its liquidity needs, including reducing its planned capital expenditures. Specifically, TDS Telecom has elected to slow the pace of its fiber deployment and reduce or defer planned capital expenditures as a means to lower its funding needs. It is possible that TDS Telecom will be required, if it is unable to access capital on acceptable terms, to substantially reduce its plans for fiber deployment, in both the short and long-term.

Cash and Cash Equivalents

Cash and cash equivalents include cash and money market investments. The primary objective of TDS' Cash and cash equivalents investment activities is to preserve principal. TDS does not have direct access to UScellular cash.

Cash and Cash Equivalents

(Dollars in millions)



The majority of TDS' Cash and cash equivalents are held in bank deposit accounts and in money market funds that purchase only debt issued by the U.S. Treasury or U.S. government agencies. Refer to the Consolidated Cash Flow Analysis for additional information related to changes in Cash and cash equivalents.

In addition to Cash and cash equivalents, TDS and UScellular had available undrawn borrowing capacity (taking into account debt covenant restrictions) from the following debt facilities at December 31, 2023. See the Financing section below for further details.

	TDS	UScellular
(Dollars in millions)		
Revolving Credit Agreement	\$ 299	\$ 300
Receivables Securitization Agreement	—	300
Repurchase Agreement ¹	—	200
Total undrawn borrowing capacity	299	800
Debt covenant restrictions ¹	—	200
Total available undrawn borrowing capacity	\$ 299	\$ 600

¹ The capacity available under the Repurchase Agreement and the Debt covenant restrictions in the table above relate to the Repurchase Agreement facility that subsequently expired in January 2024.

Financing

Revolving Credit Agreements

TDS and UScellular have unsecured revolving credit agreements with maximum borrowing capacities of \$400 million and \$300 million, respectively. Amounts under the revolving credit agreements may be borrowed, repaid and reborrowed from time to time until maturity in July 2026. As of December 31, 2023, the outstanding borrowings under the TDS agreement were \$100 million and TDS' and UScellular's unused borrowing capacity was \$299 million and \$300 million, respectively.

In January 2024, TDS borrowed \$25 million under its revolving credit agreement.

Term Loan Agreements

TDS and UScellular have term loan agreements with maximum borrowing capacities of \$500 million and \$800 million, respectively. The maturity dates for the term loan agreements range from July 2026 to July 2031. As of December 31, 2023, TDS and UScellular have borrowed the full amounts available under the agreements and the outstanding borrowings were \$492 million and \$783 million, respectively.

Secured Term Loan Agreement

In September 2023, TDS entered into a \$300 million senior secured term loan credit agreement. The maturity date of the agreement is the earlier of (i) September 2026 and (ii) the date that is 91 days prior to the scheduled maturity date of TDS' existing revolving credit agreement (which maturity date is currently July 2026). During 2023, TDS borrowed the full amount of \$300 million available under the agreement.

This term loan is secured by a perfected security interest in certain assets of TDS, including 26 million common shares in UScellular, TDS' equity interest in certain wholly-owned subsidiaries, and all or substantially all of TDS' personal property that does not constitute equity interests. This term loan is also secured by a perfected security interest in certain assets of certain wholly-owned subsidiaries of TDS that are also guarantors, including without limitation and subject to customary exceptions, equity interests in certain wholly-owned subsidiaries of such subsidiaries and all or substantially all of the personal property of such guarantor subsidiaries that does not consist of equity interests. This agreement includes representations and warranties, covenants, events of default and other terms and conditions that are substantially similar to TDS' existing term loan and revolving credit agreements or otherwise customary for similar secured credit facilities.

Export Credit Financing Agreements

TDS has a \$150 million term loan credit facility with Export Development Canada to finance (or refinance) imported equipment, including equipment purchased prior to entering the term loan facility agreement. During 2023, TDS borrowed \$100 million under the agreement. The maturity date for the agreement is December 2027. As of December 31, 2023, the outstanding borrowings under the agreement were \$150 million, which is the full amount available under the agreement.

UScellular has a \$150 million term loan credit facility with Export Development Canada to finance (or refinance) imported equipment, including equipment purchased prior to entering the term loan facility agreement. The maturity date for the agreement is January 2027. As of December 31, 2023, UScellular has borrowed the full amount available under the agreement.

Receivables Securitization Agreement

UScellular, through its subsidiaries, has a receivables securitization agreement that permits securitized borrowings using its equipment installment plan receivables. In September 2023, UScellular amended the agreement to extend the maturity date to September 2025. Amounts under the agreement may be borrowed, repaid and reborrowed from time to time until maturity. Unless the agreement is amended to extend the maturity date, repayments based on receivable collections commence in October 2025. During 2023, UScellular borrowed \$315 million and repaid \$440 million under the agreement. As of December 31, 2023, the outstanding borrowings under the agreement were \$150 million and the unused borrowing capacity was \$300 million, subject to sufficient collateral to satisfy the asset borrowing base provisions of the agreement.

In January 2024, UScellular repaid \$50 million under the agreement.

Repurchase Agreement

UScellular, through a subsidiary (the repo subsidiary), had a repurchase agreement to borrow up to \$200 million, subject to the availability of eligible equipment installment plan receivables and the agreement of the lender. In January 2023, UScellular amended the repurchase agreement to extend the expiration date to January 2024. During 2023, the repo subsidiary repaid \$60 million under the repurchase agreement. As of December 31, 2023, there were no outstanding borrowings under the repurchase agreement and the unused borrowing capacity was \$200 million, which was restricted from being borrowed due to covenants within the TDS and UScellular credit agreements that limit secured borrowings on an enterprise-wide basis.

The UScellular repurchase agreement expired in January 2024.

Debt Covenants

The TDS and UScellular revolving credit agreements, term loan agreements including the secured term loan, export credit financing agreements and the UScellular receivables securitization agreement require TDS or UScellular, as applicable, to comply with certain affirmative and negative covenants, which include certain financial covenants that may restrict the borrowing capacity available. In March 2023, the agreements were amended to require TDS and UScellular to maintain the Consolidated Leverage Ratio as of the end of any fiscal quarter at a level not to exceed the following: 4.25 to 1.00 from January 1, 2023 through March 31, 2024; 4.00 to 1.00 from April 1, 2024 through March 31, 2025; 3.75 to 1.00 from April 1, 2025 and thereafter. TDS and UScellular are also required to maintain the Consolidated Interest Coverage Ratio at a level not lower than 3.00 to 1.00 as of the end of any fiscal quarter. TDS and UScellular believe that they were in compliance as of December 31, 2023 with all such financial covenants.

TDS believes that it and/or its subsidiaries were in compliance as of December 31, 2023, with all covenants and other requirements set forth in the TDS and UScellular long-term debt indentures. TDS and UScellular have not failed to make nor do they expect to fail to make any scheduled payment of principal or interest under such indentures.

Other Long-Term Financing

TDS and UScellular each have an effective shelf registration statement on Form S-3 to issue senior or subordinated debt securities, preferred shares and depositary shares. The proceeds from any such issuances may be used for general corporate purposes, including the possible reduction of other short-term or long-term debt; spectrum purchases; capital expenditures; acquisition, construction and development programs; working capital; additional investments in subsidiaries; or the repurchase of shares. The ability of TDS or UScellular to complete an offering pursuant to such shelf registration statements is subject to market conditions and other factors at the time.

TDS and UScellular, at their discretion, may from time to time seek to retire or purchase their outstanding debt through cash purchases and/or exchanges for other securities, in open market purchases, privately negotiated transactions, tender offers, exchange offers or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

Refer to Market Risk — Long-Term Debt for additional information regarding required principal payments and the weighted average interest rates related to TDS' Long-term debt.

See Note 12 — Debt in the Notes to Consolidated Financial Statements for additional information related to the financing agreements.

Credit Ratings

In certain circumstances, TDS' and UScellular's interest cost on their various agreements may be subject to increase if their current credit ratings from nationally recognized credit rating agencies are lowered, and may be subject to decrease if the ratings are raised. The agreements do not cease to be available nor do the maturity dates accelerate solely as a result of a downgrade in TDS' or UScellular's credit rating. However, downgrades in TDS' or UScellular's credit rating could adversely affect their ability to renew the agreements, obtain consents, waivers, or amendments, or obtain access to other credit agreements in the future.

TDS and UScellular are rated as sub-investment grade issuers. The TDS and UScellular issuer credit ratings as of December 31, 2023, and the dates such ratings were re-affirmed were as follows:

Rating Agency	Rating	Outlook
Moody's (re-affirmed October 2023)	Ba1	stable outlook
Standard & Poor's (issued August 2023)	BB	watch-developing outlook
Fitch Ratings (re-affirmed March 2023)	BB+	stable outlook

Following the announcement on August 4, 2023 related to the review of strategic alternatives for UScellular, Standard & Poor's placed the BB issuer credit rating for TDS on CreditWatch with developing implications. Per the release, this action reflects the potential for a higher or lower rating depending on the outcome of the UScellular strategic alternatives review. Further, Standard & Poor's indicated they expect to resolve the CreditWatch placement once they have sufficient information following the conclusion of the strategic review process. At the same time, Moody's issued a release indicating that TDS' Ba1 issuer credit rating is not immediately impacted given the uncertainty around potential outcomes. Fitch Ratings did not issue a public statement.

Capital Requirements

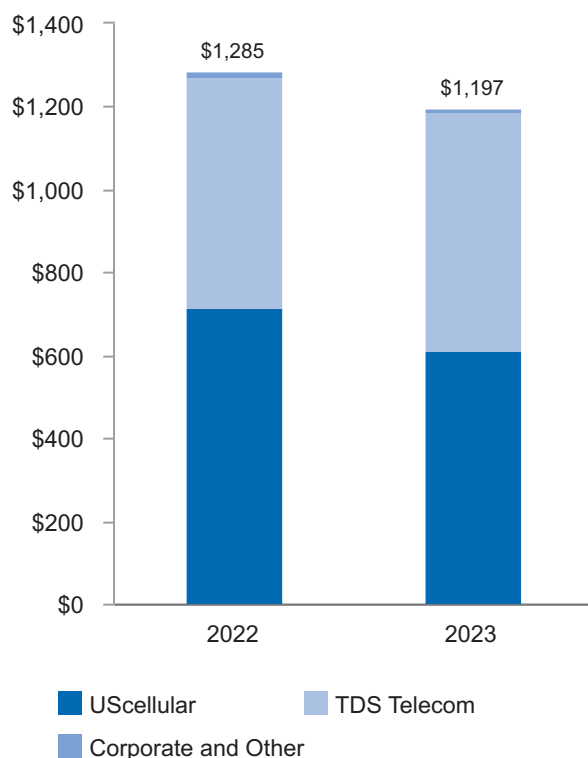
The discussion below is intended to highlight some of the significant cash outlays expected during 2024 and beyond and to highlight the spending incurred in current and prior years for these items. This discussion does not include cash required to fund normal operations, and is not a comprehensive list of capital requirements. Significant cash requirements that are not routine or in the normal course of business could arise from time to time.

Capital Expenditures

TDS makes substantial investments to acquire, construct and upgrade telecommunications networks and facilities to remain competitive and as a basis for creating long-term value for shareholders. In recent years, rapid changes in technology and new opportunities (such as 5G and VoLTE technology for UScellular and fiber for TDS Telecom) have required substantial investments in potentially revenue-enhancing and cost-saving upgrades to TDS' networks to remain competitive; this is expected to continue in 2024 and future years with the continued deployment of 5G technology for UScellular, and the continued deployment of fiber for TDS Telecom.

Capital expenditures (i.e., additions to property, plant and equipment and system development expenditures; excludes wireless spectrum license additions), which include the effects of accruals and capitalized interest, in 2023 and 2022, were as follows:

Capital Expenditures (Dollars in millions)



USCellular's capital expenditures in 2023 were \$611 million compared to \$717 million in 2022. In 2023, USCellular's capital expenditures were used for the following purposes:

- Enhance and maintain USCellular's network capacity and coverage, including continued deployment of 5G with a focus on mid-band spectrum to provide additional speed and capacity to accommodate increased data usage by current customers; and
- Invest in information technology to support existing and new services and products.

Capital expenditures for 2024 are expected to be between \$550 million and \$650 million. These expenditures are expected to be used for similar purposes as those listed above.

TDS Telecom's capital expenditures in 2023 were \$577 million compared to \$556 million in 2022. In 2023, these capital expenditures were used for the following purposes:

- Continue to expand fiber deployment in expansion and incumbent markets;
- Support broadband growth and success-based spending; and
- Maintain and enhance existing infrastructure including build-out requirements of state broadband and ACAM programs.

Capital expenditures for 2024 are expected to be between \$310 million and \$340 million. These expenditures are expected to be used for similar purposes as those listed above.

TDS intends to finance its capital expenditures for 2024 using primarily Cash flows from operating activities, existing cash balances and additional debt financing from its existing agreements and/or other forms of available financing.

Acquisitions, Divestitures and Exchanges

TDS may be engaged in negotiations (subject to all applicable regulations) relating to the acquisition, divestiture or exchange of companies, properties, assets, wireless spectrum licenses (including pursuant to FCC auctions) and other possible businesses. In general, TDS may not disclose such transactions until there is a definitive agreement.

Other Obligations

TDS will require capital for future spending on existing contractual obligations, including long-term debt obligations; dividend obligations; lease commitments; commitments for device purchases, network facilities and transport services; agreements for software licensing; long-term marketing programs; commitments for wireless spectrum licenses acquired through FCC auctions; and other agreements to purchase goods or services. TDS has taken and expects to continue to take steps to reduce and defer capital expenditures to lower its funding needs. Refer to Liquidity and Capital Resources within this MD&A for additional information.

Variable Interest Entities

TDS consolidates certain "variable interest entities" as defined under GAAP. See Note 15 — Variable Interest Entities in the Notes to Consolidated Financial Statements for additional information related to these variable interest entities. TDS may elect to make additional capital contributions and/or advances to these variable interest entities in future periods to fund their operations.

Common Share Repurchase Programs

During 2023, TDS repurchased 545,990 Common Shares for \$6 million at an average cost per share of \$10.09. As of December 31, 2023, the maximum dollar value of TDS Common Shares that may yet be purchased under TDS' program was \$132 million.

UScellular had no share repurchases during 2023. At December 31, 2023, the total cumulative amount of UScellular Common Shares authorized to be repurchased is 1,927,000.

Depending on its future financial performance, construction, development and acquisition programs, and available sources of financing, TDS and UScellular may not have sufficient liquidity or capital resources to make share repurchases. Therefore, there is no assurance that TDS and UScellular will make any share repurchases in the future.

For additional information related to the current TDS and UScellular repurchase authorizations, see Note 17 — Shareholders' Equity in the Notes to Consolidated Financial Statements.

Dividends

TDS paid quarterly dividends per outstanding Common Share of \$0.185 in 2023 and \$0.180 in 2022. TDS increased the dividend per share to \$0.190 in the first quarter of 2024. It is uncertain at this time how the strategic alternatives review for UScellular, TDS' available opportunities to reinvest in its businesses, or TDS' ongoing liquidity needs, may impact the decisions of the TDS Board of Directors regarding the declaration of future dividends.

TDS paid quarterly dividends per outstanding Series UU depositary share (each representing 1/1,000th of a Preferred Share) of \$0.414 in 2023 and 2022.

TDS paid quarterly dividends per outstanding Series VV depositary share (each representing 1/1,000th of a Preferred Share) of \$0.375 in 2023 and 2022.

Consolidated Cash Flow Analysis

TDS operates a capital-intensive business. TDS makes substantial investments to acquire wireless spectrum licenses and properties and to construct and upgrade communications networks and facilities with a goal of creating long-term value for shareholders. In recent years, rapid changes in technology and new opportunities have required substantial investments in potentially revenue-enhancing and cost-saving upgrades to TDS' networks. Revenues from certain of these investments are long-term and in some cases are uncertain. To meet its cash-flow needs, TDS may need to delay or reduce certain investments, dividend payments or sell assets. Refer to Liquidity and Capital Resources within this MD&A for additional information. Cash flows may fluctuate from quarter to quarter and year to year due to seasonality, timing and other factors. The following discussion summarizes TDS' cash flow activities in 2023 and 2022.

2023 Commentary

TDS' Cash, cash equivalents and restricted cash decreased \$129 million. Net cash provided by operating activities was \$1,142 million due to a net loss of \$487 million adjusted for non-cash items of \$1,496 million and distributions received from unconsolidated entities of \$150 million, including \$69 million in distributions from the LA Partnership. This was partially offset by changes in working capital items which decreased net cash by \$17 million. The working capital changes were primarily driven by the timing of vendor payments and an increase in receivables, partially offset by reduced inventory balances and a federal income tax refund of \$57 million received during the second quarter of 2023.

Cash flows used for investing activities were \$1,327 million, which included payments for property, plant and equipment of \$1,211 million and payments for wireless spectrum licenses of \$130 million.

Cash flows provided by financing activities were \$56 million, due primarily to \$365 million borrowed under the TDS revolving credit agreement, \$315 million borrowed under the UScellular receivables securitization agreement, \$300 million borrowed under the TDS secured term loan agreement, and \$100 million borrowed under the TDS export credit agreement. These were partially offset by \$440 million in repayments on the UScellular receivables securitization agreement, \$265 million in repayments on the TDS revolving credit agreement, a \$60 million repayment on the UScellular EIP receivables repurchase agreement, payment of \$153 million in dividends and cash paid for software license agreements of \$66 million.

2022 Commentary

TDS' Cash, cash equivalents and restricted cash decreased \$15 million. Net cash provided by operating activities was \$1,155 million due to net income of \$72 million adjusted for non-cash items of \$1,036 million and distributions received from unconsolidated entities of \$145 million, including \$59 million in distributions from the LA Partnership. This was partially offset by changes in working capital items which decreased net cash by \$98 million. The working capital changes were primarily influenced by an increase in receivable and inventory balances, partially offset by a federal income tax refund of \$125 million received during the first quarter of 2022. The increase in receivables was driven by a high volume of equipment upgrades due to promotional activities and a longer contract term for equipment installment plans.

Cash flows used for investing activities were \$1,783 million, which included payments for property, plant and equipment of \$1,161 million and payments for wireless spectrum licenses of \$585 million. Cash payments for property, plant and equipment are lower than the total capital expenditures in 2022 due primarily to future obligations of certain software license agreements that are recorded as current year capital expenditures but are paid over time.

Cash flows provided by financing activities were \$613 million, due primarily to \$800 million borrowed under the term loan facilities, \$200 million borrowed under the export credit financing agreements, \$110 million borrowed under the UScellular EIP receivables repurchase agreement, \$75 million borrowed under the UScellular revolving credit agreement, and \$75 million borrowed under the UScellular receivables securitization agreement. These were partially offset by \$250 million of repayments on the UScellular receivables securitization agreement, a \$75 million repayment on the UScellular revolving credit agreement, a \$50 million repayment on the UScellular EIP receivables repurchase agreement, the payment of dividends totaling \$151 million, the repurchase of TDS and UScellular Common Shares totaling \$83 million and cash paid for software license agreements of \$23 million.

Consolidated Balance Sheet Analysis

The following discussion addresses certain captions in the consolidated balance sheet and changes therein. This discussion is intended to highlight the significant changes and is not intended to fully reconcile the changes. Notable balance sheet changes during 2023 were as follows:

Accounts receivable, other

Accounts receivable, other decreased \$30 million due primarily to the collection of vendor credits from original equipment manufacturers.

Inventory, net

Inventory, net decreased \$60 million due primarily to efforts to reduce inventory on hand which was elevated due to lower than expected sales in the fourth quarter of 2022.

Income taxes receivable

Income taxes receivable decreased \$55 million due primarily to a federal income tax refund received in the second quarter of 2023 related to the 2020 net operating loss carryback enabled by the CARES Act.

Goodwill

Goodwill decreased \$547 million due to the impairment of TDS Telecom's Goodwill in the fourth quarter of 2023. See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for additional information.

Accounts payable

Accounts payable decreased \$146 million due primarily to the timing of vendor invoice payments related to inventory.

Other current liabilities

Other current liabilities decreased \$186 million due primarily to the payment of Auction 107 relocation fees and repayments on the EIP receivables repurchase agreement.

Retained earnings

Retained earnings decreased \$676 million due primarily to the net loss incurred for the period, driven by the impairment of TDS Telecom's Goodwill of \$547 million and the payment of dividends.

Application of Critical Accounting Policies and Estimates

TDS prepares its consolidated financial statements in accordance with GAAP. TDS' significant accounting policies are discussed in detail in Note 1 — Summary of Significant Accounting Policies, Note 2 — Revenue Recognition and Note 10 — Leases in the Notes to Consolidated Financial Statements.

Management believes the application of the following critical accounting policies and the estimates required by such application reflect its most significant judgments and estimates used in the preparation of TDS' consolidated financial statements.

Intangible Asset Impairment

Wireless spectrum licenses and Goodwill represent a significant component of TDS' consolidated assets. These assets are considered to be indefinite-lived assets, and therefore are not amortized but are tested at least annually for impairment. TDS performs annual impairment testing of wireless spectrum licenses and Goodwill as of November 1 of each year, or more frequently if triggering events occur. Significant negative events, such as changes in any of the assumptions described below or decreases in forecasted cash flows, could result in an impairment. Wireless spectrum licenses are tested for impairment at the level of reporting referred to as a unit of accounting. Goodwill is tested for impairment at the level of reporting referred to as a reporting unit.

See Note 7 — Intangible Assets in the Notes to Consolidated Financial Statements for information related to Licenses and Goodwill activity in 2023 and 2022.

Wireless Spectrum Licenses – UScellular

For purposes of its impairment test, UScellular has one unit of accounting. UScellular performed a quantitative impairment assessment in 2023 and a qualitative impairment assessment in 2022.

In 2023, a market approach was used to value the wireless spectrum license portfolio. The wireless spectrum licenses were pooled by band, and a range of values was established using industry benchmarks, FCC auction data, and precedent transactions. The midpoint of the range was established as the point estimate for the value of each band, and the sum of the band values was used as the point estimate value of UScellular's wireless spectrum license unit of accounting. Based on this valuation, the fair value of the wireless spectrum licenses exceeded the respective carrying value by 17% and there was no impairment of wireless spectrum licenses.

In 2022, UScellular considered several qualitative factors, including analyst estimates of wireless spectrum license values, recent spectrum auction results, UScellular and other market participant transactions, and other industry and market factors. Based on these assessments, UScellular concluded that it was more likely than not that the fair value of the unit of accounting exceeded its carrying value. Therefore, no quantitative impairment evaluation was completed.

Goodwill – TDS Telecom

TDS Telecom had recorded Goodwill as a result of past business acquisitions. For purposes of the 2023 and 2022 Goodwill impairment test, TDS Telecom had one reporting unit.

2023 Impairment Test

Rising interest rates and liquidity constraints have caused TDS Telecom to slow the pace of its fiber deployment and reduce or defer planned capital expenditures in future years, which also defers the related revenue generation from these projects. In addition, TDS Telecom is facing increasing competitive pressures in its Incumbent Wireline markets. Consequently, TDS Telecom reset its long-range forecast in the fourth quarter of 2023, and performed a quantitative impairment assessment as of November 1, 2023.

The discounted cash flow and guideline public company approaches were used to value the reporting unit, weighted at 75% and 25%, respectively. The discounted cash flow approach develops an indication of fair value using various inputs and considers current economic factors as well as risks specific to the industry and the reporting unit. The most significant assumptions made in this process were the revenue growth rate over the forecast period (shown as a compound annual growth rate in the table below), the terminal growth rate and the discount rate.

Key Assumptions

Revenue growth rate	6.8 %
Terminal growth rate	1.0 %
Discount rate ¹	11.0 %

¹ The discount rate is derived based on a set of guideline public companies and is an indicator of the cost of capital for a market participant in TDS Telecom's industry. The discount rate includes a premium for forecast risk; the premium in 2023 contemplates execution risk related to fiber expansion given near-term capital and liquidity constraints at the reporting unit.

The guideline public company method develops an estimate of fair value by calculating market pricing multiples for selected publicly traded companies that are comparable to the reporting unit. The multiples are applied to the appropriate financial measure of the reporting unit to estimate the reporting unit's fair value.

The results of the goodwill impairment test indicated that the carrying value of the TDS Telecom reporting unit exceeded its fair value. Therefore, TDS recognized a loss on impairment of goodwill of \$547 million to reduce the carrying value of Goodwill for the reporting unit to zero in the fourth quarter of 2023.

This reset of the long-range forecast and resulting impairment of Goodwill did not have a material impact on the value of TDS Telecom's long-lived asset group; therefore, TDS concluded that it was more likely than not that the fair value of the long-lived asset group exceeded its carrying value, and accordingly no impairment of long-lived assets was recorded.

2022 Impairment Test

TDS Telecom performed a qualitative impairment assessment in 2022, which analyzed company, industry and economic trends, and concluded that it was more likely than not that the fair value of the TDS Telecom reporting unit exceeded its carrying value, and accordingly no Goodwill impairment was recorded in 2022.

Income Taxes

The amounts of income tax assets and liabilities, the related income tax provision and the amount of unrecognized tax benefits are critical accounting estimates because such amounts are significant to TDS' financial condition and results of operations.

The preparation of the consolidated financial statements requires TDS to calculate a provision for income taxes. This process involves estimating the actual current income tax liability together with assessing temporary differences resulting from the different treatment of items for tax purposes. These temporary differences result in deferred income tax assets and liabilities which are included on a net basis in TDS' Consolidated Balance Sheet. TDS must then assess the likelihood that deferred income tax assets will be realized based on future taxable income and, to the extent management believes that realization is not likely, establish a valuation allowance. Management's judgment is required in determining the provision for income taxes, deferred income tax assets and liabilities and any valuation allowance that is established for deferred income tax assets.

TDS recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on management's judgment as to the possible outcome that has a greater than 50% cumulative likelihood of being realized upon ultimate resolution.

See Note 5 — Income Taxes in the Notes to Consolidated Financial Statements for additional information.

Regulatory Matters

5G Fund

On October 27, 2020, the FCC adopted rules creating the 5G Fund for Rural America, which will distribute up to \$9 billion over ten years to bring 5G wireless broadband connectivity to rural America. The 5G Fund will be implemented through a two-phase competitive process, using multiround auctions to award support. The winning bidders will be required to meet certain minimum speed requirements and interim and final deployment milestones. The order provides that the 5G Fund be in lieu of the previously proposed fund (the Phase II Connect America Mobility Fund) for the development of 4G LTE. The order also provides that over time a growing percentage of the legacy support a carrier receives must be used for 5G deployment. On September 22, 2023, the FCC adopted a Further Notice of Proposed Rulemaking (FNPRM) to continue implementation of the 5G Fund. The FCC sought comment on, among other things, the definition of areas eligible for 5G Fund support, adjustment factors and metrics used to identify winning bids, and the potential inclusion of cybersecurity and supply chain management requirements for those receiving 5G Fund support.

UScellular cannot predict at this time when the 5G Fund auction will occur, when the phase down period for its existing legacy support from the Federal USF will commence, or whether the 5G Fund auction will provide opportunities to UScellular to offset any loss in existing support.

Spectrum Auctions

On March 2, 2020, the FCC released a Public Notice establishing procedures for an auction offering wireless spectrum licenses in the 3.5 GHz band (Auction 105). On September 2, 2020, the FCC announced by way of public notice that UScellular was the provisional winning bidder for 243 wireless spectrum licenses for a purchase price of \$14 million. On July 15, 2022, the FCC released a Consent Decree related to its spectrum aggregation and ownership attribution rules in which UScellular agreed to relinquish its rights to 27 wireless spectrum licenses awarded in Auction 105 and subsequently received a full refund of \$2 million. The remaining 216 wireless spectrum licenses were granted by the FCC on July 26, 2022.

On August 7, 2020, the FCC released a Public Notice establishing procedures for an auction offering wireless spectrum licenses in the 3.7-3.98 GHz bands (Auction 107). On February 24, 2021, the FCC announced by way of public notice that UScellular was the provisional winning bidder for 254 wireless spectrum licenses for \$1,283 million. UScellular paid \$30 million of this amount in 2020 and the remainder in March 2021. The wireless spectrum licenses from Auction 107 were granted by the FCC in July 2021. Additionally, UScellular was obligated to pay approximately \$179 million in total from 2021 through 2025 related to relocation costs and accelerated relocation incentive payments. Such additional costs were accrued and capitalized at the time the licenses were granted, and are adjusted as necessary as the estimated obligation changes. UScellular paid \$122 million, \$8 million and \$36 million related to the additional costs for the years ended December 31, 2023, 2022 and 2021, respectively. UScellular received full access to the spectrum in the third quarter of 2023.

On June 9, 2021, the FCC released a Public Notice establishing procedures for an auction offering wireless spectrum licenses in the 3.45-3.55 GHz band (Auction 110). On January 14, 2022, the FCC announced by way of public notice that UScellular was the provisional winning bidder for 380 wireless spectrum licenses for \$580 million. UScellular paid \$20 million of this amount in 2021 and the remainder in the first quarter of 2022. The wireless spectrum licenses from Auction 110 were granted by the FCC on May 4, 2022.

On March 21, 2022, the FCC released a Public Notice establishing procedures for an auction offering wireless spectrum licenses in the 2.5 GHz band (Auction 108). On September 1, 2022, the FCC announced by way of public notice that UScellular was the provisional winning bidder for 34 wireless spectrum licenses for \$3 million. The wireless spectrum licenses from Auction 108 were granted by the FCC on December 1, 2022.

FCC Enhanced Alternative Connect America Cost Model (E-ACAM)

On July 24, 2023, the FCC released an order adopting the E-ACAM program for the purpose of supporting widespread deployment of 100/20 Mbps service speeds in eligible rural areas. The program is offered and extended to carriers currently receiving ACAM or legacy rate-of-return support.

On September 28, 2023, TDS Telecom notified the FCC of its decision to accept 24 of the 25 state offers received for E-ACAM support. The enhanced program requires TDS Telecom to deploy high-speed internet to approximately 270,000 locations. Starting in 2024, TDS Telecom expects to receive support of approximately \$90 million per year for 15 years in exchange for meeting the 100/20 Mbps service requirement. The support replaces the prior ACAM program support received for the 24 states where TDS Telecom has wireline operations. On October 30, 2023, the Wireline Competition Bureau issued a public notice authorizing the Universal Service Administrative Company to disburse the appropriate amounts. TDS Telecom will incur capital expenditures over the next several years to meet its obligations to serve the required locations with 100/20 Mbps service.

Private Securities Litigation Reform Act of 1995

Safe Harbor Cautionary Statement

This Management's Discussion and Analysis of Financial Condition and Results of Operations and other sections of this Annual Report contain statements that are not based on historical facts and represent forward-looking statements, as this term is defined in the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, that address activities, events or developments that TDS intends, expects, projects, believes, estimates, plans or anticipates will or may occur in the future are forward-looking statements. The words "believes," "anticipates," "estimates," "expects," "plans," "intends," "projects" and similar expressions are intended to identify these forward-looking statements, but are not the exclusive means of identifying them. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results, events or developments to be significantly different from any future results, events or developments expressed or implied by such forward-looking statements. Such risks, uncertainties and other factors include, but are not limited to, those set forth below. See "Risk Factors" in TDS' Annual Report on Form 10-K for the year ended December 31, 2023, for a further discussion of these risks. Each of the following risks could have a material adverse effect on TDS' business, financial condition or results of operations. However, such factors are not necessarily all of the important factors that could cause actual results, performance or achievements to differ materially from those expressed in, or implied by, the forward-looking statements contained in this document. Other unknown or unpredictable factors also could have material adverse effects on future results, performance or achievements. TDS undertakes no obligation to update publicly any forward-looking statements whether as a result of new information, future events or otherwise. Readers should evaluate any statements in light of these important factors.

Operational Risk Factors

- *Intense competition involving products, services, pricing, promotions and network speed and technologies could adversely affect TDS' revenues or increase its costs to compete.*
- *Changes in roaming practices or other factors could cause TDS' roaming revenues to decline from current levels, roaming expenses to increase from current levels and/or impact TDS' ability to service its customers in geographic areas where TDS does not have its own network, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *An inability to attract diverse people of outstanding talent throughout all levels of the organization, to develop their potential through education and assignments, and to retain them by keeping them engaged, challenged and properly rewarded could have an adverse effect on TDS' business, financial condition or results of operations.*
- *TDS' smaller scale relative to larger competitors that may have greater financial and other resources than TDS could cause TDS to be unable to compete successfully, which could adversely affect its business, financial condition or results of operations.*
- *Changes in various business factors, including changes in demand, consumer preferences and perceptions, price competition, churn from customer switching activity and other factors, could have an adverse effect on TDS' business, financial condition or results of operations.*
- *A failure by TDS to obtain access to adequate radio spectrum to meet current or anticipated future needs and/or to accurately predict future needs for radio spectrum could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Advances or changes in technology could render certain technologies used by TDS obsolete, could put TDS at a competitive disadvantage, could reduce TDS' revenues or could increase its costs of doing business.*
- *Complexities associated with deploying new technologies present substantial risk and TDS' investments in unproven technologies may not produce the benefits that TDS expects.*
- *Costs, integration problems or other factors associated with acquisitions, divestitures or exchanges of properties or wireless spectrum licenses and/or expansion of TDS' businesses could have an adverse effect on TDS' business, financial condition or results of operations.*
- *A failure by TDS to complete significant network construction and systems implementation activities as part of its plans to improve the quality, coverage, capabilities and capacity of its network, support and other systems and infrastructure could have an adverse effect on its operations.*
- *Difficulties involving third parties with which TDS does business, including changes in TDS' relationships with or financial or operational difficulties, including supply chain disruptions, of key suppliers or independent agents and third-party national retailers who market TDS' services, could adversely affect TDS' business, financial condition or results of operations.*
- *A failure by TDS to maintain flexible and capable telecommunication networks or information technologies, or a material disruption thereof, could have an adverse effect on TDS' business, financial condition or results of operations.*

Financial Risk Factors

- *Uncertainty in TDS' or UScellular's future cash flow and liquidity or the inability to access capital, deterioration in the capital markets, changes in interest rates, other changes in TDS' or UScellular's performance or market conditions, changes in TDS' or UScellular's credit ratings or other factors could limit or restrict the availability of financing on terms and prices acceptable to TDS, which has required and could in the future require TDS to reduce or delay its construction, development or acquisition programs, reduce the amount of wireless spectrum licenses acquired, divest assets or businesses, and/or reduce or cease share repurchases and/or the payment of dividends.*
- *TDS has a significant amount of indebtedness which could adversely affect its financial performance and in turn adversely affect its ability to make payments on its indebtedness, comply with terms of debt covenants and incur additional debt.*
- *TDS has entered into a new Senior Secured Credit Agreement that imposes certain restrictions on its business and operations that may affect its ability to operate its business and make payments on its indebtedness.*
- *TDS' assets and revenue are concentrated primarily in the U.S. telecommunications industry. Consequently, its operating results may fluctuate based on factors related primarily to conditions in this industry.*
- *TDS has significant investments in entities that it does not control. Losses in the value of such investments could have an adverse effect on TDS' financial condition or results of operations.*

Regulatory, Legal and Governance Risk Factors

- *TDS and UScellular have initiated a process to explore a range of strategic alternatives for UScellular and there can be no assurance that any strategic alternative will be successfully identified or completed, that any such strategic alternative will result in additional value for TDS and its shareholders, or that the process will not have an adverse impact on TDS' business or financial statements.*
- *Failure by TDS to timely or fully comply with any existing applicable legislative and/or regulatory requirements or changes thereto could adversely affect TDS' business, financial condition or results of operations.*
- *TDS receives significant regulatory support, and is also subject to numerous surcharges and fees from federal, state and local governments – the applicability and the amount of the support and fees are subject to great uncertainty, including the ability to pass through certain fees to customers, and this uncertainty could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Settlements, judgments, restraints on its current or future manner of doing business and/or legal costs resulting from pending and future litigation could have an adverse effect on TDS' business, financial condition or results of operations.*
- *The possible development of adverse precedent in litigation or conclusions in professional or environmental studies to the effect that potentially harmful emissions from devices or network equipment, including but not limited to radio frequencies emitted by wireless signals or due to contamination from network cabling, may cause harmful health or environmental consequences, including cancer, tumors or otherwise harmful impacts, or may interfere with various electronic medical devices or frequencies used by other industries, could have an adverse effect on TDS' wireless and/or wireline business, financial condition or results of operations.*
- *Claims of infringement of intellectual property and proprietary rights of others, primarily involving patent infringement claims, could prevent TDS from using necessary technology to provide products or services or subject TDS to expensive intellectual property litigation or monetary penalties, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Certain matters, such as control by the TDS Voting Trust and provisions in the TDS Restated Certificate of Incorporation, may serve to discourage or make more difficult a change in control of TDS or have other consequences.*

General Risk Factors

- *TDS has experienced, and in the future expects to experience, cyber-attacks or other breaches of network or information technology security of varying degrees on a regular basis, which could have an adverse effect on TDS' business, financial condition or results of operations.*
- *Disruption in credit or other financial markets, a deterioration of U.S. or global economic conditions or other events could, among other things, impede TDS' access to or increase the cost of financing its operating and investment activities and/or result in reduced revenues and lower operating income and cash flows, which would have an adverse effect on TDS' business, financial condition or results of operations.*
- *The impact of public health emergencies on TDS' business is uncertain, but depending on duration and severity could have a material adverse effect on TDS' business, financial condition or results of operations.*

Market Risk

Long-Term Debt

As of December 31, 2023, approximately 50% of TDS' long-term debt was in fixed-rate senior notes and approximately 50% in variable-rate debt. Fluctuations in market interest rates can lead to volatility in the fair value of fixed-rate notes and interest expense on variable-rate debt.

The following table presents the scheduled principal payments on long-term debt, lease obligations and the related weighted average interest rates by maturity dates at December 31, 2023:

	Principal Payments Due by Period	
	Long-Term Debt Obligations ¹	Weighted-Avg. Interest Rates on Long-Term Debt Obligations ²
(Dollars in millions)		
2024	\$ 26	7.2 %
2025	26	7.2 %
2026	676	7.2 %
2027	319	7.0 %
2028	482	7.5 %
Thereafter	2,500	6.4 %
Total	<u>\$ 4,029</u>	<u>6.7 %</u>

¹ The total long-term debt obligation differs from Long-term debt in the Consolidated Balance Sheet due to unamortized debt issuance costs on all non-revolving debt instruments, unamortized discounts related to UScellular's 6.7% Senior Notes, and outstanding borrowings under the receivables securitization agreement, which principal repayments are not scheduled but are instead based on actual receivable collections. See Note 12 — Debt in the Notes to Consolidated Financial Statements for additional information.

² Represents the weighted average stated interest rates at December 31, 2023, for debt maturing in the respective periods.

Fair Value of Long-Term Debt

At December 31, 2023 and 2022, the estimated fair value of long-term debt obligations, excluding lease obligations, the current portion of such long-term debt and debt financing costs, was \$3,651 million and \$3,047 million, respectively, and the book value was \$4,139 million and \$3,789 million, respectively. See Note 3 — Fair Value Measurements in the Notes to Consolidated Financial Statements for additional information.

Supplemental Information Relating to Non-GAAP Financial Measures

TDS sometimes uses information derived from consolidated financial information but not presented in its financial statements prepared in accordance with GAAP to evaluate the performance of its business. Certain of these measures are considered “non-GAAP financial measures” under U.S. Securities and Exchange Commission Rules. Specifically, TDS has referred to the following measures in this Form 10-K Report:

- EBITDA
- Adjusted EBITDA
- Adjusted OIBDA
- Free cash flow
- Goodwill impairment, net of tax

Following are explanations of each of these measures:

EBITDA, Adjusted EBITDA and Adjusted OIBDA

EBITDA, Adjusted EBITDA and Adjusted OIBDA are defined as Net income (loss) adjusted for the items set forth in the reconciliation below. EBITDA, Adjusted EBITDA and Adjusted OIBDA are not measures of financial performance under GAAP and should not be considered as alternatives to Net income (loss) or Cash flows from operating activities, as indicators of cash flows or as measures of liquidity. TDS does not intend to imply that any such items set forth in the reconciliation below are non-recurring, infrequent or unusual; such items may occur in the future.

Adjusted EBITDA is a segment measure reported to the chief operating decision maker for purposes of assessing the segments' performance. See Note 19 — Business Segment Information in the Notes to Consolidated Financial Statements for additional information.

Management uses Adjusted EBITDA and Adjusted OIBDA as measurements of profitability, and therefore reconciliations to applicable GAAP income measures are deemed appropriate. Management believes Adjusted EBITDA and Adjusted OIBDA are useful measures of TDS' operating results before significant recurring non-cash charges, nonrecurring expenses, gains and losses, and other items as presented below as they provide additional relevant and useful information to investors and other users of TDS' financial data in evaluating the effectiveness of its operations and underlying business trends in a manner that is consistent with management's evaluation of business performance. Adjusted EBITDA shows adjusted earnings before interest, taxes, depreciation, amortization and accretion, gains and losses, and expenses related to the strategic alternatives review of UScellular, while Adjusted OIBDA reduces this measure further to exclude Equity in earnings of unconsolidated entities and Interest and dividend income in order to more effectively show the performance of operating activities excluding investment activities. The following tables reconcile EBITDA, Adjusted EBITDA and Adjusted OIBDA to the corresponding GAAP measures, Net income (loss) and Operating income (loss).

TDS TELECOM	2023	2022
(Dollars in millions)		
Net income (loss) (GAAP)	\$ (483)	\$ 53
Add back or deduct:		
Income tax expense (benefit)	(26)	23
Interest expense	(8)	(7)
Depreciation, amortization and accretion	245	215
EBITDA (Non-GAAP)	(272)	284
Add back or deduct:		
Loss on impairment of goodwill	547	—
(Gain) loss on asset disposals, net	10	7
Adjusted EBITDA (Non-GAAP)	285	291
Deduct:		
Interest and dividend income	4	2
Other, net	2	1
Adjusted OIBDA (Non-GAAP)	279	288
Deduct:		
Depreciation, amortization and accretion	245	215
Loss on impairment of goodwill	547	—
(Gain) loss on asset disposals, net	10	7
Operating income (loss) (GAAP)	\$ (523)	\$ 66

Numbers may not foot due to rounding.

Free Cash Flow

The following table presents Free cash flow, which is defined as Cash flows from operating activities less Cash paid for additions to property, plant and equipment and Cash paid for software license agreements. Free cash flow is a non-GAAP financial measure which TDS believes may be useful to investors and other users of its financial information in evaluating liquidity, specifically, the amount of net cash generated by business operations after deducting Cash paid for additions to property, plant and equipment and Cash paid for software license agreements.

	2023	2022
(Dollars in millions)		
Cash flows from operating activities (GAAP)	\$ 1,142	\$ 1,155
Cash paid for additions to property, plant and equipment	(1,211)	(1,161)
Cash paid for software license agreements	(66)	(23)
Free cash flow (Non-GAAP)	\$ (135)	\$ (29)

Goodwill impairment, net of tax

The following non-GAAP financial measure isolates the total effects on net income of the current period Loss on impairment of goodwill at TDS Telecom, including tax impacts. TDS believes this measure may be useful to investors and other users of its financial information to assist in comparing the current period financial results with periods that were not impacted by such a charge.

	2023	2022
(Dollars in millions)		
Net loss attributable to TDS common shareholders (GAAP)	\$ (569)	\$ (7)
Adjustments:		
Loss on impairment of goodwill	547	—
Deferred tax benefit on the tax-amortizable portion of the impaired Goodwill	(36)	—
Subtotal of Non-GAAP adjustments	511	—
Net loss attributable to TDS common shareholders excluding goodwill impairment charge (Non-GAAP)	\$ (58)	\$ (7)

Financial Statements

Telephone and Data Systems, Inc. Consolidated Statement of Operations

Year Ended December 31,	2023	2022	2021
(Dollars and shares in millions, except per share amounts)			
Operating revenues			
Service	\$ 4,169	\$ 4,240	\$ 4,216
Equipment and product sales	991	1,173	1,113
Total operating revenues	<u>5,160</u>	<u>5,413</u>	<u>5,329</u>
Operating expenses			
Cost of services (excluding Depreciation, amortization and accretion reported below)	1,240	1,245	1,267
Cost of equipment and products	1,094	1,320	1,205
Selling, general and administrative	1,753	1,768	1,677
Depreciation, amortization and accretion	915	929	895
Loss on impairment of intangible assets	547	3	—
(Gain) loss on asset disposals, net	27	27	26
(Gain) loss on sale of business and other exit costs, net	—	(1)	(2)
(Gain) loss on license sales and exchanges, net	(2)	—	—
Total operating expenses	<u>5,574</u>	<u>5,291</u>	<u>5,068</u>
Operating income (loss)	(414)	122	261
Investment and other income (expense)			
Equity in earnings of unconsolidated entities	159	159	182
Interest and dividend income	20	17	11
Interest expense	(244)	(174)	(232)
Other, net	2	1	(1)
Total investment and other income (expense)	<u>(63)</u>	<u>3</u>	<u>(40)</u>
Income (loss) before income taxes	(477)	125	221
Income tax expense	10	53	33
Net income (loss)	(487)	72	188
Less: Net income attributable to noncontrolling interests, net of tax	13	10	32
Net income (loss) attributable to TDS shareholders	(500)	62	156
TDS Preferred Share dividends	69	69	39
Net income (loss) attributable to TDS common shareholders	\$ (569)	\$ (7)	\$ 117
Basic weighted average shares outstanding	113	114	115
Basic earnings (loss) per share attributable to TDS common shareholders	\$ (5.05)	\$ (0.07)	\$ 1.03
Diluted weighted average shares outstanding	113	114	116
Diluted earnings (loss) per share attributable to TDS common shareholders	\$ (5.06)	\$ (0.07)	\$ 1.00

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

Telephone and Data Systems, Inc.
Consolidated Statement of Comprehensive Income

Year Ended December 31,	2023	2022	2021
<i>(Dollars in millions)</i>			
Net income (loss)	\$ (487)	\$ 72	\$ 188
Net change in accumulated other comprehensive income			
Change related to retirement plan			
Amounts included in net periodic benefit cost for the period			
Net actuarial gains (losses)	8	(4)	9
Amortization of prior service cost and unrecognized net gain	—	4	4
	8	—	13
Change in deferred income taxes	(2)	—	(4)
Change related to retirement plan, net of tax	6	—	9
Net change in accumulated other comprehensive income (loss)	6	—	9
Comprehensive income (loss)	(481)	72	197
Less: Net income attributable to noncontrolling interests, net of tax	13	10	32
Comprehensive income (loss) attributable to TDS shareholders	\$ (494)	\$ 62	\$ 165

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

Telephone and Data Systems, Inc.
Consolidated Statement of Cash Flows

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Cash flows from operating activities			
Net income (loss)	\$ (487)	\$ 72	\$ 188
Add (deduct) adjustments to reconcile net income (loss) to net cash flows from operating activities			
Depreciation, amortization and accretion	915	929	895
Bad debts expense	111	138	60
Stock-based compensation expense	41	42	49
Deferred income taxes, net	8	47	52
Equity in earnings of unconsolidated entities	(159)	(159)	(182)
Distributions from unconsolidated entities	150	145	180
Loss on impairment of intangible assets	547	3	—
(Gain) loss on asset disposals, net	27	27	26
(Gain) loss on sale of business and other exit costs, net	—	(1)	(2)
(Gain) loss on license sales and exchanges, net	(2)	—	—
Other operating activities	8	10	61
Changes in assets and liabilities from operations			
Accounts receivable	2	(69)	(22)
Equipment installment plans receivable	(20)	(199)	(116)
Inventory	61	(90)	(25)
Accounts payable	(99)	32	(69)
Customer deposits and deferred revenues	(8)	48	43
Accrued taxes	50	127	(49)
Other assets and liabilities	(3)	53	14
Net cash provided by operating activities	<u>1,142</u>	<u>1,155</u>	<u>1,103</u>
Cash flows from investing activities			
Cash paid for additions to property, plant and equipment	(1,211)	(1,161)	(1,131)
Cash paid for licenses and other intangible assets	(130)	(614)	(1,308)
Advance payments for license acquisitions	—	—	(20)
Other investing activities	14	(8)	(3)
Net cash used in investing activities	<u>(1,327)</u>	<u>(1,783)</u>	<u>(2,462)</u>
Cash flows from financing activities			
Issuance of long-term debt	1,081	1,154	1,543
Repayment of long-term debt	(723)	(332)	(2,081)
Issuance of short-term debt	—	110	—
Repayment of short-term debt	(60)	(50)	—
Issuance of TDS Preferred Shares	—	—	1,110
TDS Common Shares reissued for benefit plans, net of tax payments	(3)	(4)	(5)
UScellular Common Shares reissued for benefit plans, net of tax payments	(6)	(5)	(16)
Repurchase of TDS Common Shares	(6)	(40)	(8)
Repurchase of UScellular Common Shares	—	(43)	(31)
Dividends paid to TDS shareholders	(153)	(151)	(119)
Payment of debt and equity issuance costs	(5)	(2)	(62)
Distributions to noncontrolling interests	(3)	(3)	(3)
Cash paid for software license agreements	(66)	(23)	(9)
Other financing activities	—	2	2
Net cash provided by financing activities	<u>56</u>	<u>613</u>	<u>321</u>
Net decrease in cash, cash equivalents and restricted cash	(129)	(15)	(1,038)
Cash, cash equivalents and restricted cash			
Beginning of period	399	414	1,452
End of period	<u>\$ 270</u>	<u>\$ 399</u>	<u>\$ 414</u>

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

Telephone and Data Systems, Inc.
Consolidated Balance Sheet — Assets

December 31,	2023	2022
(Dollars in millions)		
Current assets		
Cash and cash equivalents	\$ 236	\$ 360
Accounts receivable		
Customers and agents, less allowances of \$70 and \$74, respectively	992	1,069
Other, less allowances of \$4 and \$3, respectively	82	112
Inventory, net	208	268
Prepaid expenses	86	102
Income taxes receivable	4	59
Other current assets	52	58
Total current assets	<u>1,660</u>	<u>2,028</u>
Assets held for sale	15	26
Licenses	4,702	4,699
Goodwill	—	547
Other intangible assets, net of accumulated amortization of \$106 and \$112, respectively	183	204
Investments in unconsolidated entities	505	495
Property, plant and equipment		
In service and under construction	15,612	14,971
Less: Accumulated depreciation and amortization	10,550	10,211
Property, plant and equipment, net	<u>5,062</u>	<u>4,760</u>
Operating lease right-of-use assets	987	995
Other assets and deferred charges	807	796
Total assets¹	<u>\$ 13,921</u>	<u>\$ 14,550</u>

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

Telephone and Data Systems, Inc.
Consolidated Balance Sheet — Liabilities and Equity

December 31,	2023	2022
(Dollars and shares in millions, except per share amounts)		
Current liabilities		
Current portion of long-term debt	\$ 26	\$ 19
Accounts payable	360	506
Customer deposits and deferred revenues	277	285
Accrued interest	12	12
Accrued taxes	43	46
Accrued compensation	149	144
Short-term operating lease liabilities	147	146
Other current liabilities	170	356
Total current liabilities	1,184	1,514
Deferred liabilities and credits		
Deferred income tax liability, net	975	969
Long-term operating lease liabilities	890	908
Other deferred liabilities and credits	784	813
Long-term debt, net	4,080	3,731
Commitments and contingencies		
Noncontrolling interests with redemption features	12	12
Equity		
TDS shareholders' equity		
Series A Common and Common Shares		
Authorized 290 shares (25 Series A Common and 265 Common Shares)		
Issued 133 shares (7 Series A Common and 126 Common Shares)		
Outstanding 113 shares (7 Series A Common and 106 Common Shares) and 112 shares (7 Series A Common and 105 Common Shares), respectively		
Par Value (\$0.01 per share)	1	1
Capital in excess of par value	2,558	2,551
Preferred Shares, 0.279 shares authorized, par value \$0.01 per share, 0.0444 shares outstanding (0.0168 Series UU and 0.0276 Series VV)	1,074	1,074
Treasury shares, at cost, 20 and 21 Common Shares, respectively	(465)	(481)
Accumulated other comprehensive income	11	5
Retained earnings	2,023	2,699
Total TDS shareholders' equity	5,202	5,849
Noncontrolling interests	794	754
Total equity	5,996	6,603
Total liabilities and equity¹	\$ 13,921	\$ 14,550

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

¹ The consolidated total assets as of December 31, 2023 and 2022, include assets held by consolidated variable interest entities (VIEs) of \$1,188 million and \$1,236 million, respectively, which are not available to be used to settle the obligations of TDS. The consolidated total liabilities as of December 31, 2023 and 2022, include certain liabilities of consolidated VIEs of \$23 million for which the creditors of the VIEs have no recourse to the general credit of TDS. See Note 15 — Variable Interest Entities for additional information.

Telephone and Data Systems, Inc.
Consolidated Statement of Changes in Equity

	TDS Shareholders							Total equity	
	Series A Common and Common shares	Capital in excess of par value	Preferred Shares	Treasury shares	Accumulated other comprehensive income (loss)	Retained earnings	Total TDS shareholders' equity		Noncontrolling interests
(Dollars in millions, except per share amounts)									
December 31, 2022	1	\$ 2,551	\$ 1,074	\$ (481)	\$ 5	\$ 2,699	\$ 5,849	\$ 754	\$ 6,603
Net income (loss) attributable to TDS shareholders	—	—	—	—	—	(500)	(500)	—	(500)
Net income attributable to noncontrolling interests classified as equity	—	—	—	—	—	—	—	13	13
Other comprehensive income	—	—	—	—	6	—	6	—	6
TDS Common and Series A Common share dividends (\$0.74 per share)	—	—	—	—	—	(83)	(83)	—	(83)
TDS Preferred share dividends (\$1.656 per Series UU share and \$1,500 per Series VV share)	—	—	—	—	—	(70)	(70)	—	(70)
Repurchase of Common Shares	—	—	—	(6)	—	—	(6)	—	(6)
Dividend reinvestment plan	—	1	—	3	—	(1)	3	—	3
Incentive and compensation plans	—	19	—	19	—	(22)	16	—	16
Adjust investment in subsidiaries for repurchases, issuances and other compensation plans	—	(13)	—	—	—	—	(13)	30	17
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(3)	(3)
December 31, 2023	1	\$ 2,558	\$ 1,074	\$ (465)	\$ 11	\$ 2,023	\$ 5,202	\$ 794	\$ 5,996

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

Telephone and Data Systems, Inc.
Consolidated Statement of Changes in Equity

	TDS Shareholders							Total equity	
	Series A Common and Common shares	Capital in excess of par value	Preferred Shares	Treasury shares	Accumulated other comprehensive income (loss)	Retained earnings	Total TDS shareholders' equity		Noncontrolling interests
(Dollars in millions, except per share amounts)									
December 31, 2021	\$ 1	\$ 2,496	1,074	\$ (461)	\$ 5	\$ 2,812	\$ 5,927	\$ 807	\$ 6,734
Net income attributable to TDS shareholders	—	—	—	—	—	62	62	—	62
Net income attributable to noncontrolling interests classified as equity	—	—	—	—	—	—	—	9	9
TDS Common and Series A Common Share dividends (\$0.72 per share)	—	—	—	—	—	(82)	(82)	—	(82)
TDS Preferred share dividends (\$1.656 per Series UU share and \$1,500 per Series VV share)	—	—	—	—	—	(69)	(69)	—	(69)
Repurchase of Common Shares	—	—	—	(40)	—	—	(40)	—	(40)
Dividend reinvestment plan	—	2	—	3	—	(3)	2	—	2
Incentive and compensation plans	—	18	—	17	—	(21)	14	—	14
Adjust investment in subsidiaries for repurchases, issuances and other compensation plans	—	35	—	—	—	—	35	(59)	(24)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(3)	(3)
December 31, 2022	\$ 1	\$ 2,551	\$ 1,074	\$ (481)	\$ 5	\$ 2,699	\$ 5,849	\$ 754	\$ 6,603

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

Telephone and Data Systems, Inc.
Consolidated Statement of Changes in Equity

	TDS Shareholders							Total equity	
	Series A Common and Common shares	Capital in excess of par value	Preferred Shares	Treasury shares	Accumulated other comprehensive income (loss)	Retained earnings	Total TDS shareholders' equity		Noncontrolling interests
(Dollars in millions, except per share amounts)									
December 31, 2020	\$ 1	\$ 2,482	\$ —	\$ (477)	\$ (4)	\$ 2,802	\$ 4,804	\$ 789	\$ 5,593
Net income attributable to TDS shareholders	—	—	—	—	—	156	156	—	156
Net income attributable to noncontrolling interests classified as equity	—	—	—	—	—	—	—	32	32
Other comprehensive income	—	—	—	—	9	—	9	—	9
TDS Common and Series A Common Share dividends (\$0.70 per share)	—	—	—	—	—	(80)	(80)	—	(80)
Issuance of Preferred Shares, net of costs	—	—	1,074	—	—	—	1,074	—	1,074
TDS Preferred share dividends (\$1.380 per Series UU share and \$558 per Series VV share)	—	—	—	—	—	(39)	(39)	—	(39)
Repurchase of Common Shares	—	—	—	(8)	—	—	(8)	—	(8)
Dividend reinvestment plan	—	—	—	3	—	(1)	2	—	2
Incentive and compensation plans	—	22	—	21	—	(26)	17	—	17
Adjust investment in subsidiaries for repurchases, issuances and other compensation plans	—	(8)	—	—	—	—	(8)	(11)	(19)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(3)	(3)
December 31, 2021	\$ 1	\$ 2,496	\$ 1,074	\$ (461)	\$ 5	\$ 2,812	\$ 5,927	\$ 807	\$ 6,734

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

Telephone and Data Systems, Inc.
Notes to Consolidated Financial Statements

Note 1 Summary of Significant Accounting Policies

Nature of Operations

Telephone and Data Systems, Inc. (TDS) is a diversified telecommunications company providing high-quality communications services to customers with 4.6 million retail wireless connections and 1.2 million broadband, video and voice connections at December 31, 2023. TDS conducts all of its wireless operations through its 83%-owned subsidiary, United States Cellular Corporation (UScellular). TDS provides broadband, video and voice services through its wholly-owned subsidiary, TDS Telecommunications LLC (TDS Telecom).

TDS has the following reportable segments: UScellular and TDS Telecom. TDS' non-reportable other business activities are presented as "Corporate, Eliminations and Other", which includes the operations of TDS' wholly-owned hosted and managed services (HMS) subsidiary, which operates under the OneNeck IT Solutions brand, and its wholly-owned subsidiary Suttle-Straus, Inc. (Suttle-Straus). HMS' and Suttle-Straus' financial results were not significant to TDS' operations. All of TDS' segments operate only in the United States. See Note 19 — Business Segment Information for summary financial information on each business segment.

Principles of Consolidation

The accounting policies of TDS conform to accounting principles generally accepted in the United States of America (GAAP) as set forth in the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC). Unless otherwise specified, references to accounting provisions and GAAP in these notes refer to the requirements of the FASB ASC. The consolidated financial statements include the accounts of TDS and subsidiaries in which it has a controlling financial interest, including UScellular and TDS Telecom. In addition, the consolidated financial statements include certain entities in which TDS has a variable interest that requires consolidation into the TDS financial statements under GAAP. See Note 15 — Variable Interest Entities for additional information relating to TDS' VIEs. Intercompany accounts and transactions have been eliminated.

Certain numbers included herein are rounded to millions for ease of presentation; however, certain calculated amounts and percentages are determined using the unrounded numbers.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect (a) the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and (b) the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents include cash and highly liquid investments with original maturities of three months or less. Cash and cash equivalents subject to contractual restrictions are classified as restricted cash. Restricted cash primarily consists of balances required under the receivables securitization agreement. See Note 12 — Debt for additional information related to the receivables securitization agreement. The following table provides a reconciliation of Cash and cash equivalents and restricted cash reported in the Consolidated Balance Sheet to the total of the amounts in the Consolidated Statement of Cash Flows.

December 31,	2023	2022
(Dollars in millions)		
Cash and cash equivalents	\$ 236	\$ 360
Restricted cash included in Other current assets	34	39
Cash, cash equivalents and restricted cash in the statement of cash flows	<u>\$ 270</u>	<u>\$ 399</u>

Accounts Receivable and Allowance for Credit Losses

UScellular's accounts receivable consist primarily of amounts owed by customers for wireless services and equipment sales, including sales of certain devices and accessories under installment plans, by agents and third-party distributors for sales of equipment to them and by other wireless carriers whose customers have used UScellular's wireless systems.

TDS Telecom's accounts receivable primarily consist of amounts owed by customers for services and products provided, by state and federal governments for grants and support funds, and by interexchange carriers for long-distance and data traffic, which TDS Telecom carries on its network.

TDS estimates expected credit losses related to accounts receivable balances based on a review of available and relevant information including current economic conditions, projected economic conditions, historical loss experience, account aging, and other factors that could affect collectability. Expected credit losses are determined for each pool of accounts receivable balances that share similar risk characteristics. The allowance for credit losses is the best estimate of the amount of expected credit losses related to existing accounts receivable. TDS does not have any off-balance sheet credit exposure related to its customers.

Inventory

Inventory consists primarily of wireless devices stated at the lower of cost, which approximates cost determined on a first-in first-out basis, or net realizable value. Net realizable value is determined by reference to the stand-alone selling price.

Cloud-Hosted Arrangements

TDS' cloud-hosted arrangements that are service contracts consist primarily of software used to perform administrative functions. Implementation costs related to TDS' cloud-hosted arrangements, which are recorded in Prepaid expenses and Other assets and deferred charges in the Consolidated Balance Sheet, were as follows:

December 31,	2023	2022
(Dollars in millions)		
Implementation costs, gross	\$ 117	\$ 109
Accumulated amortization	(68)	(49)
Implementation costs, net	<u>\$ 49</u>	<u>\$ 60</u>

These costs are amortized over the period of the service contract, which is generally three to five years. Amortization of implementation costs was \$18 million, \$19 million and \$17 million for the years ended December 31, 2023, 2022 and 2021, respectively, and was included in Selling, general and administrative expenses.

Licenses

Licenses consist of direct and incremental costs incurred in acquiring Federal Communications Commission (FCC) wireless spectrum licenses that generally provide UScellular with the exclusive right to utilize designated radio spectrum within specific geographic service areas to provide wireless service. Although wireless spectrum licenses are issued for a fixed period of time, generally ten years, or in some cases twelve or fifteen years, the FCC has granted license renewals routinely and at a nominal cost. The wireless spectrum licenses held by UScellular expire at various dates. UScellular believes that it is probable that its future wireless spectrum license renewal applications will be granted. UScellular determined that there are currently no legal, regulatory, contractual, competitive, economic or other factors that limit the useful lives of the wireless spectrum licenses. Therefore, UScellular has determined that wireless spectrum licenses are indefinite-lived intangible assets.

UScellular performs its annual impairment assessment of wireless spectrum licenses as of November 1 of each year or more frequently if there are events or circumstances that cause UScellular to believe it is more likely than not that the carrying value of wireless spectrum licenses exceeds fair value. For purposes of its impairment test, UScellular has one unit of accounting.

UScellular performed a quantitative assessment in 2023 and a qualitative assessment in 2022 to determine whether the wireless spectrum licenses were impaired. Based on the impairment assessments performed, UScellular did not have an impairment of its wireless spectrum licenses in 2023 or 2022. The events and circumstances related to the strategic alternatives review of UScellular may require an impairment assessment of the wireless spectrum licenses in the future. See Note 7 — Intangible Assets for additional details related to wireless spectrum licenses.

Goodwill

TDS had Goodwill as a result of past business acquisitions. TDS performs its annual impairment assessment of Goodwill as of November 1 of each year or more frequently if there are events or circumstances that cause TDS to believe it is more likely than not that the carrying value of individual reporting units exceeds their respective fair values. Goodwill impairment loss will be measured as the amount by which a reporting unit's carrying amount exceeds its fair value. The loss recognized should not exceed the total amount of goodwill allocated to that reporting unit.

For purposes of conducting its Goodwill impairment test, TDS Telecom has one reporting unit. TDS Telecom performed a quantitative impairment assessment in 2023 and a qualitative impairment assessment in 2022. Based on the annual impairment assessments performed, TDS Telecom recorded a loss on impairment of \$547 million in 2023. TDS Telecom did not have an impairment of its Goodwill in 2022.

See Note 7 — Intangible Assets for additional details related to Goodwill.

Other intangible assets

TDS Telecom has definite-lived franchise rights as a result of past acquisitions of cable businesses. Franchise rights are intangible assets that provide their holder with the right to operate a business in a certain geographical location as sanctioned by the franchiser, usually a government agency. Franchise rights are generally granted for ten years and may be renewed for additional terms upon approval by the granting authority. TDS anticipates that future renewals of its franchise rights will be granted. TDS reviews franchise rights for impairment whenever events or changes in circumstances indicate that the assets might be impaired. TDS re-evaluates the useful life used for amortization of franchise rights each year to determine if changes in technology or other business changes would warrant a revision of its remaining useful life. Franchise rights are included in Other intangible assets in the Consolidated Balance Sheet.

TDS Telecom has definite-lived internet protocol addresses, which are required for customers to connect to the internet. TDS re-evaluates the useful life used for amortization of internet protocol addresses each year to determine if changes in technology would warrant a revision of its useful life. Internet protocol addresses are included in Other intangible assets in the Consolidated Balance Sheet.

See Note 7 — Intangible Assets for additional details related to Other intangible assets.

Investments in Unconsolidated Entities

For its equity method investments for which financial information is readily available, TDS records its equity in the earnings of the entity in the current period. For its equity method investments for which financial information is not readily available, TDS records its equity in the earnings of the entity on a one quarter lag basis.

Property, Plant and Equipment

Property, plant and equipment is stated at the original cost of construction or purchase including capitalized costs of certain taxes, payroll-related expenses, interest and estimated costs to remove the assets.

Expenditures that enhance the productive capacity of assets in service or extend their useful lives are capitalized and depreciated. Expenditures for maintenance and repairs of assets in service are charged to Cost of services or Selling, general and administrative expense, as applicable. Retirements and disposals of assets are recorded by removing the original cost of the asset (along with the related accumulated depreciation) from plant in service and recording it, together with proceeds, if any, and net removal costs (removal costs less an applicable accrued asset retirement obligation and salvage value realized), as a gain or loss, as appropriate. Certain TDS Telecom segment assets use the group depreciation method. Accordingly, when a group method asset is retired in the ordinary course of business, the original cost of the asset and accumulated depreciation in the same amount are removed, with no gain or loss recognized on the disposition.

Software licenses that qualify for capitalization as an asset are accounted for as the acquisition of a fixed asset and the incurrence of a liability to the extent that the license fees are not fully paid at acquisition.

Depreciation and Amortization

Depreciation is provided using the straight-line method over the estimated useful life of the related asset, except for certain TDS Telecom segment assets, which use the group depreciation method. The group depreciation method develops a depreciation rate based on the average useful life of a specific group of assets, rather than each asset individually. TDS depreciates leasehold improvement assets over periods ranging from one year to thirty years; such periods approximate the shorter of the assets' economic lives or the specific lease terms.

Useful lives of specific assets are reviewed throughout the year to determine if changes in technology or other business changes would warrant accelerating the depreciation of those specific assets. There were no material changes to the assigned useful lives of the various categories of property, plant and equipment in 2023, 2022 or 2021. However, in 2023, 2022 and 2021, depreciation for certain specific assets was accelerated due to changes in technology. See Note 9 — Property, Plant and Equipment for additional details related to useful lives.

Impairment of Long-Lived Assets

TDS reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the assets might be impaired. UScellular and TDS Telecom each have one asset group for purposes of assessing property, plant and equipment for impairment based on the integrated nature of its network, assets and operations. The cash flows generated by each of these groups is the lowest level for which identifiable cash flows are largely independent of the cash flows of other groups of assets and liabilities. It is possible that any outcomes of the strategic alternatives review could change the composition of UScellular's long-lived assets, how UScellular may derive cash flows from these assets and may result in uncertainty related to asset recoverability. This may impact UScellular's asset groups for purposes of assessing property, plant and equipment for impairment and may require an impairment assessment to be performed which may result in the need to write down certain long-lived assets in the near term.

Leases

A lease is generally present in a contract if the lessee controls the use of identified property, plant or equipment for a period of time in exchange for consideration. See Note 10 — Leases for additional details related to leases.

Agent Liabilities

UScellular has relationships with agents, which are independent businesses that obtain customers for UScellular. At December 31, 2023 and 2022, UScellular had accrued \$50 million and \$53 million, respectively, in agent related liabilities. These amounts are included in Other current liabilities in the Consolidated Balance Sheet.

Debt Issuance Costs

Debt issuance costs include underwriters' and legal fees and other charges related to issuing and renewing various borrowing instruments and other long-term agreements and are amortized over the respective term of each instrument. Debt issuance costs related to TDS' and UScellular's revolving credit agreements and UScellular's receivables securitization and repurchase agreements are recorded in Other assets and deferred charges in the Consolidated Balance Sheet. All other debt issuance costs are presented as an offset to the related debt obligation in the Consolidated Balance Sheet.

Asset Retirement Obligations

TDS records asset retirement obligations for the fair value of legal obligations associated with asset retirements and a corresponding increase in the carrying amount of the related long-lived asset in the period in which the obligations are incurred. In periods subsequent to initial measurement, TDS recognizes changes in the liability resulting from the passage of time and updates to the timing or the amount of the original estimates. The liability is accreted to its estimated settlement date value over the period to the estimated settlement date. The change in the carrying amount of the long-lived asset is depreciated over the average remaining life of the related asset. See Note 11 — Asset Retirement Obligations for additional information.

Treasury Shares

Common Shares repurchased by TDS are recorded at cost as treasury shares and result in a reduction of equity. When treasury shares are reissued, TDS determines the cost using the first-in, first-out cost method. The difference between the cost of the treasury shares and reissuance price is included in Capital in excess of par value or Retained earnings.

Revenue Recognition

Revenues from sales of equipment and products are recognized when control has transferred to the customer, agent or third-party distributor. Service revenues are recognized as the related service is provided. See Note 2 — Revenue Recognition for additional information on TDS' policies related to Revenues.

Advertising Costs

TDS expenses advertising costs as incurred. Advertising costs totaled \$208 million, \$196 million and \$203 million in 2023, 2022 and 2021, respectively.

Income Taxes

TDS files a consolidated federal income tax return. Deferred taxes are computed using the liability method, whereby deferred tax assets are recognized for future deductible temporary differences and operating loss carryforwards, and deferred tax liabilities are recognized for future taxable temporary differences. Both deferred tax assets and liabilities are measured using the enacted tax rates in effect when the temporary differences are expected to reverse. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment. Deferred tax assets are reduced by a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized. TDS evaluates income tax uncertainties, assesses the probability of the ultimate settlement with the applicable taxing authority and records an amount based on that assessment. Deferred taxes are reported as a net non-current asset or liability by jurisdiction. Any corresponding valuation allowance to reduce the amount of deferred tax assets is also recorded as non-current. See Note 5 — Income Taxes for additional information.

Stock-Based Compensation and Other Plans

TDS has established long-term incentive plans, dividend reinvestment plans, and a non-employee director compensation plan. The dividend reinvestment plan of TDS is not considered a compensatory plan, and therefore recognition of compensation costs for grants made under this plan is not required. All other plans are considered compensatory plans; therefore, recognition of costs for grants made under these plans is required.

TDS recognizes stock compensation expense based upon the fair value of the specific awards granted using established valuation methodologies. The amount of stock compensation cost recognized on a straight-line basis is based on the portion of the award that is expected to vest over the requisite service period, which generally represents the vesting period. Stock-based compensation cost recognized has been reduced for estimated forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. See Note 18 — Stock-Based Compensation for additional information.

Recent Development

On August 4, 2023, TDS and UScellular announced that the Boards of Directors of both companies have decided to initiate a process to explore a range of strategic alternatives for UScellular. During 2023, TDS incurred third-party expenses of \$13 million related to the strategic alternatives review, which are included in Selling, general and administrative expenses. At this time, TDS cannot predict the ultimate outcome of such process or estimate the potential impact of such process on the financial statements.

Note 2 Revenue Recognition

Nature of goods and services

The following is a description of principal activities from which TDS generates its revenues.

Services and products	Nature, timing of satisfaction of performance obligations, and significant payment terms
Wireless services	Wireless service includes voice, messaging and data services. Revenue is recognized in Service revenues as wireless service is provided to the customer. Wireless services generally are billed and paid in advance on a monthly basis.
Wireless devices and accessories	UScellular offers a comprehensive range of wireless devices such as handsets, tablets, mobile hotspots, home phones and routers for purchase by its customers, as well as accessories. UScellular also sells wireless devices to agents and other third-party distributors for resale. UScellular frequently discounts wireless devices sold to new and current customers. UScellular also offers customers the option to purchase certain devices and accessories under installment contracts whereby they pay over a specified time period. For certain equipment installment plans, after a specified period of time, the customer may have the right to upgrade to a new device. Such upgrades require the customer to enter into an equipment installment contract for the new device, and transfer the existing device to UScellular. UScellular recognizes revenue in Equipment and product sales revenues when control of the device or accessory is transferred to the customer, agent or third-party distributor, which is generally upon delivery.
Wireless roaming	UScellular receives roaming revenues when other wireless carriers' customers use UScellular's wireless systems. UScellular recognizes revenue in Service revenues when the roaming service is provided.
Wireless Eligible Telecommunications Carrier (ETC) Revenues	Telecommunications companies may be designated by states, or in some cases by the FCC, as an ETC to receive support payments from the Universal Service Fund if they provide specified services in "high cost" areas. ETC revenues recognized in the reporting period represent the amounts which UScellular is entitled to receive for such period, as determined and approved in connection with UScellular's designation as an ETC in various states.
Wireless tower rents	UScellular receives tower rental revenues when another carrier leases tower space on a UScellular-owned tower. UScellular recognizes revenue in Service revenues in the period during which the services are provided.
Activation fees	TDS charges its end customers activation fees in connection with the sale of certain services and equipment. Activation fees are deferred and recognized over the period benefited.
Wireline and cable services	Wireline and cable services include broadband, video and voice services. Revenue is recognized in Service revenues as service is provided to the customer. Wireline and cable services are generally billed and paid in advance on a monthly basis.
Wholesale revenues	Wholesale revenues include network access services primarily to interexchange and wireless carriers for carrying data and voice traffic on TDS Telecom's network, special access services and state and federal support payments, including ACAM. Wholesale revenues are recorded as the related service is provided.
IT hardware sales	TDS recognizes equipment revenue when it no longer has any requirements to perform, when title has passed and when the products are accepted by the customer.
Hosted and managed services	HMS Service revenues consist of cloud and hosting solutions, managed services, Enterprise Resource Planning (ERP) application management, colocation services, and IT hardware and related maintenance and professional services. Revenues related to these services are recognized as services are provided.

Significant Judgments

As a practical expedient, TDS groups similar contracts or similar performance obligations together into portfolios of contracts or performance obligations if doing so does not result in a significant difference from accounting for the individual contracts discretely. TDS applies this grouping method for the following types of transactions: device activation fees, contract acquisition costs, contract fulfillment costs, and certain customer promotions. Contract portfolios are recognized over the respective expected customer lives or terms of the contracts.

Services are deemed to be highly interrelated when the method and timing of transfer and performance risk are the same. Highly interrelated services that are determined to not be distinct have been grouped into a single performance obligation. Each month of services promised is a performance obligation. The series of monthly service performance obligations promised over the course of the contract are combined into a single performance obligation for purposes of the revenue allocation.

TDS has made judgments regarding transaction price, including but not limited to issues relating to variable consideration, time value of money, returns and non-cash consideration. When determined to be significant in the context of the contract, these items are considered in the valuation of transaction price at contract inception or modification, as appropriate.

Multiple Performance Obligations

UScellular and TDS Telecom each sell bundled service and equipment offerings. In these instances, TDS recognizes its revenue based on the relative standalone selling prices for each distinct service or equipment performance obligation, or bundles thereof. TDS estimates the standalone selling price of the device or accessory to be its retail price excluding discounts. TDS estimates the standalone selling price of service to be the price offered to customers on month-to-month contracts.

Incentives

Discounts, incentives, and rebates to agents and end customers that are deemed cash are recognized as a reduction of Operating revenues concurrently with the associated revenue.

From time to time, UScellular may offer certain promotions to incentivize customers to switch to, or to purchase additional services from, UScellular. Under these types of promotions, an eligible customer may receive an incentive in the form of a discount off additional services purchased shown as a credit to the customer's monthly bill. UScellular accounts for the future discounts as material rights at the time of the initial transaction by allocating and deferring revenue based on the relative proportion of the future discounts in comparison to the aggregate initial purchase. The deferred revenue will be recognized as service revenue in future periods.

Amounts Collected from Customers and Remitted to Governmental Authorities

TDS records amounts collected from customers and remitted to governmental authorities on a net basis within a liability account if the amount is assessed upon the customer and TDS merely acts as an agent in collecting the amount on behalf of the imposing governmental authority. If the amount is assessed upon TDS, then amounts collected from customers are recorded in Service revenues and amounts remitted to governmental authorities are recorded in Selling, general and administrative expenses in the Consolidated Statement of Operations. The amounts recorded gross in revenues that are billed to customers and remitted to governmental authorities totaled \$89 million, \$88 million and \$95 million for 2023, 2022 and 2021, respectively.

Disaggregation of Revenue

In the following table, TDS' revenues are disaggregated by type of service, which represents the relevant categorization of revenues for TDS' reportable segments, and timing of recognition. Service revenues are recognized over time and Equipment and product sales are recognized at a point in time.

Year Ended December 31, 2023	UScellular	TDS Telecom	Corporate, Eliminations and Other	Total
(Dollars in millions)				
Revenues from contracts with customers:				
Type of service:				
Retail service ¹	\$ 2,742	\$ —	\$ —	\$ 2,742
Inbound roaming	32	—	—	32
Residential	—	700	—	700
Commercial	—	155	—	155
Wholesale	—	169	—	169
Other service	169	—	75	244
Service revenues from contracts with customers	<u>2,943</u>	<u>1,024</u>	<u>75</u>	<u>4,042</u>
Equipment and product sales	862	1	128	991
Total revenues from contracts with customers²	<u><u>\$ 3,805</u></u>	<u><u>\$ 1,025</u></u>	<u><u>\$ 203</u></u>	<u><u>\$ 5,033</u></u>

Year Ended December 31, 2022	UScellular	TDS Telecom	Corporate, Eliminations and Other	Total
(Dollars in millions)				
Revenues from contracts with customers:				
Type of service:				
Retail service	\$ 2,793	\$ —	\$ —	\$ 2,793
Inbound roaming	67	—	—	67
Residential	—	669	—	669
Commercial	—	173	—	173
Wholesale	—	173	—	173
Other service	172	—	73	245
Service revenues from contracts with customers	3,032	1,015	73	4,120
Equipment and product sales	1,044	1	128	1,173
Total revenues from contracts with customers²	\$ 4,076	\$ 1,016	\$ 201	\$ 5,293

Year Ended December 31, 2021	UScellular	TDS Telecom	Corporate, Eliminations and Other	Total
(Dollars in millions)				
Revenues from contracts with customers:				
Type of service:				
Retail service ^{3,4}	\$ 2,757	\$ —	\$ —	\$ 2,757
Inbound roaming	110	—	—	110
Residential	—	641	—	641
Commercial	—	183	—	183
Wholesale	—	178	—	178
Other service ²	165	—	73	238
Service revenues from contracts with customers	3,032	1,002	73	4,107
Equipment and product sales	1,007	1	105	1,113
Total revenues from contracts with customers²	\$ 4,039	\$ 1,003	\$ 178	\$ 5,220

Numbers may not foot due to rounding.

¹ UScellular recorded an adjustment to correct a prior period error related to the recognition of discounts for certain Prepaid customers, which decreased Service revenue by \$5 million in 2023. This adjustment was not material to any of the periods impacted.

² Revenue line items in this table will not agree to amounts presented in the Consolidated Statement of Operations as the amounts in this table only include revenue resulting from contracts with customers.

³ For 2021, amounts have been adjusted to reclassify \$8 million of Internet of Things (IoT) and Reseller revenues from Retail service to Other service.

⁴ UScellular recorded an adjustment to correct a prior period error related to the timing of recognition of regulatory fee billings which increased Service revenue by \$9 million in 2021. This adjustment was not material to any of the periods impacted.

Contract Balances

For contracts that involve multiple element service and equipment offerings, the transaction price is allocated to each performance obligation based on its relative standalone selling price. When consideration is received in advance of delivery of goods or services, a contract liability is recorded. A contract asset is recorded when revenue is recognized in advance of TDS' right to receive consideration. Once there is an unconditional right to receive the consideration, TDS records such amounts as receivables, and then bills the customer under the terms of the respective contract.

TDS recognizes Equipment and product sales revenue when the equipment is delivered to the customer and a corresponding contract asset or liability is recorded for the difference between the amount of revenue recognized and the amount billed to the customer in cases where discounts are offered. The contract asset or liability is reduced over the contract term as service is provided and billed to the customer.

The following table provides balances for contract assets from contracts with customers, which are recorded in Other current assets and Other assets and deferred charges in the Consolidated Balance Sheet, and contract liabilities from contracts with customers, which are recorded in Customer deposits and deferred revenues and Other deferred liabilities and credits in the Consolidated Balance Sheet.

December 31,	2023		2022	
(Dollars in millions)				
Contract assets	\$	14	\$	12
Contract liabilities	\$	380	\$	395

Revenue recognized related to contract liabilities existing at January 1, 2023 was \$262 million for the year ended December 31, 2023.

Transaction price allocated to the remaining performance obligations

The following table includes estimated service revenues expected to be recognized related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period. These estimates represent service revenues to be recognized when services are delivered to customers pursuant to service plan contracts and under certain roaming agreements with other carriers. These estimates are based on contracts in place as of December 31, 2023, and may vary from actual results. As practical expedients, revenue related to contracts of less than one year, generally month-to-month contracts, and contracts with a fixed per-unit price and variable quantity, are excluded from these estimates.

	Service Revenues	
(Dollars in millions)		
2024	\$	362
2025		161
Thereafter		73
Total	\$	<u>596</u>

Contract Cost Assets

TDS expects that commission fees paid as a result of obtaining contracts are recoverable, and therefore TDS defers and amortizes these costs. As a practical expedient, costs with an amortization period of one year or less are expensed as incurred. TDS also incurs fulfillment costs, such as installation costs, where there is an expectation that a future benefit will be realized. Deferred commission fees and fulfillment costs are amortized based on the timing of transfer of the goods or services to which the assets relate, typically the contract term. Contract cost asset balances, which are recorded in Other assets and deferred charges in the Consolidated Balance Sheet, were as follows:

December 31,	2023		2022	
(Dollars in millions)				
Costs to obtain contracts				
Sales commissions	\$	143	\$	144
Fulfillment costs				
Installation costs		6		8
Total contract cost assets	\$	<u>149</u>	\$	<u>152</u>

Amortization of contract cost assets was \$107 million, \$113 million and \$116 million for the years ended December 31, 2023, 2022 and 2021, respectively, and was included in Selling, general and administrative expenses and Cost of services expenses.

Note 3 Fair Value Measurements

As of December 31, 2023 and 2022, TDS did not have any material financial or nonfinancial assets or liabilities that were required to be recorded at fair value in its Consolidated Balance Sheet in accordance with GAAP.

The provisions of GAAP establish a fair value hierarchy that contains three levels for inputs used in fair value measurements. Level 1 inputs include quoted market prices for identical assets or liabilities in active markets. Level 2 inputs include quoted market prices for similar assets and liabilities in active markets or quoted market prices for identical assets and liabilities in inactive markets. Level 3 inputs are unobservable. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. A financial instrument's level within the fair value hierarchy is not representative of its expected performance or its overall risk profile, and therefore Level 3 assets are not necessarily higher risk than Level 2 assets or Level 1 assets.

TDS has applied the provisions of fair value accounting for purposes of computing the fair value of financial instruments for disclosure purposes as displayed below.

	Level within the Fair Value Hierarchy	December 31, 2023		December 31, 2022	
		Book Value	Fair Value	Book Value	Fair Value
(Dollars in millions)					
Long-term debt					
Retail	2	\$ 1,500	\$ 1,097	\$ 1,500	\$ 899
Institutional	2	536	451	536	395
Other	2	2,103	2,103	1,753	1,753

Long-term debt excludes lease obligations, the current portion of Long-term debt and debt financing costs. The fair value of "Retail" Long-term debt was estimated using market prices for UScellular Senior Notes, which are traded on the New York Stock Exchange. TDS' "Institutional" debt consists of UScellular's 6.7% Senior Notes which are traded over the counter. TDS' "Other" debt consists of term loan credit agreements, receivables securitization agreement and export credit financing agreements. TDS estimated the fair value of its Institutional and Other debt through a discounted cash flow analysis using the interest rates or estimated yield to maturity for each borrowing, which ranged from 3.52% to 7.96% and 3.52% to 8.28% at December 31, 2023 and 2022, respectively.

The fair values of Cash and cash equivalents, restricted cash and short-term debt approximate their book values due to the short-term nature of these financial instruments.

Note 4 Equipment Installment Plans

UScellular sells devices to customers under equipment installment plans over a specified time period. For certain equipment installment plans, after a specified period of time or amount of payments, the customer may have the right to upgrade to a new device and have the remaining unpaid equipment installment contract balance waived, subject to certain conditions, including trading in the original device in good working condition and signing a new equipment installment contract.

The following table summarizes equipment installment plan receivables.

December 31,	2023	2022
(Dollars in millions)		
Equipment installment plan receivables, gross	\$ 1,151	\$ 1,211
Allowance for credit losses	(90)	(96)
Equipment installment plan receivables, net	<u>\$ 1,061</u>	<u>\$ 1,115</u>
Net balance presented in the Consolidated Balance Sheet as:		
Accounts receivable — Customers and agents (Current portion)	\$ 577	\$ 646
Other assets and deferred charges (Non-current portion)	484	469
Equipment installment plan receivables, net	<u>\$ 1,061</u>	<u>\$ 1,115</u>

UScellular uses various inputs to evaluate the credit profiles of its customers, including internal data, information from credit bureaus and other sources. From this evaluation, a credit class is assigned to the customer that determines the number of eligible lines, the amount of credit available, and the down payment requirement, if any. These credit classes are grouped into four credit categories: lowest risk, lower risk, slight risk and higher risk. A customer's assigned credit class is reviewed periodically and a change is made, if appropriate. An equipment installment plan billed amount is considered past due if not paid within 30 days.

The balance and aging of the equipment installment plan receivables on a gross basis by credit category were as follows:

	December 31, 2023					December 31, 2022				
	Lowest Risk	Lower Risk	Slight Risk	Higher Risk	Total	Lowest Risk	Lower Risk	Slight Risk	Higher Risk	Total
(Dollars in millions)										
Unbilled	\$ 977	\$ 88	\$ 16	\$ 4	\$ 1,085	\$ 1,016	\$ 98	\$ 22	\$ 5	\$ 1,141
Billed — current	35	5	2	1	43	41	5	2	—	48
Billed — past due	12	7	3	1	23	13	6	2	1	22
Total	<u>\$ 1,024</u>	<u>\$ 100</u>	<u>\$ 21</u>	<u>\$ 6</u>	<u>\$ 1,151</u>	<u>\$ 1,070</u>	<u>\$ 109</u>	<u>\$ 26</u>	<u>\$ 6</u>	<u>\$ 1,211</u>

The balance of the equipment installment plan receivables as of December 31, 2023 on a gross basis by year of origination were as follows:

	2021	2022	2023	Total
(Dollars in millions)				
Lowest Risk	\$ 49	\$ 404	\$ 571	\$ 1,024
Lower Risk	3	30	67	100
Slight Risk	—	4	17	21
Higher Risk	—	1	5	6
Total	<u>\$ 52</u>	<u>\$ 439</u>	<u>\$ 660</u>	<u>\$ 1,151</u>

The write-offs, net of recoveries for the year ended December 31, 2023 on a gross basis by year of origination were as follows:

	2021	2022	2023	Total
(Dollars in millions)				
Write-offs, net of recoveries	\$ 13	\$ 45	\$ 17	\$ 75

Activity for the years ended December 31, 2023 and 2022, in the allowance for credit losses for equipment installment plan receivables was as follows:

	2023	2022
(Dollars in millions)		
Allowance for credit losses, beginning of year	\$ 96	\$ 72
Bad debts expense	69	100
Write-offs, net of recoveries	(75)	(76)
Allowance for credit losses, end of year	<u>\$ 90</u>	<u>\$ 96</u>

Note 5 Income Taxes

TDS' current income taxes balances at December 31, 2023 and 2022, were as follows:

December 31,	2023	2022
(Dollars in millions)		
Federal income taxes receivable	\$ 1	\$ 56
Net state income taxes receivable	3	3

Income tax expense (benefit) is summarized as follows:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Current			
Federal	\$ (1)	\$ 1	\$ 2
State	3	5	(21)
Deferred			
Federal	(10)	32	59
State	18	15	(7)
Total income tax expense (benefit)	<u>\$ 10</u>	<u>\$ 53</u>	<u>\$ 33</u>

A reconciliation of TDS' income tax expense computed at the statutory rate to the reported income tax expense, and the statutory federal income tax rate to TDS' effective income tax rate is as follows:

Year Ended December 31,	2023		2022		2021	
	Amount	Rate	Amount	Rate	Amount	Rate
(Dollars in millions)						
Statutory federal income tax expense and rate	\$ (100)	21.0 %	\$ 26	21.0 %	\$ 47	21.0 %
State income taxes, net of federal benefit ¹	16	(3.4)	16	12.8	(23)	(10.3)
Change in federal valuation allowance ²	8	(1.7)	7	5.7	7	3.1
Goodwill impairment ³	83	(17.4)	—	—	—	—
Nondeductible compensation	7	(1.4)	7	5.6	6	2.9
Tax credits	(3)	0.6	(2)	(1.9)	(2)	(0.8)
Other differences, net	(1)	0.2	(1)	(0.6)	(2)	(0.8)
Total income tax expense (benefit) and rate	<u>\$ 10</u>	<u>(2.1)%</u>	<u>\$ 53</u>	<u>42.6 %</u>	<u>\$ 33</u>	<u>15.1 %</u>

¹ State income taxes, net of federal benefit, include changes in unrecognized tax benefits as well as adjustments to state valuation allowances. State taxes in 2021 are a net benefit due primarily to the reduction of tax accruals resulting from expirations of state statute of limitations for prior tax years.

² Change in federal valuation allowance is due primarily to annual interest expense from partnership investments that carryforward but may not be realized.

³ Goodwill impairment reflects the federal tax effect of the portion of the impaired goodwill that is not amortizable for income tax purposes. See Note 7 — Intangible Assets for additional information related to the goodwill impairment.

Significant components of TDS' deferred income tax assets and liabilities at December 31, 2023 and 2022, were as follows:

December 31,	2023	2022
(Dollars in millions)		
Deferred tax assets		
Net operating loss (NOL) carryforwards	\$ 284	\$ 250
Lease liabilities	260	265
Contract liabilities	61	63
Interest expense carryforwards	133	74
Asset retirement obligation	123	116
Other	98	129
Total deferred tax assets	<u>959</u>	<u>897</u>
Less valuation allowance	<u>(216)</u>	<u>(177)</u>
Net deferred tax assets	<u>743</u>	<u>720</u>
Deferred tax liabilities		
Property, plant and equipment	841	805
Licenses/intangibles	410	419
Partnership investments	181	173
Lease assets	242	245
Other	44	43
Total deferred tax liabilities	<u>1,718</u>	<u>1,685</u>
Net deferred income tax liability	<u>\$ 975</u>	<u>\$ 965</u>

Presented in the Consolidated Balance Sheet as:

Deferred income tax liability, net	\$ 975	\$ 969
Other assets and deferred charges	—	(4)
Net deferred income tax liability	<u>\$ 975</u>	<u>\$ 965</u>

At December 31, 2023, TDS and certain subsidiaries had \$420 million of federal NOL carryforwards (generating a \$88 million deferred tax asset) available to offset future taxable income. The federal NOL carryforwards generally expire between 2024 and 2037, with the exception of federal NOLs generated after 2017, which do not expire. TDS and certain subsidiaries had \$4,050 million of state NOL carryforwards (generating a \$195 million deferred tax asset) available to offset future taxable income. The state NOL carryforwards expire between 2024 and 2043. A valuation allowance was established for certain federal and state NOL carryforwards since it is more likely than not that a portion of such carryforwards will expire before they can be utilized.

At December 31, 2023, TDS and certain subsidiaries had \$523 million of federal interest expense carryforwards (generating a \$110 million deferred tax asset) available to offset future taxable income. The federal interest expense carryforwards do not expire. TDS and certain subsidiaries had \$556 million of state interest expense carryforwards (generating a \$23 million deferred tax asset) available to offset future taxable income. The state interest expense carryforwards generally do not expire. A valuation allowance was established for certain federal and state interest expense carryforwards since it is more likely than not that a portion of such carryforwards will not be utilized.

A summary of TDS' deferred tax asset valuation allowance is as follows:

	2023	2022	2021
(Dollars in millions)			
Balance at beginning of year	\$ 177	\$ 149	\$ 158
Charged to Income tax expense	39	28	(9)
Balance at end of year	<u>\$ 216</u>	<u>\$ 177</u>	<u>\$ 149</u>

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2023	2022	2021
(Dollars in millions)			
Unrecognized tax benefits balance at beginning of year	\$ 38	\$ 37	\$ 54
Additions for tax positions of current year	10	6	8
Additions for tax positions of prior years	—	1	—
Reductions for tax positions of prior years	(2)	—	(3)
Reductions for settlements of tax positions	—	—	(2)
Reductions for lapses in statutes of limitations	(6)	(6)	(20)
Unrecognized tax benefits balance at end of year	<u>\$ 40</u>	<u>\$ 38</u>	<u>\$ 37</u>

Unrecognized tax benefits are included in Accrued taxes and Other deferred liabilities and credits in the Consolidated Balance Sheet. If these benefits were recognized at each respective year end period, they would have reduced income tax expense in 2023, 2022 and 2021 by \$31 million, \$30 million and \$30 million, respectively, net of the federal benefit from state income taxes.

TDS recognizes accrued interest and penalties related to unrecognized tax benefits in Income tax expense (benefit). The amounts charged to income tax expense related to interest and penalties resulted in nominal expense in 2023 and 2022, and a benefit of \$10 million in 2021. Net accrued liabilities for interest and penalties were \$13 million at both December 31, 2023 and 2022, and are included in Other deferred liabilities and credits in the Consolidated Balance Sheet.

TDS and its subsidiaries file federal and state income tax returns. With limited exceptions, TDS is no longer subject to federal and state income tax audits for the years prior to 2020.

Note 6 Earnings Per Share

Basic earnings (loss) per share attributable to TDS common shareholders is computed by dividing Net income (loss) attributable to TDS common shareholders by the weighted average number of Common Shares outstanding during the period. Diluted earnings (loss) per share attributable to TDS common shareholders is computed by dividing Net income (loss) attributable to TDS common shareholders by the weighted average number of Common Shares outstanding during the period adjusted to include the effects of potentially dilutive securities. Potentially dilutive securities primarily include incremental shares issuable upon the exercise of outstanding stock options and the vesting of performance and restricted stock units, as calculated using the treasury stock method.

The amounts used in computing basic and diluted earnings (loss) per share attributable to TDS common shareholders were as follows:

Year Ended December 31,	2023	2022	2021
(Dollars and shares in millions, except per share amounts)			
Net income (loss) attributable to TDS common shareholders used in basic earnings (loss) per share	\$ (569)	\$ (7)	\$ 117
Adjustments to compute diluted earnings (loss):			
Noncontrolling interest adjustment	(1)	(1)	(1)
Net income (loss) attributable to TDS common shareholders used in diluted earnings (loss) per share	<u>\$ (570)</u>	<u>\$ (8)</u>	<u>\$ 116</u>
Weighted average number of shares used in basic earnings (loss) per share:			
Common Shares	106	107	108
Series A Common Shares	7	7	7
Total	<u>113</u>	<u>114</u>	<u>115</u>
Effects of dilutive securities	—	—	1
Weighted average number of shares used in diluted earnings (loss) per share	<u>113</u>	<u>114</u>	<u>116</u>
Basic earnings (loss) per share attributable to TDS common shareholders	<u>\$ (5.05)</u>	<u>\$ (0.07)</u>	<u>\$ 1.03</u>
Diluted earnings (loss) per share attributable to TDS common shareholders	<u>\$ (5.06)</u>	<u>\$ (0.07)</u>	<u>\$ 1.00</u>

Certain Common Shares issuable upon the exercise of stock options or vesting of performance and restricted stock units were not included in weighted average diluted shares outstanding for the calculation of Diluted earnings (loss) per share attributable to TDS common shareholders because their effects were antidilutive. The number of such Common Shares excluded was 6 million, 5 million and 4 million for 2023, 2022 and 2021, respectively.

Note 7 Intangible Assets

Licenses

TDS reviews opportunities to acquire additional wireless spectrum, including pursuant to FCC auctions. TDS also may seek to divest outright or exchange wireless spectrum that is not strategic to its long-term success. Prior to 2009, TDS accounted for UScellular's share repurchases as step acquisitions, allocating a portion of the share repurchase value to TDS' Licenses. Consequently, UScellular's Licenses on a stand-alone basis do not equal the TDS consolidated Licenses related to UScellular.

Auction 107

In February 2021, the FCC announced by way of public notice that UScellular was the provisional winning bidder for 254 wireless spectrum licenses in the 3.7-3.98 GHz bands (Auction 107) for \$1,283 million. UScellular paid \$30 million of this amount in 2020 and the remainder in March 2021. The wireless spectrum licenses from Auction 107 were granted by the FCC in July 2021. Additionally, UScellular was obligated to pay approximately \$179 million in total from 2021 through 2025 related to relocation costs and accelerated relocation incentive payments. Such additional costs were accrued and capitalized at the time the licenses were granted, and are adjusted as necessary as the estimated obligation changes. UScellular paid \$122 million, \$8 million and \$36 million related to the additional costs for the years ended December 31, 2023, 2022 and 2021, respectively. At December 31, 2023, the remaining estimated payments of approximately \$13 million are included in Other current liabilities in the Consolidated Balance Sheet. At December 31, 2022, the remaining estimated payments of approximately \$133 million and \$8 million were included in Other current liabilities and Other deferred liabilities and credits, respectively, in the Consolidated Balance Sheet. UScellular received full access to the spectrum in the third quarter of 2023.

Auction 110

In January 2022, the FCC announced by way of public notice that UScellular was the provisional winning bidder for 380 wireless spectrum licenses in the 3.45-3.55 GHz band (Auction 110) for \$580 million. UScellular paid \$20 million of this amount in 2021 and the remainder in the first quarter of 2022. The wireless spectrum licenses from Auction 110 were granted by the FCC in May 2022.

TDS Telecom Goodwill Impairment Assessment

TDS Telecom had recorded Goodwill as a result of past business acquisitions. For purposes of the 2023 and 2022 Goodwill impairment test, TDS Telecom had one reporting unit.

2023 Impairment Test

Rising interest rates and liquidity constraints have caused TDS Telecom to slow the pace of its fiber deployment and reduce or defer planned capital expenditures in future years, which also defers the related revenue generation from these projects. In addition, TDS Telecom is facing increasing competitive pressures in its Incumbent Wireline markets. Consequently, TDS Telecom reset its long-range forecast in the fourth quarter of 2023, and performed a quantitative impairment assessment as of November 1, 2023.

The discounted cash flow and guideline public company approaches were used to value the reporting unit, weighted at 75% and 25%, respectively. The discounted cash flow approach develops an indication of fair value using various inputs and considers current economic factors as well as risks specific to the industry and the reporting unit. The guideline public company method develops an estimate of fair value by calculating market pricing multiples for selected publicly traded companies that are comparable to the reporting unit. The multiples are applied to the appropriate financial measure of the reporting unit to estimate the reporting unit's fair value.

The results of the goodwill impairment test indicated that the carrying value of the TDS Telecom reporting unit exceeded its fair value. Therefore, TDS recognized a loss on impairment of goodwill of \$547 million to reduce the carrying value of Goodwill for the reporting unit to zero in the fourth quarter of 2023.

2022 Impairment Test

TDS Telecom performed a qualitative impairment assessment in 2022, which analyzed company, industry and economic trends, and concluded that it was more likely than not that the fair value of the TDS Telecom reporting unit exceeded its carrying value, and accordingly no Goodwill impairment was recorded in 2022.

The Goodwill balance of TDS Telecom was \$547 million at December 31, 2022, net of accumulated impairment losses of \$29 million recorded in prior periods.

Other intangible assets

Activity related to TDS' Other intangible assets is presented below.

	December 31, 2023			December 31, 2022		
	Gross Amount	Accumulated Amortization	Net Amount	Gross Amount	Accumulated Amortization	Net Amount
(Dollars in millions)						
Franchise rights	\$ 255	\$ (102)	\$ 153	\$ 255	\$ (85)	\$ 170
Customer lists	—	—	—	26	(25)	1
Internet protocol addresses	34	(4)	29	34	(2)	32
Other	1	—	1	1	—	1
Total	<u>\$ 290</u>	<u>\$ (106)</u>	<u>\$ 183</u>	<u>\$ 316</u>	<u>\$ (112)</u>	<u>\$ 204</u>

Numbers may not foot due to rounding.

Amortization expense for intangible assets was \$22 million, \$21 million and \$21 million for the years ended December 31, 2023, 2022 and 2021, respectively. Based on the current balance of finite-lived intangible assets, the estimated amortization expense is \$19 million for each of the years 2024 through 2028.

Note 8 Investments in Unconsolidated Entities

Investments in unconsolidated entities consist of amounts invested in entities in which TDS holds a noncontrolling interest. TDS' Investments in unconsolidated entities are accounted for using the equity method, measurement alternative method or net asset value practical expedient method as shown in the table below. The carrying value of measurement alternative method investments represents cost minus any impairments plus or minus any observable price changes.

December 31,	2023	2022
(Dollars in millions)		
Equity method investments:		
Capital contributions, loans, advances and adjustments	\$ 115	\$ 115
Cumulative share of income	2,775	2,615
Cumulative share of distributions	(2,413)	(2,262)
Total equity method investments	<u>477</u>	<u>468</u>
Measurement alternative method investments	19	18
Investments recorded using the net asset value practical expedient	9	9
Total investments in unconsolidated entities	<u>\$ 505</u>	<u>\$ 495</u>

The following tables, which are based on unaudited information provided in part by third parties, summarize the combined assets, liabilities and equity, and results of operations of TDS' equity method investments:

December 31,	2023	2022
(Dollars in millions)		
Assets		
Current	\$ 1,038	\$ 1,106
Noncurrent	6,440	6,486
Total assets	<u>\$ 7,478</u>	<u>\$ 7,592</u>
Liabilities and Equity		
Current liabilities	\$ 765	\$ 767
Noncurrent liabilities	1,156	1,249
Partners' capital and shareholders' equity	5,557	5,576
Total liabilities and equity	<u>\$ 7,478</u>	<u>\$ 7,592</u>

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Results of Operations			
Revenues	\$ 7,304	\$ 7,303	\$ 7,127
Operating expenses	5,704	5,684	5,152
Operating income	1,600	1,619	1,975
Other income (expense), net	(30)	(19)	14
Net income	<u>\$ 1,570</u>	<u>\$ 1,600</u>	<u>\$ 1,989</u>

Note 9 Property, Plant and Equipment

TDS' Property, plant and equipment in service and under construction, and related accumulated depreciation and amortization, as of December 31, 2023 and 2022, were as follows:

December 31,	Useful Lives (Years)	2023	2022
(Dollars in millions)			
Land	N/A	\$ 67	\$ 63
Buildings	5-40	542	532
Leasehold and land improvements	1-30	1,598	1,538
Cable and wire	15-40	2,928	2,609
Network and switching equipment	3-10	2,717	2,706
Cell site equipment	7-30	4,381	4,248
Office furniture and equipment	3-10	272	296
Other operating assets and equipment	1-12	240	200
System development	1-7	2,214	2,070
Work in process	N/A	653	709
Total property, plant and equipment, gross		<u>15,612</u>	<u>14,971</u>
Accumulated depreciation and amortization		<u>(10,550)</u>	<u>(10,211)</u>
Total property, plant and equipment, net		<u>\$ 5,062</u>	<u>\$ 4,760</u>

Depreciation and amortization expense totaled \$865 million, \$882 million and \$851 million in 2023, 2022 and 2021, respectively.

Note 10 Leases

Lessee Agreements

TDS' most significant leases are for land and tower spaces, network facilities, retail spaces, and offices. Nearly all of TDS' leases are classified as operating leases, although it does have a small number of finance leases.

TDS has agreements with both lease and nonlease components, which are accounted for separately. As part of the present value calculation for the lease liabilities, TDS uses 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 TDS' unsecured rates, adjusted to approximate the rates at which TDS would be required to borrow on a collateralized basis over a term similar to the recognized lease term. TDS applies 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. The cost of nonlease components in TDS' lease portfolio (e.g., utilities and common area maintenance) are not typically predetermined at lease commencement and are expensed as incurred at their relative standalone price.

Variable lease expense occurs when, subsequent to the lease commencement, lease payments are made that were not originally included in the lease liability calculation. TDS' variable lease payments include lease payment escalations that are tied to an index, real estate taxes, and additional payments linked to performance. The incremental changes are recorded as variable lease expense and are not included in the right-of-use assets or lease liabilities.

The identified lease term determines the periods to which expense is allocated and is also utilized in the right-of-use asset and liability calculations. Many of TDS' leases include renewal and early termination options. At lease commencement, the lease terms include options to extend the lease when TDS is reasonably certain that it will exercise the options. The lease terms do not include early termination options unless TDS is reasonably certain to exercise the options. TDS has applied the portfolio approach in cases where asset classes have similar lease characteristics including tower space, retail, and certain ground lease asset classes.

The following table shows the components of lease cost included in the Consolidated Statement of Operations:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Operating lease cost	\$ 207	\$ 206	\$ 198
Variable lease cost	<u>13</u>	<u>12</u>	<u>10</u>
Total	<u>\$ 220</u>	<u>\$ 218</u>	<u>\$ 208</u>

The following table shows supplemental cash flow information related to lease activities:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$ 213	\$ 204	\$ 204
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	\$ 168	\$ 125	\$ 188

The table below shows a weighted-average analysis for lease terms and discount rates for operating leases:

December 31,	2023	2022
Weighted Average Remaining Lease Term	12 years	12 years
Weighted Average Discount Rate	4.3 %	3.9 %

The maturities of lease liabilities are as follows:

	Operating Leases
(Dollars in millions)	
2024	\$ 187
2025	178
2026	143
2027	120
2028	97
Thereafter	696
Total lease payments ¹	\$ 1,421
Less: Imputed interest	384
Present value of lease liabilities	\$ 1,037

¹ Lease payments exclude \$28 million of legally binding lease payments for leases signed but not yet commenced.

Lessors Agreements

TDS' most significant lessor leases are for tower space and colocation space. All of TDS' lessor leases are classified as operating leases. A lease is generally present in a contract if the lessee controls the use of identified property, plant, or equipment for a period of time in exchange for consideration. TDS' lessor agreements with lease and nonlease components are generally accounted for separately; however, certain service agreements with insignificant lease components are accounted for as nonlease transactions.

The identified lease term determines the periods to which revenue is allocated over the term of the lease. Many of TDS' leases include renewal and early termination options. At lease commencement, lease terms include options to extend the lease when TDS is reasonably certain that lessees will exercise the options. Lease terms would not include periods after the date of a termination option that lessees are reasonably certain to exercise.

Variable lease income occurs when, subsequent to the lease commencement, lease payments are received that were not originally included in the lease receivable calculation. TDS' variable lease income is primarily a result of leases with escalations that are tied to an index. The incremental increases due to the index changes are recorded as variable lease income.

The following table shows the components of lease income which are included in Service revenues in the Consolidated Statement of Operations:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Operating lease income	\$ 127	\$ 120	\$ 109

The maturities of expected lease payments to be received are as follows:

	Operating Leases	
(Dollars in millions)		
2024	\$	97
2025		88
2026		67
2027		37
2028		22
Thereafter		25
Total future lease maturities	<u>\$</u>	<u>336</u>

Note 11 Asset Retirement Obligations

UScellular is subject to asset retirement obligations associated with its leased cell sites, switching office sites, retail store sites and office locations. Asset retirement obligations generally include obligations to restore leased land, towers, retail store and office premises to their pre-lease conditions.

TDS Telecom owns poles, cable and wire and certain buildings and also leases office space and property used for housing central office switching equipment and fiber cable. These assets and leases often have removal or remediation requirements. For example, TDS Telecom's poles, cable and wire are often located on property that is not owned by TDS Telecom and may be subject to the provisions of easements, permits, or leasing arrangements. Pursuant to these terms, TDS Telecom is often required to remove these assets and return the property to its original condition at a future date.

Asset retirement obligations are included in Other deferred liabilities and credits in the Consolidated Balance Sheet.

In 2023 and 2022, UScellular and TDS Telecom performed a review of the assumptions and estimated future costs related to asset retirement obligations. The results of the reviews and other changes in asset retirement obligations during 2023 and 2022, were as follows:

	2023		2022	
(Dollars in millions)				
Balance at beginning of year	\$	524	\$	469
Additional liabilities accrued		10		19
Revisions in estimated cash outflows		(3)		11
Disposition of assets		(4)		(1)
Accretion expense		29		26
Balance at end of year	<u>\$</u>	<u>556</u>	<u>\$</u>	<u>524</u>

Note 12 Debt

Revolving Credit Agreements

At December 31, 2023, TDS and UScellular had revolving credit agreements available for general corporate purposes. Amounts under the agreements may be borrowed, repaid and reborrowed from time to time until maturity in July 2026.

The following table summarizes the revolving credit agreements as of December 31, 2023:

	TDS		UScellular	
(Dollars in millions)				
Maximum borrowing capacity	\$	400	\$	300
Letters of credit outstanding	\$	1	\$	—
Amount borrowed	\$	100	\$	—
Amount available for use	\$	299	\$	300

Borrowings under the TDS and UScellular revolving credit agreements bear interest at a rate of Secured Overnight Financing Rate (SOFR) plus 1.60%. TDS and UScellular may select a borrowing period of either one, two, three or six months (or other period of twelve months or less if requested by TDS or UScellular and approved by the lenders). TDS' and UScellular's credit spread and commitment fees on their revolving credit agreements may be subject to increase if their current credit ratings from nationally recognized credit rating agencies are lowered, and may be subject to decrease if the ratings are raised.

In January 2024, TDS borrowed \$25 million under its revolving credit agreement.

Term Loan Agreements

The following tables summarizes the term loan credit agreements as of December 31, 2023:

TDS:	Term Loan 1	Term Loan 2	Total
(Dollars in millions)			
Maximum borrowing capacity	\$ 200	\$ 300	\$ 500
Amount borrowed and outstanding	\$ 196	\$ 296	\$ 492
Amount borrowed and repaid	\$ 4	\$ 4	\$ 8
Amount available for use	\$ —	\$ —	\$ —
Interest rate	SOFR plus 2.10%	SOFR plus 2.60%	
Maturity date	July 2028	July 2031	
Quarterly installments	\$0.5 million from December 2021 to maturity date	\$0.75 million from December 2022 to September 2026; \$2 million from December 2026 to maturity date	

UScellular:	Term Loan 1	Term Loan 2	Term Loan 3	Total
(Dollars in millions)				
Maximum borrowing capacity	\$ 300	\$ 300	\$ 200	\$ 800
Amount borrowed and outstanding	\$ 292	\$ 293	\$ 198	\$ 783
Amount borrowed and repaid	\$ 8	\$ 7	\$ 2	\$ 17
Amount available for use	\$ —	\$ —	\$ —	\$ —
Interest rate	SOFR plus 1.60%	SOFR plus 2.10%	SOFR plus 2.60%	
Maturity date	July 2026	July 2028	July 2031	
Quarterly installments	\$2 million from March 2023 to December 2023; \$4 million from March 2024 to December 2025; \$8 million from March 2026 to maturity date	\$0.75 million from December 2021 to maturity date	\$0.5 million from December 2022 to September 2026; \$1 million from December 2026 to maturity date	

Secured Term Loan Agreement

In September 2023, TDS entered into a \$300 million senior secured term loan credit agreement. The maturity date of the agreement is the earlier of (i) September 2026 and (ii) the date that is 91 days prior to the scheduled maturity date of TDS' existing revolving credit agreement (which maturity date is currently July 2026). The agreement requires TDS to make prepayments of the outstanding borrowings to the extent TDS receives cash proceeds in excess of prescribed thresholds from certain transactions as more fully described in the agreement. Borrowings under the agreement bear interest at a rate of SOFR plus 2.00%, which increases at certain dates throughout the term of the agreement. During 2023, TDS borrowed the full amount of \$300 million available under the agreement.

This term loan is secured by a perfected security interest in certain assets of TDS, including 26 million common shares in UScellular, TDS' equity interest in certain wholly-owned subsidiaries, and all or substantially all of TDS' personal property that does not constitute equity interests. This term loan is also secured by a perfected security interest in certain assets of certain wholly-owned subsidiaries of TDS that are also guarantors, including without limitation and subject to customary exceptions, equity interests in certain wholly-owned subsidiaries of such subsidiaries and all or substantially all of the personal property of such guarantor subsidiaries that does not consist of equity interests. This agreement includes representations and warranties, covenants, events of default and other terms and conditions that are substantially similar to TDS' existing term loan and revolving credit agreements or otherwise customary for similar secured credit facilities.

Export Credit Financing Agreements

At December 31, 2023, TDS had a \$150 million term loan credit facility with Export Development Canada to finance (or refinance) imported equipment, including equipment purchased prior to entering the term loan credit facility agreement. Borrowings bear interest at a rate of SOFR plus 1.60% and are due and payable on the five-year anniversary of the first borrowing, which is in December 2027. During 2023, TDS borrowed \$100 million under the agreement. As of December 31, 2023, the outstanding borrowings were \$150 million, which is the full amount available under the agreement.

At December 31, 2023, UScellular had a \$150 million term loan credit facility with Export Development Canada to finance (or refinance) imported equipment, including equipment purchased prior to entering the term loan credit facility agreement. Borrowings bear interest at a rate of SOFR plus 1.60% and are due and payable on the five-year anniversary of the first borrowing, which is in January 2027. As of December 31, 2023, UScellular has borrowed the full amount available under the agreement.

Receivables Securitization Agreement

At December 31, 2023, UScellular, through its subsidiaries, had a \$450 million receivables securitization agreement that permits securitized borrowings using its equipment installment plan receivables. In September 2023, UScellular amended the agreement to extend the maturity date to September 2025. Amounts under the agreement may be borrowed, repaid and reborrowed from time to time until maturity. Unless the agreement is amended to extend the maturity date, repayments based on receivable collections commence in October 2025. The outstanding borrowings bear interest at a rate of the lender's cost of funds (which has historically tracked closely to SOFR) plus 1.15%. During 2023, UScellular borrowed \$315 million and repaid \$440 million under the agreement. As of December 31, 2023, the outstanding borrowings under the agreement were \$150 million and the unused borrowing capacity was \$300 million, subject to sufficient collateral to satisfy the asset borrowing base provisions of the agreement. As of December 31, 2023, the USCC Master Note Trust held \$304 million of assets available to be pledged as collateral for the receivables securitization agreement.

In connection with entering into the receivables securitization agreement in 2017, UScellular formed a wholly-owned subsidiary, USCC Master Note Trust (Trust), which qualifies as a bankruptcy remote entity. Under the terms of the agreement, UScellular, through its subsidiaries, transfers eligible equipment installment receivables to the Trust. The Trust then utilizes the transferred assets as collateral for notes payables issued to third-party financial institutions. Since UScellular retains effective control of the transferred assets in the Trust, any activity associated with this receivables securitization agreement will be treated as a secured borrowing. Therefore, TDS will continue to report equipment installment receivables and any related balances on the Consolidated Balance Sheet. Cash received from borrowings under the receivables securitization agreement will be reported as Debt. Refer to Note 15 — Variable Interest Entities for additional information.

In January 2024, UScellular repaid \$50 million under the agreement.

Repurchase Agreement

At December 31, 2023, UScellular, through a subsidiary (the repo subsidiary), had a repurchase agreement to borrow up to \$200 million, subject to the availability of eligible equipment installment plan receivables and the agreement of the lender. In January 2023, UScellular amended the repurchase agreement to extend the expiration date to January 2024. The outstanding borrowings bear interest at a rate of the lender's cost of funds (which has historically tracked closely to SOFR) plus 1.35%. As of December 31, 2022, the outstanding borrowings under the agreement were \$60 million and were included in Other current liabilities in the Consolidated Balance Sheet. During 2023, the repo subsidiary repaid \$60 million under the agreement. As of December 31, 2023, there were no outstanding borrowings under the agreement and the unused borrowing capacity was \$200 million, which was restricted from being borrowed due to covenants within the TDS and UScellular credit agreements that limit secured borrowings on an enterprise-wide basis. As of December 31, 2023, UScellular held \$669 million of assets available for inclusion in the repurchase facility; these assets are distinct from the assets held by the USCC Master Note Trust for UScellular's receivables securitization agreement.

The UScellular repurchase agreement expired in January 2024.

Debt Covenants and Other

The TDS and UScellular revolving credit agreements, term loan agreements including the secured term loan, export credit financing agreements and the UScellular receivables securitization agreement require TDS or UScellular, as applicable, to comply with certain affirmative and negative covenants, which include certain financial covenants that may restrict the borrowing capacity available. In March 2023, the agreements were amended to require TDS and UScellular to maintain the Consolidated Leverage Ratio as of the end of any fiscal quarter at a level not to exceed the following: 4.25 to 1.00 from January 1, 2023 through March 31, 2024; 4.00 to 1.00 from April 1, 2024 through March 31, 2025; 3.75 to 1.00 from April 1, 2025 and thereafter. TDS and UScellular are also required to maintain the Consolidated Interest Coverage Ratio at a level not lower than 3.00 to 1.00 as of the end of any fiscal quarter. TDS and UScellular believe they were in compliance as of December 31, 2023 with all such financial covenants.

In connection with UScellular's revolving credit agreements, UScellular term loan agreements and the UScellular export credit financing agreement, TDS and UScellular entered into subordination agreements together with the administrative agents for the lenders under each agreement. Pursuant to these subordination agreements, (a) any consolidated funded indebtedness from UScellular to TDS will be unsecured and (b) any (i) consolidated funded indebtedness from UScellular to TDS (other than "refinancing indebtedness" as defined in the subordination agreements) in excess of \$105 million and (ii) refinancing indebtedness in excess of \$250 million will be subordinated and made junior in right of payment to the prior payment in full of obligations to the lenders under each agreement. As of December 31, 2023, UScellular had no outstanding consolidated funded indebtedness or refinancing indebtedness that was subordinated to each agreement pursuant to the subordination agreements.

Certain TDS and UScellular wholly-owned subsidiaries have jointly and severally unconditionally guaranteed the payment and performance of the obligations of TDS and UScellular under the revolving credit agreements, term loan agreements and export credit agreements. Other subsidiaries that meet certain criteria will be required to provide a similar guaranty in the future. UScellular entered into a performance guaranty whereby UScellular guarantees the performance of certain wholly-owned subsidiaries under the receivables securitization agreement and repurchase agreement.

Other Long-Term Debt

Long-term debt as of December 31, 2023 and 2022, was as follows:

	Issuance date	Maturity date	Call date (any time on or after)	December 31, 2023			December 31, 2022		
				Principal Amount	Less Unamortized discount and debt issuance costs	Total	Principal Amount	Less Unamortized discount and debt issuance costs	Total
(Dollars in millions)									
UScellular Unsecured Senior Notes									
6.70%	Dec 2003 and June 2004	Dec 2033	Dec 2003 and June 2004	\$ 544	\$ 11	\$ 533	\$ 544	\$ 11	\$ 533
6.25%	Aug 2020	Sep 2069	Sep 2025	500	17	483	500	17	483
5.50%	Dec 2020	Mar 2070	Mar 2026	500	17	483	500	17	483
5.50%	May 2021	Jun 2070	Jun 2026	500	16	484	500	16	484
UScellular Term Loans				783	4	779	796	6	790
TDS Term Loans				492	4	488	497	4	493
TDS Secured Term Loan				300	3	297	—	—	—
UScellular EIP Securitization				150	—	150	275	—	275
TDS Export Credit Financing				150	—	150	50	—	50
UScellular Export Credit Financing				150	1	149	150	1	149
TDS Revolving Credit				100	—	100	—	—	—
Finance lease obligations				6	—	6	7	—	7
Other long-term notes				4	—	4	3	—	3
Total long-term debt				\$ 4,179	\$ 73	\$ 4,106	\$ 3,822	\$ 72	\$ 3,750
Long-term debt, current						\$ 26			\$ 19
Long-term debt, noncurrent						\$ 4,080			\$ 3,731

UScellular may redeem its 6.25% Senior Notes, 5.5% March 2070 Senior Notes and 5.5% June 2070 Senior Notes, in whole or in part at any time after the respective call date, at a redemption price equal to 100% of the principal amount redeemed plus accrued and unpaid interest. UScellular may redeem the 6.7% Senior Notes, in whole or in part, at any time prior to maturity at a redemption price equal to the greater of (a) 100% of the principal amount of such notes, plus accrued and unpaid interest, or (b) the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the redemption date on a semi-annual basis at the Treasury Rate plus 30 basis points.

Interest on the Senior Notes outstanding at December 31, 2023, is payable quarterly, with the exception of UScellular's 6.7% Senior Notes for which interest is payable semi-annually.

The annual requirements for principal payments on long-term debt are approximately \$26 million, \$26 million, \$676 million, \$319 million and \$482 million for the years 2024 through 2028, respectively. These amounts do not include payments on the \$150 million of outstanding borrowings under the receivables securitization agreement. If the maturity date of the facility is not extended, principal repayments begin in October 2025. Principal repayments are not scheduled but are instead based on actual receivable collections.

The covenants associated with TDS and its subsidiaries' long-term debt obligations, among other things, restrict TDS' ability, subject to certain exclusions, to incur additional liens, enter into sale and leaseback transactions, and sell, consolidate or merge assets.

UScellular's long-term debt notes do not contain any provisions resulting in acceleration of the maturities of outstanding debt in the event of a change in UScellular's credit rating.

Note 13 Employee Benefit Plans

Defined Contribution Plans

TDS sponsors a qualified noncontributory defined contribution pension plan. The plan provides benefits for certain employees of TDS Corporate, TDS Telecom and UScellular. Under this plan, pension costs are calculated separately for each participant and are funded annually. Total pension costs were \$16 million, \$17 million and \$16 million in 2023, 2022 and 2021, respectively. In addition, TDS sponsors a defined contribution retirement savings plan (401(k) plan). Total costs incurred from TDS' contributions to the 401(k) plan were \$29 million, \$28 million and \$27 million in 2023, 2022 and 2021, respectively.

TDS also sponsors an unfunded nonqualified deferred supplemental executive retirement plan for certain employees to offset the reduction of benefits caused by the limitation on annual employee compensation under the tax laws.

Other Post-Retirement Benefits

TDS sponsors a defined benefit post-retirement plan that provides medical benefits to retirees and that covers certain employees of TDS Corporate and TDS Telecom, which is not significant to TDS' financial position or operating results. The plan is contributory, with retiree contributions adjusted annually. TDS recognizes the funded status of the plan as a component of Other assets and deferred charges in the Consolidated Balance Sheet as of December 31, 2023 and 2022. Changes in the funded status are included in Accumulated other comprehensive income (loss) in the Consolidated Balance Sheet before affecting such amounts for income taxes to the extent that such changes are not recognized in earnings as a component of net periodic benefit cost.

The post-retirement benefit fund invests mainly in mutual funds that hold U.S. equities, international equities, and debt securities. The post-retirement benefit fund does not hold any debt or equity securities issued by TDS, UScellular or any related parties. The fair value of the plan assets of the post-retirement benefit fund was \$71 million and \$66 million as of December 31, 2023 and 2022, respectively. The total plan benefit obligations were \$39 million and \$44 million as of December 31, 2023 and 2022, respectively. Therefore, the total funded status was an asset of \$32 million and \$22 million as of December 31, 2023 and 2022, respectively.

TDS is not required to set aside current funds for its future retiree health insurance benefits. The decision to contribute to the plan assets is based upon several factors, including the funded status of the plan, market conditions, alternative investment opportunities, tax benefits and other circumstances. In accordance with applicable income tax regulations, annual contributions to fund the costs of future retiree medical benefits may not exceed certain thresholds. TDS has not determined whether it will make a contribution to the plan in 2024.

Note 14 Commitments and Contingencies

Indemnifications

TDS enters into agreements in the normal course of business that provide for indemnification of counterparties. The terms of the indemnifications vary by agreement. The events or circumstances that would require TDS to perform under these indemnities are transaction specific; however, these agreements may require TDS to indemnify the counterparty for costs and losses incurred from litigation or claims arising from the underlying transaction. TDS is unable to estimate the maximum potential liability for these types of indemnifications as the amounts are dependent on the outcome of future events, the nature and likelihood of which cannot be determined at this time. Historically, TDS has not made any significant indemnification payments under such agreements.

Legal Proceedings

TDS is involved or may be involved from time to time in legal proceedings before the FCC, other regulatory authorities, and/or various state and federal courts. If TDS believes that a loss arising from such legal proceedings is probable and can be reasonably estimated, an amount is accrued in the financial statements for the estimated loss. If only a range of loss can be determined, the best estimate within that range is accrued; if none of the estimates within that range is better than another, the low end of the range is accrued. The assessment of the expected outcomes of legal proceedings is a highly subjective process that requires judgments about future events. The legal proceedings are reviewed at least quarterly to determine the adequacy of accruals and related financial statement disclosures. The ultimate outcomes of legal proceedings could differ materially from amounts accrued in the financial statements.

TDS had no material accruals with respect to legal proceedings and unasserted claims as of both December 31, 2023 and 2022.

In April 2018, the United States Department of Justice (DOJ) notified TDS that it was conducting inquiries of USCellular and TDS under the federal False Claims Act relating to USCellular's participation in wireless spectrum license auctions 58, 66, 73 and 97 conducted by the FCC. USCellular is or was a limited partner in several limited partnerships which qualified for the 25% bid credit in each auction. The investigation arose from civil actions under the Federal False Claims Act brought by private parties in the U.S. District Court for the Western District of Oklahoma. In November and December 2019, following the DOJ's investigation, the DOJ informed TDS and USCellular that it would not intervene in the above-referenced actions. Subsequently, the private party plaintiffs decided to continue the actions on their own. In July 2020, these actions were transferred to the U.S. District Court for the District of Columbia. In March 2023, the District Court for the District of Columbia granted USCellular's motions to dismiss the two actions. The private party plaintiffs are appealing the district court's decisions to grant the motions to dismiss. The appeals are pending before the U.S. Court of Appeals for the D.C. Circuit. TDS and USCellular believe that USCellular's arrangements with the limited partnerships and the limited partnerships' participation in the FCC auctions complied with applicable law and FCC rules. At this time, TDS cannot predict the outcome of any proceeding.

On May 2, 2023, a putative stockholder class action was filed against TDS and USCellular and certain current and former officers and directors in the United States District Court for the Northern District of Illinois. An Amended Complaint was filed on September 1, 2023, which names TDS, USCellular, and certain current USCellular officers and directors as defendants, and alleges that certain public statements made between May 6, 2022 and November 3, 2022 (the "potential class period") regarding, among other things, USCellular's business strategies to address subscriber demand, violated Section 10(b) and 20(a) of the Securities Exchange Act of 1934. The plaintiff seeks to represent a class of stockholders who purchased TDS equity securities during the potential class period and demands unspecified monetary damages. TDS is unable at this time to determine whether the outcome of this action would have a material impact on its results of operations, financial condition, or cash flows. TDS intends to contest plaintiffs' claims vigorously on the merits.

Note 15 Variable Interest Entities

Consolidated VIEs

TDS consolidates VIEs in which it has a controlling financial interest as defined by GAAP, and is therefore deemed the primary beneficiary. TDS reviews the criteria for a controlling financial interest at the time it enters into agreements and subsequently when events warranting reconsideration occur. These VIEs have risks similar to those described in the "Risk Factors" in TDS' Form 10-K for the year ended December 31, 2022.

USCellular formed USCC EIP LLC (Seller/Sub-Servicer), USCC Receivables Funding LLC (Transferor) and the Trust, collectively the special purpose entities (SPEs), to facilitate a securitized borrowing using its equipment installment plan receivables. Under a Receivables Sale Agreement, USCellular wholly-owned, majority-owned and unconsolidated entities, collectively referred to as "affiliated entities", transfer device equipment installment plan contracts to the Seller/Sub-Servicer. The Seller/Sub-Servicer aggregates device equipment installment plan contracts, and performs servicing, collection and all other administrative activities related to accounting for the equipment installment plan contracts. The Seller/Sub-Servicer sells the eligible equipment installment plan receivables to the Transferor, a bankruptcy remote entity, which subsequently sells the receivables to the Trust. The Trust, which is bankruptcy remote and isolated from the creditors of USCellular, will be responsible for issuing asset-backed variable funding notes (Notes), which are collateralized by the equipment installment plan receivables owned by the Trust. Given that USCellular has the power to direct the activities of these SPEs, and that these SPEs lack sufficient equity to finance their activities, USCellular is deemed to have a controlling financial interest in the SPEs, and therefore consolidates them. All transactions with third parties (e.g., issuance of the asset-backed variable funding notes) will be accounted for as a secured borrowing due to the pledging of equipment installment plan contracts as collateral, significant continuing involvement in the transferred assets, subordinated interests of the cash flows, and continued evidence of control of the receivables. Refer to Note 12 — Debt, Receivables Securitization Agreement for additional details regarding the securitization agreement for which these entities were established.

The following VIEs were formed to participate in FCC auctions of wireless spectrum licenses and to fund, establish, and provide wireless service with respect to any FCC wireless spectrum licenses won in the auctions:

- Advantage Spectrum, L.P. (Advantage Spectrum) and Sunshine Spectrum, Inc., the general partner of Advantage Spectrum; and
- King Street Wireless, L.P. (King Street Wireless) and King Street Wireless, Inc., the general partner of King Street Wireless.

These particular VIEs are collectively referred to as designated entities. The power to direct the activities that most significantly impact the economic performance of these VIEs is shared. Specifically, the general partner of these VIEs has the exclusive right to manage, operate and control the limited partnerships and make all decisions to carry on the business of the partnerships. The general partner of each partnership needs the consent of the limited partner, an indirect TDS subsidiary, to sell or lease certain wireless spectrum licenses, to make certain large expenditures, admit other partners or liquidate the limited partnerships. Although the power to direct the activities of these VIEs is shared, TDS has the most significant level of exposure to the variability associated with the economic performance of the VIEs, indicating that TDS is the primary beneficiary of the VIEs. Therefore, in accordance with GAAP, these VIEs are consolidated into the TDS financial statements.

TDS also consolidates other VIEs that are limited partnerships that provide wireless service. A limited partnership is a variable interest entity unless the limited partners hold substantive participating rights or kick-out rights over the general partner. For certain limited partnerships, UScellular is the general partner and manages the operations. In these partnerships, the limited partners do not have substantive kick-out or participating rights and, further, such limited partners do not have the authority to remove the general partner. Therefore, these limited partnerships also are recognized as VIEs and are consolidated into the TDS financial statements under the variable interest model.

The following table presents the classification and balances of the consolidated VIEs' assets and liabilities in TDS' Consolidated Balance Sheet.

December 31,	2023	2022
(Dollars in millions)		
Assets		
Cash and cash equivalents	\$ 24	\$ 29
Accounts receivable	631	700
Inventory, net	4	4
Other current assets	30	36
Licenses	639	638
Property, plant and equipment, net	123	115
Operating lease right-of-use assets	43	41
Other assets and deferred charges	494	478
Total assets	<u>\$ 1,988</u>	<u>\$ 2,041</u>
Liabilities		
Current liabilities	\$ 34	\$ 92
Long-term operating lease liabilities	38	36
Other deferred liabilities and credits	26	28
Total liabilities ¹	<u>\$ 98</u>	<u>\$ 156</u>

¹ Total liabilities does not include amounts borrowed under the receivables securitization agreement. See Note 12 — Debt for additional information.

Unconsolidated VIEs

TDS manages the operations of and holds a variable interest in certain other limited partnerships, but is not the primary beneficiary of these entities, and therefore does not consolidate them into the TDS financial statements under the variable interest model.

TDS' total investment in these unconsolidated entities was \$6 million and \$4 million at December 31, 2023 and 2022, respectively, and is included in Investments in unconsolidated entities in TDS' Consolidated Balance Sheet. The maximum exposure from unconsolidated VIEs is limited to the investment held by TDS in those entities.

Other Related Matters

TDS made contributions, loans or advances to its VIEs totaling \$306 million, \$282 million and \$36 million during 2023, 2022 and 2021, respectively; of which \$271 million in 2023 and \$249 million in 2022 are related to USCC EIP LLC as discussed above. TDS may agree to make additional capital contributions and/or advances to these or other VIEs and/or to their general partners to provide additional funding for their operations or the development of wireless spectrum licenses granted in various auctions. TDS may finance such amounts with a combination of cash on hand, borrowings under its revolving credit or receivables securitization agreements and/or other long-term debt. There is no assurance that TDS will be able to obtain additional financing on commercially reasonable terms or at all to provide such financial support.

The limited partnership agreement of Advantage Spectrum also provides the general partner with a put option whereby the general partner may require the limited partner, a subsidiary of UScellular, to purchase its interest in the limited partnership. The put option has not been exercised.

Note 16 Noncontrolling Interests

The following schedule discloses the effects of Net income (loss) attributable to TDS shareholders and changes in TDS' ownership interest in UScellular on TDS' equity:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Net income (loss) attributable to TDS shareholders	\$ (500)	\$ 62	\$ 156
Transfers (to) from noncontrolling interests			
Change in TDS' Capital in excess of par value from UScellular's issuance of UScellular shares	(33)	(19)	(49)
Change in TDS' Capital in excess of par value from UScellular's repurchases of UScellular shares	—	35	17
Net transfers (to) from noncontrolling interests	(33)	16	(32)
Net income (loss) attributable to TDS shareholders after transfers (to) from noncontrolling interests	\$ (533)	\$ 78	\$ 124

Mandatorily Redeemable Noncontrolling Interests in Finite-Lived Subsidiaries

TDS' consolidated financial statements include certain noncontrolling interests that meet the GAAP definition of mandatorily redeemable financial instruments. These mandatorily redeemable noncontrolling interests represent interests held by third parties in consolidated partnerships, where the terms of the underlying partnership agreement provide for a defined termination date at which time the assets of the subsidiary are to be sold, the liabilities are to be extinguished and the remaining net proceeds are to be distributed to the noncontrolling interest holders and TDS in accordance with the respective partnership agreements. The termination dates of these mandatorily redeemable noncontrolling interests range from 2085 to 2092.

The estimated aggregate amount that would be due and payable to settle all of these noncontrolling interests, assuming an orderly liquidation of the finite-lived consolidated partnerships on December 31, 2023, net of estimated liquidation costs, is \$21 million. This amount excludes redemption amounts recorded in Noncontrolling interests with redemption features in the Consolidated Balance Sheet. The estimate of settlement value was based on certain factors and assumptions which are subjective in nature. Changes in those factors and assumptions could result in a materially larger or smaller settlement amount. The corresponding carrying value of the mandatorily redeemable noncontrolling interests in finite-lived consolidated partnerships at December 31, 2023, was \$6 million, and is included in Noncontrolling interests in the Consolidated Balance Sheet. The excess of the aggregate settlement value over the aggregate carrying value of these mandatorily redeemable noncontrolling interests is due primarily to the unrecognized appreciation of the noncontrolling interest holders' share of the underlying net assets in the consolidated partnerships. Neither the noncontrolling interest holders' share, nor TDS' share, of the appreciation of the underlying net assets of these subsidiaries is reflected in the consolidated financial statements.

Note 17 Shareholders' Equity

Common Stock

Series A Common Shares are convertible on a share-for-share basis into Common Shares. In matters other than the election of directors, each Series A Common Share is entitled to ten votes per share, compared to one vote for each Common Share. The Series A Common Shares are entitled to elect eight directors, and the Common Shares elect four. TDS has reserved 7,518,000 Common Shares at December 31, 2023, for possible issuance upon conversion of Series A Common Shares.

On August 2, 2013, the Board of Directors of TDS authorized a \$250 million stock repurchase program for the purchase of TDS Common Shares from time to time pursuant to open market purchases, block transactions, private purchases or otherwise, depending on market conditions. This authorization does not have an expiration date. As of December 31, 2023, the maximum dollar value of TDS Common Shares that may yet be purchased under TDS' program was \$132 million.

In November 2009, UScellular announced by Form 8-K that the Board of Directors of UScellular authorized the repurchase of up to 1,300,000 Common Shares on an annual basis beginning in 2009 and continuing each year thereafter, on a cumulative basis. In December 2016, the UScellular Board amended this authorization to provide that, beginning on January 1, 2017, the authorized repurchase amount with respect to a particular year will be any amount from zero to 1,300,000 Common Shares, as determined by the Pricing Committee of the Board of Directors, and that if the Pricing Committee did not specify an amount for any year, such amount would be zero for such year. The Pricing Committee has not specified any increase in the authorization since that time. The Pricing Committee also was authorized to decrease the cumulative amount of the authorization at any time, but has not taken any action to do so at this time. As of December 31, 2023, the total cumulative amount of Common Shares authorized to be purchased is 1,927,000. The authorization provides that share repurchases will be made pursuant to open market purchases, block purchases, private purchases, or otherwise, depending on market prices and other conditions. This authorization does not have an expiration date.

Preferred Stock

In March 2021, TDS issued 16,800 shares of TDS' 6.625% Series UU Cumulative Redeemable Perpetual Preferred Stock (Preferred Shares) for \$25,000 per Preferred Share, for total gross proceeds of \$420 million. The Preferred Shares were issued to a depository to facilitate the issuance of 16,800,000 depository shares (Depository Shares), each representing 1/1,000th of a Preferred Share. TDS received net cash proceeds of \$406 million after payment of issuance costs of \$14 million. The proceeds were for general corporate purposes, including but not limited to, the funding of capital expenditures associated with TDS Telecom's fiber program and retirement of existing debt.

In August 2021, TDS issued 27,600 shares of TDS' 6.000% Series VV Preferred Shares for \$25,000 per Preferred Share, for total gross proceeds of \$690 million. The Preferred Shares were issued to a depository to facilitate the issuance of 27,600,000 Depository Shares, each representing 1/1,000th of a Preferred Share. TDS received net cash proceeds of \$668 million after payment of issuance costs of \$22 million. The proceeds were for general corporate purposes, including but not limited to, the funding of capital expenditures associated with TDS Telecom's fiber program and retirement of existing debt.

Each holder of Depository Shares is entitled to a proportional fractional interest in all rights and preferences of the Preferred Shares, including dividend, voting, redemption and liquidation rights. The Preferred Shares have no maturity or mandatory redemption date and are not redeemable at the option of the holders.

Dividends on the Preferred Shares, when declared, are payable quarterly at a rate equal to 6.625% per year for the Series UU Preferred Shares and 6.000% for the Series VV Preferred Shares. As of December 31, 2023, there were no dividends in arrears. The Preferred Shares rank senior to TDS' Common Shares and junior to all of TDS' existing and future indebtedness outstanding under TDS' credit facilities and unsecured senior notes. The Series VV Preferred Shares rank on parity with the Series UU Preferred Shares. Upon voluntary or involuntary liquidation, holders of Preferred Shares are entitled to a liquidating distribution of \$25,000 per Preferred Share after satisfaction of liabilities and obligations to creditors. The Preferred Shares have voting rights only if certain limited conditions are met.

TDS may, at its option, redeem the Series UU Preferred Shares (a) in whole or in part, on or after March 31, 2026 at a redemption price of \$25,000 per Preferred Share, or (b) in whole but not in part, any time prior to March 31, 2026, within 120 days after a credit rating downgrade as specified in the offering prospectus, at a redemption price of \$25,500 per Preferred Share, or (c) in whole or in part, within 120 days of the occurrence of a change in control as specified in the offering prospectus, at a redemption price of \$25,000 per Preferred Share, plus, in each case, all accumulated and unpaid dividends (whether or not declared) up to the redemption date.

TDS may, at its option, redeem the Series VV Preferred Shares (a) in whole or in part, on or after September 30, 2026 at a redemption price of \$25,000 per Preferred Share, or (b) in whole but not in part, any time prior to September 30, 2026, within 120 days after a credit rating downgrade as specified in the offering prospectus, at a redemption price of \$25,500 per Preferred Share, or (c) in whole or in part, within 120 days of the occurrence of a change in control as specified in the offering prospectus, at a redemption price of \$25,000 per Preferred Share, plus, in each case, all accumulated and unpaid dividends (whether or not declared) up to the redemption date.

The Preferred Shares are convertible, at the option of the holder, to shares of TDS Common Shares upon a change of control as specified in the offering prospectus. The conversion right is the lesser of (a) Common Shares equal to \$25,000 per Preferred Share plus any accumulated and unpaid dividends, divided by the TDS Common Stock price, or (b) 2,773.200 Common Shares for each Series UU Preferred Share and 2,584.000 Common Shares for each Series VV Preferred Share, which represents one-half the conversion rate at the time of closing. In both cases, certain other adjustments and provisions may impact the conversion.

Tax-Deferred Savings Plan

At December 31, 2023, TDS has reserved 941,000 Common Shares for issuance under the TDS Tax-Deferred Savings Plan, a qualified profit-sharing plan pursuant to Sections 401(a) and 401(k) of the Internal Revenue Code. Participating employees have the option of investing their contributions and TDS' contributions in a TDS Common Share fund, a UScellular Common Share fund or certain unaffiliated funds.

Note 18 Stock-Based Compensation

TDS Consolidated

The following table summarizes stock-based compensation expense recognized during 2023, 2022 and 2021:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Stock option awards	\$ —	\$ 1	\$ 2
Restricted stock unit awards	32	28	29
Performance share unit awards	7	11	16
Awards under Non-Employee Director compensation plan	2	2	2
Total stock-based compensation, before income taxes	41	42	49
Income tax benefit	(10)	(11)	(12)
Total stock-based compensation expense, net of income taxes	\$ 31	\$ 31	\$ 37

At December 31, 2023, unrecognized compensation cost for all stock-based compensation awards was \$69 million and is expected to be recognized over a weighted average period of 1.8 years.

The following table provides a summary of the classification of stock-based compensation expense included in the Consolidated Statement of Operations for the years ended:

December 31,	2023	2022	2021
(Dollars in millions)			
Selling, general and administrative expense	\$ 36	\$ 36	\$ 44
Cost of services expense	5	6	5
Total stock-based compensation expense	\$ 41	\$ 42	\$ 49

TDS' tax benefits realized from the vesting of awards totaled \$7 million in 2023.

TDS (Excluding UScellular)

The information in this section relates to stock-based compensation plans using the equity instruments of TDS. Participants in these plans are employees of TDS Corporate and TDS Telecom and Non-employee Directors of TDS. Information related to plans using the equity instruments of UScellular are shown in the UScellular section following the TDS section.

Under the TDS Long-Term Incentive Plans, TDS may grant fixed and performance-based incentive and non-qualified stock options, restricted stock, restricted stock units, and deferred compensation stock unit awards to key employees.

TDS had reserved 19,750,000 Common Shares at December 31, 2023, for equity awards granted and to be granted under the TDS Long-Term Incentive Plans in effect. At December 31, 2023, the only types of awards outstanding are fixed non-qualified stock option awards, restricted stock unit awards, performance share awards and deferred compensation stock unit awards.

TDS has also established a Non-Employee Directors' compensation plan under which it has reserved 500,000 TDS Common Shares at December 31, 2023, for issuance as compensation to members of the Board of Directors who are not employees of TDS.

TDS uses treasury stock to satisfy requirements for shares issued pursuant to its various stock-based compensation plans.

Long-Term Incentive Plans – Restricted Stock Units

TDS grants restricted stock unit awards to key employees that vest after three years or one-third graded vesting each year. Each outstanding restricted stock unit is convertible into one Common Share Award. The restricted stock unit awards currently outstanding were granted in 2021, 2022 and 2023 and vest in 2024, 2025 and 2026.

TDS estimates the fair value of restricted stock units by reducing the grant-date price of TDS' shares by the present value of the dividends expected to be paid on the underlying shares during the requisite service period, discounted at the appropriate risk-free interest rate, since employees are not entitled to dividends declared on the underlying shares while the restricted stock is unvested. The fair value is then recognized as compensation cost on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period.

A summary of TDS nonvested restricted stock units and changes during 2023 is presented in the table below:

Common Restricted Stock Units	Number	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2022	1,824,000	\$ 18.16
Granted	2,473,000	\$ 5.23
Vested	(532,000)	\$ 17.24
Forfeited	(130,000)	\$ 10.89
Nonvested at December 31, 2023	<u>3,635,000</u>	\$ 9.76

The total fair values as of the respective vesting dates of restricted stock units vested during 2023, 2022 and 2021 were \$4 million, \$7 million and \$11 million, respectively. The weighted average grant date fair value per share of the restricted stock units granted in 2023, 2022 and 2021 was \$5.23, \$15.34 and \$23.34, respectively.

Long-Term Incentive Plans – Performance Share Units

TDS grants performance share units to certain TDS employees. The performance share units generally vest after three years. For the 2021 and 2022 grants, each recipient may be entitled to shares of TDS common stock equal to 0% to 200% of a communicated target award depending on the achievement of predetermined performance-based and market-based operating targets over three years. Performance-based operating targets for the 2021 and 2022 TDS grants vary by business unit and may include Total Revenue, Return on Capital and Adjusted EBITDA. Market-based operating targets are measured against TDS' total shareholder return relative to a defined peer group.

For the 2023 TDS grants, each recipient may be entitled to shares of TDS common stock equal to 0% to 160% or 0% to 150% of a communicated target award depending on the achievement of predetermined performance-based operating targets over the performance period, which is a one-year period from January 1, 2023 to December 31, 2023, and, for certain grants, a market-based operating target over the performance period, which is a three-year period from January 1, 2023 to December 31, 2025. The performance-based operating targets for the 2023 TDS grants vary by business unit and may include UScellular's 2023 Performance Award Payout Percentage, TDS Telecom's 2023 Performance Award Payout Percentage, Total Revenue, Return on Capital and Adjusted EBITDA. The market-based operating target is measured against TDS' total shareholder return relative to a defined peer group.

Performance shares accumulate dividend equivalents, which are forfeitable if the performance metrics are not achieved. If the predetermined performance-based and market-based operating targets are met, the units granted in 2021, 2022 and 2023 will vest in 2024, 2025 and 2026, respectively.

TDS estimates fair value of performance-based operating targets using TDS' closing stock price on the date of grant. An estimate of the number of performance units expected to vest based upon achieving the performance-based operating targets is made and the fair value is expensed on a straight-line basis over the requisite service period. Each reporting period during the performance period these estimates are reviewed and stock compensation expense is adjusted accordingly to reflect the new estimates of total units expected to vest. If any part of the performance share units do not vest as a result of the established performance-based operating targets not being achieved, the related stock compensation expense is reversed.

TDS estimates the market-based operating target's fair value using an internally developed valuation model. This estimated fair value approximated TDS' closing stock price at the date of grant for market-based share units granted in 2023, 2022 and 2021. This market-based operating target value determined at the date of grant is expensed on a straight-line basis over the requisite service period and the stock compensation expense is not adjusted during the performance period for the subsequent changes in the value of the market-based unit awards and will not be reversed even if the market-based operating target is not achieved.

During 2023, TDS' Long-Term Incentive Compensation Committee elected to apply an additional discretionary amount of 35% to the 2020 grant's final payout for the performance-based operating targets. This modification resulted in \$2 million of incremental expense recognized in 2023.

A summary of TDS nonvested performance share units and changes during 2023 is presented in the table below:

Common Performance Share Units	Number	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2022	1,349,000	\$ 19.81
Granted	1,343,000	\$ 7.14
Vested	(391,000)	\$ 19.15
Change in units based on approved performance factors	10,000	\$ 19.15
Forfeited	(216,000)	\$ 16.79
Accumulated dividend equivalents	106,000	\$ 13.21
Nonvested at December 31, 2023	<u>2,201,000</u>	\$ 12.17

The total fair value of performance share units that vested during 2023, 2022 and 2021 was \$5 million, \$5 million and \$3 million, respectively. The weighted average grant date fair value per share of the performance share units granted in 2023, 2022 and 2021 was \$7.14, \$17.42 and \$25.36, respectively.

Long-Term Incentive Plan – Stock Options

TDS' last stock option grant occurred in 2021.

Stock options granted to key employees are exercisable over a specified period not in excess of ten years. Stock options generally vest over periods up to three years from the date of grant. Stock options outstanding at December 31, 2023, expire between 2024 and 2031. The exercise price of options equals the market value of TDS common stock on the date of grant.

TDS estimated the fair value of stock options granted in 2021 using the Black-Scholes valuation model and the assumptions shown in the table below:

	2021
Expected life	6.3 years
Expected annual volatility rate	36.6 %
Dividend yield	2.8 %
Risk-free interest rate	1.1 %

Pre-vesting forfeitures and expected life are estimated based on historical experience related to similar awards, giving considerations to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. TDS believes that its historical experience provides the best estimates of future pre-vesting forfeitures and future expected life. The expected volatility assumption is based on historical volatility of TDS' common stock over a period commensurate with the expected life. The dividend yield assumption is equal to the dividends declared in the most recent year as a percentage of the share price on the date of grant. The risk-free interest rate assumption is determined using the U.S. Treasury Yield Curve Rate with a term length that approximates the expected life of the stock options.

A summary of TDS stock options (total and portion exercisable) and changes during 2023 is presented in the tables and narrative below.

Common Share Options	Number of Options	Weighted Average Exercise Prices	Aggregate Intrinsic Value (in millions)	Weighted Average Remaining Contractual Life (in years)
Outstanding at December 31, 2022	3,098,000	\$ 26.37		
Exercised	(7,000)	\$ 19.15		
Forfeited	(18,000)	\$ 22.66		
Expired	(556,000)	\$ 25.02		
Outstanding at December 31, 2023	<u>2,517,000</u>	\$ 26.72	\$ —	3.5
(2,280,000 exercisable)		\$ 26.86	\$ —	3.1

The weighted average grant date fair value per share of the TDS stock options granted in 2021 was \$6.86. The aggregate intrinsic value at December 31, 2023, presented in the table above represents the total pre-tax intrinsic value (the difference between TDS' closing stock prices and the exercise price, multiplied by the number of in-the-money options) that would have been received by option holders had all options been exercised on December 31, 2023.

Long-Term Incentive Plans – Deferred Compensation Stock Units

Certain TDS employees may elect to defer receipt of all or a portion of their annual bonuses and to receive a company matching contribution on the amount deferred. All bonus compensation that is deferred by employees electing to participate is immediately vested and is deemed to be invested in TDS Common Share units. Participants receive a 25% stock unit match for amounts deferred up to 50% of their total annual bonus and a 33% match for amounts that exceed 50% of their total annual bonus; such matching contributions also are deemed to be invested in TDS Common Share units and vest over three years.

Compensation of Non-Employee Directors

TDS issued 81,000, 51,000 and 50,000 Common Shares under its Non-Employee Director plan in 2023, 2022 and 2021, respectively.

Dividend Reinvestment Plans

TDS had reserved 2,111,000 Common Shares at December 31, 2023, for issuance under Automatic Dividend Reinvestment and Stock Purchase Plans and 92,000 Series A Common Shares for issuance under the Series A Common Share Automatic Dividend Reinvestment Plan. These plans enabled holders of TDS' Common Shares to reinvest cash dividends in Common Shares and holders of Series A Common Shares to reinvest cash dividends in Series A Common Shares. The purchase price of the shares is 95% of the market value, based on the average of the daily high and low sales prices for TDS' Common Shares on the New York Stock Exchange for the ten trading days preceding the date on which the purchase is made. These plans are considered non-compensatory plans; therefore, no compensation expense is recognized for stock issued under these plans.

UScellular

The information in this section relates to stock-based compensation plans using the equity instruments of UScellular. Participants in these plans are employees of UScellular and Non-employee Directors of UScellular. Information related to plans using the equity instruments of TDS are shown in the previous section.

UScellular has established the following stock-based compensation plans: Long-Term Incentive Plans and a Non-Employee Director compensation plan.

Under the UScellular Long-Term Incentive Plans, UScellular may grant fixed and performance-based incentive and non-qualified stock options, restricted stock, restricted stock units, and deferred compensation stock unit awards to key employees. At December 31, 2023, the only types of awards outstanding are fixed non-qualified stock option awards, restricted stock unit awards, performance share awards and deferred compensation stock unit awards.

Under the Non-Employee Director compensation plan, UScellular may grant Common Shares to members of the Board of Directors who are not employees of UScellular or TDS.

At December 31, 2023, UScellular had reserved 13,769,000 Common Shares for equity awards granted and to be granted under the Long-Term Incentive Plans and 500,000 Common Shares for issuance under the Non-Employee Director compensation plan.

UScellular uses treasury stock to satisfy requirements for Common Shares issued pursuant to its various stock-based compensation plans.

Long-Term Incentive Plans – Restricted Stock Units

UScellular grants restricted stock unit awards to key employees that generally vest after three years or one-third graded vesting each year. Each outstanding restricted stock unit is convertible into one Common Share Award. The restricted stock unit awards currently outstanding were granted in 2021, 2022 and 2023 and vest in 2024, 2025 and 2026.

UScellular estimates the fair value of restricted stock units based on the closing market price of UScellular shares on the date of grant. The fair value is then recognized as compensation cost on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period.

A summary of UScellular nonvested restricted stock units and changes during 2023 is presented in the table below:

Common Restricted Stock Units	Number	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2022	2,000,000	\$ 31.84
Granted	1,286,000	\$ 21.15
Vested	(526,000)	\$ 28.73
Forfeited	(212,000)	\$ 28.93
Nonvested at December 31, 2023	<u>2,548,000</u>	\$ 27.26

The total fair value of restricted stock units that vested during 2023, 2022 and 2021 was \$12 million, \$9 million and \$22 million, respectively. The weighted average grant date fair value per share of the restricted stock units granted in 2023, 2022 and 2021 was \$21.15, \$30.35 and \$36.68, respectively.

Long-Term Incentive Plans – Performance Share Units

Beginning in 2017, UScellular granted performance share units to key employees. The performance share units generally vest after three years.

During 2023, UScellular's Long-Term Incentive Compensation Committee adopted resolutions to apply a 75% floor, and allow for an additional discretionary amount up to a maximum of 100%, for the performance based operating target for the 2021 and 2022 grants. These modifications resulted in additional expense recognized in 2023 of \$3 million and \$1 million for the 2021 and 2022 grants, respectively.

For the 2021 and 2022 grants, each recipient may be entitled to shares of UScellular common stock equal to 75% to 200% of a communicated target award depending on the achievement of a predetermined Return on Capital target over the performance period, which is a three-year period beginning on January 1 in the year of grant to December 31 of the third year. For the 2023 grants, each recipient may be entitled to shares of UScellular common stock equal to 0% to 150% of a communicated target award depending on the achievement of a predetermined Return on Capital target over the performance period, which is a one-year period beginning on January 1 in the year of grant to December 31 in the year of grant. The performance share units currently outstanding were granted in 2021, 2022 and 2023 and will vest in 2024, 2025 and 2026, respectively.

Additionally, UScellular granted performance share units during 2020 to a newly appointed President and Chief Executive Officer. The recipient may be entitled to shares of UScellular common stock equal to 100% of the communicated target award depending on the achievement of predetermined performance-based operating targets over the performance period, which is any two calendar-year period commencing no earlier than January 1, 2021 and ending no later than December 31, 2026. Performance-based operating targets include Average Total Revenue Growth and Average Annual Return on Capital. If one, or both, of the performance targets are not satisfied, the award will be forfeited.

UScellular estimates the fair value of performance share units using UScellular's closing stock price on the date of grant. An estimate of the number of performance share units expected to vest based upon achieving the performance-based operating targets is made and the aggregate fair value is expensed on a straight-line basis over the requisite service period. Each reporting period, during the performance period, the estimate of the number of performance share units expected to vest is reviewed and stock compensation expense is adjusted as appropriate to reflect the revised estimate of the aggregate fair value of the performance share units expected to vest.

A summary of UScellular's nonvested performance share units and changes during 2023 is presented in the table below:

Common Performance Share Units	Number	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2022	1,248,000	\$ 32.51
Granted	643,000	\$ 21.26
Vested	(300,000)	\$ 28.41
Forfeited	(134,000)	\$ 26.53
Nonvested at December 31, 2023	<u>1,457,000</u>	\$ 27.37

The total fair value of performance share units that vested during 2023, 2022 and 2021 was \$7 million, \$6 million and \$22 million, respectively. The weighted average grant date fair value per share of the performance share units granted in 2023, 2022 and 2021 was \$21.26, \$31.35 and \$37.67, respectively.

Long-Term Incentive Plans – Stock Options

UScellular's last stock option grant occurred in 2016.

Stock options outstanding, and the related weighted average exercise price, at December 31, 2023 and 2022 were 112,000 units at \$44.34 and 348,000 units at \$42.41, respectively. All stock options are exercisable and expire between 2024 and 2026.

Long-Term Incentive Plans – Deferred Compensation Stock Units

Certain UScellular employees may elect to defer receipt of all or a portion of their annual bonuses and to receive a company matching contribution on the amount deferred. All bonus compensation that is deferred by employees electing to participate is immediately vested and is deemed to be invested in UScellular Common Share stock units. The amount of UScellular's matching contribution is a 33% match for the amount of their total annual bonus that is deferred into the program. Matching contributions are also deemed to be invested in UScellular Common Share stock units and vest over three years.

Compensation of Non-Employee Directors

UScellular issued 36,000, 22,000 and 20,000 Common Shares in 2023, 2022 and 2021, respectively, under its Non-Employee Director compensation plan.

Note 19 Business Segment Information

UScellular and TDS Telecom are billed for services they receive from TDS, consisting primarily of information processing, accounting, finance, and general management services. Such billings are based on expenses specifically identified to UScellular and TDS Telecom and on allocations of common expenses. Management believes the method used to allocate common expenses is reasonable and that all expenses and costs applicable to UScellular and TDS Telecom are reflected in the accompanying business segment information.

Financial data for TDS' reportable segments for 2023, 2022 and 2021, is as follows. See Note 1 — Summary of Significant Accounting Policies for additional information.

Year Ended or as of December 31, 2023	UScellular	TDS Telecom	Corporate, Eliminations and Other	Total
(Dollars in millions)				
Operating revenues				
Service	\$ 3,044	\$ 1,027	\$ 98	\$ 4,169
Equipment and product sales	862	1	128	991
Total operating revenues	3,906	1,028	226	5,160
Cost of services (excluding Depreciation, amortization and accretion reported below)	740	423	77	1,240
Cost of equipment and products	988	—	106	1,094
Selling, general and administrative	1,368	326	59	1,753
Depreciation, amortization and accretion	656	245	14	915
Loss on impairment of intangible assets	—	547	—	547
(Gain) loss on asset disposals, net	17	10	—	27
(Gain) loss on license sales and exchanges, net	(2)	—	—	(2)
Operating income (loss)	139	(523)	(30)	(414)
Equity in earnings of unconsolidated entities	158	—	1	159
Interest and dividend income	10	4	6	20
Interest expense	(196)	8	(56)	(244)
Other, net	—	2	—	2
Income (loss) before income taxes	111	(509)	(79)	(477)
Income tax expense (benefit)	53	(26)	(17)	10
Net income (loss)	58	(483)	(62)	(487)
Add back:				
Depreciation, amortization and accretion	656	245	14	915
Expenses related to strategic alternatives review	8	—	5	13
Loss on impairment of intangible assets	—	547	—	547
(Gain) loss on asset disposals, net	17	10	—	27
(Gain) loss on license sales and exchanges, net	(2)	—	—	(2)
Interest expense	196	(8)	56	244
Income tax expense (benefit)	53	(26)	(17)	10
Adjusted EBITDA¹	\$ 986	\$ 285	\$ (4)	\$ 1,267
Investments in unconsolidated entities	\$ 461	\$ 4	\$ 40	\$ 505
Total assets	\$ 10,750	\$ 2,864	\$ 307	\$ 13,921
Capital expenditures	\$ 611	\$ 577	\$ 9	\$ 1,197

Year Ended or as of December 31, 2022	UScellular	TDS Telecom	Corporate, Eliminations and Other	Total
(Dollars in millions)				
Operating revenues				
Service	\$ 3,125	\$ 1,019	\$ 96	\$ 4,240
Equipment and product sales	1,044	1	128	1,173
Total operating revenues	<u>4,169</u>	<u>1,020</u>	<u>224</u>	<u>5,413</u>
Cost of services (excluding Depreciation, amortization and accretion reported below)	755	418	72	1,245
Cost of equipment and products	1,216	1	103	1,320
Selling, general and administrative	1,408	313	47	1,768
Depreciation, amortization and accretion	700	215	14	929
Loss on impairment of intangible assets	3	—	—	3
(Gain) loss on asset disposals, net	19	7	1	27
(Gain) loss on sale of business and other exit costs, net	(1)	—	—	(1)
Operating income (loss)	<u>69</u>	<u>66</u>	<u>(13)</u>	<u>122</u>
Equity in earnings of unconsolidated entities	158	—	1	159
Interest and dividend income	8	2	7	17
Interest expense	(163)	7	(18)	(174)
Other, net	—	1	—	1
Income (loss) before income taxes	<u>72</u>	<u>76</u>	<u>(23)</u>	<u>125</u>
Income tax expense (benefit)	37	23	(7)	53
Net income (loss)	<u>35</u>	<u>53</u>	<u>(16)</u>	<u>72</u>
Add back:				
Depreciation, amortization and accretion	700	215	14	929
Loss on impairment of intangible assets	3	—	—	3
(Gain) loss on asset disposals, net	19	7	1	27
(Gain) loss on sale of business and other exit costs, net	(1)	—	—	(1)
Interest expense	163	(7)	18	174
Income tax expense (benefit)	37	23	(7)	53
Adjusted EBITDA¹	<u>\$ 956</u>	<u>\$ 291</u>	<u>\$ 10</u>	<u>\$ 1,257</u>
Investments in unconsolidated entities	\$ 452	\$ 4	\$ 39	\$ 495
Total assets	\$ 11,119	\$ 3,056	\$ 375	\$ 14,550
Capital expenditures	\$ 717	\$ 556	\$ 12	\$ 1,285

Year Ended or as of December 31, 2021	UScellular	TDS Telecom	Corporate, Eliminations and Other	Total
(Dollars in millions)				
Operating revenues				
Service	\$ 3,115	\$ 1,005	\$ 96	\$ 4,216
Equipment and product sales	1,007	1	105	1,113
Total operating revenues	<u>4,122</u>	<u>1,006</u>	<u>201</u>	<u>5,329</u>
Cost of services (excluding Depreciation, amortization and accretion reported below)	790	404	73	1,267
Cost of equipment and products	1,118	1	86	1,205
Selling, general and administrative	1,345	291	41	1,677
Depreciation, amortization and accretion	678	198	19	895
(Gain) loss on asset disposals, net	23	2	1	26
(Gain) loss on sale of business and other exit costs, net	(2)	—	—	(2)
Operating income (loss)	<u>170</u>	<u>110</u>	<u>(19)</u>	<u>261</u>
Equity in earnings of unconsolidated entities	179	—	3	182
Interest and dividend income	6	1	4	11
Interest expense	(175)	5	(62)	(232)
Other, net	—	(1)	—	(1)
Income (loss) before income taxes	<u>180</u>	<u>114</u>	<u>(73)</u>	<u>221</u>
Income tax expense (benefit)	20	24	(11)	33
Net income (loss)	<u>160</u>	<u>90</u>	<u>(62)</u>	<u>188</u>
Add back:				
Depreciation, amortization and accretion	678	198	19	895
(Gain) loss on asset disposals, net	23	2	1	26
(Gain) loss on sale of business and other exit costs, net	(2)	—	—	(2)
Interest expense	175	(5)	62	232
Income tax expense (benefit)	20	24	(11)	33
Adjusted EBITDA¹	<u>\$ 1,054</u>	<u>\$ 310</u>	<u>\$ 8</u>	<u>\$ 1,372</u>
Investments in unconsolidated entities	\$ 439	\$ 4	\$ 36	\$ 479
Total assets	\$ 10,341	\$ 2,645	\$ 507	\$ 13,493
Capital expenditures	\$ 780	\$ 411	\$ 10	\$ 1,201

Numbers may not foot due to rounding.

¹ Adjusted earnings before interest, taxes, depreciation, amortization and accretion (Adjusted EBITDA) is a segment measure reported to the chief operating decision maker for purposes of assessing the segments' performance. Adjusted EBITDA is defined as net income, adjusted for the items set forth in the reconciliation above. TDS believes Adjusted EBITDA is a useful measure of TDS' operating results before significant recurring non-cash charges, gains and losses, and other items as presented above as it provides additional relevant and useful information to investors and other users of TDS' financial data in evaluating the effectiveness of its operations and underlying business trends in a manner that is consistent with management's evaluation of business performance.

Note 20 Supplemental Cash Flow Disclosures

Following are supplemental cash flow disclosures regarding interest paid and income taxes paid.

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Interest paid	\$ 235	\$ 164	\$ 177
Income taxes paid, net of (refunds received)	(50)	(119)	6

Following are supplemental cash flow disclosures regarding transactions related to stock-based compensation awards. In certain situations, TDS and UScellular withhold shares that are issuable upon the exercise of stock options or the vesting of restricted shares to cover, and with a value equivalent to, the exercise price and/or the amount of taxes required to be withheld from the stock award holder at the time of the exercise or vesting. TDS and UScellular then pay the amount of the required tax withholdings to the taxing authorities in cash.

TDS:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Common Shares withheld	338,000	225,000	223,000
Aggregate value of Common Shares withheld	\$ 3	\$ 4	\$ 5
Cash disbursements for payment of taxes	\$ (3)	\$ (4)	\$ (5)

UScellular:

Year Ended December 31,	2023	2022	2021
(Dollars in millions)			
Common Shares withheld	347,000	154,000	438,000
Aggregate value of Common Shares withheld	\$ 9	\$ 5	\$ 16
Cash disbursements for payment of taxes	\$ (6)	\$ (5)	\$ (16)

Software License Agreements

Certain software licenses are recorded as acquisitions of property, plant and equipment and the incurrence of a liability to the extent that the license fees are not fully paid at acquisition, and are treated as non-cash activity in the Consolidated Statement of Cash Flows. Such acquisitions of software licenses that are not reflected as Cash paid for additions to property, plant and equipment were \$25 million, \$130 million and \$22 million for the years ended 2023, 2022 and 2021, respectively. At December 31, 2023, liabilities of \$68 million and \$36 million related to software license agreements were recorded to Other current liabilities and Other deferred liabilities and credits, respectively, in the Consolidated Balance Sheet. At December 31, 2022, liabilities of \$65 million and \$76 million related to software license agreements were recorded to Other current liabilities and Other deferred liabilities and credits, respectively, in the Consolidated Balance Sheet.

Note 21 Certain Relationships and Related Transactions

Sidley Austin LLP is the principal law firm of TDS and its subsidiaries: Walter C.D. Carlson, a trustee and beneficiary of a voting trust that controls TDS, the non-executive Chair of the Board and member of the Board of Directors of TDS and a director of UScellular, a subsidiary of TDS is Senior Counsel at Sidley Austin LLP; and John P. Kelsh, the General Counsel and/or an Assistant Secretary of TDS and certain other subsidiaries of TDS is a partner at Sidley Austin LLP. Walter C.D. Carlson does not provide legal services to TDS or its subsidiaries. TDS, UScellular and their subsidiaries incurred legal costs from Sidley Austin LLP of \$16 million, \$8 million and \$10 million in 2023, 2022 and 2021, respectively.

The Audit Committee of the Board of Directors of TDS is responsible for the review and evaluation of all related-party transactions as such term is defined by the rules of the New York Stock Exchange.

Reports of Management

Management's Responsibility for Financial Statements

Management of Telephone and Data Systems, Inc. has the responsibility for preparing the accompanying consolidated financial statements and for their integrity and objectivity. The statements were prepared in accordance with accounting principles generally accepted in the United States of America and, in management's opinion, were fairly presented. The financial statements included amounts that were based on management's best estimates and judgments. Management also prepared the other information in the annual report and is responsible for its accuracy and consistency with the financial statements.

PricewaterhouseCoopers LLP (PCAOB ID 238), an independent registered public accounting firm, has audited these consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and has expressed herein its unqualified opinion on these financial statements.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. TDS' 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 accounting principles generally accepted in the United States of America (GAAP). TDS' internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the issuer; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the issuer are being made only in accordance with authorizations of management and, where required, the board of directors of the issuer; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the issuer's assets that could have a material effect on the interim or annual consolidated 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.

Under the supervision and with the participation of TDS' management, including its principal executive officer and principal financial officer, TDS conducted an evaluation of the effectiveness of its internal control over financial reporting as of December 31, 2023, based on the criteria established in the 2013 version of *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management has concluded that TDS maintained effective internal control over financial reporting as of December 31, 2023, based on criteria established in the 2013 version of *Internal Control — Integrated Framework* issued by the COSO.

The effectiveness of TDS' internal control over financial reporting as of December 31, 2023, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in the firm's report.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Telephone and Data Systems, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Telephone and Data Systems, Inc. and its subsidiaries (“the Company”) as of December 31, 2023 and 2022, and the related consolidated statements of operations, of comprehensive income, of changes in equity, and of cash flows for each of the three years in the period ended December 31, 2023, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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. 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

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 (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters 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.

Revenue Recognition - Retail Service and Equipment and Product Sales Revenue for the UScellular segment

As described in Note 2 to the consolidated financial statements, the Company generates revenues from retail services through the sale of wireless services including voice, messaging, and data services, as well as revenues from equipment and product sales through the sale of wireless devices and accessories. The Company recognizes wireless service revenue as the wireless service is provided to the customer. Wireless services are generally billed and paid in advance on a monthly basis. The Company offers a comprehensive range of wireless devices such as handsets, tablets, mobile hotspots, home phones, and routers for use by its customers. The Company also sells wireless devices to agents and other third-party distributors for resale. The Company also offers customers the option to purchase certain devices and accessories under installment contracts over a specified time period. The Company recognizes revenue in equipment and product sales revenues when control of the device or accessory is transferred to the customer, agent or third-party distributor, which is generally upon delivery. The UScellular segment's retail service and equipment and product sales revenue was \$2,742 million and \$862 million, respectively, for the year ended December 31, 2023.

The principal consideration for our determination that performing procedures relating to revenue recognition - retail service and equipment and product sales revenue for the UScellular segment is a critical audit matter is a high degree of auditor effort in performing procedures related to the Company's revenue recognition.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the retail service and equipment and product sales revenue recognition processes. These procedures also included, among others, (i) testing whether the criteria for recognition of retail service and equipment and product sales revenue had been met by obtaining and inspecting invoices, shipping documents, where applicable, and cash receipts from customers for a sample of revenue transactions, (ii) testing discounts and rebates for a sample of transactions, (iii) evaluating the allocation of the transaction price to the performance obligations, where applicable, (iv) recalculating the appropriateness of the retail service and equipment and product sales revenue recognized based on the terms of each arrangement for a sample of transactions, and (v) confirming a sample of outstanding customer invoice balances as of December 31, 2023, and obtaining and inspecting source documents, such as invoices, sales contracts, shipping documents, and subsequent cash receipts, for confirmations not returned.

/s/ PricewaterhouseCoopers LLP
Chicago, Illinois
February 16, 2024

We have served as the Company's auditor since 2002.

Telephone and Data Systems, Inc.

Shareholder Information

Common Stock Information

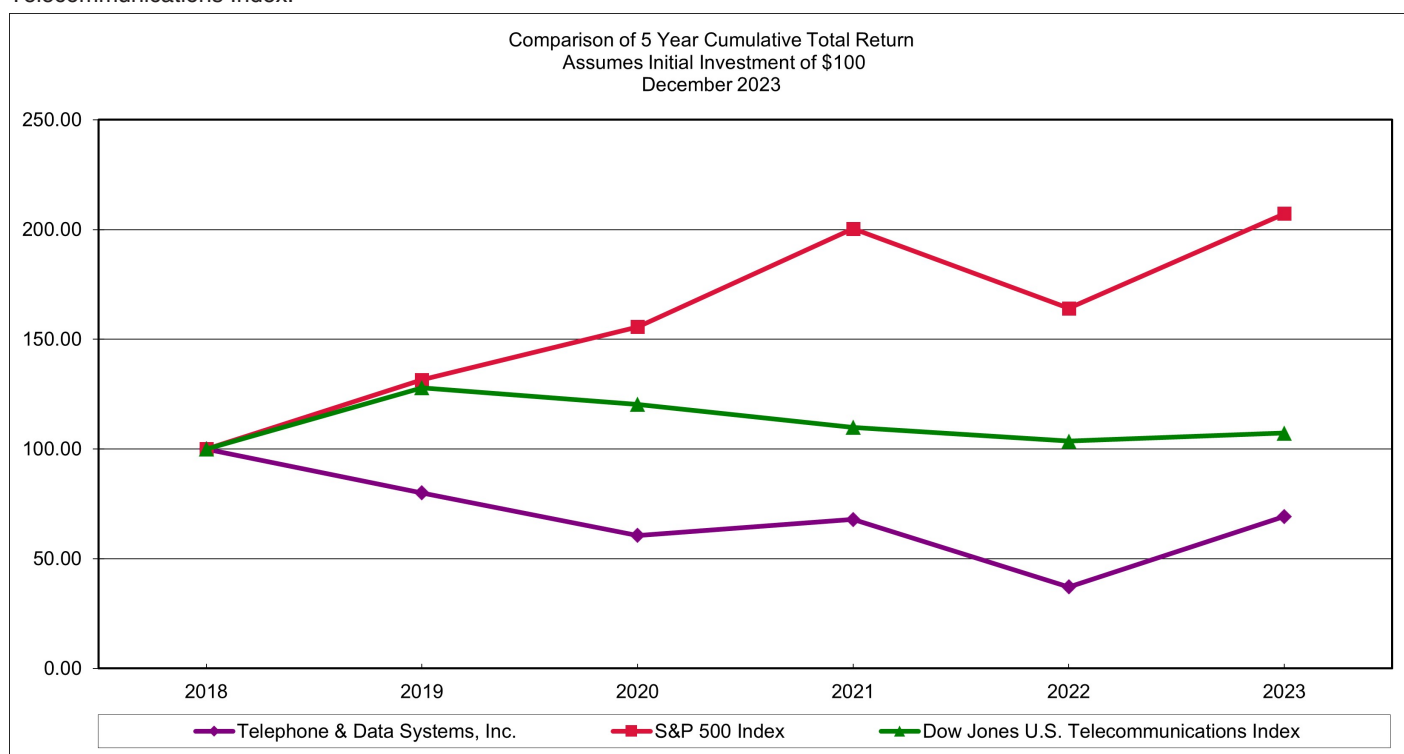
TDS' Common Shares are listed on the New York Stock Exchange under the symbol "TDS." As of January 31, 2024, the last trading day of the month, TDS Common Shares were held by 1,561 record owners, and the Series A Common Shares were held by 64 record owners.

TDS paid quarterly dividends per outstanding share of \$0.185 in 2023, \$0.180 in 2022 and \$0.175 in 2021. TDS increased the dividend per share to \$0.190 in the first quarter of 2024. TDS has paid cash dividends on its common stock since 1974. It is uncertain at this time how the strategic alternatives review for UScellular, TDS' available opportunities to reinvest in its businesses, or TDS' ongoing liquidity needs, may impact the decisions of the TDS Board of Directors regarding the declaration of future dividends.

The Common Shares of United States Cellular Corporation, an 83%-owned subsidiary of TDS, are listed on the New York Stock Exchange under the symbol "USM."

Stock Performance Graph

The following chart provides a comparison of TDS' cumulative total return to shareholders (stock price appreciation plus dividends) during the previous five years to the returns of the Standard & Poor's 500 Composite Stock Price Index and the Dow Jones U.S. Telecommunications Index.



Note: Cumulative total return assumes reinvestment of dividends.

	2018	2019	2020	2021	2022	2023
TDS Common Shares (NYSE: TDS)	\$ 100	\$ 80.02	\$ 60.57	\$ 67.89	\$ 37.15	\$ 69.21
S&P 500 Index	100	131.49	155.68	200.37	164.08	207.21
Dow Jones U.S. Telecommunications Index	100	127.88	120.31	109.89	103.57	107.20

The comparison above assumes \$100.00 invested at the close of trading on the last trading day of 2018, in TDS Common Shares, S&P 500 Index and the Dow Jones U.S. Telecommunications Index.

Dividend Reinvestment Plan

TDS' dividend reinvestment plans provide its common shareholders with a convenient and economical way to participate in the future growth of TDS. Holders of record of ten (10) or more Common Shares may purchase Common Shares with their reinvested dividends at a five percent discount from market price. Common Shares may also be purchased on a monthly basis through optional cash payments by participants in this plan. The initial ten (10) shares cannot be purchased directly from TDS. An authorization card and prospectus will be mailed automatically by the transfer agent to all registered record holders with ten (10) or more shares. Once enrolled in the plan, there are no brokerage commissions or service charges for purchases made under the plan.

Investor relations

TDS' annual report, SEC filings and news releases are available to investors, securities analysts and other members of the investment community. These reports are provided, without charge, upon request to our Investor Relations department. Investors may also access these and other reports through the Investor Relations portion of the TDS website (www.tdsinc.com).

Questions regarding lost, stolen or destroyed certificates, consolidation of accounts, transferring of shares and name or address changes should be directed to:

Julie Mathews, IRC, Director — Investor Relations
julie.mathews@tdsinc.com

General inquiries by investors, securities analysts and other members of the investment community should be directed to:

Colleen Thompson, Vice President — Corporate Relations
colleen.thompson@tdsinc.com

Directors and executive officers

See “Election of Directors” and “Executive Officers” sections of the Proxy Statement issued in 2024 for the 2024 Annual Meeting.

Principal counsel

Sidley Austin LLP, Chicago, Illinois

Transfer agent

Computershare Trust Company, N.A.
P.O. Box 43006
Providence, RI 02940-3006

Independent registered public accounting firm

PricewaterhouseCoopers LLP



We are grateful to the associates of the TDS Family of Businesses for their dedication and innovation in providing outstanding experiences for our customers.



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