AT&T INC. 2020 ANNUAL REPORT

we create connection

To Our Shareholders:

The employees of AT&T have faced and met our share of challenges over our history. But a global pandemic that so suddenly and swiftly disrupted the lives of people in virtually every country, industry, company, community and family in the world made 2020 a year like no other.

> As COVID-19 continues to disrupt our lives and millions continue to work and learn from home, the connectivity solutions we provide and the news and entertainment content we create are more relevant than ever.

The pandemic has resulted in significant changes in how people live and work, and how businesses operate, including our own.

In 2020, we pivoted to new ways of serving our customers while working to keep both them and our people safe. As I write this, more than 100,000 AT&T employees are still working from home. And we've implemented protocols to protect the tens of thousands of our employees who remained on the front lines providing critical services to customers. Thanks to our employees' dedication and the billions of dollars we've invested over the years in broadband connectivity, our network performance was outstanding, even with significant growth in demand for connectivity and network consumption patterns shifting from urban office locations to more suburban and rural residential areas.

The pandemic left no part of our business untouched. At WarnerMedia, it caused the near-universal shutdown of TV and film production and the cancellation of marquee events like the 2020 NCAA Final Four. We've worked to introduce new safety protocols into this part of our business, as well, and we committed more than $100 million to cast and crew members to help them through this unexpected production hiatus.

All this disruption and the uncertainty it caused made more clear the power of our robust and resilient portfolio of subscription businesses to generate strong cash flows that support our ability to invest in growth, focus on debt reduction and support the dividend for our investors. To put that in perspective, consumers and businesses have more than 225 million monthly subscriptions to our services, representing nearly 60% of AT&T's total revenues.

a year like no other

Our Purpose and Market Focus

As the pandemic has extended into this new year, so has our commitment to keep families, communities and companies connected. That's the strength of our business, and it's how we define AT&T's purpose: We create connection. We connect people with each other, with what they need to thrive in their everyday lives and with the stories and experiences that matter most to them. To that end, we are focused on 3 things:

1. **Leveraging our world-class fiber and wireless infrastructure** to carry more broadband traffic and serve more customers across all segments than any other U.S. company.

2. **Developing a next-generation entertainment distribution platform** built for subscription- and advertising-based customer relationships.

3. **Creating and curating industry-leading premium entertainment content** that profitably grows our customer relationships beyond our traditional connectivity-based services.

While the pandemic underscored why robust mobile and fixed internet connectivity are fundamental and important services in everyday life, we believe an engaging and high-value entertainment-based service is vital to giving us a direct relationship with most U.S. households. A robust entertainment service not only adds value to our connectivity offerings, but it also gives us the opportunity to complement our subscription-based relationships with an ad-supported value proposition. Further, we're positioning AT&T to participate in what will certainly be an attractive future for interactive and experiential home-based entertainment.

Finally, we're working in a thoughtful and disciplined way to help ensure that our capital structure supports and funds our focus areas, while returning value to you, our shareholders.

John Stankey
CHIEF EXECUTIVE OFFICER

2020 Performance Highlights

With that as context, I'm pleased to report that in this challenging and disruptive year we made significant progress across these 3 areas:

BROADBAND CONNECTIVITY

We successfully rolled out nationwide 5G, further strengthening our wireless network, which was already recognized as the best[1] and fastest[2] in the United States. And customers responded well to our unmatched network quality. In fact, in 2020 we had more than twice as many postpaid phone net adds than in 2018 and 2019 combined.

We also continued to grow our fiber broadband business, adding more than 1 million subscribers in 2020. Our fiber network not only provides critical connectivity for consumers and businesses, but it also connects with our wireless network to provide high-speed service regardless of access technology — wired or wireless.

> J.D. Power also ranked us first in customer satisfaction for residential internet everywhere we offer the service.

Fiber is also important in keeping businesses connected. At the end of 2020, more than 625,000 U.S. business buildings — connecting more than 2.5 million business customer locations — were lit with fiber from AT&T. And nationwide, more than 8.5 million business customer locations are on or within 1,000 feet of our fiber, which offers upload speeds up to 20 times faster than our competitors' networks.[3]

2020 also proved to be the ultimate stress test for FirstNet — the network we've built specifically for America's first responders — and it excelled. From the beginning of the pandemic, FirstNet has helped give its subscribers on the front line the reliable, around-the-clock connectivity they need to coordinate and communicate their response. In 2020, public safety agencies made more than 750 requests for dedicated deployable network assets to support their response to COVID-19, as well as to major disasters across the nation. It's clear FirstNet stands above other commercial offerings, and I believe first responders at more than 15,000 public safety agencies and organizations — representing nearly 2 million connections — would agree.

Across the board, our networks have held up incredibly well to Mother Nature and a global pandemic, and I'm proud of all the hard work that continues to go into providing this essential service.

SOFTWARE-BASED ENTERTAINMENT

Building on our strong HBO Max launch, we significantly exceeded our end-of-year 2020 HBO Max and HBO subscriber target. In fact, we're 2 years ahead of our initial forecast. HBO Max is generating strong viewer engagement. We ended 2020 with more than 41 million HBO Max and HBO subscribers in the United States and nearly 61 million globally, and we expect this momentum to continue.[4] For perspective, we added more HBO Max and HBO U.S. subscribers in 2020 than we did in the 10 years before that combined.

As expected, HBO Max has also helped drive positive trends in our connectivity business, supporting uptake of our AT&T UNLIMITED ELITE[SM] Plan for wireless customers, which includes HBO Max at no additional cost. As a result, we saw the percentage of wireless phone customers on unlimited plans increase by 10 percentage points in 2020.[5]

In 2021, we'll roll out an ad-supported version of HBO Max and expand availability to areas outside the United States. An ad-supported option will help us engage with even more customers by enhancing customer choice — for example, by making HBO Max accessible to viewers with less discretionary income. The business models we're putting in place give us flexibility, and our direct relationships with customers give us the ability to grow their level of engagement with us.

> With a scaled software-based entertainment distribution capability, we're well positioned for the future of entertainment consumption.

And as the pay-TV industry evolves, our sharpened focus on serving a high-quality customer base and managing that business separately allows us the overall flexibility to satisfy our customers' rapidly changing preferences for how they access and enjoy content.

FANTASTIC STORYTELLING

We kicked off 2020 with strong showings at the Golden Globes® and Academy Awards® and then proceeded to lead the industry at the Emmy® Awards, with 38 prime-time and 15 news & documentary awards. We're home to the premier storytellers in the world, and that quality has shone through in the steady stream of hits appealing to a wide range of audiences, including *The Undoing*, *I May Destroy You*, *The Flight Attendant* and *Lovecraft Count y*. The great quality of this content also helped increase viewer engagement with HBO Max.

On the theatrical side, all media companies have faced significant headwinds from the pandemic, and it's hard to predict when theaters will be back at full capacity and how consumers will feel about returning to theaters, even after a vaccine is widely available. Given that, we decided late last year to give fans a choice on how they enjoy Warner Bros.' 2021 slate of movies, which are premiering simultaneously in theaters and on HBO Max for 31 days in the United States. We started with *Wonder Woman 1984* on Dec. 25 and, based on the enthusiastic response so far, this is a winning solution. We look forward to theaters fully reopening once the pandemic subsides, but like so many other aspects of consumer behavior that COVID-19 has changed, it's hard to predict if things will return to how they were before. Either way, in 2021 this hybrid distribution model enabled by HBO Max provides us with a flexible and adaptable distribution option to meet the needs of both customers and content owners/creators as the media landscape goes through its most significant challenges in decades.

Our TV groups and networks at WarnerMedia were able to produce and air content to millions of viewers each month, as they met the challenge of restarting and ramping production while following pandemic protocols to help ensure the safety of our valued casts and crews. WarnerMedia's cable networks reach an average of nearly 170 million people across the U.S. each month.[6]

Meanwhile, CNN delivered top-notch news coverage of the pandemic, the U.S. presidential election and the ongoing struggles for racial equity and social justice, and our CNN team continues to work around the clock to keep viewers informed. As a result of their tireless efforts, CNN had its most-watched year ever, and cnn.com was the world's most-accessed digital news outlet.

Financial Strength and Capital Allocation

As I noted above, our core subscription businesses — especially wireless, broadband and enterprise networks — proved highly resilient in the face of last year's economic stresses. These critical services delivered a strong recurring stream of revenues and solid cash flows. That's a key reason why we finished the year with a strong balance sheet and solid cash position, enabling us to keep moving forward with our deliberate capital allocation plans, which include continuing to invest in our growth areas of 5G, fiber, spectrum and HBO Max.

54.5%
full-year dividend payout ratio

We are committed to supporting the dividend. My confidence in saying that comes from the financial strength and flexibility provided by the $27.5 billion in free cash flow we generated in 2020 and the $26 billion we anticipate this year.[7] Our strong cash generation in 2020 allowed us to finish the year with our full-year dividend payout ratio at 54.5% — a very comfortable position.[8]

We're also sizing our operations to reflect the new economic activity level brought about by the pandemic, and we're leaning into our cost and efficiency initiatives so that we have the cost structure in place to compete today and well into the future.

We're continuing to evaluate our portfolio for opportunities to monetize additional non-core assets. We closed or announced nearly $5 billion of asset sales last year, including our stake in Central European Media, our Puerto Rico and U.S. Virgin Islands wireless and wireline operations,[9] and our Crunchyroll anime operations.

Our financial strength also enabled us to make steady progress in paying down our debt, reducing debt maturities over the coming years and maintaining high-quality credit.

For obvious reasons, 2020 was a difficult year for forecasting financial results. Looking at 2021, we have better visibility, but we still see several uncertainties that could influence the course of our business.

With that in mind, here's what we anticipate in 2021:

- Consolidated revenue growth of about 1% with wireless service revenue growth of 2% and a gradual improvement in WarnerMedia's top line.
- Stable adjusted EPS.
- Gross capital investment in the $21 billion range with net capex of about $18 billion.[10]
- Free cash flow of around $26 billion with a dividend payout ratio in the high 50s% range.[11]

After we pay dividends, we expect to use free cash flow dollars to pay down debt. And we'll continue to look for opportunities to monetize assets and apply those proceeds to reducing our debt as well.

Advocating for Smart Public Policies

One of AT&T's core values is *stand for equality*. To that end, we're looking forward to working with the new U.S. presidential administration and Congress to advance and support equality in our country, with special focus on 3 key areas.

every American needs to be connected

First, we believe every American needs to be connected to the internet. Accomplishing that goal requires all of us in the public and private sectors to share responsibility for closing the digital divide. COVID-19 has proven that internet connectivity is more important than ever to how we live, work and learn. But many rural and low-income families don't have the internet access they need. We're addressing this digital divide on a number of fronts, including our investment of more than $95 billion over the past 5 years — more than any other U.S. company[12] — in the powerful and pervasive network infrastructure that keeps families and communities connected. But to help close the divide we need a policy framework that incorporates sustainable funding mechanisms for the long run. With smart policy reforms, America can achieve and sustain universal internet connectivity that's accessible and affordable.

There's also a growing bipartisan consensus that big online tech companies should be held more accountable for decisions that fundamentally shape American society. Members of both parties in Congress increasingly see a need for greater transparency and oversight, and AT&T supports those goals. Appropriate government oversight will give consumers more confidence that these large digital platforms are acting in the public interest.

> We also remain focused on the critical need to address racial equality and equal justice.

Working through the Business Roundtable, AT&T led an effort to redefine the relationship between law enforcement and all those they serve, laying the groundwork to achieve important breakthroughs at the local level. But, realizing that full and equal treatment for all Americans requires action at the federal level, we will continue to collaborate with policymakers to build consensus and advance important equal justice reforms.

Embracing Corporate Responsibility

For us, the priorities I've just outlined are more than just matters of public policy. They are part and parcel of our commitment to operate our business in a responsible manner. In these areas and beyond, we're doing our part as a company to create sustainable solutions to issues that face our communities, our nation and the world. For example, we've committed $600 million since 2008 to advance educational and career readiness opportunities for our young people, particularly those in underserved communities. And in the face of the pandemic, we launched initiatives to help close the homework gap affecting more than 17 million American students. To do this, we offered new discounted wireless data plans with free Wi-Fi hotspots to more than 135,000 public and private schools. And we complemented that initiative with a $10 million commitment to support connected learning in underserved communities.

Last year, we also moved forward with our efforts to address the global climate change crisis with a commitment that our global operations will be carbon neutral by 2035. And we announced the expansion of our Climate Change Analysis Tool to the entire contiguous United States. This tool identifies — up to 30 years into the future — the potential impacts of climate change on our network and operations. We believe we owe it to the millions of customers who rely on our services to create the most resilient and sustainable business we can. And I can assure you that we will continue to act upon that belief.

And let me be clear on a further point: We are deeply committed to our people. We invest in them and in our communities with well-paying jobs, excellent benefits and industry-leading skills development programs that open up advancement opportunities. Nearly 1 million employees and retirees — and their dependents — are eligible to participate in our health and welfare benefit programs, and our pension plans cover nearly 450,000 participants. We're also proud to be one of the largest employers of union-represented employees in America and the *only* major U.S. wireless company with a fully union-represented non-management workforce.

Another point of pride is our robust supplier diversity program, with approximately $13 billion in annual spend with businesses owned by minorities, women, members of the LGBTQ+ community, veterans and the differently abled. That program aims to stimulate job growth, improve opportunities for technical training and support new diverse businesses, including suppliers of financial services. In fact, we're one of the top companies with diverse spend at that level. Our program hit a significant milestone in 2020 when we delivered on our two-year commitment to spend $3 billion with Black-owned U.S. suppliers. Beyond 2020, our supplier diversity team remains dedicated to supporting the Black business community — an effort that we've sustained for more than 50 years.

Words of Thanks

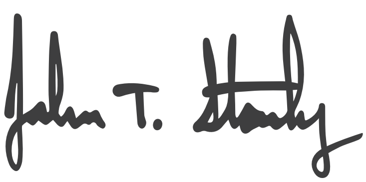
I want to close by expressing my gratitude on several fronts. First, I want to thank Randall Stephenson, who retired in January after 38 years with our company and 13 years as our chairman and CEO. Randall's fearless vision led him to seize opportunities for AT&T to grow by continuously reinventing itself. And all along the way, his personal integrity and commitment to do the right thing have set an example for us all. We wish him and his family all the best.

For our team — the amazing people who worked under extraordinarily difficult circumstances this past year — I couldn't be more grateful. I'm particularly thankful for our employees who worked courageously on the front lines to keep customers connected, not only during a global pandemic, but also in the face of natural disasters like wildfires and the most active hurricane season on record. Their commitment and agility in adjusting to ever-changing circumstances were remarkable. I've never been prouder of our people.

My thanks, as well, to our Board of Directors for their wisdom, guidance and support throughout the year. In 2021, I look forward to working with them and our new chairman, Bill Kennard, who brings to the job a deep knowledge of our business and broad leadership experience in both the public and private sectors.

And, finally, my thanks to you, our shareholders, for your continued confidence in AT&T. You have my word that our leadership team and I are committed to keep earning that confidence every day as we work to create value for you.

Sincerely,



John Stankey
Chief Executive Officer
AT&T Inc.

February 8, 2021

Our Purpose

we create connection

with each other

with what people and businesses need to thrive every day

with stories and experiences that matter

Our Market Focus

Broadband Connectivity

Software-Based Entertainment

Fantastic Storytelling

AT&T INC. FINANCIAL REVIEW 2020

Selected Financial and Operating Data

Dollars in millions except per share amounts

At December 31 and for the year ended:	**2020**	2019	2018	2017	2016
Financial Data					
Operating revenues	**$171,760**	$181,193	$170,756	$160,546	$163,786
Operating expenses	**$165,355**	$153,238	$144,660	$140,576	$140,243
Operating income	**$ 6,405**	$ 27,955	$ 26,096	$ 19,970	$ 23,543
Interest expense	**$ 7,925**	$ 8,422	$ 7,957	$ 6,300	$ 4,910
Equity in net income (loss) of affiliates	**$ 95**	$ 6	$ (48)	$ (128)	$ 98
Other income (expense) – net	**$ (1,431)**	$ (1,071)	$ 6,782	$ 1,597	$ 1,081
Income tax (benefit) expense	**$ 965**	$ 3,493	$ 4,920	$ (14,708)	$ 6,479
Net Income (Loss)	**$ (3,821)**	$ 14,975	$ 19,953	$ 29,847	$ 13,333
Less: Net Income Attributable to Noncontrolling Interest	**$ (1,355)**	$ (1,072)	$ (583)	$ (397)	$ (357)
Net Income (Loss) Attributable to AT&T	**$ (5,176)**	$ 13,903	$ 19,370	$ 29,450	$ 12,976
Net Income (Loss) Attributable to Common Stock	**$ (5,369)**	$ 13,900	$ 19,370	$ 29,450	$ 12,976
Basic Earnings Per Common Share: Net Income (Loss) Attributable to Common Stock	**$ (0.75)**	$ 1.90	$ 2.85	$ 4.77	$ 2.10
Diluted Earnings Per Common Share: Net Income (Loss) Attributable to Common Stock	**$ (0.75)**	$ 1.89	$ 2.85	$ 4.76	$ 2.10
Weighted-average common shares outstanding (000,000)	**7,157**	7,319	6,778	6,164	6,168
Weighted-average common shares outstanding with dilution (000,000)	**7,183**	7,348	6,806	6,183	6,189
End of period common shares outstanding (000,000)	**7,126**	7,255	7,282	6,139	6,139
Dividends declared per common share	**$ 2.08**	$ 2.05	$ 2.01	$ 1.97	$ 1.93
Cash and cash equivalents	**$ 9,740**	$ 12,130	$ 5,204	$ 50,498	$ 5,788
Total assets	**$525,761**	$551,669	$531,864	$444,097	$403,821
Long-term debt	**$153,775**	$151,309	$166,250	$125,972	$113,681
Total debt	**$157,245**	$163,147	$176,505	$164,346	$123,513
Debt ratio	**46.7%**	44.7%	47.7%	53.6%	49.9%
Net debt ratio	**43.8%**	41.4%	46.2%	37.2%	47.5%
Book value per common share	**$ 25.15**	$ 27.84	$ 26.63	$ 23.13	$ 20.22
Capital expenditures	**$ 15,675**	$ 19,635	$ 21,251	$ 21,550	$ 22,408
Vendor financing payments	**$ 2,966**	$ 3,050	$ 560	$ 572	$ —
Gross capital investment[1]	**$ 19,704**	$ 23,690	$ 23,240	$ 22,401	$ 22,408
Spectrum acquisitions[2]	**$ 1,613**	$ 1,316	$ 447	$ (1,380)	$ 2,477
Number of employees	**230,760**	247,800	268,220	254,000	268,540

[1] Includes capital expenditures and vendor financing payments and excludes FirstNet reimbursements of $1,063 in 2020, $1,005 in 2019, $1,429 in 2018, $279 in 2017 and $0 in 2016 (see Note 20).
[2] Cash paid for FCC license and domestic spectrum acquired in business acquisitions and swaps, net of auction deposit returns.

Dollars in millions except per share amounts

OVERVIEW

AT&T Inc. is referred to as "we," "AT&T" or the "Company" throughout this document, and the names of the particular subsidiaries and affiliates providing the services generally have been omitted. AT&T is a holding company whose subsidiaries and affiliates operate worldwide in the telecommunications, media and technology industries. You should read this discussion in conjunction with the consolidated financial statements and accompanying notes (Notes). We completed the acquisition of Time Warner Inc. (Time Warner) on June 14, 2018, and have included its results after that date. In accordance with U.S. generally accepted accounting principles (GAAP), operating results from Time Warner prior to the acquisition are excluded.

Our Management's Discussion and Analysis of Financial Condition and Results of Operations included in this document generally discusses 2020 and 2019 items and year-to-year comparisons between 2020 and 2019. Discussions of 2018 items and year-to-year comparisons between 2019 and 2018 that are not included in this document can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

We have three reportable segments: (1) Communications, (2) WarnerMedia and (3) Latin America. Our segment results presented in Note 4 and discussed below follow our internal management reporting. We analyze our segments based on segment operating contribution, which consists of operating income, excluding acquisition-related costs and other significant items and equity in net income (loss) of affiliates for investments managed within each segment. Each segment's percentage calculation of total segment operating revenue and contribution is derived from our segment results table in Note 4 and may total more than 100% due to losses in one or more segments. Percentage increases and decreases that are not considered meaningful are denoted with a dash.

We have recast our segment results for all prior periods presented to include our prior Xandr segment within our WarnerMedia segment and to remove the Crunchyroll anime business that is classified as held-for-sale and removed from the WarnerMedia segment, instead including it in Corporate and Other.

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Operating Revenues					
Communications	**$138,850**	$142,359	$143,721	**(2.5)%**	(0.9)%
WarnerMedia	**30,442**	35,259	20,585	**(13.7)**	71.3
Latin America	**5,716**	6,963	7,652	**(17.9)**	(9.0)
Corporate and other	**1,932**	1,865	2,197	**3.6**	(15.1)
Eliminations and consolidation	**(5,180)**	(5,253)	(3,399)	**1.4**	(54.5)
AT&T Operating Revenues	**171,760**	181,193	170,756	**(5.2)**	6.1
Operating Contribution					
Communications	**30,521**	32,230	32,108	**(5.3)**	0.4
WarnerMedia	**8,210**	10,659	7,020	**(23.0)**	51.8
Latin America	**(729)**	(635)	(710)	**(14.8)**	10.6
Segment Operating Contribution	**$ 38,002**	$ 42,254	$ 38,418	**(10.1)%**	10.0%

The ***Communications segment*** accounted for approximately 79% of our 2020 total segment operating revenues compared to 77% in 2019 and 80% of our 2020 total segment operating contribution as compared to 76% in 2019. This segment provides services to businesses and consumers located in the U.S. and businesses globally. Our business strategies reflect bundled product offerings that cut across product lines and utilize shared assets. In December 2020, we changed our management strategy and reevaluated our domestic video business, allowing us to maximize value in our domestic video business and further accelerate our ability to innovate and execute in our fast-growing broadband and fiber business. In conjunction with the strategy change, we separated the former Entertainment Group into two business units, Video and Broadband, which includes legacy telephony operations. We have recast our results for all prior periods to split the Entertainment Group into two separate business units, Video and Broadband, and removed video operations from Business Wireline, combining all video operations in the Video business unit. This segment contains the following business units:

- **Mobility** provides nationwide wireless service and equipment.
- **Video** provides video, including over-the-top (OTT) services and also sells multiplatform advertising services as video revenues.
- **Broadband** provides internet, including broadband fiber, and legacy telephony voice communication services to residential customers.
- **Business Wireline** provides advanced IP-based services, as well as traditional voice and data services to business customers.

The ***WarnerMedia segment*** accounted for approximately 17% of our 2020 total segment operating revenues compared to 19% in 2019 and 22% of our 2020 total segment operating contribution compared to 25% in 2019. This segment develops, produces and distributes feature films, television, gaming and other content over various physical and digital formats globally. Historical financial results of Eliminations & Other included in the WarnerMedia segment have been recast to include Xandr, previously a separate reportable segment, and to remove the Crunchyroll anime business that was classified as held-for-sale. This segment contains the following:

- **Turner** primarily operates multichannel basic television networks and digital properties. Turner also sells advertising on its networks and digital properties.
- **Home Box Office** consists of premium pay television and HBO Max domestically and premium pay, basic tier television internationally and content licensing and home entertainment.
- **Warner Bros.** primarily consists of the production, distribution and licensing of television programming and feature films, the distribution of home entertainment products and the production and distribution of games.
- **Eliminations & Other** includes the Xandr advertising business, and also removes transactions between the Turner, Home Box Office and Warner Bros. business units, including internal sales of content to the HBO Max platform that began in the fourth quarter of 2019 (see Note 5).

The ***Latin America segment*** accounted for approximately 3% of our 2020 total segment operating revenues compared to 4% in 2019. This segment provides entertainment and wireless services outside of the U.S. This segment contains the following business units:

- **Vrio** provides video services primarily to residential customers using satellite technology in Latin America and the Caribbean.
- **Mexico** provides wireless service and equipment to customers in Mexico.

COVID-19 UPDATE

Disruptions caused by the coronavirus (COVID-19) and measures taken to prevent its spread or mitigate its effects both domestically and internationally have impacted our results of operations. We recorded approximately $850, or $0.10 per diluted share, for the year ended December 31, 2020, of incremental costs associated with voluntary corporate actions taken to protect and compensate front-line employees and contractors and additional WarnerMedia production disruption.

In addition to these incremental costs, we estimate that our operations and comparability were impacted by approximately $2,925, or $0.33 per diluted share, for the year ended December 31, 2020, for: (1) reluctance of consumers to travel at previous levels, driving significantly lower international wireless roaming service revenues that do not have a directly correlated expense reduction, (2) the partial closure of movie theaters and postponement of theatrical releases, leading to lower content revenues, and (3) lower television licensing and production revenues due to production hiatus, and associated expenses.

With partial reopening of the economy and improved collections experience, the economic effects of the pandemic and resulting societal changes remain unpredictable. There are a number of uncertainties that could impact our future results of operations, including the effectiveness of COVID-19 mitigation measures, the duration of the pandemic, the efficacy and widespread distribution of a vaccine, global economic conditions, changes to our operations, changes in consumer confidence, behaviors and spending, work and learn from home trends and the sustainability of supply chains. We expect operating results and cash flows to continue to be adversely impacted by COVID-19 for the duration of the pandemic. We expect our 2021 results to be impacted by the following:

- Lower revenues from the continued partial closure of movie theaters and higher costs based on our decision to distribute 2021 films on HBO Max in the U.S. simultaneous with theaters for 31 days and costs associated with the international launch of HBO Max;
- Uncertainty in revenues from international wireless roaming services due to reduced travel, particularly in the first quarter; and
- Continued expenses to protect front-line employees, contractors and customers.

RESULTS OF OPERATIONS

Consolidated Results Our financial results are summarized in the following table. We then discuss factors affecting our overall results. Additional analysis is discussed in our "Segment Results" section. We also discuss our expected revenue and expense trends for 2021 in the "Operating Environment and Trends of the Business" section. Certain prior-period amounts have been reclassified to conform to the current period's presentation.

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
Service	**$152,767**	$163,499	$152,345	**(6.6)%**	7.3%
Equipment	**18,993**	17,694	18,411	**7.3**	(3.9)
Total Operating Revenues	**171,760**	181,193	170,756	**(5.2)**	6.1
Operating expenses					
Operations and support	**117,959**	123,563	116,184	**(4.5)**	6.4
Asset impairments and abandonments	**18,880**	1,458	46	**—**	—
Depreciation and amortization	**28,516**	28,217	28,430	**1.1**	(0.7)
Total Operating Expenses	**165,355**	153,238	144,660	**7.9**	5.9
Operating Income	**6,405**	27,955	26,096	**(77.1)**	7.1
Interest expense	**7,925**	8,422	7,957	**(5.9)**	5.8
Equity in net income (loss) of affiliates	**95**	6	(48)	**—**	—
Other income (expense) – net	**(1,431)**	(1,071)	6,782	**(33.6)**	—
Income (Loss) Before Income Taxes	**(2,856)**	18,468	24,873	**—**	(25.8)
Net Income (Loss)	**(3,821)**	14,975	19,953	**—**	(24.9)
Net Income (Loss) Attributable to AT&T	**(5,176)**	13,903	19,370	**—**	(28.2)
Net Income (Loss) Attributable to Common Stock	**$ (5,369)**	$ 13,900	$ 19,370	**—%**	(28.2)%

OVERVIEW

Operating revenues decreased in 2020, with declines in all segments reflecting impacts of the COVID-19 pandemic. Lower WarnerMedia segment revenues reflect limited and postponed theatrical and home entertainment releases as well as lower television licensing, productions and advertising revenues. Communications segment revenue declines were driven by continued declines in video and legacy services, partially offset by higher wireless device sales and increases in strategic and managed business service revenues. Latin America segment revenue declines were primarily due to foreign exchange rates.

Operations and support expenses decreased in 2020, driven by impacts of the pandemic which resulted in lower broadcast and programming costs in our Communications and WarnerMedia segments and lower film-related print and advertising costs at WarnerMedia. Also contributing to declines were a noncash gain of $900 on a spectrum transaction in the first quarter that was recorded as an offset to operating expenses as well as our continued focus on cost management. Offsetting these expense decreases were higher costs associated with our investment in HBO Max, employee separation charges and incremental costs related to COVID-19. As part of our cost and efficiency initiatives, we expect operations and support expense improvements to continue as we size our operations to reflect the current economic activity level.

Asset impairments and abandonments increased in 2020, primarily due to noncash impairment charges of $15,508 in the fourth quarter, resulting from our assessment of the recoverability of the long-lived assets and goodwill associated with our video business (see Notes 7 and 9). The increase also includes a goodwill impairment of $2,212 at our Vrio business unit in the second quarter (see Note 9) and $780 from the impairment of production and other content inventory at WarnerMedia, with approximately $524 resulting from the continued shutdown of theaters during the pandemic and the hybrid distribution model for our 2021 film slate (see Note 11). Charges in 2019 primarily related to the abandonment of certain copper assets that were not necessary to support future network activity (see Note 7).

Depreciation and amortization expense increased in 2020.

Amortization expense increased $307, or 3.9%, in 2020 due to the amortization of orbital slot licenses, which began in the first quarter of 2020 (see Note 1). Amortization expense in 2021 will reflect approximately $1,200 of reductions from the 2020 impairment of orbital slots and customers lists associated with our domestic video business (see Note 9).

Depreciation expense decreased $8 in 2020 primarily due to ongoing capital spend for network upgrades and expansion partially offset by fully depreciated assets in our Communications segment. Depreciation expense in 2021 will reflect approximately $480 of reductions from the 2020 impairment of property, plant and equipment associated with our domestic video business (see Note 7).

Operating income decreased in 2020 and increased in 2019. Our operating margin was 3.7% in 2020, compared to 15.4% in 2019 and 15.3% in 2018.

Interest expense decreased in 2020, primarily due to lower interest rates and debt balances.

Equity in net income (loss) of affiliates increased in 2020, reflecting changes in our investment portfolio, including $130 equity in earnings resulting from an investee transaction.

Other income (expense) – net decreased in 2020 primarily due to the recognition of $1,405 of debt redemption costs and lower income from Rabbi trusts and other investments. Offsetting the decrease were lower actuarial losses in 2020, $4,169 compared to $5,171 in 2019 (see Note 15).

Income tax expense decreased in 2020, primarily driven by decreased income before income taxes offset by impairments of goodwill (see Note 9), which are not deductible for tax purposes.

Our effective tax rate was (33.8)% in 2020, 18.9% in 2019, and 19.8% in 2018. The effective tax rate in 2020 was impacted by the goodwill impairments, which are not deductible for tax purposes.

Segment Results Our segments are strategic business units that offer different products and services over various technology platforms and/or in different geographies that are managed accordingly. Our segment results presented below follow our internal management reporting. In addition to segment operating contribution, we also evaluate segment performance based on EBITDA and/or EBITDA margin. EBITDA is defined as segment operating contribution, excluding equity in net income (loss) of affiliates and depreciation and amortization. We believe EBITDA to be a relevant and useful measurement to our investors as it is part of our internal management reporting and planning processes and it is an important metric that management uses to evaluate operating performance. EBITDA does not give effect to depreciation and amortization expenses incurred in operating contribution nor is it burdened by cash used for debt service requirements and thus does not reflect available funds for distributions, reinvestment or other discretionary uses. EBITDA margin is EBITDA divided by total revenues.

COMMUNICATIONS SEGMENT

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Segment Operating Revenues					
Mobility	**$ 72,564**	$ 71,056	$ 70,521	**2.1%**	0.8%
Video	**28,610**	32,124	33,363	**(10.9)**	(3.7)
Broadband	**12,318**	13,012	13,108	**(5.3)**	(0.7)
Business Wireline	**25,358**	26,167	26,729	**(3.1)**	(2.1)
Total Segment Operating Revenues	**138,850**	142,359	143,721	**(2.5)**	(0.9)
Segment Operating Contribution					
Mobility	**22,372**	22,321	21,568	**0.2**	3.5
Video	**1,729**	2,064	1,331	**(16.2)**	55.1
Broadband	**1,822**	2,681	3,369	**(32.0)**	(20.4)
Business Wireline	**4,598**	5,164	5,840	**(11.0)**	(11.6)
Total Segment Operating Contribution	**$ 30,521**	$ 32,230	$ 32,108	**(5.3)%**	0.4%

Selected Subscribers and Connections

	December 31,		
(000s)	**2020**	2019	2018
Mobility subscribers	**182,558**	165,889	151,921
Total domestic broadband connections	**15,384**	15,389	15,701
Network access lines in service	**7,263**	8,487	10,002
U-verse VoIP connections	**3,816**	4,370	5,114

Operating revenues decreased in 2020 and were impacted by the COVID-19 pandemic. Declines in our Video, Broadband and Business Wireline business units were partially offset by increases in our Mobility business unit. The decrease also reflects the continued shift away from linear video and legacy services, partially offset by higher equipment and service revenues.

Operating contribution decreased in 2020 and increased in 2019. The 2020 operating contribution includes declines in our Video, Broadband and Business Wireline business units, and reflects stable operating contribution from our Mobility business. Our Communications segment operating income margin was 22.0% in 2020, 22.6% in 2019 and 22.3% in 2018.

Communications Business Unit Discussion
Mobility Results

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
Service	**$55,542**	$55,331	$54,295	**0.4%**	1.9%
Equipment	**17,022**	15,725	16,226	**8.2**	(3.1)
Total Operating Revenues	**72,564**	71,056	70,521	**2.1**	0.8
Operating expenses					
Operations and support	**42,106**	40,681	40,690	**3.5**	—
Depreciation and amortization	**8,086**	8,054	8,263	**0.4**	(2.5)
Total Operating Expenses	**50,192**	48,735	48,953	**3.0**	(0.4)
Operating Income	**22,372**	22,321	21,568	**0.2**	3.5
Equity in Net Income (Loss) of Affiliates	**—**	—	—	**—**	—
Operating Contribution	**$22,372**	$22,321	$21,568	**0.2%**	3.5%

The following tables highlight other key measures of performance for Mobility:

Subscribers

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Postpaid	**77,154**	75,207	76,068	**2.6%**	(1.1)%
Prepaid	**18,102**	17,803	16,828	**1.7**	5.8
Reseller	**6,535**	6,893	7,693	**(5.2)**	(10.4)
Connected devices[1]	**80,767**	65,986	51,332	**22.4**	28.5
Total Mobility Subscribers	**182,558**	165,889	151,921	**10.0%**	9.2%

Mobility Net Additions

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Postpaid Phone Net Additions	**1,457**	483	194	**—%**	—%
Total Phone Net Additions[5]	**1,640**	989	1,248	**65.8**	(20.8)
Postpaid[2,6]	**2,183**	(435)	(90)	**—**	—
Prepaid[5,6]	**379**	677	1,301	**(44.0)**	(48.0)
Reseller[6]	**(449)**	(928)	(1,599)	**51.6**	42.0
Connected devices[3]	**14,785**	14,645	12,324	**1.0**	18.8
Mobility Net Subscriber Additions[1]	**16,898**	13,959	11,936	**21.1%**	16.9%
Postpaid Churn[4]	**0.98%**	1.18%	1.12%	**(20) BP**	6 BP
Postpaid Phone-Only Churn[4]	**0.79%**	0.95%	0.90%	**(16) BP**	5 BP

[1] Excludes acquisition-related additions during the period.
[2] In addition to postpaid phones, includes tablets and wearables and other. Tablet net (losses) were (512), (1,487) and (1,200) for the years ended December 31, 2020, 2019 and 2018, respectively. Wearables and other net adds were 1,223, 569 and 916 for the years ended December 31, 2020, 2019 and 2018, respectively.
[3] Includes data-centric devices such as session-based tablets, monitoring devices and primarily wholesale automobile systems. Excludes postpaid tablets.
[4] Calculated by dividing the aggregate number of wireless subscribers who canceled service during a month by the total number of wireless subscribers at the beginning of that month. The churn rate for the period is equal to the average of the churn rate for each month of that period.
[5] The year ended December 31, 2020, includes 188 subscriber disconnections resulting from updating our prepaid activation policy.
[6] The year ended December 31, 2020, includes subscribers transferred in connection with business dispositions.

Dollars in millions except per share amounts

Service revenue increased during 2020 largely due to growth in phone subscribers and connected devices, offset by declines in international roaming revenue due to reduced travel during the pandemic. Successful offers aimed at customer retention contributed to subscriber growth and lower churn.

ARPU
Average revenue per subscriber (ARPU) decreased primarily due to the decline in international roaming and waived fees.

Churn
The effective management of subscriber churn is critical to our ability to maximize revenue growth and to maintain and improve margins. Postpaid churn and postpaid phone-only churn were lower in 2020 due to migrations to unlimited plans, continued network improvements, subscriber retention offers in the fourth quarter, and lower overall involuntary disconnects.

Equipment revenue increased in 2020 primarily due to higher equipment revenue from higher postpaid upgrade volumes, the mix of sales of higher-priced smartphones, and higher sales of data devices, including wearables, wireless modems and hotspots.

Operations and support expenses increased in 2020, largely driven by higher equipment costs, increased commission deferral amortization and intercompany content costs associated with plans offering HBO Max, partially offset by lower bad debt expense. The increase in commission deferral amortization is partly offset by the impacts of our second-quarter 2020 updates to extend the expected economic life of our Mobility customers.

Depreciation expense increased in 2020, primarily due to ongoing capital spending for network upgrades and expansion partially offset by fully depreciated assets.

Operating income increased in 2020 and 2019. Our Mobility operating income margin was 30.8% in 2020, 31.4% in 2019 and 30.6% in 2018. Our Mobility EBITDA margin was 42.0% in 2020, 42.7% in 2019 and 42.3% in 2018.

Subscriber Relationships

As the wireless industry has matured, future wireless growth will depend on our ability to offer innovative services, plans and devices that take advantage of our premier 5G wireless network, which went nationwide in July 2020, and to provide these services in bundled product offerings. Subscribers that purchase two or more services from us have significantly lower churn than subscribers that purchase only one service. To support higher mobile data usage, our priority is to best utilize a wireless network that has sufficient spectrum and capacity to support these innovations on as broad a geographic basis as possible.

To attract and retain subscribers in a mature and highly competitive market, we have launched a wide variety of plans, including our FirstNet and prepaid products, and arrangements that bundle our video services. Virtually all of our postpaid smartphone subscribers are on plans that provide for service on multiple devices at reduced rates, and subscribers to such plans tend to have higher retention and lower churn rates. We offer unlimited data plans and such subscribers also tend to have higher retention and lower churn rates. Our offerings are intended to encourage existing subscribers to upgrade their current services and/or add devices, attract subscribers from other providers and/or minimize subscriber churn.

Connected Devices
Connected devices include data-centric devices such as wholesale automobile systems, monitoring devices, fleet management and session-based tablets. Connected device subscribers increased in 2020, and we added approximately 9.9 million wholesale connected cars through agreements with various carmakers, and experienced strong growth in other Internet of Things (IoT) connections. These connected car agreements give us the opportunity to create future retail relationships with the car owners.

Video Results

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Operating revenues					
Service	**$28,465**	$32,123	$33,363	**(11.4)%**	(3.7)%
Equipment	**145**	1	—	**—**	—
Total Operating Revenues	**28,610**	32,124	33,363	**(10.9)**	(3.7)
Operating expenses					
Operations and support	**24,619**	27,599	29,334	**(10.8)**	(5.9)
Depreciation and amortization	**2,262**	2,461	2,698	**(8.1)**	(8.8)
Total Operating Expenses	**26,881**	30,060	32,032	**(10.6)**	(6.2)
Operating Income	**1,729**	2,064	1,331	**(16.2)**	55.1
Equity in Net Income (Loss) of Affiliates	**—**	—	—	**—**	—
Operating Contribution	**$ 1,729**	$ 2,064	$ 1,331	**(16.2)%**	55.1%

The following tables highlight other key measures of performance for Video:

Connections

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Video Connections					
Premium TV	**16,505**	19,496	22,926	**(15.3)%**	(15.0)%
AT&T TV NOW[1]	**656**	926	1,591	**(29.2)**	(41.8)
Total Video Connections[1]	**17,161**	20,422	24,517	**(16.0)%**	(16.7)%

[1] Beginning in January 2021, AT&T TV NOW has been combined with AT&T TV.

Net Additions

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Video Net Additions					
Premium TV	**(2,991)**	(3,430)	(1,189)	**12.8%**	—%
AT&T TV NOW[1]	**(270)**	(665)	436	**59.4**	—
Net Video Additions[1]	**(3,261)**	(4,095)	(753)	**20.4%**	—%

[1] Beginning in January 2021, AT&T TV NOW has been combined with AT&T TV.

Service revenues are comprised of video entertainment subscription and advertising revenues. Revenues decreased in 2020 and 2019, largely driven by a decline in premium TV and OTT subscribers as we continue to focus on retention of existing subscribers with a particular focus on our high-value subscribers. Partially offsetting video revenue declines was higher advertising revenues during a general election year. Consistent with the rest of the industry, our customers continue to shift from a premium linear video service to more economically priced OTT and subscription video on demand offerings, which has impacted our video revenues.

Equipment revenue increased in 2020 primarily due to the nationwide introduction of our IP-based AT&T TV service in early 2020.

Operations and support expenses decreased in 2020 and 2019, largely driven by lower content costs from fewer subscribers, partially offset by annual content rate increases, including those associated with NFL SUNDAY TICKET and pandemic-related compassion payments made in the first half of 2020.

Depreciation expense decreased in 2020 and 2019, due to network assets becoming fully depreciated.

Operating income decreased in 2020 and increased in 2019. Our Video operating income margin was 6.0% in 2020, 6.4% in 2019 and 4.0% in 2018. Our Video EBITDA margin was 13.9% in 2020, 14.1% in 2019 and 12.1% in 2018.

Broadband Results

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
High-speed internet	**$ 8,534**	$ 8,403	$ 7,956	**1.6%**	5.6%
Legacy voice and data services	**2,213**	2,573	3,042	**(14.0)**	(15.4)
Other service and equipment	**1,571**	2,036	2,110	**(22.8)**	(3.5)
Total Operating Revenues	**12,318**	13,012	13,108	**(5.3)**	(0.7)
Operating expenses					
Operations and support	**7,582**	7,451	7,116	**1.8**	4.7
Depreciation and amortization	**2,914**	2,880	2,623	**1.2**	9.8
Total Operating Expenses	**10,496**	10,331	9,739	**1.6**	6.1
Operating Income	**1,822**	2,681	3,369	**(32.0)**	(20.4)
Equity in Net Income (Loss) of Affiliates	**—**	—	—	**—**	—
Operating Contribution	**$ 1,822**	$ 2,681	$ 3,369	**(32.0)%**	(20.4)%

The following tables highlight other key measures of performance for Broadband:

Connections

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Broadband Connections					
Total Broadband Connections	**14,100**	14,119	14,409	**(0.1)%**	(2.0)%
Fiber Broadband Connections	**4,951**	3,887	2,763	**27.4**	40.7
Voice Connections					
Retail Consumer Switched Access Lines	**2,862**	3,329	3,967	**(14.0)**	(16.1)
U-verse Consumer VoIP Connections	**3,231**	3,794	4,582	**(14.8)**	(17.2)
Total Retail Consumer Voice Connections	**6,093**	7,123	8,549	**(14.5)%**	(16.7)%

Net Additions

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Broadband Net Additions					
Total Broadband Net Additions	**(19)**	(290)	59	**93.4%**	—%
Fiber Broadband Net Additions	**1,064**	1,124	1,034	**(5.3)%**	8.7%

High-speed internet revenues increased in 2020 and 2019, reflecting higher ARPU resulting from the continued shift of subscribers to our higher-speed fiber services and pricing actions.

Legacy voice and data service revenues decreased in 2020 and 2019, reflecting the continued decline in the number of customers.

Other service and equipment revenues decreased in 2020 and 2019, reflecting the continued decline in the number of VoIP customers.

Operations and support expenses increased in 2020, largely driven by intercompany content costs associated with plans offering HBO Max. Expense increases in 2020 and 2019 also reflect higher acquisition and fulfillment cost deferral amortization, including the impact of updates to decrease the estimated economic life of our subscribers.

Depreciation expense increased in 2020 and 2019, primarily due to ongoing capital spending for network upgrades and expansion.

Operating income decreased in 2020 and 2019. Our Broadband operating income margin was 14.8% in 2020, 20.6% in 2019 and 25.7% in 2018. Our Broadband EBITDA margin was 38.4% in 2020, 42.7% in 2019 and 45.7% in 2018.

Business Wireline Results

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
Strategic and managed services	**$15,788**	$15,430	$14,649	**2.3%**	5.3%
Legacy voice and data services	**8,183**	9,180	10,674	**(10.9)**	(14.0)
Other service and equipment	**1,387**	1,557	1,406	**(10.9)**	10.7
Total Operating Revenues	**25,358**	26,167	26,729	**(3.1)**	(2.1)
Operating expenses					
Operations and support	**15,534**	16,069	16,181	**(3.3)**	(0.7)
Depreciation and amortization	**5,226**	4,934	4,708	**5.9**	4.8
Total Operating Expenses	**20,760**	21,003	20,889	**(1.2)**	0.5
Operating Income	**4,598**	5,164	5,840	**(11.0)**	(11.6)
Equity in Net Income (Loss) of Affiliates	**—**	—	—	**—**	—
Operating Contribution	**$ 4,598**	$ 5,164	$ 5,840	**(11.0)%**	(11.6)%

Strategic and managed services revenues increased in 2020. Our strategic services are made up of (1) data services, including our VPN, dedicated internet ethernet and broadband, (2) voice service, including VoIP and cloud-based voice solutions, (3) security and cloud solutions, and (4) managed, professional and outsourcing services. Revenue increases were primarily attributable to growth in our security and cloud solutions, dedicated internet and voice services and the impact of higher demand for connectivity due to the pandemic.

Legacy voice and data service revenues decreased in 2020, primarily due to lower demand as customers continue to shift to our more advanced IP-based offerings or our competitors.

Other service and equipment revenues decreased in 2020, reflecting higher prior-year licensing of intellectual property assets. Revenue trends are impacted by the licensing of intellectual property assets, which vary from period-to-period. Other service revenues include project-based revenue, which is nonrecurring in nature, as well as revenues from customer premises equipment.

Operations and support expenses decreased in 2020, primarily due to our continued efforts to drive efficiencies in our network operations through automation and reductions in customer support expenses through digitization.

Depreciation expense increased in 2020, reflecting increases in capital spending for network upgrades and expansion.

Operating income decreased in 2020 and 2019. Our Business Wireline operating income margin was 18.1% in 2020, 19.7% in 2019 and 21.8% in 2018. Our Business Wireline EBITDA margin was 38.7% in 2020, 38.6% in 2019 and 39.5% in 2018.

WARNERMEDIA SEGMENT

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Segment Operating Revenues					
Turner	**$12,568**	$13,122	$ 6,979	**(4.2)%**	—%
Home Box Office	**6,808**	6,749	3,598	**0.9**	—
Warner Bros.	**12,154**	14,358	8,703	**(15.4)**	—
Eliminations & Other	**(1,088)**	1,030	1,305	**—**	—
Total Segment Operating Revenues	**30,442**	35,259	20,585	**(13.7)**	—
Cost of revenues					
Turner	**5,330**	5,970	2,815	**(10.7)**	—
Home Box Office	**4,356**	3,248	1,669	**34.1**	—
Warner Bros.	**8,236**	10,006	6,130	**(17.7)**	—
Selling, general and administrative	**5,803**	5,368	2,895	**8.1**	—
Eliminations & Other	**(2,146)**	(420)	(230)	**—**	—
Depreciation and amortization	**671**	589	311	**13.9**	—
Total Operating Expenses	**22,250**	24,761	13,590	**(10.1)**	—
Operating Income	**8,192**	10,498	6,995	**(22.0)**	—
Equity in Net Income (Loss) of Affiliates	**18**	161	25	**(88.8)**	—
Total Segment Operating Contribution	**$ 8,210**	$10,659	$ 7,020	**(23.0)%**	—%

Our WarnerMedia segment includes our Turner, Home Box Office (HBO) and Warner Bros. business units. The order of presentation reflects the consistency of revenue streams, rather than overall magnitude as that is subject to timing and frequency of studio releases. Historical financial results of the WarnerMedia segment, (Eliminations & Other) have been recast to include Xandr, previously a separate reportable segment, and to remove the Crunchyroll anime business that is classified as held-for-sale.

The WarnerMedia segment does not include results from Time Warner operations prior to our June 14, 2018 acquisition. For this reason, 2018 results are not comparable to the other two years presented for this segment and therefore percent changes comparing 2018 and 2019 are not shown in the tables. Otter Media and HBO Latin America Group (HBO LAG) are included as equity method investments prior to our acquiring the remaining interests in each, which occurred in August 2018 and May 2020, respectively. Both are included in the segment operating results following the dates of acquisition. Consistent with our past practice, many of the impacts of the fair value adjustments from the application of purchase accounting required under GAAP have not been allocated to the segment, instead they are reported as acquisition-related items in the reconciliation to consolidated results.

Dollars in millions except per share amounts

Operating revenues decreased in 2020, primarily due to lower theatrical and television product revenues, reflecting the pandemic-related postponement of theatrical releases and theatrical and television production delays at Warner Bros. Turner revenues also decreased due to lower advertising revenues resulting from cancellation and shifting of sporting events, and/or compressed seasons. HBO revenues partially offset these decreases, driven by growth in international revenues and domestic HBO Max retail subscribers, partially offset by lower licensing revenues.

Operating contribution decreased in 2020 and increased in 2019. The WarnerMedia segment operating income margin was 26.9% in 2020, 29.8% in 2019 and 34.0% in 2018.

WarnerMedia Business Unit Discussion
Turner Results

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Operating revenues					
Subscription	**$ 7,613**	$ 7,736	$ 4,207	**(1.6)%**	—%
Advertising	**3,941**	4,566	2,330	**(13.7)**	—
Content and other	**1,014**	820	442	**23.7**	—
Total Operating Revenues	**12,568**	13,122	6,979	**(4.2)**	—
Operating expenses					
Cost of revenues	**5,330**	5,970	2,815	**(10.7)**	—
Selling, general and administrative	**1,624**	1,770	979	**(8.2)**	—
Depreciation and amortization	**277**	235	131	**17.9**	—
Total Operating Expenses	**7,231**	7,975	3,925	**(9.3)**	—
Operating Income	**5,337**	5,147	3,054	**3.7**	—
Equity in Net Income (Loss) of Affiliates	**(2)**	52	54	**—**	—
Operating Contribution	**$ 5,335**	$ 5,199	$ 3,108	**2.6%**	—%

Operating revenues decreased in 2020 primarily due to lower advertising revenues resulting from the cancellation of the NCAA Division I Men's Basketball Tournament in the first quarter of 2020 and the impacts from shifting sporting event schedules and/or compressed seasons, such as the delay of the NBA season that historically has started earlier in the fourth quarter. These revenue declines were partially offset by increased advertising due to news coverage of general elections and COVID-19 developments. Operating revenue declines were also caused by lower subscription revenues at regional sports networks and unfavorable exchange rates, partially offset by higher content and other revenue, including internal sales to HBO Max, which are eliminated in consolidation within the WarnerMedia segment.

Cost of revenues decreased in 2020 primarily due to lower sports programming costs as a result of the previously mentioned cancellations and modifications to the timing and/or duration of various sporting events.

Selling, general and administrative decreased in 2020 driven by cost-saving initiatives.

Operating income increased in 2020 and 2019. Our Turner operating income margin was 42.5% in 2020, 39.2% in 2019 and 43.8% in 2018.

Home Box Office Results

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
Subscription	**$ 6,090**	$ 5,814	$ 3,201	**4.7%**	—%
Content and other	**718**	935	397	**(23.2)**	—
Total Operating Revenues	**6,808**	6,749	3,598	**0.9**	—
Operating expenses					
Cost of revenues	**4,356**	3,248	1,669	**34.1**	—
Selling, general and administrative	**1,672**	1,064	518	**57.1**	—
Depreciation and amortization	**98**	102	56	**(3.9)**	—
Total Operating Expenses	**6,126**	4,414	2,243	**38.8**	—
Operating Income	**682**	2,335	1,355	**(70.8)**	—
Equity in Net Income (Loss) of Affiliates	**16**	30	29	**(46.7)**	—
Operating Contribution	**$ 698**	$ 2,365	$ 1,384	**(70.5)%**	—%

Operating revenues increased in 2020, primarily due to the May 2020 acquisition of HBO LAG and higher domestic HBO Max retail subscribers, partially offset by decreases in content and other revenue from lower content licensing. At December 31, 2020, we had 41.5 million U.S. subscribers from HBO and HBO Max, up from 34.6 million at December 31, 2019, including growth from intercompany relationships with the Communications segment.

Cost of revenues increased in 2020, primarily due to approximately $1,800 of programming investment related to HBO Max.

Selling, general and administrative increased in 2020, primarily due to higher marketing costs associated with HBO Max.

Operating income decreased in 2020 and increased in 2019. Our HBO operating income margin was 10.0% in 2020, 34.6% in 2019 and 37.7% in 2018.

Warner Bros. Results

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
Theatrical product	**$ 4,389**	$ 5,978	$ 4,002	**(26.6)%**	—%
Television product	**6,171**	6,367	3,621	**(3.1)**	—
Games and other	**1,594**	2,013	1,080	**(20.8)**	—
Total Operating Revenues	**12,154**	14,358	8,703	**(15.4)**	—
Operating expenses					
Cost of revenues	**8,236**	10,006	6,130	**(17.7)**	—
Selling, general and administrative	**1,681**	1,810	1,000	**(7.1)**	—
Depreciation and amortization	**169**	162	96	**4.3**	—
Total Operating Expenses	**10,086**	11,978	7,226	**(15.8)**	—
Operating Income	**2,068**	2,380	1,477	**(13.1)**	—
Equity in Net Income (Loss) of Affiliates	**(70)**	(30)	(28)	**—**	—
Operating Contribution	**$ 1,998**	$ 2,350	$ 1,449	**(15.0)%**	—%

Operating revenues decreased in 2020, primarily due to pandemic-related movie theater closures and television and theatrical production delays.

Theatrical product revenues were lower due to theaters closing for a significant portion of the year and postponement of theatrical releases, which also reduced licensing revenues, such as home entertainment licensing. Additionally, unfavorable comparisons to the prior-year releases, which included, in 2019, *Joker* and carryover revenues from the theatrical release of *Aquaman*, compared to the limited-capacity theater and hybrid HBO Max distribution release of *Wonder Woman 1984*, in late 2020.

Dollars in millions except per share amounts

Television product revenues decreased primarily due to lower initial telecast revenues resulting from television production delays, including delays in the start of the 2020-2021 broadcast season, partially offset by increased licensing, including internal sales to HBO Max, which are eliminated in consolidation within the WarnerMedia segment.

Games and other revenue declines were primarily due to reduced studio operations and unfavorable games comparison to the prior year, which included, in 2019, the release of *Mortal Kombat 11*.

Cost of revenues decreased in 2020, primarily due to the production hiatus and lower marketing of theatrical product, partially offset by incremental production shutdown costs.

Selling, general and administrative decreased in 2020, primarily due to lower print and advertising expenses from limited theatrical releases and lower distribution fees.

Operating income decreased in 2020 and increased in 2019. Our Warner Bros. operating income margin was 17.0% in 2020, 16.6% in 2019 and 17.0% in 2018.

LATIN AMERICA SEGMENT

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Segment Operating Revenues					
Vrio	**$ 3,154**	$ 4,094	$ 4,784	**(23.0)%**	(14.4)%
Mexico	**2,562**	2,869	2,868	**(10.7)**	—
Total Segment Operating Revenues	**5,716**	6,963	7,652	**(17.9)**	(9.0)
Segment Operating Contribution					
Vrio	**(142)**	83	347	**—**	(76.1)
Mexico	**(587)**	(718)	(1,057)	**18.2**	32.1
Total Segment Operating Contribution	**$ (729)**	$ (635)	$ (710)	**(14.8)%**	10.6%

Our Latin America operations conduct business in their local currency and operating results are converted to U.S. dollars using official exchange rates, subjecting results to foreign currency fluctuations. In May 2020, we found it necessary to close our DIRECTV operations in Venezuela due to political instability in the country and to comply with sanctions of the U.S. government.

Operating revenues decreased in 2020, primarily driven by foreign exchange rates and overall economic impacts.

Operating contribution decreased in 2020, reflecting foreign exchange rates and overall economic impacts, and increased in 2019, due to improvement in Mexico. Our Latin America segment operating income margin was (13.2)% in 2020, (9.5)% in 2019 and (9.7)% in 2018.

Latin America Business Unit Discussion
Vrio Results

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Operating revenues	**$ 3,154**	$ 4,094	$ 4,784	**(23.0)%**	(14.4)%
Operating expenses					
Operations and support	**2,800**	3,378	3,743	**(17.1)**	(9.8)
Depreciation and amortization	**520**	660	728	**(21.2)**	(9.3)
Total Operating Expenses	**3,320**	4,038	4,471	**(17.8)**	(9.7)
Operating Income (Loss)	**(166)**	56	313	**—**	(82.1)
Equity in Net Income of Affiliates	**24**	27	34	**(11.1)**	(20.6)
Operating Contribution	**$ (142)**	$ 83	$ 347	**—%**	(76.1)%

The following tables highlight other key measures of performance for Vrio:

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Vrio Video Subscribers	**10,942**	13,331	13,838	**(17.9)%**	(3.7)%

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Vrio Video Net Subscriber Additions[1]	**(148)**	(285)	250	**48.1%**	—%

[1] 2020 excludes the impact of 2.2 million subscriber disconnections resulting from the closure of our DIRECTV operations in Venezuela.

Operating revenues decreased in 2020, primarily driven by foreign exchange and overall economic impacts.

Operations and support expenses decreased in 2020, primarily driven by foreign exchange and overall economic impacts. Approximately 21% of Vrio expenses are U.S. dollar-based, with the remainder in the local currency.

Depreciation expense decreased in 2020, primarily due to changes in foreign exchange rates.

Operating income decreased in 2020 and 2019. Our Vrio operating income margin was (5.3)% in 2020, 1.4% in 2019 and 6.5% in 2018. Our Vrio EBITDA margin was 11.2% in 2020, 17.5% in 2019 and 21.8% in 2018.

Mexico Results

	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Operating revenues					
Service	**$ 1,656**	$ 1,863	$ 1,701	**(11.1)%**	9.5%
Equipment	**906**	1,006	1,167	**(9.9)**	(13.8)
Total Operating Revenues	**2,562**	2,869	2,868	**(10.7)**	—
Operating expenses					
Operations and support	**2,636**	3,085	3,415	**(14.6)**	(9.7)
Depreciation and amortization	**513**	502	510	**2.2**	(1.6)
Total Operating Expenses	**3,149**	3,587	3,925	**(12.2)**	(8.6)
Operating Income (Loss)	**(587)**	(718)	(1,057)	**18.2**	32.1
Equity in Net Income (Loss) of Affiliates	**—**	—	—	**—**	—
Operating Contribution	**$ (587)**	$ (718)	$ (1,057)	**18.2%**	32.1%

The following tables highlight other key measures of performance for Mexico:

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Mexico Wireless Subscribers[1]					
Postpaid	**4,696**	5,103	5,805	**(8.0)%**	(12.1)%
Prepaid	**13,758**	13,584	12,264	**1.3**	10.8
Reseller	**489**	472	252	**3.6**	87.3
Mexico Wireless Subscribers	**18,943**	19,159	18,321	**(1.1)%**	4.6%

(in 000s)	2020	2019	2018	Percent Change 2020 vs. 2019	Percent Change 2019 vs. 2018
Mexico Wireless Net Additions[1]					
Postpaid	**(407)**	(608)	307	**33.1%**	—%
Prepaid	**174**	1,919	2,867	**(90.9)**	(33.1)
Reseller	**118**	219	48	**(46.1)**	—
Mexico Wireless Net Additions	**(115)**	1,530	3,222	**—%**	(52.5)%

[1] 2020 excludes the impact of 101 subscriber disconnections resulting from conforming our policy on reporting of fixed wireless resellers.

Dollars in millions except per share amounts

Service revenues decreased in 2020, primarily due to foreign exchange rates, as well as lower volumes and store traffic related to COVID-19.

Equipment revenues decreased in 2020, primarily due to lower equipment sales volumes related to COVID-19 and changes in foreign exchange rates.

Operations and support expenses decreased in 2020, primarily due to lower equipment sales and changes in foreign exchange rates. Approximately 7% of Mexico expenses are U.S. dollar-based, with the remainder in the local currency.

Depreciation expense increased in 2020, primarily due to amortization of spectrum licenses and higher in-service assets. These increases were partially offset by changes in foreign exchange rates.

Operating income increased in 2020 and 2019. Our Mexico operating income margin was (22.9)% in 2020, (25.0)% in 2019 and (36.9)% in 2018. Our Mexico EBITDA margin was (2.9)% in 2020, (7.5)% in 2019 and (19.1)% in 2018.

SUPPLEMENTAL TOTAL ADVERTISING REVENUE INFORMATION

As a supplemental presentation, we are providing a view of total advertising revenues generated by AT&T. See revenue categories tables in Note 5 for a reconciliation.

Total Advertising Revenues

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Operating Revenues					
Turner	**$ 3,941**	$ 4,566	$ 2,330	**(13.7)%**	96.0%
Video	**1,718**	1,672	1,595	**2.8**	4.8
Xandr	**2,089**	2,022	1,740	**3.3**	16.2
Other	**386**	382	352	**1.0**	8.5
Eliminations	**(1,718)**	(1,672)	(1,595)	**(2.8)**	(4.8)
Total Advertising Revenues	**$ 6,416**	$ 6,970	$ 4,422	**(7.9)%**	57.6%

SUPPLEMENTAL COMMUNICATIONS OPERATING INFORMATION

As a supplemental presentation to our Communications segment operating results, we are providing a view of our AT&T Business Solutions results which includes both wireless and wireline operations. This combined view presents a complete profile of the entire business customer relationship and underscores the importance of mobile solutions for our business customers. Results have been recast to conform to the current period's classification of consumer and business wireless subscribers. See "Discussion and Reconciliation of Non-GAAP Measure" for a reconciliation of these supplemental measures to the most directly comparable financial measures calculated and presented in accordance with GAAP.

Business Solutions Results

				Percent Change	
	2020	2019	2018	**2020 vs. 2019**	2019 vs. 2018
Operating revenues					
Wireless service	**$ 7,732**	$ 7,444	$ 6,893	**3.9%**	8.0%
Strategic and managed services	**15,788**	15,430	14,649	**2.3**	5.3
Legacy voice and data services	**8,183**	9,180	10,674	**(10.9)**	(14.0)
Other service and equipment	**1,387**	1,557	1,406	**(10.9)**	10.7
Wireless equipment	**2,882**	2,754	2,508	**4.6**	9.8
Total Operating Revenues	**35,972**	36,365	36,130	**(1.1)**	0.7
Operating expenses					
Operations and support	**22,713**	22,714	22,586	**—**	0.6
Depreciation and amortization	**6,509**	6,148	5,894	**5.9**	4.3
Total Operating Expenses	**29,222**	28,862	28,480	**1.2**	1.3
Operating Income	**6,750**	7,503	7,650	**(10.0)**	(1.9)
Equity in Net Income (Loss) of Affiliates	**—**	—	—	**—**	—
Operating Contribution	**$ 6,750**	$ 7,503	$ 7,650	**(10.0)%**	(1.9)%

OPERATING ENVIRONMENT AND TRENDS OF THE BUSINESS

2021 Revenue Trends We expect revenue growth in our wireless and broadband businesses as customers demand premium content, instant connectivity and higher speeds made possible by our fiber network expansion and wireless network enhancements through 5G deployment.

In our Communications segment, we expect that our network quality and First Responder Network Authority (FirstNet) deployment will continue to contribute to wireless subscriber and service revenue growth, that 5G handsets will continue to drive wireless equipment revenue growth, and that applications like video streaming will also continue to drive greater demand for broadband services. The reluctance of consumers to travel at levels prior to the pandemic is expected to continue to contribute to uncertainty in international roaming wireless service revenues.

In our WarnerMedia segment, we expect our video streaming platform, HBO Max, and premium content will continue to drive revenue growth. The pandemic-related partial closure of movie theaters is expected to continue to pressure revenues and higher costs are anticipated based on our decision to distribute our 2021 films on HBO Max in the U.S. simultaneous with theaters for 31 days.

Across AT&T, we expect to provide consumers with a broad variety of video entertainment services, from mobile-centric and OTT streaming packages, to traditional full-size linear video. Revenue from business customers is expected to continue to grow for mobile and IP-based services but decline for legacy wireline services. Overall, we believe growth in wireless, broadband and WarnerMedia's premium content should offset pressure from our linear video and legacy voice and data services.

2021 Expense Trends We expect the spending required to support growth initiatives, primarily our continued deployment of fiber, 5G, and FirstNet build, as well as continued investment into the HBO Max platform, to pressure expense trends in 2021. To the extent 5G handset introductions continue in 2021, and as anticipated, the expenses associated with those device sales are expected to contribute to higher costs. During 2021, we will also continue to transition our hardware-based network technology to more efficient and less expensive software-based technology. These investments will help prepare us to meet increased customer demand for enhanced wireless and broadband services, including video streaming, augmented reality and "smart" technologies. The software benefits of our 5G wireless technology and new video delivery platforms should result in a more efficient use of capital and lower network-related expenses in the coming years.

We continue to transform our operations to be more efficient and effective, reinvesting savings into growth areas of the business. We are restructuring businesses, sunsetting legacy networks, improving customer service and ordering functions through digital transformation, sizing our support costs and staffing with current activity levels, and reassessing overall benefit costs. We expect continued savings from these initiatives and through our WarnerMedia merger synergy program. Cost savings and non-strategic asset sales aligns with our focus on debt reduction.

Market Conditions The U.S. stock market experienced significant volatility in 2020 due to several factors, including the global pandemic, and thus general business investment remained modest, which had impact on our business services. The global pandemic has caused, and could again cause, delays in the development, manufacturing (including the sourcing of key components) and shipment of products. As the labor market has not returned to pre-pandemic levels of unemployment, our residential customers continue to be price sensitive in selecting offerings, especially in the video area, and continue to focus on products that give them efficient access to video and broadcast services. Most of our products and services are not directly affected by the imposition of tariffs on Chinese goods. However, we expect ongoing pressure on pricing during 2021 as we respond to the competitive marketplace, especially in wireless and video services.

Included on our consolidated balance sheets are assets held by benefit plans for the payment of future benefits. Our pension plans are subject to funding requirements of the Employee Retirement Income Security Act of 1974, as amended (ERISA). We expect only minimal ERISA contribution requirements to our pension plans for 2021. Investment returns on these assets depend largely on trends in the economy, and a weakness in the equity, fixed income and real asset markets could require us to make future contributions to the pension plans. In addition, our policy of recognizing actuarial gains and losses related to our pension and other postretirement plans in the period in which they arise subjects us to earnings volatility caused by changes in market conditions; however, these actuarial gains and losses do not impact segment performance as they are required to be recorded in "Other income (expense) – net." Changes in our discount rate, which are tied to changes in the bond market, and changes in the performance of equity markets, may have significant impacts on the valuation of our pension and other postretirement obligations at the end of 2021 (see "Critical Accounting Policies and Estimates").

OPERATING ENVIRONMENT OVERVIEW

AT&T subsidiaries operating within the United States are subject to federal and state regulatory authorities. AT&T subsidiaries operating outside the United States are subject to the jurisdiction of national and supranational regulatory authorities in the markets where service is provided.

In the Telecommunications Act of 1996 (Telecom Act), Congress established a national policy framework intended to bring the benefits of competition and investment in advanced telecommunications facilities and services to all Americans by opening all telecommunications markets to competition and reducing or eliminating regulatory burdens that harm consumer welfare. Nonetheless, over the ensuing two decades, the Federal Communications Commission (FCC) and some state regulatory commissions have maintained or expanded certain regulatory requirements that were imposed decades ago on our traditional wireline subsidiaries when they operated as legal monopolies. More recently, the FCC has pursued a more deregulatory agenda, eliminating a variety of antiquated and unnecessary regulations and streamlining its processes in a number of areas. We continue to support regulatory and legislative measures and efforts, at both the state and federal levels, to reduce inappropriate regulatory burdens that inhibit our ability to compete effectively and offer needed services to our customers, including initiatives to transition services from traditional networks to all IP-based networks. At the same time, we also seek to ensure that legacy regulations are not further extended to broadband or wireless services, which are subject to vigorous competition.

Communications Segment

Internet The FCC currently classifies fixed and mobile consumer broadband services as information services, subject to light-touch regulation. The D.C. Circuit upheld the FCC's current classification, although it remanded three discrete issues to the FCC for further consideration. These issues related to the effect of the FCC's decision to classify broadband services as information services on public safety, the regulation of pole attachments, and universal service support for low-income consumers through the Lifeline program. Because no party sought Supreme Court review of the D.C. Circuit's decision to uphold the FCC's classification of broadband as an information service, that decision is final.

In October 2020, the FCC adopted an order addressing the three issues remanded by the D.C. Circuit for further consideration. After considering those issues, the FCC concluded they provided no grounds to depart from its determination that fixed and mobile consumer broadband services should be classified as information services. An appeal of the FCC's remand order is pending.

Some states have adopted legislation or issued executive orders that would reimpose net neutrality rules repealed by the FCC. Suits have been filed concerning such laws in two states.

Privacy-related legislation continues to be adopted or considered in a number of jurisdictions. Legislative, regulatory and litigation actions could result in increased costs of compliance, further regulation or claims against broadband internet access service providers and others, and increased uncertainty in the value and availability of data.

Wireless The industry-wide deployment of 5G technology, which is needed to satisfy extensive demand for video and internet access, will involve significant deployment of "small cell" equipment and therefore increase the need for local permitting processes that allow for the placement of small cell equipment on reasonable timelines and terms. Between 2018 and 2019, the FCC streamlined multiple federal wireless structure review processes with the potential to delay and impede deployment of infrastructure used to provide telecommunications and broadband services, including small cell equipment. Recognizing that state and local regulations have the same potential, in November 2020 the FCC adopted an order tightening the limits on state and local authority to deny requests to use existing structures for wireless facilities. These orders were appealed to the 9th Circuit Court of Appeals, where the appeals remain pending.

In December 2018, we introduced the nation's first commercial mobile 5G service, and in July 2020, we announced nationwide 5G coverage. We anticipate the introduction of 5G handsets and devices will contribute to a renewed interest in equipment upgrades.

As the U.S. wireless industry has matured, we believe future wireless growth will depend on our ability to offer innovative services, plans and devices. We will need a network with sufficient spectrum and capacity and sufficiently broad coverage to support the growth of these services. We continue to invest significant capital in expanding our network capacity, as well as to secure and utilize spectrum that meets our long-term needs.

Video We provide domestic satellite video service through our subsidiary DIRECTV, whose satellites are licensed by the FCC. The Communications Act of 1934 and other related acts give the FCC broad authority to regulate the U.S. operations of DIRECTV, and some of WarnerMedia's businesses are also subject to obligations under the Communications Act and related FCC regulations.

WarnerMedia Segment

We create, own and distribute intellectual property, including copyrights, trademarks and licenses of intellectual property. To protect our intellectual property, we rely on a combination of laws and license agreements. Outside of the U.S., laws and regulations relating to intellectual property protection and the effective enforcement of these laws and regulations vary greatly from country to country. The European Union Commission is pursuing legislative and regulatory initiatives which could impact WarnerMedia's activities in the EU. Piracy, particularly of digital content, continues to threaten WarnerMedia's revenues from products and services, and we work to limit that threat through a combination of approaches, including technological and legislative solutions. Outside the U.S., various laws and regulations, as well as trade agreements with the U.S., also apply to the distribution or licensing of feature films for exhibition in movie theaters and on broadcast and cable networks. For example, in certain countries, including China, laws and regulations limit the number of foreign films exhibited in such countries in a calendar year.

EXPECTED GROWTH AREAS

Over the next few years, we expect our growth to come from wireless, software-based video offerings like HBO Max, and IP-based fiber broadband services. We provide integrated services to diverse groups of customers in the U.S. on an integrated telecommunications network utilizing different technological platforms. In 2021, our key initiatives include:

- Continuing expansion of 5G service on our premier wireless network.
- Generating mobile subscriber growth from FirstNet and our premier network quality.
- Increasing subscriber base for HBO Max, our platform for premium content and video offered directly to consumers, as well as through other distributors.
- Improving fiber penetration and growing broadband revenues.
- Continuing to develop a competitive advantage through our corporate cost structure.
- Improving profitability in our Mexico business unit.

Wireless We expect to continue to deliver revenue growth in the coming years. We are in a period of rapid growth in wireless video usage and believe that there are substantial opportunities available for next-generation converged services that combine technologies and services.

As of December 31, 2020, we served 202 million wireless subscribers in North America, with more than 182 million in the United States. Our LTE technology covers over 440 million people in North America, and in the United States, we cover all major metropolitan areas and over 330 million people. We also provide 4G coverage using another technology (HSPA+), and when combined with our upgraded backhaul network, we provide enhanced network capabilities and superior mobile broadband speeds for data and video services. In December 2018, we introduced the nation's first commercial mobile 5G service and expanded that deployment nationwide in July 2020.

Our networks covering both the U.S. and Mexico have enabled our customers to use wireless services without roaming on other companies' networks. We believe this seamless access will prove attractive to customers and provide a significant growth opportunity. As of the end of 2020, we provided LTE coverage to over 110 million people in Mexico.

Integration of Data/Broadband and Entertainment Services As the communications industry has evolved into internet-based technologies capable of blending wireline and wireless services, we plan to focus on expanding our wireless network capabilities and provide high-speed internet and video offerings that allow customers to integrate their home or business fixed services with their mobile service. During 2021, we will continue to develop and provide unique integrated video, mobile and broadband solutions. The launch of the HBO Max platform has facilitated our customers' desire to view video anywhere on demand and has encouraged customer retention.

REGULATORY DEVELOPMENTS

Set forth below is a summary of the most significant regulatory proceedings that directly affected our operations during 2020. Industry-wide regulatory developments are discussed above in Operating Environment Overview. While these issues may apply only to certain subsidiaries, the words "we," "AT&T" and "our" are used to simplify the discussion. The following discussions are intended as a condensed summary of the issues rather than as a comprehensive legal analysis and description of all of these specific issues.

International Regulation Our subsidiaries operating outside the United States are subject to the jurisdiction of regulatory authorities in the territories in which the subsidiaries operate. Our licensing, compliance and advocacy initiatives in foreign countries primarily enable the provision of enterprise (i.e., large business), wireless and satellite television services. AT&T is engaged in multiple efforts with foreign regulators to open markets to competition, foster conditions favorable to investment and increase our scope of services and products.

The General Data Protection Regulation went into effect in Europe in May of 2018. AT&T processes and handles personal data of its customers and subscribers, employees of its enterprise customers and its employees. This regulation created a range of new compliance obligations and significantly increased financial penalties for noncompliance.

Federal Regulation We have organized our following discussion by service impacted.

Internet In February 2015, the FCC released an order classifying both fixed and mobile consumer broadband internet access services as telecommunications services, subject to Title II of the Communications Act. The Order, which represented a departure from longstanding bipartisan precedent, significantly expanded the FCC's authority to regulate broadband internet access services, as well as internet interconnection arrangements. In December 2017, the FCC reversed its 2015 decision by reclassifying fixed and mobile consumer broadband services as information services and repealing most of the rules that were adopted in 2015. In lieu of broad conduct prohibitions, the order requires internet service providers to disclose information about their network practices and terms of service, including whether they block or throttle internet traffic or offer paid prioritization. On October 1, 2019, the D.C. Circuit issued a unanimous opinion upholding the FCC's reclassification of broadband as an information service, and its reliance on transparency requirements and competitive marketplace dynamics to safeguard net neutrality. While the court vacated the FCC's express preemption of any state regulation of net neutrality, it stressed that its ruling did not prevent the FCC or ISPs from relying on conflict preemption to invalidate particular state laws that are inconsistent with the FCC's regulatory objectives and framework. The court also remanded the matter to the FCC for further consideration of the impact of reclassifying broadband services as information services on public safety, the Lifeline program, and pole attachment regulation. In October 2020, the FCC adopted an order concluding that those issues did not justify reversing its decision to reclassify broadband services as information services. An appeal of the FCC's remand decision is pending.

Following the FCC's 2017 decision to reclassify broadband as information services, a number of states adopted legislation to reimpose the very rules the FCC repealed. In some cases, state legislation imposes requirements that go beyond the FCC's February 2015 order. Additionally, some state governors have issued executive orders that effectively reimpose the repealed requirements. Suits have been filed concerning laws in California and Vermont. Both lawsuits were stayed pursuant to agreements by those states not to enforce their laws pending final resolution of all appeals of the FCC's December 2017 order. Because that order is now final, the California suit has returned to active status. Nonetheless, enforcement of both the California and Vermont laws remains stayed pending a ruling by a U.S. District Court in California on motions for a preliminary injunction against enforcement of the California law. Argument on those motions is now scheduled for February 2021. We expect that going forward additional states may seek to impose net neutrality requirements. We will continue to support congressional action to codify a set of standard consumer rules for the internet.

Wireless and Broadband In June and November 2020, the FCC issued a Declaratory Ruling clarifying the limits on state and local authority to deny applications to modify existing structures to accommodate wireless facilities. Appeals of the November 2020 order remain pending in the 9th Circuit Court of Appeals. If sustained on appeal, these FCC decisions will remove state and local regulatory barriers and reduce the costs of the infrastructure needed for 5G and FirstNet deployments, which will enhance our ability to place small cell facilities on utility poles, expand existing facilities to accommodate public safety services, and replace legacy facilities and services with advanced broadband infrastructure and services.

In 2020, the FCC took several actions to make spectrum available for 5G services. First, the FCC completed the auction of the 39 GHz band in large, contiguous blocks of spectrum that will support 5G. AT&T obtained spectrum in this auction, which also included spectrum in the 37 GHz and 47 GHz bands (see "Other Business Matters"). The FCC also made 150 MHz of mid-band CBRS spectrum available, to be shared with Federal incumbents, who enjoy priority. Furthermore, the FCC began the auction of 280 MHz of mid-band spectrum presently used for satellite service (the "C Band" auction). This auction is expected to conclude by June of 2021. Other mid-band spectrum auctions are planned for later in 2021.

Following enactment in December 2019 of the Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act (TRACED Act) by Congress, the FCC adopted new rules requiring voice service providers to implement caller ID authentication protocols (known as STIR/SHAKEN) and adopt robocall mitigation measures. These measures apply to portions of their networks where STIR/SHAKEN is not enabled, in addition to other anti-robocall measures. The new rules contemplate ongoing FCC oversight and review of efforts related to STIR/SHAKEN implementation. Among other goals, the FCC has stated its intention to promote the IP transition through its rules.

In September 2019, the FCC released reformed aspects of its intercarrier compensation regime related to tandem switching and transport charges, with the goal of reducing the prevalence of telephone access arbitrage schemes. In October 2020, the FCC further reformed aspects of its intercarrier compensation regime by greatly reducing, and in some cases eliminating, the charges long distance carriers must pay to originating carriers for toll-free calls. Appeals of both orders are pending at the D.C. Circuit Court of Appeals.

COMPETITION

Competition continues to increase for communications, media entertainment and digital services from traditional and nontraditional competitors. Technological advances have expanded the types and uses of services and products available. In addition, lack of or a reduced level of regulation of comparable legacy services has lowered costs for alternative communications service providers. As a result, we face continuing competition as well as some new opportunities in significant portions of our business.

Wireless We face substantial competition in our wireless businesses. Under current FCC rules, multiple licensees, who provide wireless services on the cellular, PCS, Advanced Wireless Services, 700 MHz and other spectrum bands, may operate in each of our U.S. service areas. Our competitors include two national wireless providers; a larger number of regional providers and resellers of those services; and certain cable companies. In addition, we face competition from providers who offer voice, text messaging and other services as applications on data networks. We are one of four facilities-based providers in Mexico (retail and wholesale), with the most significant market share controlled by América Móvil. We may experience significant competition from companies that provide similar services using other communications technologies and services. While some of these technologies and services are now operational, others are being developed or may be developed. We compete for customers based principally on service/device offerings, price, network quality, coverage area and customer service.

Video/Broadband Our businesses providing communications and digital entertainment services will face continued competitive pressure in 2021 from multiple providers, including wireless, satellite, cable, online video providers, and resellers. In addition, the desire for high-speed data on demand, including video, is continuing to lead customers to terminate their traditional wired or linear services and use our or competitors' wireless, satellite and internet-based services. We have launched our own video OTT and/or streaming options to attract or retain customers that do not want a full-scale traditional video package. In most U.S. markets, we compete for customers with large cable companies for high-speed internet, video and voice services and other smaller telecommunications companies for both long-distance and local services. In addition, in Latin American countries served by our Vrio subsidiary, we also face competition from other video providers, including América Móvil and Telefónica.

Legacy Voice and Data We continue to lose legacy voice and data subscribers due to competitors (e.g., wireless, cable and VoIP providers) who can provide comparable services at lower prices because they are not subject to traditional telephone industry regulation (or the extent of regulation they are subject to is in dispute), utilize different technologies or promote a different business model (such as advertising-based). In response to these competitive pressures, for a number of years we have used a bundling strategy that rewards customers who consolidate their services with us. We continue to focus on bundling services, including combined packages of wireless and video service through our IP-based services. We will continue to develop innovative and integrated services that capitalize on our wireless and IP-based network.

Additionally, we provide local and interstate telephone and switched services to other service providers, primarily large internet service providers using the largest class of nationwide internet networks (internet backbone), wireless carriers, other telephone companies, cable companies and systems integrators. These services are subject to additional competitive pressures from the development of new technologies, the introduction of innovative offerings and increasing satellite, wireless, fiber-optic and cable transmission capacity for services. We face a number of international competitors, including Orange Business Services, BT, Singapore Telecommunications Limited and Verizon Communications Inc., as well as competition from a number of large systems integrators.

Media Our WarnerMedia businesses face shifts in consumer viewing patterns, increased competition from streaming services and the expansion by other companies, in particular, technology companies. In May 2020, we launched HBO Max, our platform for premium content and video offered directly to consumers, as well as through our traditional distributors.

WarnerMedia competes with other studios and television production groups and independents to produce and sell programming. Many television networks and online platforms have affiliated production companies from which they are increasingly obtaining their programming, which has reduced their demand for programming from non-affiliated production companies. WarnerMedia also faces competition from other television networks, online platforms, and premium pay television services for distribution and marketing of its television networks and premium pay and basic tier television services by affiliates.

Our WarnerMedia businesses compete with other production companies and studios for the services of producers, directors, writers, actors and others and for the acquisition of literary properties. In recent years, technology companies also have begun to produce programming and compete with WarnerMedia for talent and property rights.

Advertising The increased amount of consumer time spent online and on mobile activities has resulted in the shift of advertising budgets away from traditional television to digital advertising. WarnerMedia's advertising-supported television networks and digital properties compete with streaming services, other networks and digital properties, print, radio and other media. Our programmatic advertising business faces competition from a variety of technology companies. Similar to all participants in the advertising technology sector, we contend with the dominance of Google, as well as the influence of Facebook, whose practices may result in the decreased ability and willingness of advertisers and programmers to adopt programmatic solutions offered by alternative suppliers.

ACCOUNTING POLICIES AND STANDARDS

Critical Accounting Policies and Estimates Because of the size of the financial statement line items they relate to or the extent of judgment required by our management, some of our accounting policies and estimates have a more significant impact on our consolidated financial statements than others. The following policies are presented in the order in which the topics appear in our consolidated statements of income.

Pension and Postretirement Benefits Our actuarial estimates of retiree benefit expense and the associated significant weighted-average assumptions are discussed in Note 15. Our assumed weighted-average discount rates for pension and postretirement benefits of 2.70% and 2.40%, respectively, at December 31, 2020, reflect the hypothetical rate at which the projected benefit obligations could be effectively settled or paid out to participants. We determined our discount rate based on a range of factors, including a yield curve composed of the rates of return on several hundred high-quality, fixed income corporate bonds available at the measurement date and corresponding to the related expected durations of future cash outflows for the obligations. These bonds were all rated at least Aa3 or AA- by one of the nationally recognized statistical rating organizations, denominated in U.S. dollars, and neither callable, convertible nor index linked. For the year ended December 31, 2020, when compared to the year ended December 31, 2019, we decreased our pension discount rate by 0.70%, resulting in an increase in our pension plan benefit obligation of $5,594 and decreased our postretirement discount rate by 0.80%, resulting in an increase in our postretirement benefit obligation of $1,311.

Our expected long-term rate of return on pension plan assets is 6.75% for 2021 and 7.00% for 2020. Our expected long-term rate of return on postretirement plan assets is 4.50% for 2021 and 4.75% for 2020. Our expected return on plan assets is calculated using the actual fair value of plan assets. If all other factors were to remain unchanged, we expect that a 0.50% decrease in the expected long-term rate of return would cause 2021 combined pension and postretirement cost to increase $277, which under our accounting policy would be adjusted to actual returns in the current year as part of our fourth-quarter remeasurement of our retiree benefit plans.

We recognize gains and losses on pension and postretirement plan assets and obligations immediately in "Other income (expense) – net" in our consolidated statements of income. These gains and losses are generally measured annually as of December 31, and accordingly, will normally be recorded during the fourth quarter, unless an earlier remeasurement is required. Should actual experience differ from actuarial assumptions, the projected pension benefit obligation and net pension cost and accumulated postretirement benefit obligation and postretirement benefit cost would be affected in future years. See Note 15 for additional discussions regarding our assumptions.

Depreciation Our depreciation of assets, including use of composite group depreciation for certain subsidiaries and estimates of useful lives, is described in Notes 1 and 7.

If all other factors were to remain unchanged, we expect that a one-year increase in the useful lives of our plant in service would have resulted in a decrease of approximately $3,128 in our 2020 depreciation expense and that a one-year decrease would have resulted in an increase of approximately $4,353 in our 2020 depreciation expense. See Notes 7 and 8 for depreciation and amortization expense applicable to property, plant and equipment, including our finance lease right-of-use assets.

Asset Valuations and Impairments Goodwill and other indefinite-lived intangible assets are not amortized but tested at least annually on October 1 for impairment. For impairment testing, we estimate fair values using models that predominantly rely on the expected cash flows to be derived from the reporting unit or use of the asset. Long-lived assets are reviewed for impairment whenever events or circumstances indicated that the book value may not be recoverable over the remaining life. Inputs underlying the expected cash flows include, but are not limited to, subscriber counts, revenues from subscriptions, advertising and content, revenue per user, capital investment and acquisition costs per subscriber, production and content costs, and ongoing operating costs. We based our assumptions on a combination of our historical results, trends, business plans and marketplace participant data.

Annual Goodwill Testing
Goodwill is tested on a reporting unit basis by comparing the estimated fair value of each reporting unit to its book value. If the fair value exceeds the book value, then no impairment is measured. We estimate fair values using an income approach (also known as a discounted cash flow model) and a market multiple approach. The income approach utilizes our future cash flow projections with a perpetuity value discounted at an appropriate weighted average cost of capital. The market multiple approach uses the multiples of publicly traded companies whose services are comparable to those offered by the reporting units. As of October 1, 2020, the calculated fair values of the reporting units exceeded their book values in all circumstances; however, the Turner, HBO and Entertainment Group (prior to our December reporting unit change discussed below) fair values exceed their book values by less than 10% with COVID-19 impacts, industry trends and our content distribution strategy affecting fair value. For the reporting units with fair value in excess of 10% of book value, if either the projected rate of long-term growth of cash flows or revenues declined by 0.5%, or if the weighted average cost of capital increased by 0.5%, the fair values would still be higher than the book value of the goodwill. In the event of a 10% drop in the fair values of the reporting units, the fair values still would have exceeded the book values of the reporting units. For the Turner and HBO reporting units as of October 1, 2020, if the projected rate of longer-term growth of cash flows or revenues declined by 1% and more than 2%, respectively, or if the weighted average cost of capital increased by 0.5%, it would result in impairment of the goodwill. Carrying values of the reporting units in the WarnerMedia segment (Turner, HBO and Warner Bros.) decrease as intangibles identified in the acquisition are amortized.

Domestic Video Business
In December 2020, we changed our management strategy and reevaluated our domestic video business, allowing us to maximize value in our domestic video business and further accelerate our ability to innovate and execute in our fast-growing broadband and fiber business. The strategy change required us to reassess the grouping and recoverability of the video business long-lived assets. In conjunction with the strategy change, we separated the former Entertainment Group into two business units, Video and Broadband, which includes legacy telephony operations. These changes required us to identify a separate Video reporting unit, which required evaluating assigned goodwill for impairment, while first assessing any impairment of goodwill at the historical Entertainment Group level.

The fair value of long-lived assets was determined primarily using the present value approach of probability-weighted expected cash flow. We determined that these assets were no longer recoverable and recognized an impairment to their estimated fair value. A pre-tax impairment of $7,255 ($4,373 orbital slots, $1,201 customer lists and $1,681 in property, plant and equipment) was assigned to the long-lived assets of the video business (see Notes 7 and 9). Upon updating the carrying value of the video business, we were then required to reperform our goodwill impairment testing of the historical Entertainment Group reporting unit, as of December 31, 2020, and before separation into the two reporting units, where we again concluded that no impairment was required, consistent with the testing as of October 1, 2020. GAAP requires ongoing fair value assessments for recoverability upon defined triggering events.

We further concluded that our video business should be identified as a separate reporting unit within the Communications segment. The change in reporting unit required the historical Entertainment Group goodwill to be assigned to the separate Video and Broadband reporting units, for which we used the relative fair value allocation methodology. The affected reporting units were then tested for goodwill impairment. We recorded an impairment of the entire $8,253 of goodwill allocated to the Video reporting unit. No goodwill impairment was required in the Broadband reporting unit. (See Note 9).

In total, we recorded an impairment charge of $15,508 ($7,255 for long-lived assets and $8,253 of assigned goodwill) in December 2020 results.

U.S. Wireless Licenses
The fair value of U.S. wireless licenses is assessed using a discounted cash flow model (the Greenfield Approach) and a corroborative market approach based on auction prices, depending upon auction activity. The Greenfield Approach assumes a company initially owns only the wireless licenses and makes investments required to build an operation comparable to current use. These licenses are tested annually for impairment on an aggregated basis, consistent with their use on a national scope for the United States. For impairment testing, we assume subscriber and revenue growth will trend up to projected levels, with a long-term growth rate reflecting expected long-term inflation trends. We assume churn rates will initially exceed our current experience but decline to rates that are in line with industry-leading churn. We used a discount rate of 9.25%, based on the optimal long-term capital structure of a market participant and its associated cost of debt and equity for the licenses, to calculate the present value of the projected cash flows. If either the projected rate of long-term growth of cash flows or revenues declined by 0.5%, or if the discount rate increased by 0.5%, the fair values of these wireless licenses would still be higher than the book value of the licenses. The fair value of these wireless licenses exceeded their book values by more than 10%.

Other Finite-Lived Intangibles
Customer relationships, licenses in Mexico, certain trade names in our Latin America business and other finite-lived intangible assets are reviewed for impairment whenever events or circumstances indicate that the book value may not be recoverable over their remaining life. For this analysis, we compare the expected undiscounted future cash flows attributable to the asset to its book value. When the asset's book value exceeds undiscounted future cash flows, an impairment is recorded to reduce the book value of the asset to its estimated fair value (see Notes 7 and 9).

Vrio Goodwill
In the second quarter of 2020, driven by significant and adverse economic and political environments in Latin America, including the impact of the COVID-19 pandemic, we experienced accelerated subscriber losses and revenue decline in the region, as well as closure of our operations in Venezuela. When combining these business trends and higher weighted-average cost of capital resulting from the increase in country-risk premiums in the region, we concluded that it was more likely than not that the fair value of the Vrio reporting unit, estimated using discounted cash flow and market multiple approaches, is less than its carrying amount. We recorded a $2,212 goodwill impairment, the entire amount of goodwill allocated to the Vrio reporting unit, with $105 attributable to noncontrolling interest (see Note 9).

Orbital Slots
During the first quarter of 2020, in conjunction with the nationwide launch of AT&T TV and our customers' continued shift from linear to streaming video services, we reassessed the estimated economic lives and renewal assumptions for our orbital slot licenses. As a result, we changed the estimated lives of these licenses from indefinite to finite-lived, effective January 1, 2020, and amortized $1,504 of the orbital slots in 2020. (See Note 1)

Income Taxes Our estimates of income taxes and the significant items giving rise to the deferred assets and liabilities are shown in Note 14 and reflect our assessment of actual future taxes to be paid on items reflected in the financial statements, giving consideration to both timing and probability of these estimates. Actual income taxes could vary from these estimates due to future changes in income tax law or the final review of our tax returns by federal, state or foreign tax authorities.

We use our judgment to determine whether it is more likely than not that we will sustain positions that we have taken on tax returns and, if so, the amount of benefit to initially recognize within our financial statements. We regularly review our uncertain tax positions and adjust our unrecognized tax benefits (UTBs) in light of changes in facts and circumstances, such as changes in tax law, interactions with taxing authorities and developments in case law. These adjustments to our UTBs may affect our income tax expense. Settlement of uncertain tax positions may require use of our cash.

New Accounting Standards

Beginning with 2020 interim and annual reporting periods, we adopted the FASB's new accounting guidance related to the measurement of credit losses on trade receivables, loans, contract assets and certain other assets not subject fair value measurement existing at January 1, 2020. We adopted the standard using a modified retrospective approach as of the beginning of the period of adoption, which did not require us to adjust the balance for prior periods, therefore affecting the comparability of our financial statements. Upon adoption, we recorded an increase to our allowances for credit losses, primarily for trade and loan receivables. See Note 1 for discussion of the impact of the standard.

See Note 1 for discussion of the expected impact of new standards.

OTHER BUSINESS MATTERS

Video Business On February 25, 2021, we signed an agreement to form a new company named DIRECTV (New DTV) with TPG Capital, which will be jointly governed by a board with representation from both AT&T and TPG. Under the agreement, we will contribute our Video business unit to New DTV for $4,250 of junior preferred units, an additional distribution preference of $4,200 and a 70% economic interest in common units. We expect to receive $7,600 in cash from New DTV at closing. TPG will contribute approximately $1,800 in cash to New DTV for $1,800 of senior preferred units and a 30% economic interest in common units. The remaining $5,800 will be funded by debt taken on by New DTV. As part of this transaction, we agreed to pay net losses under the NFL SUNDAY TICKET contract up to a cap of $2,500 over the remaining period of the contract.

The transaction is expected to close in the second half of 2021, pending customary closing conditions. The total of $7,600 of proceeds from the transaction are expected to reduce our total and net debt positions.

In the first quarter of 2021, we expect to apply held-for-sale accounting treatment to the assets and liabilities of the U.S. video business, and accordingly will include the assets in "Other current assets," and the related liabilities in "Accounts payable and accrued liabilities," on our consolidated balance sheet at March 31, 2021. The carrying amounts at December 31, 2020 of these assets and liabilities were approximately $16,150 and $4,900, respectively.

Spectrum Auction In March 2020, we were the winning bidder of high-frequency 37/39 GHz licenses in FCC Auction 103 covering an average of 786 MHz nationwide for approximately $2,400. Prior to the auction, we exchanged the 39 GHz licenses with a book value of approximately $300 that were previously acquired through FiberTower Corporation for vouchers to be applied against the winning bids and recorded a $900 gain in the first quarter of 2020. These vouchers yielded a value of approximately $1,200 which was applied toward our $2,400 gross bids. We made our final payment of approximately $950 for the Auction 103 payment in April 2020. The FCC granted the licenses in June 2020.

On February 24, 2021, the FCC announced that AT&T was the winning bidder for 1,621 C-Band licenses, comprised of a total of 80 MHz nationwide, including 40 MHz in Phase I. We must provide to the FCC an initial down payment of $4,681 on March 10, 2021, of which $550 was paid as an upfront payment prior to the start of the auction, and to pay a remaining $18,725 on or before March 24, 2021. We estimate that AT&T will be responsible for $955 of Incentive Payments upon clearing of Phase I spectrum and $2,112 upon clearing of Phase II spectrum. Additionally, we will be responsible for a portion of compensable relocation costs over the next several years as the spectrum is being cleared. Satellite operators have provided the FCC with relocation cost estimates totaling $3,400. AT&T intends to fund the purchase price using a combination of cash and short-term investments, funds from operations and either short-term or long-term debt, depending upon market conditions.

Labor Contracts As of December 31, 2020, we employed approximately 231,000 persons. Approximately 37% of our employees are represented by the Communications Workers of America (CWA), the International Brotherhood of Electrical Workers (IBEW) or other unions. After expiration of the collective bargaining agreements, work stoppages or labor disruptions may occur in the absence of new contracts or other agreements being reached. There are no significant contracts expiring in 2021. A contract covering approximately 14,000 Mobility employees in 36 states and the District of Columbia that was set to expire in February 2021 was extended until February 2022. A contract covering approximately 10,000 Mobility employees in nine Southeast states that was set to expire in February 2022 was extended until February 2023.

Pension Diversification In 2013, we made a voluntary contribution of 320 million Series A Cumulative Perpetual Preferred Membership Interests in AT&T Mobility II LLC (Mobility preferred interests), the primary holding company for our wireless business, to the trust used to pay pension benefits under certain of our qualified pension plans (see Note 17). Since their contribution, the Mobility preferred interests are plan assets under ERISA, and have been recognized as such in the plan's separate financial statements. On September 28, 2020, the trust, through the independent investment manager/fiduciary, sold 106.7 million of the Mobility preferred interests to unrelated third parties. The aggregate purchase price was $2,885, which includes accrued distributions through the date of sale (see Note 15).

Environmental We are subject from time to time to judicial and administrative proceedings brought by various governmental authorities under federal, state or local environmental laws. We reference in our Forms 10-Q and

10-K certain environmental proceedings that could result in monetary sanctions (exclusive of interest and costs) of three hundred thousand dollars or more. However, we do not believe that any of those currently pending will have a material adverse effect on our results of operations.

LIQUIDITY AND CAPITAL RESOURCES

We had $9,740 in cash and cash equivalents available at December 31, 2020. Cash and cash equivalents included cash of $2,842 and money market funds and other cash equivalents of $6,898. Approximately $2,205 of our cash and cash equivalents were held by our foreign entities in accounts predominantly outside of the U.S. and may be subject to restrictions on repatriation.

The Company's liquidity and capital resources were not materially impacted by COVID-19 and related economic conditions during 2020. We will continue to monitor impacts of the COVID-19 pandemic on our liquidity and capital resources.

Cash and cash equivalents decreased $2,390 since December 31, 2019. In 2020, cash inflows were primarily provided by cash receipts from operations, including cash from our sale and transfer of our receivables to third parties and the issuances of long-term debt, cumulative preferred stock and cumulative preferred interests in a subsidiary. These inflows were offset by cash used to meet the needs of the business, including, but not limited to, payment of operating expenses, debt repayments, funding capital expenditures and vendor financing payments, dividends to stockholders, share repurchases and spectrum acquisitions.

Cash Provided by or Used in Operating Activities

During 2020, cash provided by operating activities was $43,130 compared to $48,668 in 2019, impacted by the timing of working capital payments.

We actively manage the timing of our supplier payments for operating items to optimize the use of our cash. Among other things, we seek to make payments on 90-day or greater terms, while providing the suppliers with access to bank facilities that permit earlier payments at their cost. In addition, for payments to a key supplier, as part of our working capital initiatives, we have arrangements that allow us to extend payment terms up to 90 days at an additional cost to us (referred to as supplier financing). The net impact of supplier financing was to improve cash from operating activities $432 in 2020 and $909 in 2019. All supplier financing payments are due within one year.

Cash Used in or Provided by Investing Activities

During 2020, cash used in investing activities totaled $13,548, and consisted primarily of $15,675 (including interest during construction) for capital expenditures, final payment of approximately $950 for wireless spectrum licenses won in Auction 103 and $141 of net cash paid to acquire the remaining interest in HBO LAG. Investing activities also included cash receipts of $1,928 from the sale of our operations in Puerto Rico, which were used to redeem the preferred interests secured by the sales proceeds (see Notes 6 and 17), $1,100 from the sale of our investment in Central European Media Enterprises, Ltd. (see Note 6) and $400 from corporate owned life insurance investments.

For capital improvements, we have negotiated favorable vendor payment terms of 120 days or more (referred to as vendor financing) with some of our vendors, which are excluded from capital expenditures and reported as financing activities. Vendor financing payments were $2,966 in 2020, compared to $3,050 in 2019. Capital expenditures in 2020 were $15,675, and when including $2,966 cash paid for vendor financing and excluding $1,063 of FirstNet reimbursements, gross capital investment was $19,704 ($3,986 lower than the prior year).

The vast majority of our capital expenditures are spent on our networks, including product development and related support systems. In 2020, we placed $4,664 of equipment in service under vendor financing arrangements (compared to $2,632 in 2019) and approximately $1,230 of assets related to the FirstNet build (compared to $1,116 in 2019). Total reimbursements from the government for FirstNet were $1,626 for 2020 and $1,374 for 2019, predominately for capital expenditures.

The amount of capital expenditures is influenced by demand for services and products, capacity needs and network enhancements. In 2021, we expect that our gross capital investment, which includes capital expenditures and cash paid for vendor financing and excludes expected FirstNet reimbursement of approximately $1,000, will be in the $21,000 range (including capital expenditures in the $18,000 range).

Cash Used in or Provided by Financing Activities

For the year, cash used in financing activities totaled $32,007 and was comprised of issuances and repayments of debt, issuances of preferred stock, issuances and redemptions of preferred interests in subsidiaries, payments of dividends and share repurchases.

During 2020, debt issuances included proceeds of $9,440 in short-term borrowings (including approximately $3,950 of commercial paper) and $31,988 of net proceeds from long-term debt. Borrowing activity included the following issuances:

Issued and redeemed in 2020:

- March draw of $750 on a private financing agreement (repaid in the second quarter).
- April draw of $5,500 on a term loan credit agreement with certain commercial banks and Bank of America, N.A., as lead agent (repaid in the second quarter).

Issued and outstanding in 2020:

- February issuance of $2,995 of 4.000% global notes due 2049.
- March borrowings of $665 from loan programs with export agencies of foreign governments to support network equipment purchases in those countries.
- May issuances totaling $12,500 in global notes, comprised of $2,500 of 2.300% global notes due 2027, $3,000 of 2.750% global notes due 2031, $2,500 of 3.500% global notes due 2041, $3,000 of 3.650% global notes due 2051 and $1,500 of 3.850% global notes due 2060.
- May issuances totaling €3,000 million in global notes (approximately $3,281 at issuance), comprised of €1,750 million of 1.600% global notes due 2028, €750 million of 2.050% global notes due 2032 and €500 million of 2.600% global notes due 2038.
- June issuance of $1,050 of 3.750% global notes due 2050.
- August issuances totaling $11,000 in global notes, comprised of $2,250 of 1.650% global notes due 2028, $2,500 of 2.250% global notes due 2032, $2,500 of 3.100% global notes due 2043, $2,250 of 3.300% global notes due 2052 and $1,500 of 3.500% global notes due 2061.

During 2020, repayments of debt included $9,467 of short-term borrowings (including $3,967 of commercial paper) and $39,964 of long-term debt. Repayments included:

Notes redeemed at maturity:

- $800 of AT&T floating-rate notes in the first quarter.
- $687 of AT&T floating-rate notes in the second quarter.
- €2,250 million of AT&T floating-rate notes in the third quarter (approximately $2,637 at maturity).
- €1,000 million of 1.875% AT&T global notes in the fourth quarter ($1,290 at maturity).
- CAD$1,000 million of 3.825% AT&T global notes in the fourth quarter (approximately $954 at maturity).

Notes redeemed or repurchased prior to maturity:

- $2,619 of 4.600% AT&T global notes with original maturity in 2045, in the first quarter.
- $2,750 of 2.450% AT&T global notes with original maturity in 2020, in the second quarter.
- $1,000 of annual put reset securities issued by BellSouth, in the second quarter.
- $683 of 4.600% AT&T global notes with original maturity in 2021, in the second quarter.
- $1,695 of 2.800% AT&T global notes with original maturity in 2021, in the second quarter.
- $853 of 4.450% AT&T global notes with original maturity in 2021, in the second quarter.
- $1,172 of 3.875% AT&T global notes with original maturity in 2021, in the second quarter.
- $1,430 of 5.500% AT&T global notes with original maturity in 2047, in the second quarter.
- $1,457 of 3.000% AT&T global notes with original maturity in 2022, in the third quarter.
- $1,250 of 3.200% AT&T global notes with original maturity in 2022, in the third quarter.
- $1,012 of 3.800% AT&T global notes with original maturity in 2022, in the third quarter.
- $422 of 4.000% AT&T global notes with original maturity in 2022, in the third quarter.
- $60 of 3.800% DIRECTV senior notes with original maturity in 2022, in the third quarter.
- $63 of 4.000% Warner Media, LLC notes with original maturity in 2022, in the third quarter.
- $11,384 of AT&T global notes and subsidiary notes that were tendered for cash in the third quarter. The notes had floating and fixed interest rates. The fixed rates ranged from 3.400% to 7.850% and original maturities ranging from 2021 to 2025.
- $53 of 3.400% Warner Media, LLC notes with original maturity in 2022, in the third quarter.
- $177 of 3.400% AT&T global notes with original maturity in 2022, in the third quarter.
- $928 of 3.600% AT&T global notes with original maturity in 2023, in the third quarter.

Credit facilities repaid and other redemptions:

- $750 of borrowings under a private financing agreement, in the first quarter.
- $750 of borrowings under a private financing agreement, in the second quarter.
- $5,500 under our April 2020 term loan credit agreement with certain commercial banks and Bank of America, in the second quarter.
- $1,300 under our term loan credit agreement with Bank of America, in the second quarter.
- $500 under our term loan credit agreement with Bank of Communications Co., in the second quarter.
- R$3,381 million of Sky Serviços de Banda Larga Ltda. floating-rate loan in the third quarter (approximately $1,000 when issued in April 2018 and $638 at redemption due to strengthening of the U.S. dollar against Brazilian real).

Debt Exchanges:

- During the third quarter of 2020, we exchanged $17,677 of AT&T and subsidiary notes, with interest rates ranging from 4.350% to 8.750% and original maturities ranging from 2031 to 2058 for $1,459 of cash and $21,500 of three new series of AT&T global notes, with interest rates ranging from 3.500% to 3.650% and maturities ranging from 2053 to 2059.

- During the fourth quarter of 2020, we exchanged $8,280 of AT&T and subsidiary notes, with interest rates ranging from 2.950% to 7.125% and original maturities ranging from 2026 to 2048 for $8 of cash and $9,678 of two new series of AT&T global notes, with interest rates of 2.550% and 3.800% and maturities of 2033 and 2057, respectively.

Our weighted average interest rate of our entire long-term debt portfolio, including the impact of derivatives, was approximately 4.1% as of December 31, 2020 and 4.4% as of December 31, 2019. We had $155,209 of total notes and debentures outstanding at December 31, 2020, which included Euro, British pound sterling, Canadian dollar, Mexican peso, Australian dollar, Swiss franc and Brazilian real denominated debt that totaled approximately $43,399.

At December 31, 2020, we had $3,470 of debt maturing within one year, consisting entirely of long-term debt issuances. Debt maturing within one year includes an accreting zero-coupon note that may be redeemed each May until maturity in 2022. If the remainder of the zero-coupon note (issued for principal of $500 in 2007 and partially exchanged in the 2017 debt exchange offers) is held to maturity, the redemption amount will be $592.

During 2020, we paid $2,966 of cash under our vendor financing program, compared to $3,050 in 2019. Total vendor financing payables included in our December 31, 2020 consolidated balance sheet were approximately $3,761, with $3,563 due within one year (in "Accounts payable and accrued liabilities") and the remainder predominantly due within two to three years (in "Other noncurrent liabilities").

Financing activities in 2020 also included $1,979 from the September issuance of preferred interests in a subsidiary and $3,869 for the February issuance of Series B and Series C preferred stock (see Note 17).

We repurchased approximately 142 million shares of common stock at a cost of $5,278, predominantly in the first quarter, and completed the share repurchase authorization approved by the Board of Directors in 2013. In March 2020, we cancelled an accelerated share repurchase agreement that was planned for the second quarter and other repurchases to maintain flexibility and focus on continued investment in serving our customers, taking care of our employees and enhancing our network, including 5G. At December 31, 2020, we had approximately 178 million shares remaining from our share repurchase authorizations approved by the Board of Directors in 2014.

We paid dividends on common shares and preferred shares of $14,956 in 2020, compared with $14,888 in 2019. Dividends were higher in 2020, primarily due to dividend payments to preferred stockholders and the increase in our quarterly dividend on common stock approved by our Board of Directors in December 2019, partially offset by fewer shares outstanding.

Dividends on common stock declared by our Board of Directors totaled $2.08 per share in 2020 and $2.05 per share in 2019. Our dividend policy considers the expectations and requirements of stockholders, capital funding requirements of AT&T and long-term growth opportunities.

Our 2021 financing activities will focus on managing our debt level and paying dividends, subject to approval by our Board of Directors. We plan to fund our financing uses of cash through a combination of cash from operations, issuance of debt, and asset sales. The timing and mix of any debt issuance and/or refinancing will be guided by credit market conditions and interest rate trends.

Credit Facilities

The following summary of our various credit and loan agreements does not purport to be complete and is qualified in its entirety by reference to each agreement filed as exhibits to our Annual Report on Form 10-K.

We use credit facilities as a tool in managing our liquidity status. In November 2020, we amended one of our $7,500 revolving credit agreements by extending the termination date. In total, we have two $7,500 revolving credit agreements, totaling $15,000, with one terminating on December 11, 2023 and the other terminating on November 17, 2025. No amounts were outstanding under either agreement as of December 31, 2020.

In September 2019, we entered into and drew on a $1,300 term loan credit agreement containing (i) a 1.25 year $400 facility due in 2020, (ii) a 2.25 year $400 facility due in 2021, and (iii) a 3.25 year $500 facility due in 2022, with Bank of America, N.A., as agent. These facilities were repaid and terminated in the second quarter of 2020.

On April 6, 2020, we entered into and drew on a $5,500 Term Loan Credit Agreement (Term Loan) with 11 commercial banks and Bank of America, N.A. as lead agent. We repaid and terminated the Term Loan in May 2020.

On January 29, 2021, we entered into a $14,700 Term Loan Credit Agreement (Term Loan), with Bank of America, N.A., as agent. The Term Loan is available for a single draw at any time before May 29, 2021. The proceeds will be used for general corporate purposes, which may include among other things, financing acquisitions of additional spectrum. The entire principal amount of the Term Loan will be due and payable 364 days after the date on which the borrowing is made. At January 31, 2021, we had approximately $6,100 of commercial paper outstanding.

We also utilize other external financing sources, which include various credit arrangements supported by government agencies to support network equipment purchases, as well as a commercial paper program.

Each of our credit and loan agreements contains covenants that are customary for an issuer with an investment grade senior debt credit rating as well as a net debt-to-EBITDA financial ratio covenant requiring us to maintain, as of the last day of each fiscal quarter, a ratio of not more than 3.5-to-1. As of December 31, 2020, we were in compliance with the covenants for our credit facilities.

Dollars in millions except per share amounts

Collateral Arrangements

During 2019 and 2020, we amended collateral arrangements with counterparties to require cash collateral posting by AT&T only when derivative market values exceed certain thresholds. Under these arrangements, which cover over 90% of our approximate $41,000 derivative portfolio, counterparties are still required to post collateral. During 2020, we received approximately $800 of cash collateral, on a net basis. Cash postings under these arrangements vary with changes in credit ratings and netting agreements. (See Note 13)

Other

Our total capital consists of debt (long-term debt and debt maturing within one year) and stockholders' equity. Our capital structure does not include debt issued by our equity method investment. At December 31, 2020, our debt ratio was 46.7%, compared to 44.7% at December 31, 2019 and 47.7% at December 31, 2018. Our net debt ratio was 43.8% at December 31, 2020, compared to 41.4% at December 31, 2019 and 46.2% at December 31, 2018. The debt ratio is affected by the same factors that affect total capital, and reflects our recent debt issuances and repayments and debt acquired in business combinations.

A significant amount of our cash outflows is related to tax items, acquisition of spectrum through FCC auctions and benefits paid for current and former employees:

- Total taxes incurred, collected and remitted by AT&T during 2020 and 2019, were $21,967 and $24,170. These taxes include income, franchise, property, sales, excise, payroll, gross receipts and various other taxes and fees.
- Total domestic spectrum acquired primarily through FCC auctions, including cash, exchanged spectrum and auction deposits was approximately $2,800 in 2020, $1,300 in 2019 and $450 in 2018.
- Total health and welfare benefits provided to certain active and retired employees and their dependents totaled $3,656 in 2020, with $1,029 paid from plan assets. Of those benefits, $3,293 related to medical and prescription drug benefits. In addition, in 2020 we prefunded $745 for future benefit payments. During 2020, we paid $5,124 of pension benefits out of plan assets.

During 2020, we have received $3,641 from the disposition of assets, and when combined with working capital monetization initiatives, which include the sale of receivables, total cash received from monetization efforts, net of $1,613 of spectrum acquisitions, was approximately $1,100. We plan to continue to explore similar opportunities.

CONTRACTUAL OBLIGATIONS, COMMITMENTS AND CONTINGENCIES

Our contractual obligations as of December 31, 2020 are in the following table:

Contractual Obligations

		Payments Due By Period			
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Long-term debt obligations[1]	$165,654	$ 3,418	$13,730	$14,238	$134,268
Interest payments on long-term debt	123,582	6,627	12,851	11,817	92,287
Purchase obligations[2]	70,610	20,274	21,275	11,142	17,919
Operating lease obligations[3]	31,123	4,808	8,621	6,464	11,230
FirstNet sustainability payments[4]	17,520	120	390	390	16,620
Unrecognized tax benefits[5]	10,560	463	—	—	10,097
Other finance obligations[6]	12,437	4,236	2,232	1,602	4,367
Total Contractual Obligations	$431,486	$39,946	$59,099	$45,653	$286,788

[1] Represents principal or payoff amounts of notes and debentures at maturity or, for putable debt, the next put opportunity (see Note 12). Foreign debt includes the impact from hedges, when applicable.
[2] We expect to fund the purchase obligations with cash provided by operations or through incremental borrowings. The minimum commitment for certain obligations is based on termination penalties that could be paid to exit the contracts. If we elect to exit these contracts, termination fees for all such contracts in the year of termination could be approximately $259 in 2021, $257 in the aggregate for 2022 and 2023 and $64 in the aggregate for 2024 and 2025 and $1,987 in the aggregate thereafter. Certain termination fees are excluded from the above table, as the fees would not be paid every year and the timing of such payments, if any, is uncertain. (See Note 21)
[3] Represents operating lease payments (see Note 8).
[4] Represents contractual commitment to make sustainability payments over the 25-year contract. These sustainability payments represent our commitment to fund FirstNet's operating expenses and future reinvestment in the network, which we own and operate. FirstNet has a statutory requirement to reinvest funds that exceed the agency's operating expenses, which we anticipate to be $15,000. (See Note 20)
[5] The noncurrent portion of the UTBs is included in the "More than 5 Years" column, as we cannot reasonably estimate the timing or amounts of additional cash payments, if any, at this time (see Note 14).
[6] Represents future minimum payments under the Crown Castle and other arrangements (see Note 19), payables subject to extended payment terms (see Note 22) and finance lease payments (see Note 8).

Certain items were excluded from this table, as the year of payment is unknown and could not be reliably estimated since past trends were not deemed to be an indicator of future payment, we believe the obligations are immaterial or because the settlement of the obligation will not require the use of cash. These items include: deferred income tax liability of $60,472 (see Note 14); net postemployment benefit obligations of $19,690; expected pension and postretirement payments (see Note 15); and other noncurrent liabilities of $11,829.

MARKET RISK

We are exposed to market risks primarily from changes in interest rates and foreign currency exchange rates. These risks, along with other business risks, impact our cost of capital. It is our policy to manage our debt structure and foreign exchange exposure in order to manage capital costs, control financial risks and maintain financial flexibility over the long term. In managing market risks, we employ derivatives according to documented policies and procedures, including interest rate swaps, interest rate locks, foreign currency exchange contracts and combined interest rate foreign currency contracts (cross-currency swaps). We do not use derivatives for trading or speculative purposes. We do not foresee significant changes in the strategies we use to manage market risk in the near future.

One of the most significant assumptions used in estimating our postretirement benefit obligations is the assumed weighted-average discount rate, which is the hypothetical rate at which the projected benefit obligations could be effectively settled or paid out to participants. We determined our discount rate based on a range of factors, including a yield curve composed of the rates of return on several hundred high-quality, fixed income corporate bonds available at the measurement date and corresponding to the related expected durations of future cash outflows for the obligations. In recent years, the discount rates have been increasingly volatile, and on average have been lower than in historical periods. Lower discount rates used to measure our pension and postretirement plans result in higher obligations. Future increases in these rates could result in lower obligations, improved funded status and actuarial gains.

Interest Rate Risk

The majority of our financial instruments are medium- and long-term fixed-rate notes and debentures. Changes in interest rates can lead to significant fluctuations in the fair value of these instruments. The principal amounts by expected maturity, average interest rate and fair value of our liabilities that are exposed to interest rate risk are described in Notes 12 and 13. In managing interest expense, we control our mix of fixed and floating rate debt through term loans, floating rate notes, and interest rate swaps. We have established interest rate risk limits that we closely monitor by measuring interest rate sensitivities in our debt and interest rate derivatives portfolios.

Most of our foreign-denominated long-term debt has been swapped from fixed-rate or floating-rate foreign currencies to fixed-rate U.S. dollars at issuance through cross-currency swaps, removing interest rate risk and foreign currency exchange risk associated with the underlying interest and principal payments. Likewise, periodically we enter into interest rate locks to partially hedge the risk of increases in the benchmark interest rate during the period leading up to the probable issuance of fixed-rate debt. We expect gains or losses in our cross-currency swaps and interest rate locks to offset the losses and gains in the financial instruments they hedge.

We had no interest rate swaps and no interest rate locks at December 31, 2020.

Foreign Exchange Risk

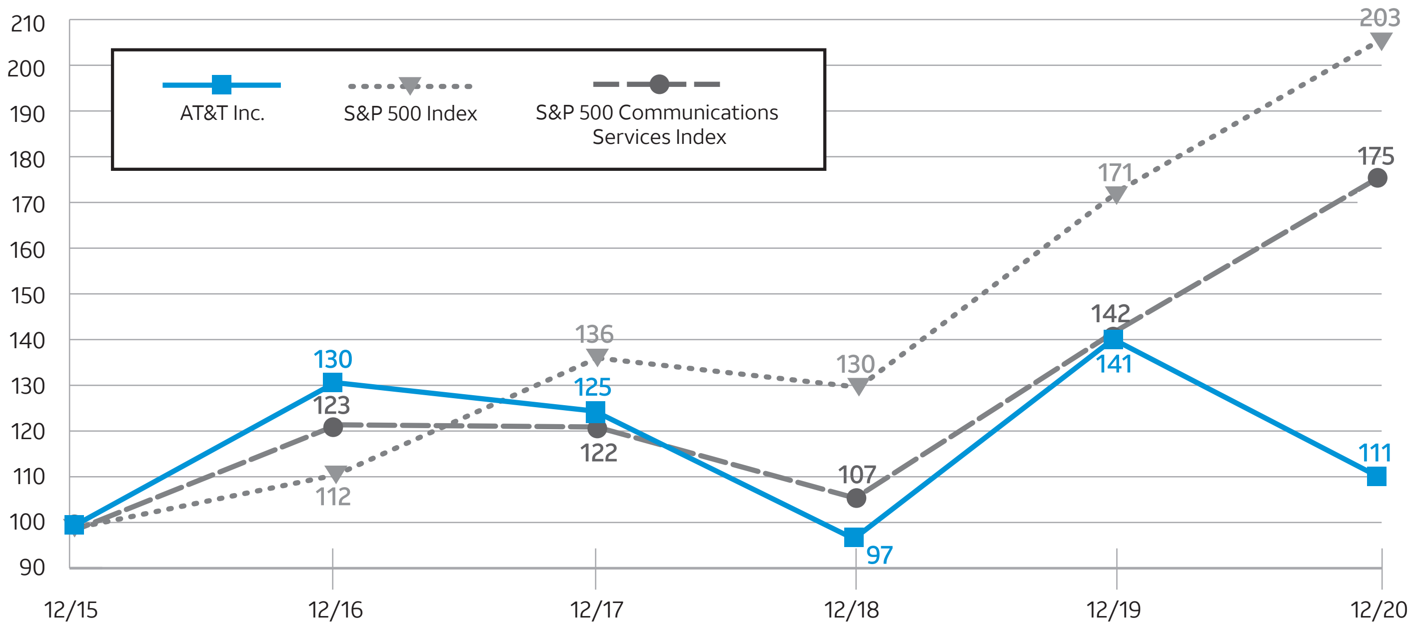
We principally use foreign exchange contracts to hedge certain film production costs denominated in foreign currencies. We are also exposed to foreign currency exchange risk through our foreign affiliates and equity investments in foreign companies. We have designated €1,450 million aggregate principal amount of debt as a hedge of the variability of certain Euro-denominated net investments of our subsidiaries. The gain or loss on the debt that is designated as, and is effective as, an economic hedge of the net investment in a foreign operation is recorded as a currency translation adjustment within accumulated other comprehensive income, net on the consolidated balance sheet.

Through cross-currency swaps, most of our foreign-denominated debt has been swapped from fixed-rate or floating-rate foreign currencies to fixed-rate U.S. dollars at issuance, removing interest rate and foreign currency exchange risk associated with the underlying interest and principal payments. We expect gains or losses in our cross-currency swaps to offset the gains and losses in the financial instruments they hedge. We had cross-currency swaps with a notional value of $40,745 and a fair value of $(93) outstanding at December 31, 2020.

For the purpose of assessing specific risks, we use a sensitivity analysis to determine the effects that market risk exposures may have on the fair value of our financial instruments and results of operations. We had foreign exchange forward contracts with a notional value of $90 and a fair value of $(3) outstanding at December 31, 2020.

STOCK PERFORMANCE GRAPH

Comparison of Five Year Cumulative Return
AT&T Inc., S&P 500 Index and S&P 500 Communications Services Index



The comparison above assumes $100 invested on December 31, 2015, in AT&T common stock and the following Standard & Poor's (S&P) Indices: S&P 500 Index and S&P 500 Communications Services Index. We have adopted the S&P 500 Communications Services Index, which permits us to use a more diversified set of companies in the communications and media sectors that are relevant to our businesses. Total return equals stock price appreciation plus reinvestment of dividends.

DISCUSSION AND RECONCILIATION OF NON-GAAP MEASURE

We believe the following measure is relevant and useful information to investors as it is used by management as a method of comparing performance with that of many of our competitors. This supplemental measure should be considered in addition to, but not as a substitute of, our consolidated and segment financial information.

Business Solutions Reconciliation

We provide a supplemental discussion of our Business Solutions operations that is calculated by combining our Mobility and Business Wireline business units, and then adjusting to remove non-business operations. The following table presents a reconciliation of our supplemental Business Solutions results. Results have been recast to conform to the current period's classification.

	Year Ended December 31, 2020			
	Mobility	**Business Wireline**	**Adjustments[1]**	**Business Solutions**
Operating revenues				
Wireless service	**$55,542**	**$ —**	**$(47,810)**	**$ 7,732**
Strategic and managed services	**—**	**15,788**	**—**	**15,788**
Legacy voice and data services	**—**	**8,183**	**—**	**8,183**
Other service and equipment	**—**	**1,387**	**—**	**1,387**
Wireless equipment	**17,022**	**—**	**(14,140)**	**2,882**
Total Operating Revenues	**72,564**	**25,358**	**(61,950)**	**35,972**
Operating expenses				
Operations and support	**42,106**	**15,534**	**(34,927)**	**22,713**
EBITDA	**30,458**	**9,824**	**(27,023)**	**13,259**
Depreciation and amortization	**8,086**	**5,226**	**(6,803)**	**6,509**
Total Operating Expenses	**50,192**	**20,760**	**(41,730)**	**29,222**
Operating Income	**$22,372**	**$ 4,598**	**$(20,220)**	**$ 6,750**

[1] Non-business wireless reported in the Communications segment under the Mobility business unit.

	Year Ended December 31, 2019			
	Mobility	Business Wireline	Adjustments[1]	Business Solutions
Operating revenues				
Wireless service	$55,331	$ —	$(47,887)	$ 7,444
Strategic and managed services	—	15,430	—	15,430
Legacy voice and data services	—	9,180	—	9,180
Other service and equipment	—	1,557	—	1,557
Wireless equipment	15,725	—	(12,971)	2,754
Total Operating Revenues	71,056	26,167	(60,858)	36,365
Operating expenses				
Operations and support	40,681	16,069	(34,036)	22,714
EBITDA	30,375	10,098	(26,822)	13,651
Depreciation and amortization	8,054	4,934	(6,840)	6,148
Total Operating Expenses	48,735	21,003	(40,876)	28,862
Operating Income	$22,321	$ 5,164	$(19,982)	$ 7,503

[1] Non-business wireless reported in the Communications segment under the Mobility business unit.

	Year Ended December 31, 2018			
	Mobility	Business Wireline	Adjustments[1]	Business Solutions
Operating revenues				
Wireless service	$54,295	$ —	$(47,402)	$ 6,893
Strategic and managed services	—	14,649	—	14,649
Legacy voice and data services	—	10,674	—	10,674
Other service and equipment	—	1,406	—	1,406
Wireless equipment	16,226	—	(13,718)	2,508
Total Operating Revenues	70,521	26,729	(61,120)	36,130
Operating expenses				
Operations and support	40,690	16,181	(34,285)	22,586
EBITDA	29,831	10,548	(26,835)	13,544
Depreciation and amortization	8,263	4,708	(7,077)	5,894
Total Operating Expenses	48,953	20,889	(41,362)	28,480
Operating Income	$21,568	$ 5,840	$(19,758)	$ 7,650

[1] Non-business wireless reported in the Communications segment under the Mobility business unit.

RISK FACTORS

In addition to the other information set forth in this document, including the matters contained under the caption "Cautionary Language Concerning Forward-Looking Statements," you should carefully read the matters described below. We believe that each of these matters could materially affect our business. We recognize that most of these factors are beyond our ability to control and therefore we cannot predict an outcome.

Macro-economic Factors:

Adverse changes in the U.S. securities markets, interest rates and medical costs could materially increase our benefit plan costs and future funding requirements.

Our costs to provide current benefits and funding for future benefits are subject to increases, primarily due to continuing increases in medical and prescription drug costs, and can be affected by lower returns on assets held by our pension and other benefit plans, which are reflected in our financial statements for that year. In calculating the costs included on our financial statements of providing benefits under our plans, we have made certain assumptions regarding future investment returns, interest rates and medical costs. These assumptions could change significantly over time and could be materially different than originally projected. Lower than assumed investment returns, a decline in interest rates with a corresponding increase in our benefit obligations, and higher than assumed medical and prescription drug costs will increase expenses.

The Financial Accounting Standards Board requires companies to recognize the funded status of defined benefit pension and postretirement plans as an asset or liability in their statement of financial position and to recognize changes in that funded status in the year in which the changes occur. We have elected to reflect the annual adjustments to the funded status in our consolidated statement of income. Therefore, an increase in our costs or adverse market conditions will have a negative effect on our operating results.

Significant adverse changes in capital markets could result in the deterioration of our defined benefit plans' funded status and result in increased contribution requirements for such plans, which could be material.

Adverse changes in global financial markets could limit our ability and our larger customers' ability to access capital or increase the cost of capital needed to fund business operations.

During 2020, uncertainty surrounding global growth rates and the impact of the COVID-19 pandemic helped create volatility in the credit, currency, equity and fixed income markets. Volatility may affect companies' access to the credit markets, leading to higher borrowing costs, or, in some cases, the inability to fund ongoing operations. In addition, we contract with large financial institutions to support our own treasury operations, including contracts to hedge our exposure on interest rates and foreign exchange and the funding of credit lines and other short-term debt obligations, including commercial paper. These financial institutions face stricter capital-related and other regulations in the United States and Europe, as well as ongoing legal and financial issues concerning their loan portfolios, which may hamper their ability to provide credit or raise the cost of providing such credit.

The U.K. Financial Conduct Authority, which regulates LIBOR, has announced that it intends to phase out LIBOR by the end of 2021. Although our securities may provide for alternative methods of calculating the interest rate payable on such indebtedness, uncertainty as to the extent and manner of future changes may adversely affect the current trading market for LIBOR-based securities, and the value of variable rate indebtedness in general. A company's cost of borrowing is also affected by evaluations given by various credit rating agencies and these agencies have been applying tighter credit standards when evaluating debt levels and future growth prospects. While we have been successful in continuing to access the credit and fixed income markets when needed, adverse changes in the financial markets could render us either unable to access these markets or able to access these markets only at higher interest costs and with restrictive financial or other conditions, severely affecting our business operations. Additionally, downgrades of our credit rating by the major credit rating agencies could increase our cost of borrowing and also impact the collateral we would be required to post under certain agreements we have entered into with our derivative counterparties, which could negatively impact our liquidity. Further, valuation changes in our derivative portfolio due to interest rates and foreign exchange rates could require us to post collateral and thus may negatively impact our liquidity.

Our international operations have increased our exposure to political instability, to changes in the international economy and to the level of regulation on our business and these risks could offset our expected growth opportunities.

We have international operations, particularly in Latin America, including Mexico, and worldwide through WarnerMedia's content distribution. We need to comply with a wide variety of complex local laws, regulations and treaties. We are exposed to restrictions on cash repatriation, foreign exchange controls, fluctuations in currency values, changes in relationships between U.S. and foreign governments, trade restrictions including potential tariffs, differences in intellectual property protection laws, and other regulations that may affect materially our earnings. Our Mexico operations, in particular, rely on a continuation of a regulatory regime that fosters competition. While our foreign operations represent significant opportunities to sell our services, a number of foreign countries where we operate have experienced unstable growth patterns, increased inflation, currency devaluation, foreign exchange controls, instability in the banking sector and high unemployment. In addition, significant political turmoil has continued in several Latin American countries. Should these conditions persist, our ability to offer service in one or more countries could be adversely affected and customers in these countries may be unable to purchase the services we offer or pay for services already provided. For example, we found it necessary in May 2020 to close our DIRECTV operations in Venezuela due to political instability in the country and in order to comply with sanctions of the U.S. government.

In addition, operating in foreign countries also typically involves participating with local businesses, either to comply with local laws or, for example, to enhance product marketing, deploy networks or execute on other capital projects. Involvement with foreign firms exposes us to the risk of being unable to control the actions of those firms and therefore exposes us to risks associated with our obligation to comply with the Foreign Corrupt Practices Act (FCPA). Violations of the FCPA could have a material adverse effect on our operating results.

Industry-wide Factors:

Our business is subject to risks arising from the outbreak of the COVID-19 virus.

The COVID-19 pandemic and resulting mitigation measures have caused, and may continue to cause, a negative effect on our operating results. To date, mitigation measures have caused sports leagues to modify their seasons and suspend certain operations as the cancellation of many sporting events, including the 2020 NCAA tournament, which has adversely affected our advertising revenues, may result in contract disputes concerning carriage rights and has caused us to incur expenses relating to certain of these sporting events notwithstanding their cancellation. The closure or avoidance of theaters, and the interruptions in movie production and other programming caused by COVID-19 are expected to continue to impact the timing of revenues and may cause a loss of revenue to our WarnerMedia business over the long term. The COVID-19 pandemic could also drive higher costs for our WarnerMedia business in 2021 based on the hybrid distribution model for releasing films in 2021 and costs associated with safety measures put in place to help provide a safe environment for content production. If the mitigation measures or the associated effects are prolonged, we expect business customers in industries most significantly impacted will continue to reduce or terminate services, having a negative effect on the performance of our Business Wireline business unit. Further, concerns over the COVID-19 pandemic could again result in the prolonged closure of many of our retail stores and deter customers from accessing our stores even as the pandemic subsides. These pandemic concerns may also result in continued impact to our customers' ability to pay for our products and services. We may also continue to see significant impact on roaming revenues due to a downturn in international travel. The COVID-19 pandemic has caused and could further cause reduced staffing levels at our call centers and field operations, resulting in delays in service. Further reductions in staffing levels could additionally limit our ability to provide services, adversely impacting our competitive position. We may also incur significantly higher expenses attributable to infrastructure investments required to meet higher network utilization from more customers consuming bandwidth from changes in work from home trends; extended cancellation periods; and increased labor costs if the COVID-19 pandemic continues for an extended period.

The COVID-19 pandemic and mitigation measures have caused, and may continue to cause, adverse impacts on global economic conditions and consumer confidence, spending and consumer behavior, which could affect demand for our products and services. The extent to which the COVID-19 pandemic impacts our business results of operations, cash flows and financial condition will depend on future developments that are highly uncertain and cannot be predicted, including new information that may emerge concerning other strains of the virus and the actions to contain its impact. Due to the speed with which the situation continues to develop and change, we are not able at this time to estimate the additional impact of COVID-19 on our financial or operational results, but the impact could be material.

Changes to federal, state and foreign government regulations and decisions in regulatory proceedings, as well as private litigation, could further increase our operating costs and/or alter customer perceptions of our operations, which could materially adversely affect us.

Our subsidiaries providing wired services are subject to significant federal and state regulation while many of our competitors are not. In addition, our subsidiaries and affiliates operating outside the United States are also subject to the jurisdiction of national and supranational regulatory authorities in the market where service is provided. Our wireless and various video subsidiaries are regulated to varying degrees by the FCC and in some instances, by state and local agencies. Adverse regulations and rulings by the FCC relating to broadband, wireless deployment and satellite video issues could impede our ability to manage our networks and recover costs and lessen incentives to invest in our networks. The continuing growth of IP-based services, especially when accessed by wireless devices, has created or potentially could create conflicting regulation between the FCC and various state and local authorities, which may involve lengthy litigation to resolve and may result in outcomes unfavorable to us. In addition, increased public focus on a variety of issues related to our operations, such as privacy issues, government requests or orders for customer data, and concerns about global climate changes, have led to proposals or new legislation at state, federal and foreign government levels to change or increase regulation on our operations. Enactment of new privacy laws and regulations could, among other things, adversely affect our ability to collect and offer targeted advertisements or result in additional costs of compliance or litigation. Should customers decide that our competitors offer a more customer-friendly environment, our competitive position, results of operations or financial condition could be materially adversely affected.

Continuing growth in and the converging nature of wireless, video and broadband services will require us to deploy significant amounts of capital and require ongoing access to spectrum in order to provide attractive services to customers.

Wireless, video and broadband services are undergoing rapid and significant technological changes and a dramatic increase in usage, in particular, the demand for faster and seamless usage of video and data across mobile and fixed devices. The COVID-19 pandemic has accelerated these changes and also resulted in higher network utilization, as more customers consume bandwidth from changes in work from home trends.
We must continually invest in our networks in order to improve our wireless, video and broadband services to meet this increasing demand and changes in customer expectations, while remaining competitive. Improvements in these services depend on many factors, including continued access to and deployment of adequate spectrum and the capital needed to expand our wireline network to support transport of these services. In order to stem broadband subscriber losses to cable competitors in our non-fiber wireline areas, we have been expanding our all-fiber wireline network. We must maintain and expand our network capacity and coverage for transport of video, data and voice between cell and fixed landline sites.
To this end, we participate in spectrum auctions and continue to deploy software and other technology advancements in order to efficiently invest in our network.

Network service enhancements and product launches may not occur as scheduled or at the cost expected due to many factors, including delays in determining equipment and wireless handset operating standards, supplier delays, software issues, increases in network and handset component costs, regulatory permitting delays for tower sites or enhancements, or labor-related delays. Deployment of new technology also may adversely affect the performance of the network for existing services. If we cannot acquire needed spectrum or deploy the services customers desire on a timely basis with acceptable quality and at reasonable costs, then our ability to attract and retain customers, and, therefore, maintain and improve our operating margins, could be materially adversely affected.

Increasing competition for wireless customers could materially adversely affect our operating results.

We have multiple wireless competitors in each of our service areas and compete for customers based principally on service/device offerings, price, network quality, coverage area and customer service. In addition, we are facing growing competition from providers offering services using advanced wireless technologies and IP-based networks. We expect market saturation to continue to cause the wireless industry's customer growth rate to moderate in comparison with historical growth rates, leading to increased competition for customers. Our share of industry sales could be reduced due to aggressive pricing strategies pursued by competitors. We also expect that our customers' growing demand for high-speed video and data services will place constraints on our network capacity. These competition and capacity constraints will continue to put pressure on pricing and margins as companies compete for potential customers.
Our ability to respond will depend, among other things, on continued improvement in network quality and customer service and our ability to price our products and services competitively as well as effective marketing of attractive products and services. These efforts will involve significant expenses and require strategic management decisions on, and timely implementation of, equipment choices, network deployment and service offerings.

Ongoing changes in the television industry and consumer viewing patterns could materially adversely affect our operating results.

Our video subsidiaries derive substantial revenues and profits from cable networks and premium pay television services and the production and licensing of television programming to broadcast and cable networks and premium pay television services. The U.S. television industry is continuing to evolve rapidly, with developments in technology leading to new methods for the distribution of video content and changes in when, where and how audiences consume video content. These changes have led to (1) internet-based streaming competitors, which are increasing in number and some of which have significant and growing subscriber/user bases, and (2) reduced viewers of traditional advertising-supported television resulting from increased video consumption through SVOD services (including our own), time-shifted viewing of television programming and the use of DVRs to skip advertisements. The number of subscribers to traditional linear programming in the U.S. has been declining in recent years and the U.S. television industry has generally experienced declines in ratings for programming, which have negatively affected subscription and advertising revenues, and these trends are expected to continue. The popularity of content, whether on television, on the internet, or through movies, is difficult to predict and can change rapidly, and low public acceptance of our television, OTT and movie content, including WarnerMedia's content, could adversely affect our results of operations. We are taking steps to mitigate the risks from these changes, such as the launch of our HBO Max direct-to-consumer streaming platform and new, enhanced advertising opportunities, but there can be no assurance that these and other efforts will be successful in responding to these changes.

Intellectual property rights may be adversely affected by piracy or be inadequate to take advantage of business opportunities, such as new distribution platforms, which may materially adversely affect our operations.

Increased piracy of video content, products and other intellectual property, particularly in our foreign WarnerMedia and Latin American operations, will decrease revenues. Mobile and broadband technological developments have made it easier to reproduce and distribute high-quality unauthorized copies of content. Piracy is particularly prevalent in countries that lack effective copyright and other legal protections or enforcement measures and thieves can attract users throughout the world. Effective intellectual property protection may not be available in every country where we operate. We may need to spend significant amounts of money to protect our rights. We are also increasingly negotiating broader licensing agreements to expand our ability to use new methods to distribute content to customers. Any impairment of our intellectual property rights, including due to changes in U.S. or foreign intellectual property laws or the absence of effective legal protections or enforcement measures, or our inability to negotiate broader distribution rights, could materially adversely impact our operations.

Incidents leading to damage to our reputation, and any resulting lawsuits, claims or other legal proceedings, could have a material adverse effect on our business.

We believe that our brand image, awareness and reputation strengthen our relationship with consumers and contribute significantly to the success of our business. We strive to create a culture in which our colleagues act with integrity and respect and feel comfortable speaking up to report instances of misconduct or other concerns. Our ability to attract and retain employees is highly dependent upon our commitment to a diverse and inclusive workplace, ethical business practices and other qualities. Acts of misconduct by any employee, and particularly by senior management, could erode trust and confidence and damage our reputation. Negative public opinion could result from actual or alleged conduct by us or those currently or formerly associated with us, and from any number of activities or circumstances, including operations, employment-related offenses (such as sexual harassment and discrimination), regulatory compliance and actions taken by regulators or others in response to such conduct. We have in the past been, and may in the future be, named as a defendant in lawsuits, claims and other legal proceedings that arise in the ordinary course of our business based on alleged acts of misconduct by employees. These actions seek, among other things, compensation for alleged personal injury (including claims for loss of life), workers' compensation, employment discrimination, sexual harassment, workplace misconduct, wage and hour claims and other employment-related damages, compensation for breach of contract, statutory or regulatory claims, negligence or gross negligence, punitive damages, consequential damages, and civil penalties or other losses or injunctive or declaratory relief. The outcome of any allegations, lawsuits, claims or legal proceedings is inherently uncertain and could result in significant costs, damage to our brands or reputation and diversion of management's attention from our business. Additionally, our news organization makes editorial judgments around what is covered and how it is covered in the normal course of business. Although we have disciplined practices that are used to make such editorial judgments, it is possible that our news coverage alienates some consumers, adversely impacts our reputation and therefore impacts demand for our other products and services. Any damage to our reputation or payments of significant amounts, even if reserved, could materially and adversely affect our business, reputation, financial condition, results of operations and cash flows.

Company-Specific Financial Factors:

Adoption of new software-based technologies may involve quality and supply chain issues and could increase capital costs.

The communications and digital entertainment industry has experienced rapid changes in the past several years. An increasing number of our customers are using mobile devices as the primary means of viewing video and an increasing number of nontraditional video providers are developing content and technologies to satisfy the desire for video entertainment demand. In addition, businesses and government bodies are broadly shifting to wireless-based services for homes and infrastructure to improve services to their respective customers and constituencies. We are spending significant capital to shift our wired network to software-based technology to manage this demand and are expanding 5G wireless technology to address these consumer demands. We are entering into a significant number of software licensing agreements and working with software developers to provide network functions in lieu of installing switches or other physical network equipment in order to respond to rapid developments in video and wireless demand. While software-based functionality can be changed much more quickly than, for example, physical switches, the rapid pace of development means that we may increasingly need to rely on single-source and software solutions that have not previously been deployed in production environments. Should this software not function as intended or our license agreements provide inadequate protection from intellectual property infringement claims, we could be forced to either substitute (if available) or else spend time to develop alternative technologies at a much higher cost and incur harm to our reputation for reliability, and, as a result, our ability to remain competitive could be materially adversely affected.

We depend on various suppliers to provide equipment to operate our business and satisfy customer demand and interruption or delay in supply can adversely impact our operating results.

We depend on suppliers to provide us, directly or through other suppliers, with items such as network equipment, customer premises equipment, video equipment and wireless-related equipment such as mobile hotspots, handsets, wirelessly enabled computers, wireless data cards and other connected devices for our customers. These suppliers could fail to provide equipment on a timely basis, or fail to meet our performance expectations, for a number of reasons, including difficulties in obtaining export licenses for certain technologies, inability to secure component parts, general business disruption, natural disasters, safety issues, economic and political instability and public health emergencies such as the COVID-19 pandemic. The COVID-19 pandemic has caused, and may again cause, delays in the development, manufacturing (including the sourcing of key components) and shipment of products. In certain limited circumstances, suppliers have been unable to supply products in a timely fashion. In such limited circumstances, we have been unable to provide products and services precisely as and when requested by our customers. It is possible that, in some circumstances, we could be forced to switch to a different key supplier. Because of the cost and time lag that can be associated with transitioning from one supplier to another, our business could be substantially disrupted if we were required to, or chose to, replace the products of one or more key suppliers with products from another source, especially if the replacement became necessary on short notice. Any such disruption could increase our costs, decrease our operating efficiencies and have a negative effect on our operating results.

Increasing costs to provide video and other services could adversely affect operating margins.

Our operating costs, including customer acquisition and retention costs, could continue to put pressure on margins and customer retention levels. In addition, most of our video programming that we distribute via our linear services is provided by other companies and historically the rates they charge us for programming have often increased more than the rate of inflation. In addition, as customer viewing habits shift to mobile, on-demand and streaming from linear programming, negotiating licensing rights is increasingly complicated. We are attempting to use our scale and access to wireless customers to change this trend but such negotiations are difficult and also may result in programming disruption. Our HBO Max streaming platform is another component of our strategy to reach nontraditional video customers and we are investing heavily to provide a competitive and attractive offering. If we are unable to restrain these costs or provide programming desired by our customers, it could impact margins and our ability to attract and retain customers. Our WarnerMedia operations, which create and license content to other providers, also may experience increasing difficulties securing favorable terms, including those related to pricing, positioning and packaging, during contract negotiations, which may lead to blackouts of WarnerMedia programming, and WarnerMedia may face greater difficulty in achieving placement of its networks and premium pay television services in offerings by third parties.

A number of our competitors offering comparable legacy services that rely on alternative technologies and business models are typically subject to less (or no) regulation, and therefore are able to operate with lower costs. These competitors generally can focus on discrete customer segments since they do not have regulatory obligations to provide universal service. Also, these competitors have cost advantages compared to us, due in part to operating on newer, more technically advanced and lower-cost networks and a nonunionized workforce, lower employee benefits and fewer retirees. We are transitioning services from our old copper-based network and seeking regulatory approvals, where needed, at both the state and federal levels. If we do not obtain regulatory approvals for our network transition or obtain approvals with onerous conditions, we could experience significant cost and competitive disadvantages.

We may not realize or sustain the expected benefits from our business transformation initiatives, and these efforts could have a materially adverse effect on our business, operations, financial condition, results of operations and competitive position.

We have been and will be undertaking certain transformation initiatives, which are designed to reduce costs, streamline distribution, remove redundancies and simplify and improve processes and support functions. Our focus is on supporting added customer value with an improved customer experience. We intend for these efficiencies to enable increased investments in our strategic areas of focus which consist of improving broadband connectivity (for example, fiber and 5G), developing software-based entertainment (such as HBO Max and AT&T TV) and utilizing WarnerMedia's storytelling legacy to engage consumers and gain insights across multiple distribution points. If we do not successfully manage and execute these initiatives, or if they are inadequate or ineffective, we may fail to meet our financial goals and achieve anticipated benefits, improvements may be delayed, not sustained or not realized and our business, operations and competitive position could be adversely affected.

If our efforts to attract and retain subscribers to our new HBO Max platform are not successful, our business will be adversely affected.

HBO Max's future success is subject to inherent uncertainty. Our ability to continue to attract subscribers to the HBO Max platform will depend in part on our ability to consistently provide subscribers with compelling content choices, as well as a quality experience for selecting and viewing those content choices. Furthermore, the relative service levels, content offerings, promotions, and pricing and related features of competitors to HBO Max may adversely impact our ability to attract and retain subscribers. If consumers do not perceive our offerings to be of value, including if we introduce new or adjust existing features, adjust pricing or offerings, terminate or modify promotional or trial period offerings, experience technical issues, or change the mix of content in a manner that is not favorably received by them, we may not be able to attract and retain subscribers. In addition, many subscribers to these types of offerings originate from word-of-mouth advertising from then existing subscribers. If our efforts to satisfy subscribers are not successful, including because we terminate or modify promotional or trial-period offerings or because of technical issues with the platform, we may not be able to attract or retain subscribers, and as a result, our ability to maintain and/or grow our business will be adversely affected.

If subscribers cancel or decide to not continue subscriptions for any reason, including a perception that they do not use it sufficiently, the need to cut household expenses, unsatisfactory availability of content, promotions or trial-period offers expire or are modified, competitive services or promotions provide a better value or experience, and customer service or technical issues are not satisfactorily resolved, our business will be adversely affected. We must continually add new subscribers both to replace canceled subscribers and to grow our business. If we do not grow as expected, given, in particular, that a significant portion of our content costs are committed and contracted over several years based on minimum subscriber delivery levels, we may not be able to adjust our expenditures or increase our (per subscriber) revenues commensurate with the lowered growth rate such that our margins, liquidity and results of operations may be adversely impacted. If we are unable to successfully compete with competitors in retaining and attracting new subscribers, our business will be adversely affected. Further, if excessive numbers of subscribers do cancel, we may be required to incur significantly higher marketing expenditures or offer significantly more generous promotions to replace these subscribers with new subscribers.

Unfavorable litigation or governmental investigation results could require us to pay significant amounts or lead to onerous operating procedures.

We are subject to a number of lawsuits both in the United States and in foreign countries, including, at any particular time, claims relating to antitrust; patent infringement; wage and hour; personal injury; customer privacy violations; regulatory proceedings; and selling and collection practices. We also spend substantial resources complying with various government standards, which may entail related investigations and litigation. In the wireless area, we also face current and potential litigation relating to alleged adverse health effects on customers or employees who use such technologies including, for example, wireless devices. We may incur significant expenses defending such suits or government charges and may be required to pay amounts or otherwise change our operations in ways that could materially adversely affect our operations or financial results.

Cyberattacks, equipment failures, natural disasters and terrorist acts may materially adversely affect our operations.

Cyberattacks, major equipment failures or natural disasters, such as flooding, hurricanes and forest fires, whether caused by discrete severe weather events and/or precipitated by long-term climate change and earthquakes, software problems, terrorist acts or other breaches of network or IT security that affect our networks, including software and switches, microwave links, third-party-owned local and long-distance networks on which we rely, our cell sites or other equipment, our satellites, our customer account support and information systems, or employee and business records could have a material adverse effect on our operations. Our wired network in particular is becoming increasingly reliant on software as it evolves to handle increasing demands for video transmission. While we have been subject to security incidents or cyberattacks, these did not result in a material adverse effect on our operations. However, as such attacks continue to increase in scope and frequency, we may be unable to prevent a significant attack in the future. Our ability to maintain and upgrade our video programming also depends on our ability to successfully deploy and operate video satellites. Our inability to deploy or operate our networks or customer support systems or protect sensitive personal information of customers or employees or valuable technical and marketing information could result in significant expenses, potential legal liability, a loss of current or future customers and reputation damage, any of which could have a material adverse effect on our operations and financial condition.

Increases in our debt levels to fund acquisitions, additional spectrum purchases, or other strategic decisions could adversely affect our ability to finance future debt at attractive rates and reduce our ability to respond to competition and adverse economic trends.

We have incurred debt to fund significant acquisitions, as well as spectrum purchases needed to compete in our industry. While we believe such decisions were prudent and necessary to take advantage of both growth opportunities and respond to industry developments, we did experience credit-rating downgrades from historical levels. Banks and potential purchasers of our publicly traded debt may decide that these strategic decisions and similar actions we may take in the future, as well as expected trends in the industry, will continue to increase the risk of investing in our debt and may demand a higher rate of interest, impose restrictive covenants or otherwise limit the amount of potential borrowing. Additionally, our capital allocation plan is focused on, among other things, managing our debt level going forward. Any failure to successfully execute this plan could adversely affect our cost of funds, liquidity, competitive position and access to capital markets.

Our business may be impacted by changes in tax laws and regulations, judicial interpretations of same or administrative actions by federal, state, local and foreign taxing authorities.

Tax laws are dynamic and subject to change as new laws are passed and new interpretations of the law are issued or applied. In many cases, the application of existing, newly enacted or amended tax laws (such as the U.S. Tax Cuts and Jobs Act of 2017) may be uncertain and subject to differing interpretations, especially when evaluated against ever changing products and services provided by our global telecommunications, media, and technology businesses. In addition, tax legislation has been introduced or is being considered in various jurisdictions that could significantly impact our tax rate, tax liabilities, carrying value of deferred tax assets or deferred tax liabilities. Any of these changes could materially impact our financial performance and our tax provision, net income and cash flows.

We are also subject to ongoing examinations by taxing authorities in various jurisdictions. Although we regularly assess the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of provisions for taxes, there can be no assurance as to the outcome of these examinations. In the event that we have not accurately or fully described, disclosed or determined, calculated or remitted amounts that were due to taxing authorities or if the ultimate determination of our taxes owed is for an amount in excess of amounts previously accrued, we could be subject to additional taxes, penalties and interest, which could materially impact our business, financial condition and operating results.

CAUTIONARY LANGUAGE CONCERNING FORWARD-LOOKING STATEMENTS

Information set forth in this report contains forward-looking statements that are subject to risks and uncertainties, and actual results could differ materially. Many of these factors are discussed in more detail in the "Risk Factors" section. We claim the protection of the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995.

The following factors could cause our future results to differ materially from those expressed in the forward-looking statements:

- The severity, magnitude and duration of the COVID-19 pandemic and containment, mitigation and other measures taken in response, including the potential impacts of these matters on our business and operations.
- Our inability to predict the extent to which the COVID-19 pandemic and related impacts will continue to impact our business operations, financial performance and results of operations.
- Adverse economic, political and/or capital access changes in the markets served by us or in countries in which we have significant investments and/or operations, including the impact on customer demand and our ability and our suppliers' ability to access financial markets at favorable rates and terms.
- Increases in our benefit plans' costs, including increases due to adverse changes in the United States and foreign securities markets, resulting in worse-than-assumed investment returns and discount rates; adverse changes in mortality assumptions; adverse medical cost trends; and unfavorable or delayed implementation or repeal of healthcare legislation, regulations or related court decisions.
- The final outcome of FCC and other federal, state or foreign government agency proceedings (including judicial review, if any, of such proceedings) and legislative efforts involving issues that are important to our business, including, without limitation, pending Notices of Apparent Liability; the transition from legacy technologies to IP-based infrastructure, including the withdrawal of legacy TDM-based services; universal service; broadband deployment; wireless equipment siting regulations and, in particular, siting for 5G service; E911 services; competition policy; privacy; net neutrality; multichannel video programming distributor services and equipment; content licensing and copyright protection; availability of new spectrum on fair and balanced terms; and wireless and satellite license awards and renewals.
- Enactment of additional state, local, federal and/or foreign regulatory and tax laws and regulations, or changes to existing standards and actions by tax agencies and judicial authorities including the resolution of disputes with any taxing jurisdictions, pertaining to our subsidiaries and foreign investments, including laws and regulations that reduce our incentive to invest in our networks, resulting in lower revenue growth and/or higher operating costs.
- Potential changes to the electromagnetic spectrum currently used for broadcast television and satellite distribution being considered by the FCC could negatively impact WarnerMedia's ability to deliver linear network feeds of its domestic cable networks to its affiliates, and in some cases, WarnerMedia's ability to produce high-value news and entertainment programming on location.
- U.S. and foreign laws and regulations, as well as possible private rights of action, regarding intellectual property rights protection and privacy, personal data protection and user consent are complex and rapidly evolving and could result in adverse impacts to our business plans, increased costs, or claims against us that may harm our reputation.
- The ability of our competitors to offer product/service offerings at lower prices due to lower cost structures and regulatory and legislative actions adverse to us, including non-regulation of comparable alternative technologies and/or government-owned or subsidized networks.
- Disruption in our supply chain for a number of reasons, including, difficulties in obtaining export licenses for certain technology, inability to secure component parts, general business disruption, natural disasters, safety issues, economic and political instability and public health emergencies.
- The continued development and delivery of attractive and profitable wireless, video and broadband offerings and devices, and, in particular, the success of our HBO Max platform; the extent to which regulatory and build-out requirements apply to our offerings; our ability to match speeds offered by our competitors and the availability, cost and/or reliability of the various technologies and/or content required to provide such offerings.
- Our ability to generate advertising revenue from attractive video content, especially from WarnerMedia, in the face of unpredictable and rapidly evolving public viewing habits and legal restrictions on the use of personal data.
- The availability and cost and our ability to adequately fund additional wireless spectrum and network upgrades; and regulations and conditions relating to spectrum use, licensing, obtaining additional spectrum, technical standards and deployment and usage, including network management rules.
- Our ability to manage growth in wireless data services, including network quality and acquisition of adequate spectrum at reasonable costs and terms.
- The outcome of pending, threatened or potential litigation (which includes arbitrations), including, without limitation, patent and product safety claims by or against third parties.
- The impact from major equipment or software failures on our networks, including satellites operated by DIRECTV; the effect of security breaches related to the network or customer information; our inability to obtain handsets, equipment/software or have handsets, equipment/software serviced in a timely and cost-effective manner from suppliers; and in the case of satellites launched, timely provisioning of services from vendors; or severe weather conditions including flooding and hurricanes, natural disasters including earthquakes and forest fires, pandemics, energy shortages, wars or terrorist attacks.
- The issuance by the Financial Accounting Standards Board or other accounting oversight bodies of new accounting standards or changes to existing standards.
- Our ability to successfully integrate our WarnerMedia operations, including the ability to manage various businesses in widely dispersed business locations and with decentralized management.
- Changes in our corporate strategies, such as changing network-related requirements or acquisitions and dispositions, which may require significant amounts of cash or stock, to respond to competition and regulatory, legislative and technological developments.
- The uncertainty surrounding further congressional action to address spending reductions, which may result in a significant decrease in government spending and reluctance of businesses and consumers to spend in general.

Readers are cautioned that other factors discussed in this report, although not enumerated here, also could materially affect our future earnings.

Consolidated Statements of Income

Dollars in millions except per share amounts

	2020	2019	2018
Operating Revenues			
Service	**$152,767**	$163,499	$152,345
Equipment	**18,993**	17,694	18,411
Total operating revenues	**171,760**	181,193	170,756
Operating Expenses			
Cost of revenues			
Equipment	**19,706**	18,653	19,786
Broadcast, programming and operations	**27,305**	31,132	26,727
Other cost of revenues (exclusive of depreciation and amortization shown separately below)	**32,909**	34,356	32,906
Selling, general and administrative	**38,039**	39,422	36,765
Asset impairments and abandonments	**18,880**	1,458	46
Depreciation and amortization	**28,516**	28,217	28,430
Total operating expenses	**165,355**	153,238	144,660
Operating Income	**6,405**	27,955	26,096
Other Income (Expense)			
Interest expense	**(7,925)**	(8,422)	(7,957)
Equity in net income (loss) of affiliates	**95**	6	(48)
Other income (expense) – net	**(1,431)**	(1,071)	6,782
Total other income (expense)	**(9,261)**	(9,487)	(1,223)
Income (Loss) Before Income Taxes	**(2,856)**	18,468	24,873
Income tax expense	**965**	3,493	4,920
Net Income (Loss)	**(3,821)**	14,975	19,953
Less: Net Income Attributable to Noncontrolling Interest	**(1,355)**	(1,072)	(583)
Net Income (Loss) Attributable to AT&T	**$ (5,176)**	$ 13,903	$ 19,370
Less: Preferred Stock Dividends	**(193)**	(3)	—
Net Income (Loss) Attributable to Common Stock	**$ (5,369)**	$ 13,900	$ 19,370
Basic Earnings Per Share Attributable to Common Stock	**$ (0.75)**	$ 1.90	$ 2.85
Diluted Earnings Per Share Attributable to Common Stock	**$ (0.75)**	$ 1.89	$ 2.85

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

Consolidated Statements of Comprehensive Income

Dollars in millions except per share amounts

	2020	2019	2018
Net income (loss)	**$(3,821)**	$14,975	$19,953
Other comprehensive income (loss), net of tax:			
Foreign Currency:			
Translation adjustment (includes $(59), $(9) and $(32) attributable to noncontrolling interest), net of taxes of $(42), $18 and $(45)	**(929)**	19	(1,062)
Securities:			
Net unrealized gains (losses), net of taxes of $27, $17 and $(1)	**78**	50	(4)
Reclassification adjustment included in net income, net of taxes of $(5), $0 and $0	**(15)**	—	—
Derivative Instruments:			
Net unrealized gains (losses), net of taxes of $(212), $(240) and $(156)	**(811)**	(900)	(597)
Reclassification adjustment included in net income, net of taxes of $18, $12 and $6	**69**	45	13
Defined benefit postretirement plans:			
Net prior service credit arising during period, net of taxes of $735, $1,134 and $271	**2,250**	3,457	830
Amortization of net prior service credit included in net income, net of taxes of $(601), $(475) and $(431)	**(1,841)**	(1,459)	(1,322)
Other comprehensive income (loss)	**(1,199)**	1,212	(2,142)
Total comprehensive income (loss)	**(5,020)**	16,187	17,811
Less: Total comprehensive income attributable to noncontrolling interest	**(1,296)**	(1,063)	(551)
Total Comprehensive Income (Loss) Attributable to AT&T	**$(6,316)**	$15,124	$17,260

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

Consolidated Balance Sheets

Dollars in millions except per share amounts

	December 31,	
	2020	2019
Assets		
Current Assets		
Cash and cash equivalents	**$ 9,740**	$ 12,130
Accounts receivable – net of related allowance for credit loss of $1,221 and $1,235	**20,215**	22,636
Prepaid expenses	**1,822**	1,631
Other current assets	**20,231**	18,364
Total current assets	**52,008**	54,761
Noncurrent Inventories and Theatrical Film and Television Production Costs	**14,752**	12,434
Property, Plant and Equipment – Net	**127,315**	130,128
Goodwill	**135,259**	146,241
Licenses – Net	**93,840**	97,907
Trademarks and Trade Names – Net	**23,297**	23,567
Distribution Networks – Net	**13,793**	15,345
Other Intangible Assets – Net	**15,386**	20,798
Investments in and Advances to Equity Affiliates	**1,780**	3,695
Operating Lease Right-Of-Use Assets	**24,714**	24,039
Other Assets	**23,617**	22,754
Total Assets	**$525,761**	$551,669
Liabilities and Stockholders' Equity		
Current Liabilities		
Debt maturing within one year	**$ 3,470**	$ 11,838
Accounts payable and accrued liabilities	**49,032**	45,956
Advanced billings and customer deposits	**6,176**	6,124
Accrued taxes	**1,019**	1,212
Dividends payable	**3,741**	3,781
Total current liabilities	**63,438**	68,911
Long-Term Debt	**153,775**	151,309
Deferred Credits and Other Noncurrent Liabilities		
Deferred income taxes	**60,472**	59,502
Postemployment benefit obligation	**18,276**	18,788
Operating lease liabilities	**22,202**	21,804
Other noncurrent liabilities	**28,358**	29,421
Total deferred credits and other noncurrent liabilities	**129,308**	129,515
Stockholders' Equity		
Preferred stock ($1 par value, 10,000,000 authorized):		
Series A (48,000 issued and outstanding at December 31, 2020 and December 31, 2019)	**—**	—
Series B (20,000 issued and outstanding at December 31, 2020 and 0 issued and outstanding at December 31, 2019)	**—**	—
Series C (70,000 issued and outstanding at December 31, 2020 and 0 issued and outstanding at December 31, 2019)	**—**	—
Common stock ($1 par value, 14,000,000,000 authorized at December 31, 2020 and December 31, 2019: issued 7,620,748,598 at December 31, 2020 and December 31, 2019)	**7,621**	7,621
Additional paid-in capital	**130,175**	126,279
Retained earnings	**37,457**	57,936
Treasury stock (494,826,583 at December 31, 2020 and 366,193,458 at December 31, 2019, at cost)	**(17,910)**	(13,085)
Accumulated other comprehensive income	**4,330**	5,470
Noncontrolling interest	**17,567**	17,713
Total stockholders' equity	**179,240**	201,934
Total Liabilities and Stockholders' Equity	**$525,761**	$551,669

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

Consolidated Statements of Cash Flows

Dollars in millions except per share amounts

	2020	2019	2018
Operating Activities			
Net income (loss)	**$ (3,821)**	$ 14,975	$ 19,953
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	**28,516**	28,217	28,430
Amortization of film and television costs	**8,603**	9,587	3,772
Undistributed earnings from investments in equity affiliates	**38**	295	292
Provision for uncollectible accounts	**1,972**	2,575	1,791
Deferred income tax expense	**1,675**	1,806	4,931
Net (gain) loss on investments, net of impairments	**(742)**	(1,218)	(739)
Pension and postretirement benefit expense (credit)	**(2,992)**	(2,002)	(1,148)
Actuarial (gain) loss on pension and postretirement benefits	**4,169**	5,171	(3,412)
Asset impairments and abandonments	**18,880**	1,458	46
Changes in operating assets and liabilities:			
Receivables	**2,216**	2,812	(1,580)
Other current assets, inventories and theatrical film and television production costs	**(13,070)**	(12,852)	(6,442)
Accounts payable and other accrued liabilities	**(1,410)**	(1,524)	1,602
Equipment installment receivables and related sales	**(1,429)**	548	(490)
Deferred customer contract acquisition and fulfillment costs	**376**	(910)	(3,458)
Postretirement claims and contributions	**(985)**	(1,008)	(936)
Other – net	**1,134**	738	990
Total adjustments	**46,951**	33,693	23,649
Net Cash Provided by Operating Activities	**43,130**	48,668	43,602
Investing Activities			
Capital expenditures, including $(123), $(200) and $(493) of interest during construction	**(15,675)**	(19,635)	(21,251)
Acquisitions, net of cash acquired	**(1,851)**	(1,809)	(43,309)
Dispositions	**3,641**	4,684	2,148
(Purchases), sales and settlement of securities and investments, net	**497**	435	(183)
Advances to and investments in equity affiliates, net	**(160)**	(365)	(1,050)
Cash collections of deferred purchase price	**—**	—	500
Net Cash Used in Investing Activities	**(13,548)**	(16,690)	(63,145)
Financing Activities			
Net change in short-term borrowings with original maturities of three months or less	**(17)**	(276)	(821)
Issuance of other short-term borrowings	**9,440**	4,012	4,898
Repayment of other short-term borrowings	**(9,467)**	(6,904)	(2,098)
Issuance of long-term debt	**31,988**	17,039	41,875
Repayment of long-term debt	**(39,964)**	(27,592)	(52,643)
Payment of vendor financing	**(2,966)**	(3,050)	(560)
Issuance of preferred stock	**3,869**	1,164	—
Purchase of treasury stock	**(5,498)**	(2,417)	(609)
Issuance of treasury stock	**105**	631	745
Issuance of preferred interests in subsidiaries	**1,979**	7,876	—
Redemption of preferred interest in subsidiary	**(1,950)**	—	—
Dividends paid	**(14,956)**	(14,888)	(13,410)
Other – net	**(4,570)**	(678)	(3,366)
Net Cash Used in Financing Activities	**(32,007)**	(25,083)	(25,989)
Net (decrease) increase in cash and cash equivalents and restricted cash	**(2,425)**	6,895	(45,532)
Cash and cash equivalents and restricted cash beginning of year	**12,295**	5,400	50,932
Cash and Cash Equivalents and Restricted Cash End of Year	**$ 9,870**	$ 12,295	$ 5,400

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

Consolidated Statements of Changes in Stockholders' Equity

Dollars and shares in millions except per share amounts

	2020		2019		2018	
	Shares	**Amount**	Shares	Amount	Shares	Amount
Preferred Stock – Series A						
Balance at beginning of year	**—**	**$ —**	—	$ —	—	$ —
Issuance of stock	**—**	**—**	—	—	—	—
Balance at end of year	**—**	**$ —**	—	$ —	—	$ —
Preferred Stock – Series B						
Balance at beginning of year	**—**	**$ —**	—	$ —	—	$ —
Issuance of stock	**—**	**—**	—	—	—	—
Balance at end of year	**—**	**$ —**	—	$ —	—	$ —
Preferred Stock – Series C						
Balance at beginning of year	**—**	**$ —**	—	$ —	—	$ —
Issuance of stock	**—**	**—**	—	—	—	—
Balance at end of year	**—**	**$ —**	—	$ —	—	$ —
Common Stock						
Balance at beginning of year	**7,621**	**$ 7,621**	7,621	$ 7,621	6,495	$ 6,495
Issuance of stock	**—**	**—**	—	—	1,126	1,126
Balance at end of year	**7,621**	**$ 7,621**	7,621	$ 7,621	7,621	$ 7,621
Additional Paid-In Capital						
Balance at beginning of year		**$126,279**		$125,525		$ 89,563
Repurchase and acquisition of common stock		**67**		—		—
Issuance of preferred stock		**3,869**		1,164		—
Issuance of common stock		**—**		—		35,473
Issuance of treasury stock		**(62)**		(125)		(115)
Share-based payments		**18**		(271)		604
Changes related to acquisition of interests held by noncontrolling owners		**4**		(14)		—
Balance at end of year		**$130,175**		$126,279		$125,525
Retained Earnings						
Balance at beginning of year		**$ 57,936**		$ 58,753		$ 50,500
Cumulative effect of accounting changes and other adjustments		**(293)**		316		3,000
Adjusted beginning balance		**57,643**		59,069		53,500
Net income (loss) attributable to AT&T		**(5,176)**		13,903		19,370
Preferred stock dividends		**(139)**		(8)		—
Common stock dividends ($2.08, $2.05, and $2.01 per share)		**(14,871)**		(15,028)		(14,117)
Balance at end of year		**$ 37,457**		$ 57,936		$ 58,753

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

Consolidated Statements of Changes in Stockholders' Equity – continued

Dollars and shares in millions except per share amounts

	2020		2019		2018	
	Shares	**Amount**	Shares	Amount	Shares	Amount
Treasury Stock						
Balance at beginning of year	**(366)**	**$ (13,085)**	(339)	$ (12,059)	(356)	$ (12,714)
Repurchase and acquisition of common stock	**(150)**	**(5,631)**	(67)	(2,492)	(20)	(692)
Issuance of treasury stock	**21**	**806**	40	1,466	37	1,347
Balance at end of year	**(495)**	**$ (17,910)**	(366)	$ (13,085)	(339)	$ (12,059)
Accumulated Other Comprehensive Income Attributable to AT&T, net of tax:						
Balance at beginning of year		**$ 5,470**		$ 4,249		$ 7,017
Cumulative effect of accounting changes and other adjustments		**—**		—		(658)
Adjusted beginning balance		**5,470**		4,249		6,359
Other comprehensive income (loss) attributable to AT&T		**(1,140)**		1,221		(2,110)
Balance at end of year		**$ 4,330**		$ 5,470		$ 4,249
Noncontrolling Interest:						
Balance at beginning of year		**$ 17,713**		$ 9,795		$ 1,146
Cumulative effect of accounting changes and other adjustments		**(7)**		29		35
Adjusted beginning balance		**17,706**		9,824		1,181
Net income attributable to noncontrolling interest		**1,355**		1,072		583
Issuance and acquisition of noncontrolling owners		**1,979**		7,881		8,804
Redemption of noncontrolling interest		**(1,950)**		—		—
Distributions		**(1,464)**		(1,055)		(732)
Acquisition of interests held by noncontrolling owners		**—**		—		(9)
Translation adjustments attributable to noncontrolling interest, net of taxes		**(59)**		(9)		(32)
Balance at end of year		**$ 17,567**		$ 17,713		$ 9,795
Total Stockholders' Equity at beginning of year		**$201,934**		$193,884		$142,007
Total Stockholders' Equity at end of year		**$179,240**		$201,934		$193,884

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

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation Throughout this document, AT&T Inc. is referred to as "AT&T," "we" or the "Company." The consolidated financial statements include the accounts of the Company and subsidiaries and affiliates which we control, including the results of Time Warner Inc. (referred to as "Time Warner" or "WarnerMedia"), which was acquired on June 14, 2018 (see Note 6). AT&T is a holding company whose subsidiaries and affiliates operate worldwide in the telecommunications, media and technology industries.

All significant intercompany transactions are eliminated in the consolidation process. Investments in subsidiaries and partnerships which we do not control but have significant influence are accounted for under the equity method. Earnings from certain investments accounted for using the equity method are included for periods ended within up to one quarter of our period end. We also record our proportionate share of our equity method investees' other comprehensive income (OCI) items, including translation adjustments. We treat distributions received from equity method investees as returns on investment and classify them as cash flows from operating activities until those distributions exceed our cumulative equity in the earnings of that investment. We treat the excess amount as a return of investment and classify it as cash flows from investing activities.

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates and assumptions, including potential impacts arising from the COVID-19 pandemic and other estimates of probable losses and expenses, that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. Certain prior-period amounts have been conformed to the current period's presentation. See Note 4 for a discussion on the recast of our segment results and Note 9 for a discussion of the separation of our former Entertainment Group into two reporting units, Video and Broadband.

Accounting Policies and Adopted Accounting Standards

Credit Losses As of January 1, 2020, we adopted, through modified retrospective application, the Financial Accounting Standards Board's (FASB) Accounting Standards Update (ASU) No. 2016-13, "Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," or Accounting Standards Codification (ASC) 326 (ASC 326), which replaces the incurred loss impairment methodology under prior GAAP with an expected credit loss model. ASC 326 affects trade receivables, loans, contract assets, certain beneficial interests, off-balance-sheet credit exposures not accounted for as insurance and other financial assets that are not subject to fair value through net income, as defined by the standard. Under the expected credit loss model, we are required to consider future economic trends to estimate expected credit losses over the lifetime of the asset. Upon adoption on January 1, 2020, we recorded a $293 reduction to "Retained earnings," $395 increase to "Allowances for credit losses" applicable to our trade and loan receivables, $10 reduction of contract assets, $105 reduction of net deferred income tax liability and $7 reduction of "Noncontrolling interest." Our adoption of ASC 326 did not have a material impact on our financial statements.

Leases As of January 1, 2019, we adopted, with modified retrospective application, the FASB's ASU No. 2016-02, "Leases (Topic 842)" (ASC 842), which replaces existing leasing rules with a comprehensive lease measurement and recognition standard and expanded disclosure requirements (see Note 8). ASC 842 requires lessees to recognize most leases on their balance sheets as liabilities, with corresponding "right-of-use" assets. For income statement recognition purposes, leases are classified as either a finance or an operating lease without relying upon bright-line tests.

The key change upon adoption of the standard was balance sheet recognition of operating leases, given that the recognition of lease expense on our income statement is similar to our historical accounting. Using the modified retrospective transition method of adoption, we did not adjust the balance sheet for comparative periods but recorded a cumulative effect adjustment to retained earnings on January 1, 2019. We elected the package of practical expedients permitted under the transition guidance within the new standard, which, among other things, allowed us to carry forward our historical lease classification. We also elected the practical expedient related to land easements, allowing us to carry forward our accounting treatment for land easements on existing agreements that were not accounted for as leases. We excluded leases with original terms of one year or less. Additionally, we elected to not separate lease and non-lease components for certain classes of assets. Our accounting for finance leases did not change from our prior accounting for capital leases.

The adoption of ASC 842 resulted in the recognition of an operating lease liability of $22,121 and an operating right-of-use asset of the same amount. Existing prepaid and deferred rent accruals were recorded as an offset to the right-of-use asset, resulting in a net asset of $20,960. The cumulative effect of the adoption to retained earnings was an increase of $316 reflecting the reclassification of deferred gains related to sale/leaseback transactions. The standard did not materially impact our income statements or statements of cash flows, and had no impact on our debt-covenant compliance under our current agreements.

Deferral of Episodic Television and Film Costs In March 2019, the FASB issued ASU No. 2019-02, "Entertainment—Films—Other Assets—Film Costs (Subtopic 926-20) and Entertainment—Broadcasters—Intangibles—Goodwill and Other (Subtopic 920-350): Improvements to Accounting for Costs of Films and License Agreements for Program Materials" (ASU 2019-02), which we early adopted as of January 1, 2019, with prospective application. The standard eliminates certain revenue-related constraints on capitalization of inventory costs for episodic television that existed under prior guidance. In addition, the balance sheet classification requirements that existed in prior guidance for film production costs and programming inventory were eliminated. As of January 1, 2019, we reclassified $2,274 of our programming inventory costs from "Other current assets" to "Other Assets" in accordance with the guidance (see Note 11). This change in accounting did not materially impact our income statement.

Revenue Recognition As of January 1, 2018, we adopted ASU No. 2014-09, "Revenue from Contracts with Customers (Topic 606)," as modified (ASC 606), using the modified retrospective method, which does not allow us to adjust prior periods. We applied the rules to all open contracts existing as of January 1, 2018, recording an increase of $2,342 to retained earnings for the cumulative effect of the change, with an offsetting contract asset of $1,737, deferred contract acquisition costs of $1,454, other asset reductions of $239, other liability reductions of $212, deferred income tax liability of $787 and increase to noncontrolling interest of $35. (See Note 5)

Financial Instruments As of January 1, 2018, we adopted ASU No. 2016-01, "Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities" (ASU 2016-01), which requires us to prospectively record changes in the fair value of our equity investments, except for those accounted for under the equity method, in net income instead of in accumulated other comprehensive income (accumulated OCI). As of January 1, 2018, we recorded an increase of $658 in retained earnings for the cumulative effect of the adoption of ASU 2016-01, with an offset to accumulated OCI.

Income Taxes We record deferred income taxes for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the computed tax basis of those assets and liabilities. We record valuation allowances against the deferred tax assets (included, together with our deferred income tax assets, as part of our reportable net deferred income tax liabilities on our consolidated balance sheets), for which the realization is uncertain. We review these items regularly in light of changes in federal and state tax laws and changes in our business.

The Tax Cuts and Jobs Act (the Act), which was enacted on December 22, 2017, reduced the U.S. federal corporate income tax rate from 35% to 21% and required companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred. We included the estimated impact of the Act in our financial results at or for the period ended December 31, 2017, with additional adjustments recorded in 2018, as allowed by the Securities and Exchange Commission (SEC) in Staff Accounting Bulletin (SAB) 118. (See Note 14)

Cash and Cash Equivalents Cash and cash equivalents include all highly liquid investments with original maturities of three months or less. The carrying amounts approximate fair value. At December 31, 2020, we held $2,842 in cash and $6,898 in money market funds and other cash equivalents. Of our total cash and cash equivalents, $2,205 resided in foreign jurisdictions, some of which is subject to restrictions on repatriation.

Allowance for Credit Losses We record expense to maintain an allowance for credit losses for estimated losses that result from the failure or inability of our customers to make required payments deemed collectible from the customer when the service was provided or product was delivered. When determining the allowances for trade receivables and loans, we consider the probability of recoverability of accounts receivable based on past experience, taking into account current collection trends and general economic factors, including bankruptcy rates. We also consider future economic trends to estimate expected credit losses over the lifetime of the asset. Credit risks are assessed based on historical write-offs, net of recoveries, as well as an analysis of the aged accounts receivable balances with allowances generally increasing as the receivable ages. Accounts receivable may be fully reserved for when specific collection issues are known to exist, such as catastrophes or pending bankruptcies.

Equipment Inventory Equipment inventories, which primarily consist of wireless devices and accessories, are included in "Other current assets" on our consolidated balance sheets. Equipment inventories are valued at the lower of cost or net realizable value and were $3,592 at December 31, 2020 and $2,864 at December 31, 2019.

Licensed Programming Inventory Cost Recognition and Impairment We enter into agreements to license programming exhibition rights from licensors. A programming inventory asset related to these rights and a corresponding liability payable to the licensor are recorded (on a discounted basis if the license agreements are long-term) when (i) the cost of the programming is reasonably determined, (ii) the programming material has been accepted in accordance with the terms of the agreement, (iii) the programming is available for its first showing or telecast, and (iv) the license period has commenced. There are variations in the amortization methods of these rights, depending on whether the network is advertising-supported (e.g., TNT and TBS) or not advertising-supported (e.g., HBO and Turner Classic Movies).

For the advertising-supported networks, our general policy is to amortize each program's costs on a straight-line basis (or per-play basis, if greater) over its license period. In circumstances where the initial airing of the program has more value than subsequent airings, an accelerated method of amortization is used. The accelerated amortization upon the first airing versus subsequent airings is determined based on a study of historical and estimated future advertising sales for similar programming. For rights fees paid for sports programming arrangements, such rights fees are amortized using a revenue-forecast model, in which the rights fees are amortized using the ratio of current period advertising revenue to total estimated remaining advertising revenue over the term of the arrangement.

For premium pay television, streaming and over-the-top (OTT) services that are not advertising-supported, each licensed program's costs are amortized on a straight-line basis over its license period or estimated period of use, beginning with the month of initial exhibition. When we have the right to exhibit feature theatrical programming in multiple windows over a number of years, historical audience viewership is used as the basis for determining the amount of programming amortization attributable to each window.

Licensed programming inventory is carried at the lower of unamortized cost or fair value. For networks that generate both advertising and subscription revenues, the net realizable value of unamortized programming costs is generally evaluated based on the network's programming taken as a whole. In assessing whether the programming inventory for a particular advertising-supported network is impaired, the net realizable value for all of the network's programming inventory is determined based on a projection of the network's profitability. This assessment would occur upon the occurrence of certain triggering events. Similarly, for premium pay television, streaming and OTT services that are not advertising-supported, an evaluation of the fair value of unamortized programming costs is performed based on services' licensed programming taken as a whole. Specifically, the fair value for all premium pay television, streaming and OTT service licensed programming is determined based on projections of estimated subscription revenues less certain costs of delivering and distributing the licensed programming. Changes in management's intended usage of a specific program, such as a decision to no longer exhibit that program and forgo the use of the rights associated with the program license, results in a reassessment of that program's fair value, which could result in an impairment (see Note 11).

Film and Television Production Cost Recognition, Participations and Residuals and Impairments Film and television production costs on our consolidated balance sheets include the unamortized cost of completed theatrical films and television episodes, theatrical films and television series in production and undeveloped film and television rights. Film and television production costs are stated at the lower of cost, less accumulated amortization, or fair value. For films and television programs predominantly monetized individually, the amount of capitalized film and television production costs and the amount of participations and residuals to be recognized as broadcast, programming and operations expenses for a given film or television series in a particular period are determined using the film forecast computation method. Under this method, the amortization of capitalized costs and the accrual of participations and residuals are based on the proportion of the film's (or television program's) revenues recognized for such period to the film's (or television program's) estimated remaining ultimate revenues (i.e., the total revenue to be received throughout a film's (or television program's) life cycle).

The process of estimating a film's ultimate revenues requires us to make a series of judgments related to future revenue-generating activities associated with a particular film. We estimate the ultimate revenues, less additional costs to be incurred (including exploitation and participation costs), in order to determine whether the value of a film or television series is impaired and requires an immediate write-off of unrecoverable film and television production costs. To the extent that the ultimate revenues are adjusted, the resulting gross margin reported on the exploitation of that film or television series in a period is also adjusted. (See Note 11)

Prior to the theatrical release of a film, our estimates are based on factors such as the historical performance of similar films, the star power of the lead actors, the rating and genre of the film, pre-release market research (including test market screenings), international distribution plans and the expected number of theaters in which the film will be released. In the absence of revenues directly related to the exhibition of owned film or television programs on our television networks, premium pay television, streaming or OTT services, we estimate a portion of the unamortized costs that are representative of the utilization of that film or television program in that exhibition and expense such costs as the film or television program is exhibited. The period over which ultimate revenues are estimated generally does not exceed ten years from the initial release of a motion picture or from the date of delivery of the first episode of an episodic television series. Estimates were updated based on information available during the film's production and, upon release, the actual results of each film.

For a film (or television program) predominantly monetized as part of a film (or television program) group, the amount of capitalized film and television production costs is amortized using a reasonably reliable estimate of the portion of unamortized film costs that is representative of the use of the film. Production costs are expensed as the film (or television program) is exhibited or exploited.

Property, Plant and Equipment Property, plant and equipment is stated at cost, except for assets acquired using acquisition accounting, which are initially recorded at fair value (see Note 7). The cost of additions and substantial improvements to property, plant and equipment is capitalized, and includes internal compensation costs for these projects. The cost of maintenance and repairs of property, plant and equipment is charged to operating expenses. Property, plant and equipment costs are depreciated using straight-line methods over their estimated economic lives. Certain subsidiaries follow composite group depreciation methodology. Accordingly, when a portion of their depreciable property, plant and equipment is retired in the ordinary course of business, the gross book value is reclassified to accumulated depreciation, and no gain or loss is recognized on the disposition of these assets.

Property, plant and equipment is reviewed for recoverability whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. We recognize an impairment loss when the carrying amount of a long-lived asset is not recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. See Note 7 for a discussion of an impairment of long-lived assets of the video business and other network asset abandonments.

The liability for the fair value of an asset retirement obligation is recorded in the period in which it is incurred if a reasonable estimate of fair value can be made. In periods subsequent to initial measurement, we recognize period-to-period changes in the liability resulting from the passage of time and revisions to either the timing or the amount of the original estimate. The increase in the carrying value of the associated long-lived asset is depreciated over the corresponding estimated economic life.

Software Costs We capitalize certain costs incurred in connection with developing or obtaining internal-use software. Capitalized software costs are included in "Property, Plant and Equipment – Net" on our consolidated balance sheets. In addition, there is certain network software that allows the equipment to provide the features and functions unique to the AT&T network, which we include in the cost of the equipment categories for financial reporting purposes.

We amortize our capitalized software costs over a three-year to seven-year period, reflecting the estimated period during which these assets will remain in service.

Goodwill and Other Intangible Assets We have the following major classes of intangible assets: goodwill; licenses, which include Federal Communications Commission (FCC) and other wireless licenses and orbital slots; distribution networks; film and television libraries; intellectual properties and franchises; trademarks and trade names; customer lists; and various other finite-lived intangible assets (see Note 9).

Goodwill represents the excess of consideration paid over the fair value of identifiable net assets acquired in business combinations. Wireless licenses provide us with the exclusive right to utilize certain radio frequency spectrum to provide wireless communications services. While wireless licenses are issued for a fixed period of time (generally ten years), renewals of domestic wireless licenses have occurred routinely and at nominal cost. We have determined that there are currently no legal, regulatory, contractual, competitive, economic or other factors that limit the useful lives of our FCC wireless licenses.

During 2019, in conjunction with the renewal process of certain wireless licenses in Mexico, we reassessed the estimated economic lives and renewal assumptions for these licenses. As a result, we have changed the life of these licenses from indefinite to finite-lived. On January 1, 2019, we began amortizing our wireless licenses in Mexico over their average remaining economic life of 25 years. This change in accounting does not materially impact our income statement.

During the first quarter of 2020, in conjunction with the nationwide launch of AT&T TV and our customers' continued shift from linear to streaming video services, we reassessed the estimated economic lives and renewal assumptions for our orbital slot licenses. As a result, we have changed the estimated lives of our orbital slot licenses from indefinite to finite-lived, effective January 1, 2020, and began amortizing these licenses using the sum-of-months-digits method over their average remaining economic life of 15 years at January 1, 2020. This change in accounting increased amortization expense $1,504, or $0.16 per diluted share available to common stock for 2020.

We acquired the rights to the AT&T and other trade names in previous acquisitions, classifying certain of those trade names as indefinite-lived. We have the effective ability to retain these exclusive rights permanently at a nominal cost. During the first quarter of 2020, we reassessed and changed the estimated economic lives of certain trade names in our Latin America business from indefinite to finite-lived and began amortizing them using the straight-line method over their average remaining economic life of 15 years. This change had an insignificant impact on our financial statements.

Goodwill, FCC wireless licenses and other indefinite-lived intangible assets are not amortized but are tested at least annually for impairment. The testing is performed on the value as of October 1 each year, and compares the book values of the assets to their fair values. Goodwill is tested by comparing the carrying amount of each reporting unit, deemed to be our principal operating segments or one level below them, to the fair value using both discounted cash flow as well as market multiple approaches. FCC wireless licenses are tested on an aggregate basis, consistent with our use of the licenses on a national scope, using a discounted cash flow approach. Prior to 2020, orbital slots were similarly aggregated for purposes of impairment testing and valued using a discounted cash flow approach. Trade names are tested by comparing their book values to their fair values calculated using a discounted cash flow approach on a presumed royalty rate derived from the revenues related to each brand name.

Intangible assets that have finite useful lives are amortized over their estimated useful lives (see Note 9). As of January 1, 2020, on a prospective basis, orbital slots are amortized using the sum-of-the-months-digits method of amortization over their average remaining economic life. Customer lists and relationships are amortized using primarily the sum-of-the-months-digits method of amortization over the period in which those relationships are expected to contribute to our future cash flows. Finite-lived trademarks and trade names and distribution networks are amortized using the straight-line method over the estimated useful life of the assets. Film library is amortized using the film forecast computation method, as previously disclosed. The remaining finite-lived intangible assets are generally amortized using the straight-line method. These assets, along with other long-lived assets, are reviewed for recoverability whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable.

Advertising Costs We expense advertising costs for products and services or for promoting our corporate image as incurred (see Note 22).

Foreign Currency Translation Our foreign subsidiaries and foreign investments generally report their earnings in their local currencies. We translate their foreign assets and liabilities at exchange rates in effect at the balance sheet dates. We translate their revenues and expenses using average rates during the year. The resulting foreign currency translation adjustments are recorded as a separate component of accumulated OCI in our consolidated balance sheets (see Note 3). Operations in countries with highly inflationary economies use the U.S. dollar as the functional currency.

We hedge a portion of the foreign currency exchange risk involved in certain foreign currency-denominated transactions, which we explain further in our discussion of our methods of managing our foreign currency risk (see Note 13).

Pension and Other Postretirement Benefits See Note 15 for a comprehensive discussion of our pension and postretirement benefits, including a discussion of the actuarial assumptions, our policy for recognizing the associated gains and losses and our method used to estimate service and interest cost components.

New Accounting Standards

Income Taxes In December 2019, the FASB issued ASU No. 2019-12, "Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes" (ASU 2019-12), which is expected to simplify income tax accounting requirements in areas deemed costly and complex. The amendments under ASU 2019-12 will be effective as of January 1, 2021, and interim periods within that year, with early adoption permitted in its entirety as of the beginning of the year of adoption. At adoption, the guidance allows for modified retrospective application through a cumulative effect adjustment to retained earnings. We do not expect ASU 2019-12 to have a material impact on our financial statements.

Reference Rate Reform In March 2020, the FASB issued ASU No. 2020-04, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting" (ASU 2020-04, as amended), which provides optional expedients, and allows for certain exceptions to existing GAAP, for contract modifications triggered by the expected market transition of certain benchmark interest rates to alternative reference rates. ASU 2020-04 applies to contracts, hedging relationships, certain derivatives and other arrangements that reference the London Interbank Offering Rate (LIBOR) or any other rates ending after December 31, 2022. ASU 2020-04 became effective immediately. We are evaluating the impact of our adoption of ASU 2020-04, including optional expedients, to our financial statements.

Convertible Instruments In August 2020, the FASB issued ASU No. 2020-06, "Debt—Debt With Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity" (ASU 2020-06), which eliminated certain separation models regarding cash conversion and beneficial conversion features to simplify reporting for convertible instruments as a single liability or equity, with no separate accounting for embedded conversion features. ASU 2020-06 will be effective for fiscal years beginning after December 31, 2021, under modified retrospective or full retrospective application, subject to early adoption in 2021. We are evaluating the impact of our adoption of ASU 2020-06 on our financial statements.

NOTE 2. EARNINGS PER SHARE

A reconciliation of the numerators and denominators of basic and diluted earnings per share is shown in the table below:

Year Ended December 31,	**2020**	2019	2018
Numerators			
Numerator for basic earnings per share:			
Net Income (Loss)	**$(3,821)**	$14,975	$19,953
Less: Net Income Attributable to Noncontrolling Interest	**(1,355)**	(1,072)	(583)
Net Income (Loss) Attributable to AT&T	**(5,176)**	13,903	19,370
Less: Preferred Stock Dividends	**(193)**	(3)	—
Net Income (Loss) Attributable to Common Stock	**(5,369)**	13,900	19,370
Dilutive potential common shares:			
Share-based payment[1]	**23**	21	19
Numerator for diluted earnings per share	**$(5,346)**	$13,921	$19,389
Denominators (000,000)			
Denominator for basic earnings per share:			
Weighted average number of common shares outstanding	**7,157**	7,319	6,778
Dilutive potential common shares:			
Share-based payment (in shares)[1]	**26**	29	28
Denominator for diluted earnings per share	**7,183**	7,348	6,806
Basic Earnings Per Share Attributable to Common Stock	**$ (0.75)**	$ 1.90	$ 2.85
Diluted Earnings Per Share Attributable to Common Stock[1]	**$ (0.75)**	$ 1.89	$ 2.85

[1] For 2020, dilutive potential common shares are not included in the computation of diluted earnings per share because their effect is antidilutive as a result of the net loss.

In the first quarter of 2020, we completed an accelerated share repurchase agreement with a third-party financial institution to repurchase AT&T common stock (see Note 17). Under the terms of the agreement, we paid the financial institution $4,000 and received 104.8 million shares.

Dollars in millions except per share amounts

NOTE 3. OTHER COMPREHENSIVE INCOME

Changes in the balances of each component included in accumulated OCI are presented below. All amounts are net of tax and exclude noncontrolling interest.

	Foreign Currency Translation Adjustment	Net Unrealized Gains (Losses) on Available-for-Sale Securities	Net Unrealized Gains (Losses) on Cash Flow Hedges	Defined Benefit Postretirement Plans	Accumulated Other Comprehensive Income
Balance as of December 31, 2017	$ (2,054)	$ 660	$1,402	$ 7,009	$ 7,017
Other comprehensive income (loss) before reclassifications	(1,030)	(4)	(597)	830	(801)
Amounts reclassified from accumulated OCI	—[1]	—[1]	13[2]	(1,322)[3]	(1,309)
Net other comprehensive income (loss)	(1,030)	(4)	(584)	(492)	(2,110)
Amounts reclassified to retained earnings[4]	—	(658)	—	—	(658)
Balance as of December 31, 2018	(3,084)	(2)	818	6,517	4,249
Other comprehensive income (loss) before reclassifications	28	50	(900)	3,457	2,635
Amounts reclassified from accumulated OCI	—[1]	—[1]	45[2]	(1,459)[3]	(1,414)
Net other comprehensive income (loss)	28	50	(855)	1,998	1,221
Balance as of December 31, 2019	(3,056)	48	(37)	8,515	5,470
Other comprehensive income (loss) before reclassifications	(870)	78	(811)	2,250	647
Amounts reclassified from accumulated OCI	—[1]	(15)[1]	69[2]	(1,841)[3]	(1,787)
Net other comprehensive income (loss)	(870)	63	(742)	409	(1,140)
Balance as of December 31, 2020	**$(3,926)**	**$ 111**	**$ (779)**	**$8,924**	**$4,330**

[1] (Gains) losses are included in "Other income (expense) – net" in the consolidated statements of income.
[2] (Gains) losses are included in "Interest expense" in the consolidated statements of income (see Note 13).
[3] The amortization of prior service credits associated with postretirement benefits is included in "Other income (expense) – net" in the consolidated statements of income (see Note 15).
[4] With the adoption of ASU 2016-01, the unrealized (gains) losses on our equity investments are reclassified to retained earnings (see Note 1).

NOTE 4. SEGMENT INFORMATION

Our segments are comprised of strategic business units that offer products and services to different customer segments over various technology platforms and/or in different geographies that are managed accordingly. We analyze our segments based on segment operating contribution, which consists of operating income, excluding acquisition-related costs and other significant items (as discussed below), and equity in net income (loss) of affiliates for investments managed within each segment. We have three reportable segments: (1) Communications, (2) WarnerMedia and (3) Latin America.

We have recast our segment results for all prior periods to include our prior Xandr segment within our WarnerMedia segment and to remove the Crunchyroll anime business that is classified as held-for-sale and removed from the WarnerMedia segment, instead including it in Corporate and Other.

We also evaluate segment and business unit performance based on EBITDA and/or EBITDA margin. EBITDA is defined as operating contribution excluding equity in net income (loss) of affiliates and depreciation and amortization. We believe EBITDA to be a relevant and useful measurement to our investors as it is part of our internal management reporting and planning processes and it is an important metric that management uses to evaluate operating performance. EBITDA does not give effect to depreciation and amortization expenses incurred in operating contribution nor is it burdened by cash used for debt service requirements and thus does not reflect available funds for distributions, reinvestment or other discretionary uses. EBITDA margin is EBITDA divided by total revenues.

The ***Communications segment*** provides wireless and wireline telecom, video and broadband services to consumers located in the U.S. and businesses globally. Our business strategies reflect bundled product offerings that cut across product lines and utilize shared assets. In December 2020, we changed our management strategy and reevaluated our domestic video business, allowing us to maximize value in our domestic video business and further accelerate our ability to innovate and execute in our fast-growing broadband and fiber business. In conjunction with the strategy change, we separated the former Entertainment Group into two business units, Video and Broadband, which includes legacy telephony operations. We have recast our results for all prior periods to split the Entertainment Group into two separate business units, Video and Broadband, and removed video operations from Business Wireline, combining all video operations in the Video business unit. This segment contains the following business units:

- **Mobility** provides nationwide wireless service and equipment.
- **Video** provides video, including over-the-top (OTT) services and also sells multiplatform advertising services as video revenues.
- **Broadband** provides internet, including broadband fiber, and legacy telephony voice communication services to residential customers.
- **Business Wireline** provides advanced IP-based services, as well as traditional voice and data services to business customers.

The ***WarnerMedia segment*** develops, produces and distributes feature films, television, gaming and other content in various physical and digital formats globally. Historical financial results of Eliminations & Other included in the WarnerMedia segment have been recast to include Xandr, previously a separate reportable segment, and to remove the Crunchyroll anime business that was classified as held-for-sale. This segment contains the following:

- **Turner** primarily operates multichannel basic television networks and digital properties. Turner also sells advertising on its networks and digital properties.
- **Home Box Office** consists of premium pay television and HBO Max domestically and premium pay, basic tier television internationally, and content licensing and home entertainment.
- **Warner Bros.** primarily consists of the production, distribution and licensing of television programming and feature films, the distribution of home entertainment products and the production and distribution of games.
- **Eliminations & Other** includes the Xandr advertising business, and also removes transactions between the Turner, Home Box Office and Warner Bros. business units, including internal sales of content to the HBO Max platform that began in the fourth quarter of 2019 (see Note 5).

The ***Latin America segment*** provides entertainment and wireless services outside of the U.S. This segment contains the following business units:

- **Vrio** provides video services primarily to residential customers using satellite technology in Latin America and the Caribbean.
- **Mexico** provides wireless service and equipment to customers in Mexico.

Corporate and Other reconciles our segment results to consolidated operating income and income before income taxes, and includes:

- *Corporate,* which consists of: (1) businesses no longer integral to our operations or which we no longer actively market, (2) corporate support functions, (3) impacts of corporate-wide decisions for which the individual operating segments are not being evaluated, and (4) the reclassification of the amortization of prior service credits, which we continue to report with segment operating expenses, to consolidated "Other income (expense) – net."
- *Acquisition-related items,* which consists of items associated with the merger and integration of acquired businesses, including amortization of intangible assets.
- *Certain significant items,* which includes (1) employee separation charges associated with voluntary and/or strategic offers, (2) losses resulting from asset impairments and abandonments, and (3) other items for which the segments are not being evaluated.
- *Eliminations and consolidations,* which (1) removes transactions involving dealings between our segments, including channel distribution between WarnerMedia and Communications, and (2) includes adjustments for our reporting of the advertising business.

"Interest expense" and "Other income (expense) – net" are managed only on a total company basis and are, accordingly, reflected only in consolidated results.

Dollars in millions except per share amounts

For the year ended December 31, 2020

	Revenues	Operations and Support Expenses	EBITDA	Depreciation and Amortization	Operating Income (Loss)	Equity in Net Income (Loss) of Affiliates	Segment Contribution
Communications							
Mobility	**$ 72,564**	**$ 42,106**	**$ 30,458**	**$ 8,086**	**$ 22,372**	**$ —**	**$22,372**
Video	**28,610**	**24,619**	**3,991**	**2,262**	**1,729**	**—**	**1,729**
Broadband	**12,318**	**7,582**	**4,736**	**2,914**	**1,822**	**—**	**1,822**
Business Wireline	**25,358**	**15,534**	**9,824**	**5,226**	**4,598**	**—**	**4,598**
Total Communications	**138,850**	**89,841**	**49,009**	**18,488**	**30,521**	**—**	**30,521**
WarnerMedia							
Turner	**12,568**	**6,954**	**5,614**	**277**	**5,337**	**(2)**	**5,335**
Home Box Office	**6,808**	**6,028**	**780**	**98**	**682**	**16**	**698**
Warner Bros.	**12,154**	**9,917**	**2,237**	**169**	**2,068**	**(70)**	**1,998**
Eliminations and other	**(1,088)**	**(1,320)**	**232**	**127**	**105**	**74**	**179**
Total WarnerMedia	**30,442**	**21,579**	**8,863**	**671**	**8,192**	**18**	**8,210**
Latin America							
Vrio	**3,154**	**2,800**	**354**	**520**	**(166)**	**24**	**(142)**
Mexico	**2,562**	**2,636**	**(74)**	**513**	**(587)**	**—**	**(587)**
Total Latin America	**5,716**	**5,436**	**280**	**1,033**	**(753)**	**24**	**(729)**
Segment Total	**175,008**	**116,856**	**58,152**	**20,192**	**37,960**	**$ 42**	**$38,002**
Corporate and Other							
Corporate[1]	**1,932**	**3,974**	**(2,042)**	**300**	**(2,342)**		
Acquisition-related items	**—**	**468**	**(468)**	**8,012**	**(8,480)**		
Certain significant items	**—**	**19,156**	**(19,156)**	**14**	**(19,170)**		
Eliminations and consolidations	**(5,180)**	**(3,615)**	**(1,565)**	**(2)**	**(1,563)**		
AT&T Inc.	**$171,760**	**$136,839**	**$ 34,921**	**$28,516**	**$ 6,405**		

[1] Includes $2,442 for the reclassification of prior service credit amortization.

For the year ended December 31, 2019

	Revenues	Operations and Support Expenses	EBITDA	Depreciation and Amortization	Operating Income (Loss)	Equity in Net Income (Loss) of Affiliates	Segment Contribution
Communications							
Mobility	$ 71,056	$ 40,681	$30,375	$ 8,054	$22,321	$ —	$22,321
Video	32,124	27,599	4,525	2,461	2,064	—	2,064
Broadband	13,012	7,451	5,561	2,880	2,681	—	2,681
Business Wireline	26,167	16,069	10,098	4,934	5,164	—	5,164
Total Communications	142,359	91,800	50,559	18,329	32,230	—	32,230
WarnerMedia							
Turner	13,122	7,740	5,382	235	5,147	52	5,199
Home Box Office	6,749	4,312	2,437	102	2,335	30	2,365
Warner Bros.	14,358	11,816	2,542	162	2,380	(30)	2,350
Eliminations and other	1,030	304	726	90	636	109	745
Total WarnerMedia	35,259	24,172	11,087	589	10,498	161	10,659
Latin America							
Vrio	4,094	3,378	716	660	56	27	83
Mexico	2,869	3,085	(216)	502	(718)	—	(718)
Total Latin America	6,963	6,463	500	1,162	(662)	27	(635)
Segment Total	184,581	122,435	62,146	20,080	42,066	$188	$42,254
Corporate and Other							
Corporate[1]	1,937	3,279	(1,342)	636	(1,978)		
Acquisition-related items	(72)	960	(1,032)	7,460	(8,492)		
Certain significant items	—	2,082	(2,082)	43	(2,125)		
Eliminations and consolidations	(5,253)	(3,735)	(1,518)	(2)	(1,516)		
AT&T Inc.	$181,193	$125,021	$56,172	$28,217	$27,955		

[1] Includes $1,934 for the reclassification of prior service credit amortization.

For the year ended December 31, 2018

	Revenues	Operations and Support Expenses	EBITDA	Depreciation and Amortization	Operating Income (Loss)	Equity in Net Income (Loss) of Affiliates	Segment Contribution
Communications							
Mobility	$ 70,521	$ 40,690	$29,831	$ 8,263	$21,568	$ —	$21,568
Video	33,363	29,334	4,029	2,698	1,331	—	1,331
Broadband	13,108	7,116	5,992	2,623	3,369	—	3,369
Business Wireline	26,729	16,181	10,548	4,708	5,840	—	5,840
Total Communications	143,721	93,321	50,400	18,292	32,108	—	32,108
WarnerMedia							
Turner	6,979	3,794	3,185	131	3,054	54	3,108
Home Box Office	3,598	2,187	1,411	56	1,355	29	1,384
Warner Bros.	8,703	7,130	1,573	96	1,477	(28)	1,449
Eliminations and other	1,305	168	1,137	28	1,109	(30)	1,079
Total WarnerMedia	20,585	13,279	7,306	311	6,995	25	7,020
Latin America							
Vrio	4,784	3,743	1,041	728	313	34	347
Mexico	2,868	3,415	(547)	510	(1,057)	—	(1,057)
Total Latin America	7,652	7,158	494	1,238	(744)	34	(710)
Segment Total	171,958	113,758	58,200	19,841	38,359	$ 59	$38,418
Corporate and Other							
Corporate[1]	2,246	2,335	(89)	1,633	(1,722)		
Acquisition-related items	(49)	1,185	(1,234)	6,931	(8,165)		
Certain significant items	—	899	(899)	26	(925)		
Eliminations and consolidations	(3,399)	(1,947)	(1,452)	(1)	(1,451)		
AT&T Inc.	$170,756	$116,230	$54,526	$28,430	$26,096		

[1] Includes $1,753 for the reclassification of prior service credit amortization.

The following table is a reconciliation of operating income (loss) to “Income Before Income Taxes” reported in our consolidated statements of income:

	2020	2019	2018
Communications	**$ 30,521**	$32,230	$32,108
WarnerMedia	**8,210**	10,659	7,020
Latin America	**(729)**	(635)	(710)
Segment Contribution	**38,002**	42,254	38,418
Reconciling Items:			
Corporate and Other	**(2,342)**	(1,978)	(1,722)
Merger and integration items	**(468)**	(1,032)	(1,234)
Amortization of intangibles acquired	**(8,012)**	(7,460)	(6,931)
Impairments and abandonments	**(18,880)**	(1,458)	(46)
Gain on spectrum transaction[1]	**900**	—	—
Employee separation charges and benefit-related (gain) loss	**(1,177)**	(624)	(587)
Other noncash charges (credits), net	**(13)**	(43)	(111)
Natural disaster items	**—**	—	(181)
Segment equity in net income of affiliates	**(42)**	(188)	(59)
Eliminations and consolidations	**(1,563)**	(1,516)	(1,451)
AT&T Operating Income	**6,405**	27,955	26,096
Interest Expense	**7,925**	8,422	7,957
Equity in net income (loss) of affiliates	**95**	6	(48)
Other income (expense) – net	**(1,431)**	(1,071)	6,782
Income (Loss) Before Income Taxes	**$ (2,856)**	$18,468	$24,873

[1] Included as a reduction of “Selling, general and administrative expenses” in the consolidated statements of income.

Dollars in millions except per share amounts

The following table sets forth revenues earned from customers, and property, plant and equipment located in different geographic areas:

	2020		2019		2018	
	Revenues	Net Property, Plant & Equipment	Revenues	Net Property, Plant & Equipment	Revenues	Net Property, Plant & Equipment
United States	**$155,899**	**$121,208**	$161,689	$122,567	$154,795	$123,457
Europe	**5,387**	**1,152**	6,536	1,854	4,073	1,634
Mexico	**2,862**	**3,530**	3,198	3,648	3,100	3,467
Brazil	**1,807**	**694**	2,797	1,057	2,724	1,213
All other Latin America	**2,679**	**485**	3,219	544	3,055	1,217
Asia/Pacific Rim	**2,322**	**203**	2,793	390	2,214	408
Other	**804**	**43**	961	68	795	77
Total	**$171,760**	**$127,315**	$181,193	$130,128	$170,756	$131,473

The following tables present intersegment revenues, assets, investments in equity affiliates and capital expenditures by segment:

Intersegment Reconciliation

	2020	2019	2018
Intersegment revenues			
Communications	**$ 11**	$ 26	$ 13
WarnerMedia	**3,183**	3,318	1,875
Latin America	**—**	—	—
Total Intersegment Revenues	**3,194**	3,344	1,888
Consolidations	**1,986**	1,909	1,511
Eliminations and consolidations	**$5,180**	$5,253	$3,399

At or for the years ended December 31,	2020			2019		
	Assets	**Investments In Equity Method Investees**	**Capital Expenditures**	Assets	Investments In Equity Method Investees	Capital Expenditures
Communications	**$ 522,758**	**$ —**	**$14,107**	$ 521,252	$ —	$17,410
WarnerMedia	**150,947**	**1,123**	**699**	143,492	3,011	1,205
Latin America	**15,811**	**590**	**708**	20,606	650	757
Corporate and eliminations	**(163,755)**	**67**	**161**	(133,681)	34	263
Total	**$ 525,761**	**$1,780**	**$15,675**	$ 551,669	$3,695	$19,635

NOTE 5. REVENUE RECOGNITION

We report our revenues net of sales taxes and record certain regulatory fees, primarily Universal Service Fund (USF) fees, on a net basis. No customer accounted for more than 10% of consolidated revenues in 2020, 2019 or 2018.

Wireless, Advanced Data, Legacy Voice & Data Services and Equipment Revenue

We offer service-only contracts and contracts that bundle equipment used to access the services and/or with other service offerings. Some contracts have fixed terms and others are cancellable on a short-term basis (i.e., month-to-month arrangements).

Examples of service revenues include wireless, video entertainment (e.g., AT&T U-verse and DIRECTV), strategic services (e.g., virtual private network service), and legacy voice and data (e.g., traditional local and long-distance). These services represent a series of distinct services that is considered a separate performance obligation. Service revenue is recognized when services are provided, based upon either usage (e.g., minutes of traffic/bytes of data processed) or period of time (e.g., monthly service fees).

Some of our services require customer premises equipment that, when combined and integrated with AT&T's specific network infrastructure, facilitates the delivery of service to the customer. In evaluating whether the equipment is a separate performance obligation, we consider the customer's ability to benefit from the equipment on its own or together with other readily available resources and if so, whether the service and equipment are separately identifiable (i.e., is the service highly dependent on, or highly interrelated with the equipment). When the equipment does not meet the criteria to be a separate performance obligation (e.g., equipment associated with certain video services), we allocate the total transaction price to the related service. When equipment is a separate performance obligation, we record the sale of equipment when title has passed and the products are accepted by the customer. For devices sold through indirect channels (e.g., national dealers), revenue is recognized when the dealer accepts the device, not upon activation.

Our equipment and service revenues are predominantly recognized on a gross basis, as most of our services do not involve a third party and we typically control the equipment that is sold to our customers.

Revenue recognized from fixed term contracts that bundle services and/or equipment is allocated based on the stand-alone selling price of all required performance obligations of the contract (i.e., each item included in the bundle). Promotional discounts are attributed to each required component of the arrangement, resulting in recognition over the contract term. Stand-alone selling prices are determined by assessing prices paid for service-only contracts (e.g., arrangements where customers bring their own devices) and stand-alone device pricing.

We offer the majority of our customers the option to purchase certain wireless devices in installments over a specified period of time, and, in many cases, they may be eligible to trade in the original equipment for a new device and have the remaining unpaid balance paid or settled. For customers that elect these equipment installment payment programs, at the point of sale, we recognize revenue for the entire amount of revenue allocated to the customer receivable net of fair value of the trade-in right guarantee. The difference between the revenue recognized and the consideration received is recorded as a note receivable when the devices are not discounted and our right to consideration is unconditional. When installment sales include promotional discounts (e.g., "buy one get one free"), the difference between revenue recognized and consideration received is recorded as a contract asset to be amortized over the contract term.

Less commonly, we offer certain customers highly discounted devices when they enter into a minimum service agreement term. For these contracts, we recognize equipment revenue at the point of sale based on a stand-alone selling price allocation. The difference between the revenue recognized and the cash received is recorded as a contract asset that will amortize over the contract term.

Our contracts allow for customers to frequently modify their arrangement, without incurring penalties in many cases. When a contract is modified, we evaluate the change in scope or price of the contract to determine if the modification should be treated as a new contract or if it should be considered a change of the existing contract. We generally do not have significant impacts from contract modifications.

Revenues from transactions between us and our customers are recorded net of revenue-based regulatory fees and taxes. Cash incentives given to customers are recorded as a reduction of revenue. Nonrefundable, upfront service activation and setup fees associated with service arrangements are deferred and recognized over the associated service contract period or customer relationship life.

Subscription Revenue

Subscription revenues from cable networks and premium pay and basic-tier television services are recognized over the license period as programming is provided to affiliates or digital distributors based on negotiated contractual programming rates. When a distribution contract with an affiliate has expired and a new distribution contract has not been executed, revenues are based on estimated rates, giving consideration to factors including the previous contractual rates, inflation, current payments by the affiliate and the status of the negotiations on a new contract. When the new distribution contract terms are finalized, an adjustment to revenue is recorded, if necessary, to reflect the new terms.

Subscription revenues from end-user subscribers are recognized when services are provided, based upon either usage or period of time. Subscription revenues from streaming services are recognized as programming services are provided to customers.

Content Revenue

Feature films typically are produced or acquired for initial exhibition in theaters, followed by distribution, generally commencing within three years of such initial exhibition. Revenues from film rentals by theaters are recognized as the films are exhibited.

Television programs and series are initially produced for broadcast and may be subsequently licensed or sold in physical format and/or electronic delivery. Revenues from the distribution of television programming through broadcast networks, cable networks, first-run syndication and streaming services are recognized when the programs or series are available to the licensee. In certain circumstances, pursuant to the terms of the applicable contractual arrangements, the availability dates granted to customers may precede the date in which the customer can be billed for these sales.

Dollars in millions except per share amounts

Revenues from sales of feature films and television programming in physical format are recognized at the later of the delivery date or the date when made widely available for sale or rental by retailers based on gross sales less a provision for estimated returns, rebates and pricing allowances. Revenues from the licensing of television programs and series for electronic sell-through or video-on-demand are recognized when the product has been purchased by and made available to the consumer to either download or stream.

Upfront or guaranteed payments for the licensing of intellectual property are recognized as revenue at either the inception of the license term if the intellectual property has significant standalone functionality or over the corresponding license term if the licensee's ability to derive utility is dependent on our continued support of the intellectual property throughout the license term.

Revenues from the sales of console games are recognized at the later of the delivery date or the date that the product is made widely available for sale or rental by retailers based on gross sales less a provision for estimated returns, rebates and pricing allowances.

Advertising Revenue

Advertising revenues are recognized, net of agency commissions, in the period that the advertisements are aired. If there is a targeted audience guarantee, revenues are recognized for the actual audience delivery and revenues are deferred for any shortfall until the guaranteed audience delivery is met, typically by providing additional advertisements. Advertising revenues from digital properties are recognized as impressions are delivered or the services are performed.

Revenue Categories

The following tables set forth reported revenue by category and by business unit. Intercompany transactions between segments and the dual reporting of certain advertising revenues are included in "Eliminations and consolidations." Intercompany transactions between Turner, Home Box Office and Warner Bros., including internal sales to HBO Max that began in the fourth quarter of 2019, are included in "Eliminations and Other."

For the year ended December 31, 2020

	Service Revenues								
	Wireless	Advanced Data	Legacy Voice & Data	Subscription	Content	Advertising	Other	Equipment	Total
Communications									
Mobility	**$55,251**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 291**	**$ —**	**$17,022**	**$ 72,564**
Video	**—**	**—**	**—**	**26,747**	**—**	**1,718**	**—**	**145**	**28,610**
Broadband	**—**	**8,534**	**2,213**	**—**	**—**	**—**	**1,564**	**7**	**12,318**
Business Wireline	**—**	**13,330**	**8,183**	**—**	**—**	**—**	**3,075**	**770**	**25,358**
WarnerMedia									
Turner	**—**	**—**	**—**	**7,613**	**759**	**3,941**	**255**	**—**	**12,568**
Home Box Office	**—**	**—**	**—**	**6,090**	**692**	**—**	**26**	**—**	**6,808**
Warner Bros.	**—**	**—**	**—**	**50**	**11,632**	**6**	**466**	**—**	**12,154**
Eliminations and Other[1]	**—**	**—**	**—**	**12**	**(3,264)**	**2,178**	**(14)**	**—**	**(1,088)**
Latin America									
Vrio	**—**	**—**	**—**	**3,154**	**—**	**—**	**—**	**—**	**3,154**
Mexico	**1,656**	**—**	**—**	**—**	**—**	**—**	**—**	**906**	**2,562**
Corporate and Other	**528**	**46**	**554**	**—**	**—**	**—**	**661**	**143**	**1,932**
Eliminations and consolidations[2]	**—**	**—**	**—**	**(3,110)**	**—**	**(1,718)**	**(352)**	**—**	**(5,180)**
Total Operating Revenues	**$57,435**	**$21,910**	**$10,950**	**$40,556**	**$ 9,819**	**$ 6,416**	**$5,681**	**$18,993**	**$171,760**

[1] Eliminations and other of $3,264 include Warner Bros. content sales of approximately $2,250 with HBO Max, $600 with HBO linear and $300 with Turner.
[2] Eliminations and consolidations of $3,110 include approximately $1,500 and $950 of Turner and HBO linear channel distribution arrangements with the Video business unit, respectively. HBO customer subscriptions were approximately $290 with Video and $180 with Broadband.

For the year ended December 31, 2019

	Service Revenues								
	Wireless	Advanced Data	Legacy Voice & Data	Subscription	Content	Advertising	Other	Equipment	Total
Communications									
Mobility	$55,039	$ —	$ —	$ —	$ —	$ 292	$ —	$15,725	$ 71,056
Video	—	—	—	30,451	—	1,672	—	1	32,124
Broadband	—	8,403	2,573	—	—	—	2,029	7	13,012
Business Wireline	—	12,916	9,180	—	—	—	3,286	785	26,167
WarnerMedia									
Turner	—	—	—	7,736	481	4,566	339	—	13,122
Home Box Office	—	—	—	5,814	925	—	10	—	6,749
Warner Bros.	—	—	—	88	13,532	41	697	—	14,358
Eliminations and Other[1]	—	—	—	13	(1,058)	2,071	4	—	1,030
Latin America									
Vrio	—	—	—	4,094	—	—	—	—	4,094
Mexico	1,863	—	—	—	—	—	—	1,006	2,869
Corporate and Other	628	59	565	—	—	—	443	170	1,865
Eliminations and consolidations[2]	—	—	—	(3,249)	—	(1,672)	(332)	—	(5,253)
Total Operating Revenues	$57,530	$21,378	$12,318	$44,947	$13,880	$ 6,970	$6,476	$17,694	$181,193

[1] Eliminations and other of $1,058 include Warner Bros. content sales of approximately $500 with HBO linear and $350 with Turner.
[2] Eliminations and consolidations of $3,249 include approximately $1,740 and $1,320 of Turner and HBO linear channel distribution arrangements with the Video business unit, respectively.

For the year ended December 31, 2018

	Service Revenues								
	Wireless	Advanced Data	Legacy Voice & Data	Subscription	Content	Advertising	Other	Equipment	Total
Communications									
Mobility	$54,063	$ —	$ —	$ —	$ —	$ 232	$ —	$16,226	$ 70,521
Video	—	—	—	31,768	—	1,595	—	—	33,363
Broadband	—	7,956	3,042	—	—	—	2,101	9	13,108
Business Wireline	—	12,234	10,674	—	—	—	2,998	823	26,729
WarnerMedia									
Turner	—	—	—	4,207	295	2,330	147	—	6,979
Home Box Office	—	—	—	3,201	391	—	6	—	3,598
Warner Bros.	—	—	—	47	8,216	53	387	—	8,703
Eliminations and Other[1]	—	—	—	6	(518)	1,807	10	—	1,305
Latin America									
Vrio	—	—	—	4,784	—	—	—	—	4,784
Mexico	1,701	—	—	—	—	—	—	1,167	2,868
Corporate and Other	718	160	288	—	—	—	845	186	2,197
Eliminations and consolidations[2]	—	—	—	(1,843)	—	(1,595)	39	—	(3,399)
Total Operating Revenues	$56,482	$20,350	$14,004	$42,170	$8,384	$ 4,422	$6,533	$18,411	$170,756

[1] Eliminations and other of $518 include Warner Bros. content sales of approximately $225 with HBO linear and $225 with Turner.
[2] Eliminations and consolidations of $1,843 include approximately $1,000 and $700 of Turner and HBO linear channel distribution arrangements with the Video business unit, respectively.

Deferred Customer Contract Acquisition and Fulfillment Costs

Costs to acquire and fulfill customer contracts, including commissions on service activations, for our wireless, business wireline and video services, are deferred and amortized over the contract period or expected customer relationship life, which typically ranges from three years to five years. For contracts with an estimated amortization period of less than one year, we expense incremental costs immediately.

Dollars in millions except per share amounts

The following table presents the deferred customer contract acquisition and fulfillment costs included on our consolidated balance sheets at December 31:

Consolidated Balance Sheets	2020	2019
Deferred Acquisition Costs		
Other current assets	**$3,087**	$ 2,462
Other Assets	**3,198**	2,991
Total deferred customer contract acquisition costs	**$6,285**	$ 5,453
Deferred Fulfillment Costs		
Other current assets	**$4,118**	$ 4,519
Other Assets	**5,634**	6,439
Total deferred customer contract fulfillment costs	**$9,752**	$10,958

The following table presents amortization of deferred customer contract acquisition and fulfillment costs, which are recorded in other cost of revenues in our consolidated statements of income, for the year ended December 31:

Consolidated Statements of Income	2020	2019
Deferred acquisition cost amortization	**$2,755**	$ 2,174
Deferred fulfillment cost amortization	**5,110**	4,947

Contract Assets and Liabilities

A contract asset is recorded when revenue is recognized in advance of our right to bill and receive consideration. The contract asset will decrease as services are provided and billed. For example, when equipment installment sales include promotional discounts (e.g., "buy one get one free") the difference between revenue recognized and consideration received is recorded as a contract asset to be amortized over the contract term.

When consideration is received in advance of the delivery of goods or services, a contract liability is recorded for deferred revenue. Reductions in the contract liability will be recorded as revenue as we satisfy the performance obligations.

The following table presents contract assets and liabilities on our consolidated balance sheets at December 31:

Consolidated Balance Sheets	2020	2019
Contract assets	**$3,501**	$2,472
Contract liabilities	**6,879**	6,999

Our beginning of period contract liabilities recorded as customer contract revenue during 2020 was $5,579.

Our consolidated balance sheets at December 31, 2020 and 2019 included approximately $2,054 and $1,611, respectively, for the current portion of our contract assets in "Other current assets" and $6,071 and $5,939, respectively, for the current portion of our contract liabilities in "Advanced billings and customer deposits."

Remaining Performance Obligations

Remaining performance obligations represent services we are required to provide to customers under bundled or discounted arrangements, which are satisfied as services are provided over the contract term. In determining the transaction price allocated, we do not include nonrecurring charges and estimates for usage, nor do we consider arrangements with an original expected duration of less than one year, which are primarily prepaid wireless, video and residential internet agreements.

Remaining performance obligations associated with business contracts reflect recurring charges billed, adjusted to reflect estimates for sales incentives and revenue adjustments. Performance obligations associated with wireless contracts are estimated using a portfolio approach in which we review all relevant promotional activities, calculating the remaining performance obligation using the average service component for the portfolio and the average device price.

As of December 31, 2020, the aggregate amount of the transaction price allocated to remaining performance obligations was $42,072, of which we expect to recognize approximately 60% by the end of 2021, with the remaining balance recognized thereafter.

NOTE 6. ACQUISITIONS, DISPOSITIONS AND OTHER ADJUSTMENTS

Acquisitions

HBO Latin America Group (HBO LAG) In May 2020, we acquired the remaining interest in HBO LAG for $141, net of cash acquired. At acquisition, we remeasured the fair value of the total business, which exceeded the carrying amount of our equity method investment and resulted in a pre-tax gain of $68. We consolidated that business upon close and recorded those assets at fair value, including $640 of trade names, $271 of distribution networks and $346 of goodwill that is reported in the WarnerMedia segment. These estimates are preliminary in nature and subject to adjustments, which will be finalized within one year from the date of acquisition.

Time Warner In June 2018, we completed our acquisition of Time Warner, a leader in media and entertainment whose major businesses encompass an array of some of the most respected media brands. For accounting purposes, the transaction was valued at $79,358. Our consolidated balance sheets include the assets and liabilities of Time Warner, which were measured at fair value.

For the 200-day period ended December 31, 2018, our consolidated statement of income included $18,209 of revenues and $1,400 of operating income, which included $3,296 of intangible amortization, from Time Warner and its affiliates. The following unaudited pro forma consolidated results of operations assume that the acquisition of Time Warner was completed as of January 1, 2017.

	(Unaudited) Year Ended December 31,	
	2018	2017
Total operating revenues	$183,651	$188,769
Net Income Attributable to AT&T	20,814	31,380
Basic Earnings Per Share		
Attributable to Common Stock	$ 2.86	$ 4.30
Diluted Earnings Per Share		
Attributable to Common Stock	$ 2.85	$ 4.26

Pro forma data may not be indicative of the results that would have been obtained had these events occurred at the beginning of the periods presented, nor is it intended to be a projection of future results.

Otter Media On August 7, 2018, we acquired the remaining interest in Otter Media Holdings (Otter Media) for $157 in cash and the conversion to equity of the $1,480 advance made in the first quarter of 2018. At acquisition, we remeasured the fair value of the total business, which exceeded the carrying amount of our equity method investment and resulted in a pre-tax gain of $395. We consolidated that business upon close and recorded those assets at fair value, including $1,239 of goodwill that is reported in the WarnerMedia segment.

AppNexus On August 15, 2018, we purchased AppNexus for $1,432 and recorded $1,220 of goodwill that is reported in the WarnerMedia segment. Our investment allows us to create a marketplace for TV and digital video advertising.

Spectrum Auctions In June 2020, we completed the acquisition of $2,379 of 37/39 GHz spectrum in a Federal Communications Commission (FCC) auction. Prior to the auction, we exchanged the 39 GHz licenses with a book value of approximately $300 that were previously acquired through FiberTower Corporation for vouchers to be applied against the winning bids and recorded a $900 gain in the first quarter of 2020. These vouchers yielded a value of approximately $1,200, which was applied toward our gross bids. In the second quarter of 2020, we made the final cash payment of $949, bringing the total cash payment to $1,186.

In December 2019, we acquired $982 of 24 GHz spectrum in an FCC auction.

Dispositions

Central European Media Enterprises Ltd. (CME) On October 13, 2020, we completed the sale of our 65.3% interest in CME, a European broadcasting company, for approximately $1,100 and recorded a pre-tax gain of $39. Upon close, we received relief from a debt guarantee originally covering approximately $1,100 that was reduced to $600 at the time of the sale.

Operations in Puerto Rico On October 31, 2020, we completed the sale of our previously held-for-sale wireless and wireline operations in Puerto Rico and the U.S. Virgin Islands for approximately $1,950 and recorded a pre-tax loss of $82. Upon sale we removed held-for-sale assets (“Other current assets”) and held-for-sale liabilities (“Accounts payable and accrued liabilities”) that primarily consisted of FCC licenses (approximately $1,100), allocated goodwill (approximately $250), net property, plant and equipment (approximately $850) and net tax liabilities (approximately $500), previously reported on our consolidated balance sheets. The proceeds were used to redeem $1,950 of cumulative preferred interests in a subsidiary that held notes secured by the proceeds of this sale.

Hudson Yards In June 2019, we sold our ownership in Hudson Yards North Tower Holdings LLC under a sale-leaseback arrangement for cash proceeds of $2,081 and recorded a loss of approximately $100 resulting from transaction costs (primarily real estate transfer taxes).

Hulu In April 2019, we sold our ownership in Hulu for cash proceeds of $1,430 and recorded a pre-tax gain of $740.

Data Colocation Operations On December 31, 2018, we sold certain data centers to Brookfield Infrastructure Partners for $1,100 and recorded a pre-tax gain of $432. The sale included assets; primarily consisting of property, plant and equipment, of $298; and goodwill of $215.

NOTE 7. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is summarized as follows at December 31:

	Lives (years)	**2020**	2019
Land	—	**$ 2,571**	$ 2,651
Buildings and improvements	2-44	**39,418**	38,924
Central office equipment[1]	3-10	**95,981**	96,061
Cable, wiring and conduit	15-50	**75,409**	72,042
Satellites	14-17	**908**	2,489
Other equipment	3-20	**90,883**	94,951
Software	3-7	**18,482**	22,244
Under construction	—	**4,099**	4,176
		327,751	333,538
Accumulated depreciation and amortization		**200,436**	203,410
Property, plant and equipment – net		**$127,315**	$130,128

[1] Includes certain network software.

Our depreciation expense was $20,277 in 2020, $20,285 in 2019 and $20,083 in 2018. Depreciation expense included amortization of software totaling $3,483 in 2020, $3,313 in 2019 and $3,092 in 2018.

In December 2020, we reassessed our grouping of long-lived assets and identified certain impairment indicators, requiring us to evaluate the recoverability of the long-lived assets of our video business. Based on this evaluation, we determined that these assets were not fully recoverable and recognized pre-tax impairment charges totaling $7,255, of which $1,681 relates to property, plant and equipment, including satellites. The reduced carrying amounts of the impaired assets became their new cost basis.

Dollars in millions except per share amounts

In 2019, we recorded a noncash pre-tax charge of $1,290 to abandon copper assets that we no longer expect will be utilized to support future network activity. The abandonment was considered outside the ordinary course of business.

NOTE 8. LEASES

We have operating and finance leases for certain facilities and equipment used in our operations. Our leases generally have remaining lease terms of up to 15 years. Some of our real estate operating leases contain renewal options that may be exercised, and some of our leases include options to terminate the leases within one year.

We have recognized a right-of-use asset for both operating and finance leases, and a corresponding lease liability that represents the present value of our obligation to make payments over the lease term. The present value of the lease payments is calculated using the incremental borrowing rate for operating and finance leases, which was determined using a portfolio approach based on the rate of interest that we would have to pay to borrow an amount equal to the lease payments on a collateralized basis over a similar term. We use the unsecured borrowing rate and risk-adjust that rate to approximate a collateralized rate in the currency of the lease, which will be updated on a quarterly basis for measurement of new lease liabilities.

The components of lease expense were as follows:

	2020	2019
Operating lease cost	**$5,896**	$5,684
Finance lease cost:		
Amortization of right-of-use assets	**$ 287**	$ 271
Interest on lease obligation	**156**	169
Total finance lease cost	**$ 443**	$ 440

The following table provides supplemental cash flows information related to leases:

	2020	2019
Cash Flows from Operating Activities		
Cash paid for amounts included in lease obligations:		
Operating cash flows from operating leases	**$4,852**	$4,583
Supplemental Lease Cash Flow Disclosures		
Operating lease right-of-use assets obtained in exchange for new operating lease obligations	**$5,270**	$7,818

The following tables set forth supplemental balance sheet information related to leases at December 31:

	2020	2019
Operating Leases		
Operating lease right-of-use assets	**$24,714**	$24,039
Accounts payable and accrued liabilities	**$ 3,537**	$ 3,451
Operating lease obligation	**22,202**	21,804
Total operating lease obligation	**$25,739**	$25,255
Finance Leases		
Property, plant and equipment, at cost	**$ 3,586**	$ 3,534
Accumulated depreciation and amortization	**(1,361)**	(1,296)
Property, plant and equipment, net	**$ 2,225**	$ 2,238
Current portion of long-term debt	**$ 189**	$ 162
Long-term debt	**1,847**	1,872
Total finance lease obligation	**$ 2,036**	$ 2,034

	2020	2019
Weighted-Average Remaining Lease Term (years)		
Operating leases	**8.5**	8.4
Finance leases	**9.9**	10.3
Weighted-Average Discount Rate		
Operating leases	**4.1%**	4.2%
Finance leases	**8.1%**	8.4%

The following table provides the expected future minimum maturities of lease obligations:

	Operating Leases	Finance Leases
2021	**$ 4,808**	**$ 350**
2022	**4,527**	**333**
2023	**4,094**	**300**
2024	**3,560**	**276**
2025	**2,904**	**272**
Thereafter	**11,230**	**1,609**
Total lease payments	**31,123**	**3,140**
Less: imputed interest	**(5,384)**	**(1,104)**
Total	**$25,739**	**$ 2,036**

NOTE 9. GOODWILL AND OTHER INTANGIBLE ASSETS

We test goodwill for impairment at a reporting unit level, which is deemed to be our principal operating segments or one level below. With our annual impairment testing as of October 1, 2020, the calculated fair values of the reporting units exceeded their book values in all circumstances; however, the Turner, HBO and Entertainment Group (prior to the reporting unit change) fair values exceeded their book values by less than 10%, with COVID-19 impacts, industry trends and our content distribution strategy affecting fair value.

In December 2020, we changed our management strategy and reevaluated our domestic video business, allowing us to maximize value in our domestic video business and further accelerate our ability to innovate and execute in our fast-growing broadband and fiber business. The strategy change required us to reassess the grouping and recoverability of the video business long-lived assets. In conjunction with the strategy change, we separated the former Entertainment Group reporting unit into two reporting units, Video and Broadband, which includes legacy telephony operations. Our recoverability assessment resulted in $7,255 of long-lived asset impairment in the video business, including $4,373 for orbital slots and $1,201 for customer lists. The change in reporting unit required the historical Entertainment Group goodwill to be assigned to the separate Video and Broadband reporting units, for which we used the relative fair value allocation methodology. The affected reporting units were then tested for goodwill impairment. We recorded an impairment of the entire $8,253 of goodwill allocated to the Video reporting unit. No goodwill impairment was required in the Broadband reporting unit.

In the second quarter of 2020, driven by significant and adverse economic and political environments in Latin America, including the impact of COVID-19, we experienced accelerated subscriber losses and revenue decline in the region, as well as closure of our operations in Venezuela. When combining these business trends and higher weighted-average cost of capital resulting from the increase in country-risk premiums in the region, we concluded that it was more likely than not that the fair value of the Vrio reporting unit, estimated using discounted cash flow and market multiple approaches, was less than its carrying amount. We recorded a $2,212 goodwill impairment in the Vrio reporting unit, with $105 attributable to noncontrolling interest.

Other changes to our goodwill in 2020 resulted from foreign currency translation, the held-for-sale treatment of our Crunchyroll anime business and our acquisition of the remaining interest in HBO LAG (see Note 6). In 2020, the prior Xandr segment was combined with our WarnerMedia segment.

Changes to our goodwill in 2019 primarily resulted from the held-for-sale treatment of wireless and wireline operations in Puerto Rico and the U.S. Virgin Islands (see Note 6) and final valuations related to our acquisitions of Time Warner and Otter Media, as well as changes from foreign currency translation.

At December 31, 2020, our Communications segment has four reporting units: Mobility, Video, Broadband and Business Wireline. Our WarnerMedia segment has four reporting units: Turner, Home Box Office, Warner Bros. and Xandr. Our Latin America segment has two reporting units: Vrio and Mexico.

The following table sets forth the changes in the carrying amounts of goodwill by operating segment:

	2020					2019			
	Balance at Jan. 1	**Acquisitions**	**Impairments**	**Dispositions, currency exchange and other**	**Balance at Dec. 31**	Balance at Jan. 1	Acquisitions	Dispositions, currency exchange and other	Balance at Dec. 31
Communications	**$100,234**	**$ —**	**$ (8,253)**	**$ (5)**	**$ 91,976**	$100,551	$ —	$(317)	$100,234
WarnerMedia	**42,345**	**415**	**—**	**(313)**	**42,447**	42,101	66	178	42,345
Latin America	**3,662**	**—**	**(2,212)**	**(614)**	**836**	3,718	—	(56)	3,662
Total	**$146,241**	**$415**	**$(10,465)**	**$(932)**	**$135,259**	$146,370	$66	$(195)	$146,241

We review amortized intangible assets for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable over the remaining life of the asset or asset group, including the video business previously discussed. In 2020, we changed the estimated lives of our orbital slot licenses from indefinite to finite-lived and began amortizing them over their average remaining economic life of 15 years (see Note 1).

Dollars in millions except per share amounts

Our other intangible assets at December 31 are summarized as follows:

		2020			2019		
Other Intangible Assets	Weighted-Average Life	Gross Carrying Amount	Accumulated Amortization	Currency Translation Adjustment	Gross Carrying Amount	Accumulated Amortization	Currency Translation Adjustment
Amortized intangible assets:							
Wireless licenses[1]	24.6 years	**$ 2,979**	**$ 271**	**$ (421)**	$ 2,981	$ 156	$(243)
Orbital slots[2]	15.0 years	**5,825**	—	—	—	—	—
Trademarks and trade names	37.1 years	**20,016**	**1,518**	**(442)**	18,359	853	(6)
Distribution network	10.0 years	**18,414**	**4,621**	**—**	18,138	2,793	—
Released television and film content	17.5 years	**10,940**	**6,240**	**—**	10,941	4,974	—
Customer lists and relationships	9.3 years	**4,100**	**1,645**	**(460)**	20,304	14,773	(281)
Other	21.3 years	**11,311**	**2,615**	**(5)**	11,427	1,843	(3)
Total	22.3 years	**$ 73,585**	**$16,910**	**$(1,328)**	$ 82,150	$25,392	$(533)

[1] Includes $1,561 of wireless license renewals in Mexico in 2019.
[2] Changed from indefinite-lived January 1, 2020.

Indefinite-lived intangible assets not subject to amortization, net of currency translation adjustment:

	2020	2019
Licenses:		
Wireless licenses	**$ 85,728**	$ 83,623
Orbital slots[1]	**—**	11,702
Trade names	**5,241**	6,067
Total	**$ 90,969**	$101,392

[1] Changed to amortized January 1, 2020.

Amortized intangible assets are definite-life assets, and, as such, we record amortization expense based on a method that most appropriately reflects our expected cash flows from these assets. Amortization expense for definite-life intangible assets was $8,239 for the year ended December 31, 2020, $7,932 for the year ended December 31, 2019 and $8,347 for the year ended December 31, 2018. Amortization expense is estimated to be $5,987 in 2021, $5,363 in 2022, $4,846 in 2023, $4,302 in 2024 and $4,046 in 2025.

NOTE 10. EQUITY METHOD INVESTMENTS

Investments in partnerships, joint ventures and less than majority-owned subsidiaries in which we have significant influence are accounted for under the equity method.

In May 2020, we acquired the remaining interest in HBO LAG and fully consolidated that entity. In October 2020, we sold our ownership interest in CME. (See Note 6)

In 2019, we sold our investments in Hudson Yards and Hulu. (See Note 6)

In 2018, we acquired Time Warner, which included various equity method investments. The difference between the fair values and the proportional carrying amounts of those investments' net assets primarily related to investments in CME (sold in 2020) and HBO LAG (consolidated in 2020). (See Note 6)

Our investments in equity affiliates at December 31, 2020 primarily include our interests in SKY Mexico and The CW Network.

SKY Mexico We hold a 41.3% interest in SKY Mexico, which is a leading pay-TV provider in Mexico.

The CW Network (The CW) We hold a 50.0% interest in The CW, which is an advertising supported broadcasting and licensing joint venture between Warner Bros. and CBS Corporation.

The following table is a reconciliation of our investments in equity affiliates as presented on our consolidated balance sheets:

	2020	2019
Beginning of year	**$ 3,695**	$ 6,245
Additional investments	**178**	448
Acquisition of remaining interest in HBO LAG	**(1,141)**	—
Disposition of CME	**(749)**	—
Disposition of Hudson Yards	**—**	(1,681)
Disposition of Hulu	**—**	(689)
Disposition of Game Show Network	**—**	(288)
Equity in net income (loss) of affiliates	**95**	6
Dividends and distributions received	**(133)**	(301)
Currency translation adjustments	**(10)**	(10)
Impairments	**(146)**	—
Other adjustments	**(9)**	(35)
End of year	**$ 1,780**	$ 3,695

NOTE 11. INVENTORIES AND THEATRICAL FILM AND TELEVISION PRODUCTION COSTS

Film and television production costs are stated at the lower of cost, less accumulated amortization, or fair value and include the unamortized cost of completed theatrical films and television episodes, theatrical films and television series in production and undeveloped film and television rights. The amount of capitalized film and television production costs recognized as broadcast, programming and operations expenses for a given period is determined using the film forecast computation method. As of January 1, 2019, we reclassified $2,274 of our programming inventory costs from "Other current assets" to "Other Assets" in connection with the adoption of ASU 2019-2 (see Note 1).

In the fourth quarter of 2020, we recognized an impairment of $524 based on a change in these estimates for various film titles. This change in estimates was driven by the continued shutdown of theaters during the pandemic, including the resurgence of an outbreak in the fourth quarter and the impact of our decision to release our 2021 movies in theaters and on HBO Max at the same time.

The following table summarizes inventories and theatrical film and television production costs as of December 31:

	2020	2019
Inventories:		
Programming costs, less amortization[1]	**$ 6,010**	$ 4,151
Other inventory, primarily DVD and Blu-ray Discs	**103**	96
Total inventories	**6,113**	4,247
Less: current portion of inventory	**(103)**	(96)
Total noncurrent inventories	**6,010**	4,151
Theatrical film production costs:[2]		
Released, less amortization	**487**	392
Completed and not released	**616**	437
In production	**1,130**	1,475
Development and pre-production	**190**	171
Television production costs:[2]		
Released, less amortization	**2,495**	2,199
Completed and not released	**1,381**	1,344
In production	**2,353**	2,208
Development and pre-production	**90**	57
Total theatrical film and television production costs	**8,742**	8,283
Total noncurrent inventories and theatrical film and television production costs	**$14,752**	$12,434

[1] Includes the costs of certain programming rights, primarily sports, for which payments have been made prior to the related rights being received.
[2] Does not include $4,699 and $5,967 of acquired film and television library intangible assets as of December 31, 2020, and 2019, respectively, which are included in "Other Intangible Assets – Net" on our consolidated balance sheets.

Approximately 90% of unamortized film costs for released theatrical and television content are expected to be amortized within three years from December 31, 2020. In addition, approximately $3,111 of the total $5,171 film costs of released and completed and not released theatrical and television product are expected to be amortized during 2021.

NOTE 12. DEBT

Long-term debt of AT&T and its subsidiaries, including interest rates and maturities, is summarized as follows at December 31:

		2020	2019
Notes and debentures			
Interest Rates	Maturities[1]		
0.98% – 2.99%	2020 – 2039	**$ 25,549**	$ 17,404
3.00% – 4.99%	2020 – 2050	**110,317**	102,595
5.00% – 6.99%	2020 – 2095	**24,259**	34,513
7.00% – 9.15%	2020 – 2097	**5,006**	5,050
Credit agreement borrowings		**300**	4,969
Fair value of interest rate swaps recorded in debt		**20**	26
		165,451	164,557
Unamortized (discount) premium – net		**(9,710)**	(2,996)
Unamortized issuance costs		**(532)**	(452)
Total notes and debentures		**155,209**	161,109
Finance lease obligations		**2,036**	2,034
Total long-term debt, including current maturities		**157,245**	163,143
Current maturities of long-term debt		**(3,470)**	(11,834)
Total long-term debt		**$153,775**	$151,309

[1] Maturities assume putable debt is redeemed by the holders at the next opportunity.

We had outstanding Euro, British pound sterling, Canadian dollar, Mexican peso, Australian dollar, Swiss franc and Brazilian real denominated debt of approximately $43,399 and $42,485 at December 31, 2020 and 2019, respectively.

The weighted-average interest rate of our entire long-term debt portfolio, including the impact of derivatives, was approximately 4.1% as of December 31, 2020 and 4.4% as of December 31, 2019.

Current maturities of long-term debt include an accreting zero-coupon note that may be redeemed each May, until maturity in 2022. If the zero-coupon note (issued for principal of $500 in 2007 and partially exchanged in the 2017 debt exchange offers) is held to maturity, the redemption amount will be $592.

Dollars in millions except per share amounts

Debt maturing within one year consisted of the following at December 31:

	2020	2019
Current maturities of long-term debt	**$3,470**	$11,834
Bank borrowings[1]	**—**	4
Total	**$3,470**	$11,838

[1] Outstanding balance of short-term credit facility of a foreign subsidiary.

Financing Activities

During 2020, we received net proceeds of $31,988 on the issuance of $32,241 in long-term debt in various markets, with an average weighted maturity of approximately 20 years and a weighted average interest rate of 3.2%. We repaid $39,758 in borrowings of various notes with a weighted average coupon of 3.2%.

Tender Offers and Debt Exchanges

In August 2020, we repurchased $11,384 of AT&T global notes and subsidiary notes due 2021 to 2025 through cash tender offers.

In September 2020, we exchanged $17,677 of AT&T and subsidiary notes, with interest rates ranging from 4.350% to 8.750% and original maturities ranging from 2031 to 2058 for $1,459 of cash and $21,500 of three new series of AT&T Inc. global notes, with interest rates ranging from 3.500% to 3.650% and maturities ranging from 2053 to 2059.

In December 2020, we also exchanged $8,280 of AT&T and subsidiary notes, with interest rates ranging from 2.950% to 7.125% and original maturities ranging from 2026 to 2048 for $8 of cash and $9,678 of two new series of AT&T global notes, with interest rates of 2.550% and 3.800% and maturities of 2033 and 2057, respectively.

As of December 31, 2020 and 2019, we were in compliance with all covenants and conditions of instruments governing our debt. Substantially all of our outstanding long-term debt is unsecured. Maturities of outstanding long-term notes and debentures, as of December 31, 2020, and the corresponding weighted-average interest rate scheduled for repayment are as follows:

	2021	2022	2023	2024	2025	Thereafter
Debt repayments[1]	$3,418	$5,951	$7,779	$7,849	$6,389	$134,268
Weighted-average interest rate	3.8%	3.3%	3.4%	3.3%	3.9%	4.2%

[1] Debt repayments represent maturity value and assume putable debt is redeemed at the next opportunity. Foreign debt includes the impact from hedges, when applicable.

Credit Facilities

General

In September 2019, we entered into and drew on a $1,300 term loan credit agreement containing (i) a 1.25 year $400 facility due in 2020, (ii) a 2.25 year $400 facility due in 2021, and (iii) a 3.25 year $500 facility due in 2022, with Bank of America, N.A., as agent. These facilities were repaid and terminated in the second quarter of 2020.

In April 2020, we entered into and drew on a $5,500 Term Loan Credit Agreement (Term Loan) with 11 commercial banks and Bank of America, N.A. as lead agent. We repaid and terminated the Term Loan in May 2020.

On January 29, 2021, we entered into a $14,700 Term Loan Credit Agreement (Term Loan), with Bank of America, N.A., as agent. The Term Loan is available for a single draw at any time before May 29, 2021. The proceeds will be used for general corporate purposes, which may include among other things, financing acquisitions of additional spectrum. The entire principal amount of the Term Loan will be due and payable 364 days after the date on which the borrowing is made. At January 31, 2021, we had approximately $6,100 of commercial paper outstanding.

Revolving Credit Agreements

In November 2020, we amended one of our $7,500 revolving credit agreements by extending the termination date. In total, we have two $7,500 revolving credit agreements, totaling $15,000, with one terminating on December 11, 2023 and the other terminating on November 17, 2025. No amounts were outstanding under either agreement as of December 31, 2020.

Each of the credit agreements contains covenants that are customary for an issuer with an investment grade senior debt credit rating, as well as a net debt-to-EBITDA (earnings before interest, taxes, depreciation and amortization, and other modifications described in each agreement) financial ratio covenant requiring AT&T to maintain, as of the last day of each fiscal quarter, a ratio of not more than 3.5-to-1. The events of default are customary for agreements of this type and such events would result in the acceleration of, or would permit the lenders to accelerate, as applicable, required payments and would increase each agreement's relevant Applicable Margin by 2.00% per annum.

The obligations of the lenders under two revolving credit agreements to provide advances will terminate on December 11, 2023, and November 17, 2025, unless the commitments are terminated in whole prior to that date. All advances must be repaid no later than the date on which lenders are no longer obligated to make any advances under the applicable credit agreement.

Each of the credit agreements provides that we and lenders representing more than 50% of the facility amount may agree to extend their commitments under such Credit Agreement for two one-year periods beyond the initial termination date. We have the right to terminate, in whole or in part, amounts committed by the lenders under each of the credit agreements in excess of any outstanding advances; however, any such terminated commitments may not be reinstated.

Advances under these agreements would bear interest, at our option, either:

- at a variable annual rate equal to: (1) the highest of (but not less than zero) (a) the rate of interest announced publicly by Citibank in New York, New York, from time to time, as Citibank's base rate, (b) 0.5% per annum above the federal funds rate, and (c) the London interbank offered rate (or the successor thereto) ("LIBOR") applicable to dollars for a period of one month plus 1.00%, plus (2) an applicable margin, as set forth in the applicable Credit Agreement (the "Applicable Margin for Base Advances"); or
- at a rate equal to: (i) LIBOR (adjusted upwards to reflect any bank reserve costs) for a period of one, two, three or six months, as applicable, plus (ii) an applicable margin, as set forth in the applicable Credit Agreement (the "Applicable Margin for Eurodollar Rate Advances").

We pay a facility fee of 0.070%, 0.080%, 0.100% or 0.125% per annum of the amount of the lender commitments, depending on AT&T's credit rating.

NOTE 13. FAIR VALUE MEASUREMENTS AND DISCLOSURE

The Fair Value Measurement and Disclosure framework in ASC 820, "Fair Value Measurement," provides a three-tiered fair value hierarchy based on the reliability of the inputs used to determine fair value. Level 1 refers to fair values determined based on quoted prices in active markets for identical assets. Level 2 refers to fair values estimated using significant other observable inputs and Level 3 includes fair values estimated using significant unobservable inputs.

The level of an asset or liability within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Our valuation techniques maximize the use of observable inputs and minimize the use of unobservable inputs.

The valuation methodologies described above may produce a fair value calculation that may not be indicative of future net realizable value or reflective of future fair values. We believe our valuation methods are appropriate and consistent with other market participants. The use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. There have been no changes in the methodologies used since December 31, 2019.

Long-Term Debt and Other Financial Instruments

The carrying amounts and estimated fair values of our long-term debt, including current maturities, and other financial instruments, are summarized as follows:

	December 31, 2020		December 31, 2019	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Notes and debentures[1]	**$155,209**	**$187,224**	$161,109	$182,124
Bank borrowings	**—**	**—**	4	4
Investment securities[2]	**3,249**	**3,249**	3,723	3,723

[1] Includes credit agreement borrowings.
[2] Excludes investments accounted for under the equity method.

The carrying amount of debt with an original maturity of less than one year approximates fair value. The fair value measurements used for notes and debentures are considered Level 2 and are determined using various methods, including quoted prices for identical or similar securities in both active and inactive markets.

Dollars in millions except per share amounts

Following is the fair value leveling for investment securities that are measured at fair value and derivatives as of December 31, 2020, and December 31, 2019. Derivatives designated as hedging instruments are reflected as "Other assets," "Other noncurrent liabilities," "Other current assets" and "Accounts payable and accrued liabilities" on our consolidated balance sheets.

	December 31, 2020			
	Level 1	**Level 2**	**Level 3**	**Total**
Equity Securities				
Domestic equities	**$1,010**	**$ —**	**$ —**	**$ 1,010**
International equities	**180**	**—**	**—**	**180**
Fixed income equities	**236**	**—**	**—**	**236**
Available-for-Sale Debt Securities	**—**	**1,479**	**—**	**1,479**
Asset Derivatives				
Cross-currency swaps	**—**	**1,721**	**—**	**1,721**
Foreign exchange contracts	**—**	**6**	**—**	**6**
Liability Derivatives				
Cross-currency swaps	**—**	**(1,814)**	**—**	**(1,814)**
Foreign exchange contracts	**—**	**(9)**	**—**	**(9)**

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Equity Securities				
Domestic equities	$844	$ —	$ —	$ 844
International equities	183	—	—	183
Fixed income equities	229	—	—	229
Available-for-Sale Debt Securities	—	1,444	—	1,444
Asset Derivatives				
Interest rate swaps	—	2	—	2
Cross-currency swaps	—	172	—	172
Interest rate locks	—	11	—	11
Foreign exchange contracts	—	89	—	89
Liability Derivatives				
Cross-currency swaps	—	(3,187)	—	(3,187)
Interest rate locks	—	(95)	—	(95)

Investment Securities

Our investment securities include both equity and debt securities that are measured at fair value, as well as equity securities without readily determinable fair values. A substantial portion of the fair values of our investment securities is estimated based on quoted market prices. Investments in equity securities not traded on a national securities exchange are valued at cost, less any impairment, and adjusted for changes resulting from observable, orderly transactions for identical or similar securities. Investments in debt securities not traded on a national securities exchange are valued using pricing models, quoted prices of securities with similar characteristics or discounted cash flows.

The components comprising total gains and losses in the period on equity securities are as follows:

For the years ended December 31,	**2020**	2019	2018
Total gains (losses) recognized on equity securities	**$171**	$301	$(130)
Gains (losses) recognized on equity securities sold	**(25)**	100	(10)
Unrealized gains (losses) recognized on equity securities held at end of period	**$196**	$201	$(120)

At December 31, 2020, available-for-sale debt securities totaling $1,479 have maturities as follows – less than one year: $29; one to three years: $159; three to five years: $179; five or more years: $1,112.

Our cash equivalents (money market securities), short-term investments (certificate and time deposits) and nonrefundable customer deposits are recorded at amortized cost, and the respective carrying amounts approximate fair values. Short-term investments and nonrefundable customer deposits are recorded in "Other current assets" and our investment securities are recorded in "Other Assets" on the consolidated balance sheets.

Derivative Financial Instruments

We enter into derivative transactions to manage certain market risks, primarily interest rate risk and foreign currency exchange risk. This includes the use of interest rate swaps, interest rate locks, foreign exchange forward contracts and combined interest rate foreign exchange contracts (cross-currency swaps). We do not use derivatives for trading or speculative purposes. We record derivatives on our consolidated balance sheets at fair value that is derived from observable market data, including yield curves and foreign exchange rates (all of our derivatives are Level 2). Cash flows associated with derivative instruments are presented in the same category on the consolidated statements of cash flows as the item being hedged.

Fair Value Hedging Periodically, we enter into and designate fixed-to-floating interest rate swaps as fair value hedges. The purpose of these swaps is to manage interest rate risk by managing our mix of fixed-rate and floating-rate debt. These swaps involve the receipt of fixed-rate amounts for floating interest rate payments over the life of the swaps without exchange of the underlying principal amount.

We also designate some of our foreign exchange contracts as fair value hedges. The purpose of these contracts is to hedge currency risk associated with foreign-currency-denominated operating assets and liabilities.

Unrealized and realized gains or losses from fair value hedges impact the same category on the consolidated statements of income as the item being hedged. Unrealized gains on derivatives designated as fair value hedges are recorded at fair market value as assets, and unrealized losses are recorded at fair market value as liabilities. Changes in the fair value of derivative instruments designated as fair value hedges are offset against the change in fair value of the hedged assets or liabilities through earnings. In the year ended December 31, 2020 and 2019, no ineffectiveness was measured on fair value hedges.

Cash Flow Hedging We designate our cross-currency swaps as cash flow hedges. We have entered into multiple cross-currency swaps to hedge our exposure to variability in expected future cash flows that are attributable to foreign currency risk generated from our foreign-denominated debt. These agreements include initial and final exchanges of principal from fixed foreign currency denominated amounts to fixed U.S. dollar denominated amounts, to be exchanged at a specified rate that is usually determined by the market spot rate upon issuance. They also include an interest rate swap of a fixed or floating foreign currency-denominated interest rate to a fixed U.S. dollar denominated interest rate.

We also designate some of our foreign exchange contracts as cash flow hedges. The purpose of these contracts is to hedge certain forecasted film production costs and film tax incentives denominated in foreign currencies.

Unrealized gains on derivatives designated as cash flow hedges are recorded at fair value as assets, and unrealized losses are recorded at fair value as liabilities. For derivative instruments designated as cash flow hedges, changes in fair value are reported as a component of accumulated OCI and are reclassified into the consolidated statements of income in the same period the hedged transaction affects earnings.

Periodically, we enter into and designate interest rate locks to partially hedge the risk of changes in interest payments attributable to increases in the benchmark interest rate during the period leading up to the probable issuance of fixed-rate debt. We designate our interest rate locks as cash flow hedges. Gains and losses when we settle our interest rate locks are amortized into income over the life of the related debt. Over the next 12 months, we expect to reclassify $92 from accumulated OCI to "Interest expense" due to the amortization of net losses on historical interest rate locks.

We settled all interest rate locks in May 2020 in conjunction with the issuance of fixed rate debt obligations that the interest rate locks were hedging and paid $731 that was largely offset by the return of collateral at the time of settlement. Cash flows from the interest rate lock settlements and return of collateral were reported as financing activities in our statement of cash flows, consistent with our accounting policy for these instruments.

Net Investment Hedging We have designated €1,450 million aggregate principal amount of debt as a hedge of the variability of some of the Euro-denominated net investments of our subsidiaries. The gain or loss on the debt that is designated as, and is effective as, an economic hedge of the net investment in a foreign operation is recorded as a currency translation adjustment within accumulated OCI, net on the consolidated balance sheets. Net losses on net investment hedges recognized in accumulated OCI for 2020 were $147.

Collateral and Credit-Risk Contingency We have entered into agreements with our derivative counterparties establishing collateral thresholds based on respective credit ratings and netting agreements. At December 31, 2020, we had posted collateral of $53 (a deposit asset) and held collateral of $694 (a receipt liability). Under the agreements, if AT&T's credit rating had been downgraded one rating level by Fitch Ratings, before the final collateral exchange in

Dollars in millions except per share amounts

December, we would have been required to post additional collateral of $33. If AT&T's credit rating had been downgraded four ratings levels by Fitch Ratings, two levels by S&P, and two levels by Moody's, we would have been required to post additional collateral of $676. If DIRECTV Holdings LLC's credit rating had been downgraded below BBB- by S&P, we would have been required to post additional collateral of $134. At December 31, 2019, we had posted collateral of $204 (a deposit asset) and held collateral of $44 (a receipt liability). We do not offset the fair value of collateral, whether the right to reclaim cash collateral (a receivable) or the obligation to return cash collateral (a payable) exists, against the fair value of the derivative instruments.

Following are the notional amounts of our outstanding derivative positions at December 31:

	2020	2019
Interest rate swaps	$ —	$ 853
Cross-currency swaps	40,745	42,325
Interest rate locks	—	3,500
Foreign exchange contracts	90	269
Total	$40,835	$46,947

Following are the related hedged items affecting our financial position and performance:

Effect of Derivatives on the Consolidated Statements of Income

Fair Value Hedging Relationships For the years ended December 31,	2020	2019	2018
Interest rate swaps (Interest expense):			
Gain (Loss) on interest rate swaps	$(6)	$ 58	$(12)
Gain (Loss) on long-term debt	6	(58)	12

In addition, the net swap settlements that accrued and settled in the periods above were offset against "Interest expense."

Cash Flow Hedging Relationships For the years ended December 31,	2020	2019	2018
Cross-currency swaps:			
Gain (Loss) recognized in accumulated OCI	$(378)	$(1,066)	$(825)
Foreign exchange contracts:			
Gain (Loss) recognized in accumulated OCI	3	10	51
Other income (expense) – net reclassified from accumulated OCI into income	(3)	6	39
Interest rate locks:			
Gain (Loss) recognized in accumulated OCI	(648)	(84)	—
Interest income (expense) reclassified from accumulated OCI into income	(84)	(63)	(58)

Nonrecurring Fair Value Measurements

In addition to assets and liabilities that are recorded at fair value on a recurring basis, impairment indicators may subject goodwill, long-lived assets and film costs to nonrecurring fair value measurements. The implied fair values of the video and Vrio businesses were estimated using both the discounted cash flow as well as market multiple approaches. The fair values of long-lived assets in the video business were determined using a present value approach of probability-weighted expected cash flows. The fair values of film productions were estimated using a discounted cash flow approach. The inputs to all of these approaches are considered Level 3.

Goodwill amounts related to the Video and Vrio reporting units were fully impaired. At December 31, 2020, nonrecurring fair value measurements in our Video business unit totaled $9,744 and were comprised of $5,873 for orbital slots, $1,613 for customer lists and $2,258 for property, plant and equipment (see Notes 7 and 9). Nonrecurring fair value measurements for film costs within our Warner Bros. business unit totaled $844 (see Note 11). There were no nonrecurring fair value measurements at December 31, 2019.

NOTE 14. INCOME TAXES

Significant components of our deferred tax liabilities (assets) are as follows at December 31:

	2020	2019
Depreciation and amortization	$46,952	$44,896
Licenses and nonamortizable intangibles	13,930	17,355
Employee benefits	(5,279)	(5,143)
Deferred fulfillment costs	2,691	3,050
Net operating loss and other carryforwards	(7,355)	(7,301)
Other – net	4,562	1,536
Subtotal	55,501	54,393
Deferred tax assets valuation allowance	4,773	4,941
Net deferred tax liabilities	$60,274	$59,334
Noncurrent deferred tax liabilities	$60,472	$59,502
Less: Noncurrent deferred tax assets	(198)	(168)
Net deferred tax liabilities	$60,274	$59,334

At December 31, 2020, we had combined net operating and capital loss carryforwards (tax effected) for federal income tax purposes of $585, state of $916 and foreign of $2,763, expiring through 2040. Additionally, we had federal credit carryforwards of $1,080 and state credit carryforwards of $2,011, expiring primarily through 2040.

We recognize a valuation allowance if, based on the weight of available evidence, it is more likely than not that some portion, or all, of a deferred tax asset will not be realized. Our valuation allowances at December 31, 2020 and 2019 related primarily to state and foreign net operating losses and state credit carryforwards.

The Company considers post-1986 unremitted foreign earnings subjected to the one-time transition tax not to be indefinitely reinvested as such earnings can be repatriated without any significant incremental tax costs. The Company considers other types of unremitted foreign earnings to be indefinitely reinvested. U.S. income and foreign withholding taxes have not been recorded on temporary differences related to investments in certain foreign subsidiaries as such differences are considered indefinitely reinvested. Determination of the amount of unrecognized deferred tax liability is not practicable.

We recognize the financial statement effects of a tax return position when it is more likely than not, based on the technical merits, that the position will ultimately be sustained. For tax positions that meet this recognition threshold, we apply our judgment, taking into account applicable tax laws, our experience in managing tax audits and relevant GAAP, to determine the amount of tax benefits to recognize in our financial statements. For each position, the difference between the benefit realized on our tax return and the benefit reflected in our financial statements is recorded on our consolidated balance sheets as an unrecognized tax benefit (UTB). We update our UTBs at each financial statement date to reflect the impacts of audit settlements and other resolutions of audit issues, the expiration of statutes of limitation, developments in tax law and ongoing discussions with taxing authorities. A reconciliation of the change in our UTB balance from January 1 to December 31 for 2020 and 2019 is as follows:

Federal, State and Foreign Tax	**2020**	2019
Balance at beginning of year	**$10,979**	$10,358
Increases for tax positions related to the current year	**1,580**	903
Increases for tax positions related to prior years	**112**	1,106
Decreases for tax positions related to prior years	**(994)**	(1,283)
Lapse of statute of limitations	**(24)**	(32)
Settlements	**(1,646)**	(283)
Current year acquisitions	**—**	205
Foreign currency effects	**(6)**	5
Balance at end of year	**10,001**	10,979
Accrued interest and penalties	**2,450**	2,708
Gross unrecognized income tax benefits	**12,451**	13,687
Less: Deferred federal and state income tax benefits	**(878)**	(886)
Less: Tax attributable to timing items included above	**(3,588)**	(4,320)
Total UTB that, if recognized, would impact the effective income tax rate as of the end of the year	**$ 7,985**	$ 8,481

Periodically we make deposits to taxing jurisdictions which reduce our UTB balance but are not included in the reconciliation above. The amount of deposits that reduced our UTB balance was $702 at December 31, 2020 and $2,584 at December 31, 2019.

Accrued interest and penalties included in UTBs were $2,450 as of December 31, 2020, and $2,708 as of December 31, 2019. We record interest and penalties related to federal, state and foreign UTBs in income tax expense. The net interest and penalty expense included in income tax expense was $149 for 2020, $267 for 2019 and $1,290 for 2018.

We file income tax returns in the U.S. federal jurisdiction and various state, local and foreign jurisdictions. As a large taxpayer, our income tax returns are regularly audited by the Internal Revenue Service (IRS) and other taxing authorities.

The IRS has completed field examinations of our tax returns through 2012. All audit periods prior to 2005 are closed for federal examination purposes and we have effectively resolved all outstanding audit issues for years through 2010 with the IRS Appeals Division. Those years will be closed as the final paperwork is processed in the coming months.

While we do not expect material changes, we are generally unable to estimate the range of impacts on the balance of the remaining uncertain tax positions or the impact on the effective tax rate from the resolution of these issues until each year is closed; and it is possible that the amount of unrecognized benefit with respect to our uncertain tax positions could increase or decrease within the next 12 months.

The components of income tax (benefit) expense are as follows:

	2020	2019	2018
Federal:			
Current	**$ (687)**	$ 584	$3,258
Deferred	**1,039**	1,656	277
	352	2,240	3,535
State and local:			
Current	**(6)**	603	513
Deferred	**263**	144	473
	257	747	986
Foreign:			
Current	**413**	605	539
Deferred	**(57)**	(99)	(140)
	356	506	399
Total	**$ 965**	$3,493	$4,920

Dollars in millions except per share amounts

"Income Before Income Taxes" in the Consolidated Statements of Income included the following components for the years ended December 31:

	2020	2019	2018
U.S. income (loss) before income taxes	**$ (452)**	$18,301	$25,379
Foreign income (loss) before income taxes	**(2,404)**	167	(506)
Total	**$(2,856)**	$18,468	$24,873

A reconciliation of income tax expense (benefit) and the amount computed by applying the statutory federal income tax rate of 21% to income from continuing operations before income taxes is as follows:

	2020	2019	2018
Taxes computed at federal statutory rate	**$ (600)**	$3,878	$5,223
Increases (decreases) in income taxes resulting from:			
State and local income taxes – net of federal income tax benefit	**193**	611	738
Enactment date and measurement period adjustments from the Act	**—**	—	(718)
Tax on foreign investments	**(141)**	(115)	(466)
Noncontrolling interest	**(285)**	(230)	(121)
Permanent items and R&D credit	**(239)**	(285)	(189)
Audit resolutions	**(112)**	(156)	544
Divestitures	**107**	—	—
Goodwill impairment[1]	**2,120**	—	—
Other – net	**(78)**	(210)	(91)
Total	**$ 965**	$3,493	$4,920
Effective Tax Rate	**(33.8)%**	18.9%	19.8%

[1] Goodwill impairments are not deductible for tax purposes.

NOTE 15. PENSION AND POSTRETIREMENT BENEFITS

We offer noncontributory pension programs covering the majority of domestic nonmanagement employees in our Communications business. Nonmanagement employees' pension benefits are generally calculated using one of two formulas: a flat dollar amount applied to years of service according to job classification or a cash balance plan with negotiated annual pension band credits as well as interest credits. Most employees can elect to receive their pension benefits in either a lump sum payment or an annuity.

Pension programs covering U.S. management employees are closed to new entrants. These programs continue to provide benefits to participants that were generally hired before January 1, 2015, who receive benefits under either cash balance pension programs that include annual or monthly credits based on salary as well as interest credits, or a traditional pension formula (i.e., a stated percentage of employees' adjusted career income).

We also provide a variety of medical, dental and life insurance benefits to certain retired employees under various plans and accrue actuarially determined postretirement benefit costs as active employees earn these benefits.

WarnerMedia and certain of its subsidiaries have both funded and unfunded defined benefit pension plans, the substantial majority of which are noncontributory plans covering domestic employees. WarnerMedia also sponsors unfunded domestic postretirement benefit plans covering certain retirees and their dependents. At acquisition, the plans were already closed to new entrants and frozen for new accruals.

During the fourth quarter of 2020, we committed to, and reflected in our results, plan changes impacting retiree life and death coverage and health and medical subsidy benefits. Changes were also communicated that impact future pension accruals for certain management employees. These plan changes align our benefit plans to, or above market level.

In 2019, for certain management participants in our pension plan who terminated employment before April 1, 2019, we offered the option of more favorable 2018 interest rates and mortality basis for determining lump-sum distributions. We recorded special termination benefits of $81 associated with this offer in "Other income (expense) – net." We also offered certain terminated vested pension plan participants the opportunity to receive their benefit as a lump sum.

During the fourth quarter of 2019, we committed to plan changes impacting the cost of postretirement health and welfare benefits, which were reflected in our results. Future retirees will not receive health retirement subsidies toward post-Medicare coverage but have access to a new cost-efficient comprehensive plan.

Obligations and Funded Status

For defined benefit pension plans, the benefit obligation is the projected benefit obligation, the actuarial present value, as of our December 31 measurement date, of all benefits attributed by the pension benefit formula to employee service rendered to that date. The amount of benefit to be paid depends on a number of future events incorporated into the pension benefit formula, including estimates of the average life of employees and their beneficiaries and average years of service rendered. It is measured based on assumptions concerning future interest rates and future employee compensation levels as applicable.

For postretirement benefit plans, the benefit obligation is the accumulated postretirement benefit obligation, the actuarial present value as of the measurement date of all future benefits attributed under the terms of the postretirement benefit plans to employee service.

The following table presents the change in the projected benefit obligation for the years ended December 31:

	Pension Benefits		Postretirement Benefits	
	2020	2019	**2020**	2019
Benefit obligation at beginning of year	**$59,873**	$55,439	**$16,041**	$19,378
Service cost – benefits earned during the period	**1,029**	1,019	**53**	71
Interest cost on projected benefit obligation	**1,687**	1,960	**416**	675
Amendments	**(340)**	—	**(2,655)**	(4,590)
Actuarial (gain) loss	**5,054**	7,734	**1,423**	2,050
Special termination benefits	**—**	81	**—**	—
Benefits paid	**(5,124)**	(6,356)	**(1,370)**	(1,543)
Curtailment	**(1)**	—	**—**	—
Plan transfers	**(20)**	(4)	**20**	—
Benefit obligation at end of year	**$62,158**	$59,873	**$13,928**	$16,041

The following table presents the change in the fair value of plan assets for the years ended December 31 and the plans' funded status at December 31:

	Pension Benefits		Postretirement Benefits	
	2020	2019	**2020**	2019
Fair value of plan assets at beginning of year	**$53,530**	$51,681	**$ 4,145**	$ 4,277
Actual return on plan assets	**6,199**	8,207	**302**	609
Benefits paid[1]	**(5,124)**	(6,356)	**(1,029)**	(941)
Contributions	**2**	2	**425**	200
Plan transfers	**(1)**	(4)	**—**	—
Fair value of plan assets at end of year	**54,606**	53,530	**3,843**	4,145
Unfunded status at end of year[2]	**$ (7,552)**	$ (6,343)	**$(10,085)**	$(11,896)

[1] At our discretion, certain postretirement benefits may be paid from our cash accounts, which does not reduce Voluntary Employee Benefit Association (VEBA) assets. Future benefit payments may be made from VEBA trusts and thus reduce those asset balances.
[2] Funded status is not indicative of our ability to pay ongoing pension benefits or of our obligation to fund retirement trusts. Required pension funding is determined in accordance with the Employee Retirement Income Security Act of 1974, as amended (ERISA) and applicable regulations.

Amounts recognized on our consolidated balance sheets at December 31 are listed below:

	Pension Benefits		Postretirement Benefits	
	2020	2019	**2020**	2019
Current portion of employee benefit obligation[1]	**$ —**	$ —	**$ (1,213)**	$ (1,365)
Employee benefit obligation[2]	**(7,552)**	(6,343)	**(8,872)**	(10,531)
Net amount recognized	**$(7,552)**	$(6,343)	**$(10,085)**	$(11,896)

[1] Included in "Accounts payable and accrued liabilities."
[2] Included in "Postemployment benefit obligation," combined with international pension obligations and other postemployment obligations of $553 and $1,299 at December 31, 2020, respectively.

The accumulated benefit obligation for our pension plans represents the actuarial present value of benefits based on employee service and compensation as of a certain date and does not include an assumption about future compensation levels. The accumulated benefit obligation for our pension plans was $60,848 at December 31, 2020, and $58,150 at December 31, 2019.

Net Periodic Benefit Cost and Other Amounts Recognized in Other Comprehensive Income

Periodic Benefit Costs

The service cost component of net periodic pension cost (benefit) is recorded in operating expenses in the consolidated statements of income while the remaining components are recorded in "Other income (expense) – net." Our combined net pension and postretirement cost (credit) recognized in our consolidated statements of income was $711, $2,762 and $(4,251) for the years ended December 31, 2020, 2019 and 2018.

Dollars in millions except per share amounts

The following table presents the components of net periodic benefit cost (credit):

	Pension Benefits[1]			Postretirement Benefits		
	2020	2019	2018	**2020**	2019	2018
Service cost – benefits earned during the period	**$ 1,029**	$ 1,019	$ 1,116	**$ 53**	$ 71	$ 109
Interest cost on projected benefit obligation	**1,687**	1,960	2,092	**416**	675	778
Expected return on assets	**(3,557)**	(3,561)	(3,190)	**(178)**	(227)	(304)
Amortization of prior service credit	**(113)**	(113)	(115)	**(2,329)**	(1,820)	(1,635)
Actuarial (gain) loss	**2,404**	3,088	(812)	**1,299**	1,670	(2,290)
Net pension and postretirement cost (credit)	**$ 1,450**	$ 2,393	$ (909)	**$ (739)**	$ 369	$(3,342)

[1] Net periodic pension cost (credit) excludes immediate cost recognized due to special events: curtailment gain of ($1) in 2020 and special termination benefits of $81 in 2019.

Other Changes in Benefit Obligations Recognized in Other Comprehensive Income

The following table presents the after-tax changes in benefit obligations recognized in OCI and the after-tax prior service credits that were amortized from OCI into net periodic benefit costs:

	Pension Benefits			Postretirement Benefits		
	2020	2019	2018	**2020**	2019	2018
Balance at beginning of year	**$361**	$447	$ 571	**$ 8,171**	$ 6,086	$ 6,456
Prior service (cost) credit	**250**	—	(37)	**2,001**	3,457	864
Amortization of prior service credit	**(86)**	(86)	(87)	**(1,756)**	(1,372)	(1,234)
Total recognized in other comprehensive (income) loss	**164**	(86)	(124)	**245**	2,085	(370)
Balance at end of year	**$525**	$361	$ 447	**$ 8,416**	$ 8,171	$ 6,086

Assumptions

In determining the projected benefit obligation and the net pension and postretirement benefit cost, we used the following significant weighted-average assumptions:

	Pension Benefits			Postretirement Benefits		
	2020	2019	2018	**2020**	2019	2018
Weighted-average discount rate for determining benefit obligation at December 31	**2.70%**	3.40%	4.50%	**2.40%**	3.20%	4.40%
Discount rate in effect for determining service cost[1,2]	**3.60%**	4.10%	4.20%	**3.50%**	4.40%	4.30%
Discount rate in effect for determining interest cost[1,2]	**2.90%**	3.50%	3.80%	**2.70%**	3.70%	3.60%
Weighted-average interest credit rate for cash balance pension programs[3]	**3.10%**	3.30%	3.70%	**—%**	—%	—%
Long-term rate of return on plan	**7.00%**	7.00%	7.00%	**4.75%**	5.75%	5.75%
Composite rate of compensation increase for determining benefit obligation	**3.00%**	3.00%	3.00%	**3.00%**	3.00%	3.00%
Composite rate of compensation increase for determining net cost (benefit)	**3.00%**	3.00%	3.00%	**3.00%**	3.00%	3.00%

[1] Weighted-average discount rate for pension benefits in effect from January 1, 2019 through March 31, 2019 was 4.60% for service cost and 4.20% for interest cost, from April 1, 2019 through June 30, 2019 was 4.30% for service cost and 3.70% for interest cost, from July 1, 2019 through September 30, 2019 was 3.90% for service cost and 3.20% for interest cost, and, from October 1, 2019 through December 31, 2019 was 3.50% for service cost and 3.00% for interest cost.

[2] Weighted-average discount rate for postretirement benefits in effect from January 1, 2019 through October 1, 2019 was 4.70% for service cost and 4.00% for interest cost, and, from October 2, 2019 through December 31, 2019 was 3.40% for service cost and 2.70% for interest cost.

[3] Weighted-average interest crediting rates for cash balance pension programs relate only to the cash balance portion of total pension benefits. A 0.50% increase in the weighted-average interest crediting rate would increase the pension benefit obligation by $130.

We recognize gains and losses on pension and postretirement plan assets and obligations immediately in "Other income (expense) – net" in our consolidated statements of income. These gains and losses are generally measured annually as of December 31 and accordingly, will normally be recorded during the fourth quarter, unless an earlier remeasurement is required. Should actual experience differ from actuarial assumptions, the projected pension benefit obligation and net pension cost and accumulated postretirement benefit obligation and postretirement benefit cost would be affected in future years.

Discount Rate Our assumed weighted-average discount rate for pension and postretirement benefits of 2.70% and 2.40% respectively, at December 31, 2020, reflects the hypothetical rate at which the projected benefit obligation could be effectively settled or paid out to participants. We determined our discount rate based on a range of factors, including a yield curve composed of the rates of return on several hundred high-quality, fixed income corporate bonds available at the measurement date and corresponding to the related expected durations of future cash outflows. These bonds were all rated at least Aa3 or AA- by one of the nationally recognized statistical rating organizations, denominated in U.S. dollars, and neither callable, convertible nor index linked. For the year ended December 31, 2020, when compared to the year ended December 31, 2019, we decreased our pension discount rate by 0.70%, resulting in an increase in our pension plan benefit obligation of $5,594 and decreased our postretirement discount rate by 0.80%, resulting in an increase in our postretirement benefit obligation of $1,311. For the year ended December 31, 2019, we decreased our pension discount rate by 1.10%, resulting in an increase in our pension plan benefit obligation of $8,018 and decreased our postretirement discount rates by 1.20%, resulting in an increase in our postretirement benefit obligation of $2,399.

We utilize a full yield curve approach in the estimation of the service and interest components of net periodic benefit costs for pension and other postretirement benefits. Under this approach, we apply discounting using individual spot rates from a yield curve composed of the rates of return on several hundred high-quality, fixed income corporate bonds available at the measurement date. These spot rates align to each of the projected benefit obligations and service cost cash flows. The service cost component relates to the active participants in the plan, so the relevant cash flows on which to apply the yield curve are considerably longer in duration on average than the total projected benefit obligation cash flows, which also include benefit payments to retirees. Interest cost is computed by multiplying each spot rate by the corresponding discounted projected benefit obligation cash flows. The full yield curve approach reduces any actuarial gains and losses based upon interest rate expectations (e.g., built-in gains in interest cost in an upward sloping yield curve scenario), or gains and losses merely resulting from the timing and magnitude of cash outflows associated with our benefit obligations. Neither the annual measurement of our total benefit obligations nor annual net benefit cost is affected by the full yield curve approach.

Expected Long-Term Rate of Return In 2021, our expected long-term rate of return is 6.75% on pension plan assets and 4.50% on postretirement plan assets. Our expected long-term rates of return on plan assets were adjusted downward by 0.25% for 2021, with pension reducing from 7.00% to 6.75% and postretirement from 4.75% to 4.50%. This update to our asset return assumptions was due to economic forecasts, a change in the asset mix, and holding more fixed income securities in the pension plan and more cash and short-term securities in our VEBA trusts. Our long-term rates of return reflect the average rate of earnings expected on the funds invested, or to be invested, to provide for the benefits included in the projected benefit obligations. In setting the long-term assumed rate of return, management considers capital markets' future expectations, the asset mix of the plans' investment and average historical asset return. Actual long-term returns can, in relatively stable markets, also serve as a factor in determining future expectations. We consider many factors that include, but are not limited to, historical returns on plan assets, current market information on long-term returns (e.g., long-term bond rates) and current and target asset allocations between asset categories. The target asset allocation is determined based on consultations with external investment advisers. If all other factors were to remain unchanged, we expect that a 0.50% decrease in the expected long-term rate of return would cause 2021 combined pension and postretirement cost to increase $277. However, any differences in the rate and actual returns will be included with the actuarial gain or loss recorded in the fourth quarter when our plans are remeasured.

Composite Rate of Compensation Increase Our expected composite rate of compensation increase cost of 3.00% in 2020 and 2019 reflects the long-term average rate of salary increases.

Healthcare Cost Trend Our healthcare cost trend assumptions are developed based on historical cost data, the near-term outlook and an assessment of likely long-term trends. Based on our assessment of historical experience, expectations of healthcare industry inflation and recent prescription drug cost experience, our 2021 assumed annual healthcare prescription drug cost trend and medical cost trend for eligible participants will remain at 4.00% annual and ultimate rate. For 2020, our assumed annual healthcare prescription drug cost trend and medical cost trend for eligible participants was decreased from an annual and ultimate trend rate of 4.50% to an annual and ultimate trend rate of 4.00%. This change in assumption decreased our obligation by $102 at December 31, 2019. In addition to the healthcare cost trend, we assumed an annual 2.50% growth in administrative expenses and an annual 3.00% growth in dental claims.

Dollars in millions except per share amounts

Plan Assets

Plan assets consist primarily of private and public equity, government and corporate bonds, and real assets (real estate and natural resources). The asset allocations of the pension plans are maintained to meet ERISA requirements. Any plan contributions, as determined by ERISA regulations, are made to a pension trust for the benefit of plan participants. We do not have significant ERISA required contributions to our pension plans for 2021.

We maintain VEBA trusts to partially fund postretirement benefits; however, there are no ERISA or regulatory requirements that these postretirement benefit plans be funded annually. We made discretionary contributions of $425 in December 2020 and $200 in December 2019 to our postretirement plan.

The principal investment objectives are to ensure the availability of funds to pay pension and postretirement benefits as they become due under a broad range of future economic scenarios, maximize long-term investment return with an acceptable level of risk based on our pension and postretirement obligations, and diversify broadly across and within the capital markets to insulate asset values against adverse experience in any one market. Each asset class has broadly diversified characteristics. Substantial biases toward any particular investing style or type of security are sought to be avoided by managing the aggregation of all accounts with portfolio benchmarks. Asset and benefit obligation forecasting studies are conducted periodically, generally every two to three years, or when significant changes have occurred in market conditions, benefits, participant demographics or funded status. Decisions regarding investment policy are made with an understanding of the effect of asset allocation on funded status, future contributions and projected expenses.

The plans' weighted-average asset targets and actual allocations as a percentage of plan assets, including the notional exposure of future contracts by asset categories at December 31 are as follows:

	Pension Assets			Postretirement (VEBA) Assets		
	Target	**2020**	2019	Target	**2020**	2019
Equity securities:						
Domestic	16% – 26%	**19%**	17%	14% – 24%	**19%**	20%
International	10% – 20%	**15**	12	9% – 19%	**14**	12
Fixed income	37% – 47%	**35**	35	40% – 50%	**45**	52
Real assets	8% – 18%	**8**	9	—% – 6%	**1**	1
Private equity	5% – 15%	**9**	8	—% – 6%	**1**	2
Preferred interest	6% – 16%	**10**	17	—% – —%	**—**	—
Other	—% – 5%	**4**	2	15% – 25%	**20**	13
Total		**100%**	100%		**100%**	100%

The pension trust holds a preferred equity interest valued at $5,771 in AT&T Mobility II LLC (Mobility II), the primary holding company for our wireless business (see Note 17). During 2020, the trust sold a portion of this preferred interest valued at $2,885 to third party investors. The preferred equity interest was valued at $8,806 as of December 31, 2019.

At December 31, 2020, AT&T securities represented 11% of assets held by our pension trust, including the preferred interest in Mobility II, and 1% of assets (primarily common stock) held by our VEBA trusts included in these financial statements.

Investment Valuation

Investments are stated at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability at the measurement date.

Investments in securities traded on a national securities exchange are valued at the last reported sales price on the final business day of the year. If no sale was reported on that date, they are valued at the last reported bid price.

Investments in securities not traded on a national securities exchange are valued using pricing models, quoted prices of securities with similar characteristics or discounted cash flows. Shares of registered investment companies are valued based on quoted market prices, which represent the net asset value of shares held at year-end.

Other commingled investment entities are valued at quoted redemption values that represent the net asset values of units held at year-end which management has determined approximates fair value.

Real estate and natural resource direct investments are valued at amounts based upon appraisal reports. Fixed income securities valuation is based upon observable prices for comparable assets, broker/dealer quotes (spreads or prices), or a pricing matrix that derives spreads for each bond based on external market data, including the current credit rating for the bonds, credit spreads to Treasuries for each credit rating, sector add-ons or credits, issue-specific add-ons or credits as well as call or other options.

The preferred interest in Mobility II is valued using an income approach by an independent fiduciary.

Purchases and sales of securities are recorded as of the trade date. Realized gains and losses on sales of securities are determined on the basis of average cost. Interest income is recognized on the accrual basis. Dividend income is recognized on the ex-dividend date.

Non-interest bearing cash and overdrafts are valued at cost, which approximates fair value.

Fair Value Measurements

See Note 13 for a discussion of the fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value.

The following tables set forth by level, within the fair value hierarchy, the pension and postretirement assets and liabilities at fair value as of December 31, 2020:

Pension Assets and Liabilities at Fair Value as of December 31, 2020				
	Level 1	Level 2	Level 3	Total
Non-interest bearing cash	$ 173	$ —	$ —	$ 173
Interest bearing cash	7	—	—	7
Foreign currency contracts	—	3	—	3
Equity securities:				
Domestic equities	9,784	—	11	9,795
International equities	4,821	11	12	4,844
Preferred interest	—	—	5,771	5,771
Fixed income securities:				
Corporate bonds and other investments	—	11,043	52	11,095
Government and municipal bonds	—	6,039	—	6,039
Mortgage-backed securities	—	442	1	443
Real estate and real assets	—	—	2,544	2,544
Securities lending collateral	621	1,435	—	2,056
Receivable for variation margin	23	—	—	23
Assets at fair value	15,429	18,973	8,391	42,793
Investments sold short and other liabilities at fair value	(450)	(8)	(1)	(459)
Total plan net assets at fair value	$14,979	$18,965	$8,390	$ 42,334
Assets held at net asset value practical expedient				
Private equity funds				5,154
Real estate funds				1,694
Commingled funds				7,706
Total assets held at net asset value practical expedient				14,554
Other assets (liabilities)[1]				(2,282)
Total Plan Net Assets				**$54,606**

[1] Other assets (liabilities) include amounts receivable, accounts payable and net adjustment for securities lending payable.

Dollars in millions except per share amounts

Postretirement Assets and Liabilities at Fair Value as of December 31, 2020	Level 1	Level 2	Level 3	Total
Interest bearing cash	$ 497	$302	$—	$ 799
Equity securities:				
Domestic equities	363	—	—	363
International equities	282	—	—	282
Fixed income securities:				
Corporate bonds and other investments	5	307	3	315
Government and municipal bonds	6	132	1	139
Mortgage-backed securities	—	94	—	94
Securities lending collateral	—	28	—	28
Assets at fair value	1,153	863	4	2,020
Securities lending payable and other liabilities	(1)	(29)	—	(30)
Total plan net assets at fair value	$1,152	$834	$ 4	$1,990
Assets held at net asset value practical expedient				
Commingled funds				1,843
Private equity				24
Real estate funds				22
Total assets held at net asset value practical expedient				1,889
Other assets (liabilities)[1]				(36)
Total Plan Net Assets				**$3,843**

[1] Other assets (liabilities) include amounts receivable and accounts payable.

The tables below set forth a summary of changes in the fair value of the Level 3 pension and postretirement assets for the year ended December 31, 2020:

Pension Assets	Equities	Fixed Income Funds	Real Estate and Real Assets	Total
Balance at beginning of year	$ 8,816	$ 6	$ 2,817	$ 11,639
Realized gains (losses)	(150)	—	255	105
Unrealized gains (losses)	3	—	(178)	(175)
Transfers in	4	51	36	91
Transfers out	—	(3)	—	(3)
Purchases	9,114	1	223	9,338
Sales	(11,994)	(2)	(609)	(12,605)
Balance at end of year	**$ 5,793**	**$53**	**$2,544**	**$ 8,390**

Postretirement Assets	Equities	Fixed Income Funds	Real Estate and Real Assets	Total
Balance at beginning of year	$ —	$ 32	$ —	$ 32
Transfers in	—	3	—	3
Transfers out	—	(11)	—	(11)
Sales	—	(20)	—	(20)
Balance at end of year	**$ —**	**$ 4**	**$ —**	**$ 4**

The following tables set forth by level, within the fair value hierarchy, the pension and postretirement assets and liabilities at fair value as of December 31, 2019:

Pension Assets and Liabilities at Fair Value as of December 31, 2019				
	Level 1	Level 2	Level 3	Total
Non-interest bearing cash	$ 85	$ —	$ —	$ 85
Interest bearing cash	529	—	—	529
Foreign currency contracts	—	5	—	5
Equity securities:				
Domestic equities	8,068	—	4	8,072
International equities	3,929	11	6	3,946
Preferred Interest	—	—	8,806	8,806
Fixed income securities:				
Corporate bonds and other investments	—	10,469	4	10,473
Government and municipal bonds	49	6,123	—	6,172
Mortgage-backed securities	—	522	2	524
Real estate and real assets	—	—	2,817	2,817
Securities lending collateral	103	1,658	—	1,761
Receivable for variation margin	5	—	—	5
Assets at fair value	12,768	18,788	11,639	43,195
Investments sold short and other liabilities at fair value	(513)	(2)	—	(515)
Total plan net assets at fair value	$12,255	$18,786	$11,639	$ 42,680
Assets held at net asset value practical expedient				
Private equity funds				4,544
Real estate funds				2,062
Commingled funds				5,710
Total assets held at net asset value practical expedient				12,316
Other assets (liabilities)[1]				(1,466)
Total Plan Net Assets				**$53,530**

[1] Other assets (liabilities) include amounts receivable, accounts payable and net adjustment for securities lending payable.

Postretirement Assets and Liabilities at Fair Value as of December 31, 2019				
	Level 1	Level 2	Level 3	Total
Interest bearing cash	$248	$ 301	$ —	$ 549
Equity securities:				
Domestic equities	438	—	—	438
International equities	265	—	—	265
Fixed income securities:				
Corporate bonds and other investments	7	492	31	530
Government and municipal bonds	6	182	1	189
Mortgage-backed securities	—	294	—	294
Securities lending collateral	—	36	—	36
Assets at fair value	964	1,305	32	2,301
Securities lending payable and other liabilities	—	(36)	—	(36)
Total plan net assets at fair value	$964	$1,269	$32	$ 2,265
Assets held at net asset value practical expedient				
Private equity funds				66
Real estate funds				27
Commingled funds				1,797
Total assets held at net asset value practical expedient				1,890
Other assets (liabilities)[1]				(10)
Total Plan Net Assets				**$4,145**

[1] Other assets (liabilities) include amounts receivable and accounts payable.

Dollars in millions except per share amounts

The tables below set forth a summary of changes in the fair value of the Level 3 pension and postretirement assets for the year ended December 31, 2019:

Pension Assets	Equities	Fixed Income Funds	Real Estate and Real Assets	Total
Balance at beginning of year	$8,750	$ 4	$2,579	$11,333
Realized gains (losses)	—	—	64	64
Unrealized gains (losses)	58	—	45	103
Transfers in	8	5	134	147
Transfers out	—	(6)	—	(6)
Purchases	—	7	228	235
Sales	—	(4)	(233)	(237)
Balance at end of year	$8,816	$ 6	$2,817	$11,639

Postretirement Assets	Equities	Fixed Income Funds	Real Estate and Real Assets	Total
Balance at beginning of year	$ 1	$12	$—	$13
Transfers in	—	28	—	28
Transfers out	—	(1)	—	(1)
Sales	(1)	(7)	—	(8)
Balance at end of year	$—	$32	$—	$32

Estimated Future Benefit Payments

Expected benefit payments are estimated using the same assumptions used in determining our benefit obligation at December 31, 2020. Because benefit payments will depend on future employment and compensation levels; average years employed; average life spans; and payment elections, among other factors, changes in any of these assumptions could significantly affect these expected amounts. The following table provides expected benefit payments under our pension and postretirement plans:

	Pension Benefits	Postretirement Benefits
2021	$ 5,391	$1,392
2022	4,597	1,231
2023	4,428	1,159
2024	4,323	879
2025	4,234	832
Years 2026 – 2030	19,646	3,651

Supplemental Retirement Plans

We also provide certain senior- and middle-management employees with nonqualified, unfunded supplemental retirement and savings plans. While these plans are unfunded, we have assets in a designated non-bankruptcy remote trust that are independently managed and used to provide for certain of these benefits. These plans include supplemental pension benefits as well as compensation-deferral plans, some of which include a corresponding match by us based on a percentage of the compensation deferral. For our supplemental retirement plans, the projected benefit obligation was $2,687 and the net supplemental retirement pension cost was $330 at and for the year ended December 31, 2020. The projected benefit obligation was $2,605 and the net supplemental retirement pension credit was $438 at and for the year ended December 31, 2019.

We use the same significant assumptions for the composite rate of compensation increase in determining our projected benefit obligation and the net pension and postemployment benefit cost. Our discount rates of 2.30% at December 31, 2020 and 3.20% at December 31, 2019 were calculated using the same methodologies used in calculating the discount rate for our qualified pension and postretirement benefit plans.

Deferred compensation expense was $183 in 2020, $199 in 2019 and $128 in 2018.

Contributory Savings Plans

We maintain contributory savings plans that cover substantially all employees. Under the savings plans, we match in cash or company stock a stated percentage of eligible employee contributions, subject to a specified ceiling. There are no debt-financed shares held by the Employee Stock Ownership Plans, allocated or unallocated.

Our match of employee contributions to the savings plans is fulfilled with purchases of our stock on the open market or company cash. Benefit cost, which is based on the cost of shares or units allocated to participating employees' accounts or the cash contributed to participant accounts, was $814, $793 and $724 for the years ended December 31, 2020, 2019 and 2018.

NOTE 16. SHARE-BASED PAYMENTS

Under our various plans, senior and other management employees and nonemployee directors have received nonvested stock and stock units. In conjunction with the acquisition of Time Warner, restricted stock units issued under Time Warner plans were converted to AT&T share units that will be distributed in the form of AT&T common stock and cash. The shares will vest over a period of one to four years in accordance with the terms of those plans. In addition, outstanding Time Warner stock options were converted to AT&T stock options that vested within one year. We do not intend to issue any additional grants under the Time Warner Inc. plans. Future grants to eligible employees will be issued under AT&T plans.

We grant performance stock units, which are nonvested stock units, based upon our stock price at the date of grant and award them in the form of AT&T common stock and cash at the end of a three-year period, subject to the achievement of certain performance goals. We treat the cash settled portion of these awards as a liability. We grant forfeitable restricted stock and stock units, which are valued at the market price of our common stock at the date of grant and predominantly vest over a four- or five-year period. We also grant other nonvested stock units and award them in cash at the end of a three-year period, subject to the achievement of certain market based conditions. As of December 31, 2020, we were authorized to issue up to approximately 183 million shares of common stock (in addition to shares that may be issued upon exercise of outstanding options or upon vesting of performance stock units or other nonvested stock units) to officers, employees and directors pursuant to these various plans.

We account for our share-based payment arrangements based on the fair value of the awards on their respective grant date, which may affect our ability to fully realize the value shown on our consolidated balance sheets of deferred tax assets associated with compensation expense. We record a valuation allowance when our future taxable income is not expected to be sufficient to recover the asset. Accordingly, there can be no assurance that the current stock price of our common shares will rise to levels sufficient to realize the entire tax benefit currently reflected on our consolidated balance sheets. However, to the extent we generate excess tax benefits (i.e., those additional tax benefits in excess of the deferred taxes associated with compensation expense previously recognized) the potential future impact on income would be reduced.

Our consolidated statements of income include the compensation cost recognized for those plans as operating expenses, as well as the associated tax benefits, which are reflected in the table below:

	2020	2019	2018
Performance stock units	**$348**	$544	$301
Restricted stock and stock units	**290**	273	153
Other nonvested stock units	**—**	7	4
Stock options	**—**	(5)	5
Total	**$638**	$819	$463
Income tax benefit	**$157**	$202	$114

A summary of the status of our nonvested stock units as of December 31, 2020, and changes during the year then ended is presented as follows (shares in millions):

Nonvested Stock Units	Shares	Weighted-Average Grant-Date Fair Value
Nonvested at January 1, 2020	42	$ 33.80
Granted	23	36.90
Vested	(18)	35.87
Forfeited	(4)	34.48
Nonvested at December 31, 2020	**43**	**$34.50**

As of December 31, 2020, there was $709 of total unrecognized compensation cost related to nonvested share-based payment arrangements granted. That cost is expected to be recognized over a weighted-average period of 2.09 years. The total fair value of shares vested during the year was $647 for 2020, compared to $798 for 2019 and $766 for 2018.

It is our intent to satisfy share option exercises using our treasury stock. Cash received from stock option exercises was $65 for 2020, $446 for 2019 and $361 for 2018.

NOTE 17. STOCKHOLDERS' EQUITY

Authorized Shares We have authorized 14 billion common shares of AT&T stock and 10 million preferred shares of AT&T stock, each with a par value of $1.00 per share. Cumulative perpetual preferred shares consist of the following:

- Series A: 48 thousand shares outstanding at December 31, 2020 and December 31, 2019, with a $25,000 per share liquidation preference and a dividend rate of 5.000%.
- Series B: 20 thousand shares outstanding at December 31, 2020 and zero outstanding at December 31, 2019, with a €100,000 per share liquidation preference, and an initial rate of 2.875%, subject to reset after May 1, 2025.

- Series C: 70 thousand shares outstanding at December 31, 2020 and zero outstanding at December 31, 2019, with a $25,000 per share liquidation preference, and a dividend rate of 4.75%.

So long as the quarterly preferred dividends are declared and paid on a timely basis on each series of preferred shares, there are no limitations on our ability to declare a dividend on or repurchase AT&T common shares. The preferred shares are optionally redeemable by AT&T at the liquidation price on or after five years from the issuance date, or upon certain other contingent events.

Stock Repurchase Program From time to time, we repurchase shares of common stock for distribution through our employee benefit plans or in connection with certain acquisitions. Our Board of Directors has approved the following authorizations to repurchase common stock: (1) March 2013 authorization program of 300 million shares, which was completed in 2020 and (2) March 2014 authorization program for an additional 300 million shares, with approximately 178 million outstanding at December 31, 2020.

To implement these authorizations, we used open market repurchases, relying on Rule 10b5-1 of the Securities Exchange Act of 1934, where feasible. We also used accelerated share repurchase agreements with large financial institutions to repurchase our stock. During 2020, we repurchased approximately 142 million shares totaling $5,278 under the March 2013 and March 2014 authorizations.

Dividend Declarations In December 2020, AT&T declared a quarterly preferred dividend of $36 and a quarterly common dividend of $0.52 per share of common stock. In December 2019, AT&T declared a quarterly preferred dividend of $8 and an increase in its quarterly common dividend to $0.52 per share of common stock.

Preferred Interests Issued by Subsidiaries We have issued cumulative perpetual preferred membership interests in certain subsidiaries. The preferred interests are entitled to cash distributions, subject to declaration. The preferred interests are included in "Noncontrolling interest" on the consolidated balance sheets.

Mobility II

We previously issued 320 million Series A Cumulative Perpetual Preferred Membership Interests in Mobility II (Mobility preferred interests), representing all currently outstanding Mobility preferred equity interests, which pay cash distributions of $560 per annum, subject to declaration. So long as the distributions are declared and paid, the terms of the Mobility preferred equity interests will not impose any limitations on cash movements between affiliates, or our ability to declare a dividend on or repurchase AT&T shares.

A holder of the Mobility preferred interests may put the interests to Mobility II. Mobility II may redeem the interests upon a change in control of Mobility II or on or after September 9, 2022. When either options arise due to a passage of time, that option may be exercised only during certain periods.

The price at which a put option or a redemption option can be exercised is the greater of (1) the market value of the interests as of the last date of the quarter preceding the date of the exercise of a put or redemption option and (2) the sum of (a) twenty-five dollars ($8,000 in the aggregate) plus (b) any accrued and unpaid distributions. The redemption price may be paid with cash, AT&T common stock, or a combination of cash and AT&T common stock, at Mobility II's sole election. In no event shall Mobility II be required to deliver more than 250 million shares of AT&T common stock to settle put and redemption options. We have the intent and ability to settle the Mobility preferred equity interests with cash.

Tower Holdings

In 2019, we issued $6,000 nonconvertible cumulative preferred interests in a wireless subsidiary (Tower Holdings) that holds interests in various tower assets and have the right to receive approximately $6,000 if the purchase options from the tower companies are exercised.

The membership interests in Tower Holdings consist of (1) common interests, which are held by a consolidated subsidiary of AT&T, and (2) two series of preferred interests (collectively the "Tower preferred interests"). The September series (Class A-1) of the preferred interests totals $1,500 and pays an initial preferred distribution of 5.0%, and the December series (Class A-2) totals $4,500 and pays an initial preferred distribution of 4.75%. Distributions are paid quarterly, subject to declaration, and reset every five years. Any failure to declare or pay distributions on the Tower preferred interests would not impose any limitation on cash movements between affiliates, or our ability to declare a dividend on or repurchase AT&T shares. We can call the Tower preferred interests at the issue price beginning five years from the issuance date or upon the receipt of proceeds from the sale of the underlying assets.

The holders of the Tower preferred interests have the option to require redemption upon the occurrence of certain contingent events, such as the failure of AT&T to pay the preferred distribution for two or more periods or to meet certain other requirements, including a minimum credit rating. If notice is given upon such an event, all other holders of equal or more subordinate classes of membership interests in Tower Holdings are entitled to receive the same form of consideration payable to the holders of the preferred interests, resulting in a deemed liquidation for accounting purposes.

Telco LLC

In September 2020, we issued $2,000 nonconvertible cumulative preferred interests out of a newly created limited liability company (Telco LLC) that was formed to hold telecommunication-related assets.

Members' equity in Telco LLC consist of (1) member's interests, which are held by a consolidated subsidiary of AT&T, and (2) preferred interests (Telco preferred interests), which pay an initial preferred distribution of 4.25% annually, subject to declaration, and subject to reset every seven years. Failure to pay distributions on the Telco preferred interests would not limit cash movements between affiliates, or our ability to declare a dividend on or repurchase AT&T shares. We can call the Telco preferred interests at the issue price beginning seven years from the issuance date.

The holders of the Telco preferred interests have the option to require redemption upon the occurrence of certain contingent events, such as the failure of Telco LLC to pay the preferred distribution for two or more periods or to meet certain other requirements, including a minimum credit rating. If notice is given, all other holders of equal or more subordinate classes of members equity are entitled to receive the same form of consideration payable to the holders of the preferred interests, resulting in a deemed liquidation for accounting purposes.

PR Holdings

In 2019, we issued $1,950 nonconvertible cumulative preferred interests in a subsidiary (PR Holdings) that held notes secured by the proceeds from our agreement to sell wireless and wireline operations in Puerto Rico and the U.S. Virgin Islands. These preferred interests were redeemed on November 6, 2020. (See Note 6)

The membership interests in PR Holdings consisted of (1) common interests, which were held by consolidated subsidiaries of AT&T, and (2) preferred interests (PR preferred interests). The PR preferred interests paid an initial preferred distribution at an annual rate of 4.75%. Distributions were paid quarterly, subject to declaration.

NOTE 18. SALES OF RECEIVABLES

We have agreements with various third-party financial institutions pertaining to the sales of certain types of our accounts receivable. The most significant of these programs are discussed in detail below and generally consist of (1) receivables arising from equipment installment plans, which are sold for cash and a deferred purchase price, and (2) revolving service and trade receivables. Under these programs, we transfer receivables to purchasers in exchange for cash and additional consideration upon settlement of the receivables, where applicable. Under the terms of our agreements for these programs, we continue to bill and collect the payments from our customers on behalf of the financial institutions.

The sales of receivables did not have a material impact on our consolidated statements of income or to "Total Assets" reported on our consolidated balance sheets. We reflect cash receipts on sold receivables as cash flows from operations in our consolidated statements of cash flows. Cash receipts on the deferred purchase price are classified as cash flows from investing activities.

Our equipment installment and revolving receivables programs are discussed in detail below. The following table sets forth a summary of the receivables and accounts being serviced at December 31:

	2020		2019	
	Equipment Installment	**Revolving**	Equipment Installment	Revolving
Gross receivables:	**$5,565**	**$3,909**	$4,576	$3,324
Balance sheet classification				
Accounts receivable				
Notes receivable	**2,716**	**—**	2,467	—
Trade receivables	**554**	**3,715**	477	2,809
Other Assets				
Noncurrent notes and trade receivables	**2,295**	**194**	1,632	515
Outstanding portfolio of receivables derecognized from our consolidated balance sheets	**7,827**	**5,300**	9,713	4,300
Cash proceeds received, net of remittances[1]	**5,646**	**5,300**	7,211	4,300

[1] Represents amounts to which financial institutions remain entitled, excluding the deferred purchase price.

Dollars in millions except per share amounts

Equipment Installment Receivables Program

We offer our customers the option to purchase certain wireless devices in installments over a specified period of time and, in many cases, once certain conditions are met, they may be eligible to trade in the original equipment for a new device and have the remaining unpaid balance paid or settled.

We maintain a program under which we transfer a portion of these receivables through our bankruptcy-remote subsidiary in exchange for cash and additional consideration upon settlement of the receivables, referred to as the deferred purchase price. In the event a customer trades in a device prior to the end of the installment contract period, we agree to make a payment to the financial institutions equal to any outstanding remaining installment receivable balance. Accordingly, we record a guarantee obligation for this estimated amount at the time the receivables are transferred.

The following table sets forth a summary of equipment installment receivables sold under this program:

	2020	2019	2018
Gross receivables sold	**$7,270**	$9,921	$9,391
Net receivables sold[1]	**7,026**	9,483	8,871
Cash proceeds received	**6,089**	8,189	7,488
Deferred purchase price recorded	**1,021**	1,451	1,578
Guarantee obligation recorded	**157**	341	361

[1] Receivables net of allowance, imputed interest and equipment trade-in right guarantees.

The deferred purchase price and guarantee obligation are initially recorded at estimated fair value and subsequently adjusted for changes in present value of expected cash flows. The estimation of their fair values is based on remaining installment payments expected to be collected and the expected timing and value of device trade-ins. The estimated value of the device trade-ins considers prices offered to us by independent third parties that contemplate changes in value after the launch of a device model. The fair value measurements used for the deferred purchase price and the guarantee obligation are considered Level 3 under the Fair Value Measurement and Disclosure framework (see Note 13).

The following table presents the previously transferred equipment installment receivables, which we repurchased in exchange for the associated deferred purchase price:

	2020	2019	2018
Fair value of repurchased receivables	**$1,271**	$1,418	$1,480
Carrying value of deferred purchase price	**1,235**	1,350	1,393
Gain on repurchases[1]	**$ 36**	$ 68	$ 87

[1] These gains are included in "Selling, general and administrative" in the consolidated statements of income.

At December 31, 2020 and December 31, 2019, our deferred purchase price receivable was $1,991 and $2,336, respectively, of which $1,476 and $1,569 are included in "Other current assets" on our consolidated balance sheets, with the remainder in "Other Assets." The guarantee obligation at December 31, 2020 and December 31, 2019 was $228 and $384, respectively, of which $161 and $148 are included in "Accounts payable and accrued liabilities" on our consolidated balance sheets, with the remainder in "Other noncurrent liabilities." Our maximum exposure to loss as a result of selling these equipment installment receivables is limited to the total amount of our deferred purchase price and guarantee obligation.

Revolving Receivables Program

In 2019, we entered into a one-year revolving agreement to transfer up to $4,300 of certain receivables through our bankruptcy-remote subsidiaries to various financial institutions on a recurring basis in exchange for cash equal to the gross receivables transferred. In 2020, we expanded the program limit to $5,300 and we extended the agreement by one year. As customers pay their balances, we transfer additional receivables into the program, resulting in our gross receivables sold exceeding net cash flow impacts (e.g., collect and reinvest). The transferred receivables are fully guaranteed by our bankruptcy-remote subsidiaries, which hold additional receivables in the amount of $3,909 that are pledged as collateral under this agreement. The transfers are recorded at fair value of the proceeds received and obligations assumed less derecognized receivables. The obligation is subsequently adjusted for changes in estimated expected credit losses and interest rates. Our maximum exposure to loss related to these receivables transferred is limited to the amount outstanding.

The fair value measurement used for the obligation is considered Level 3 under the Fair Value Measurement and Disclosure framework (see Note 13).

The following table sets forth a summary of receivables sold:

	2020	2019	2018
Gross receivables sold/cash proceeds received[1]	**$15,888**	$11,989	$—
Collections reinvested under revolving agreement	**14,888**	7,689	—
Net cash proceeds received (remitted)	**$ 1,000**	$ 4,300	$—
Net receivables sold[2]	**$15,760**	$11,604	$—
Obligations recorded (reversed)	**271**	530	—

[1] Includes initial sale of receivables of $1,000 and $4,300 for 2020 and 2019, respectively.
[2] Receivables net of allowance, return and incentive reserves and imputed interest.

NOTE 19. TOWER TRANSACTION

In December 2013, we closed our transaction with Crown Castle International Corp. (Crown Castle) in which Crown Castle gained the exclusive rights to lease and operate 9,048 wireless towers and purchased 627 of our wireless towers for $4,827 in cash. The leases have various terms with an average length of approximately 28 years. As the leases expire, Crown Castle will have fixed price purchase options for these towers totaling approximately $4,200, based on their estimated fair market values at the end of the lease terms. We sublease space on the towers from Crown Castle for an initial term of ten years at current market rates, subject to optional renewals in the future.

We determined that we did not transfer control of the tower assets, which prevented us from achieving sale-leaseback accounting for the transaction, and we accounted for the cash proceeds from Crown Castle as a financing obligation on our consolidated balance sheets. We record interest on the financing obligation using the effective interest method at a rate of approximately 3.9%. The financing obligation is increased by interest expense and estimated future net cash flows generated and retained by Crown Castle from operation of the tower sites, and reduced by our contractual payments. We continue to include the tower assets in "Property, Plant and Equipment – Net" on our consolidated balance sheets and depreciate them accordingly. At December 31, 2020 and 2019, the tower assets had a balance of $764 and $804, respectively. Our depreciation expense for these assets was $39 for each of 2020, 2019 and 2018.

Payments made to Crown Castle under this arrangement were $248 for 2020. At December 31, 2020, the future minimum payments under the sublease arrangement are $253 for 2021, $258 for 2022, $264 for 2023, $269 for 2024, $274 for 2025 and $856 thereafter.

NOTE 20. FIRSTNET

In 2017, the First Responder Network Authority (FirstNet) selected AT&T to build and manage the first nationwide broadband network dedicated to America's first responders. Under the 25-year agreement, FirstNet provides 20 MHz of valuable telecommunications spectrum and success-based payments of $6,500 over the first five years to support network buildout. We are required to construct a network that achieves coverage and nationwide interoperability requirements and have a contractual commitment to make sustainability payments of $18,000 over the 25-year contract. These sustainability payments represent our commitment to fund FirstNet's operating expenses and future reinvestments in the network which we own and operate, which we estimate in the $3,000 or less range over the life of the 25-year contract. After FirstNet's operating expenses are paid, we anticipate the remaining amount, expected to be in the $15,000 range, will be reinvested into the network.

During 2020, we submitted $120 in sustainability payments, with future payments under the agreement of $120 for 2021; $195 for 2022, 2023, 2024 and 2025; and $16,620 thereafter. Amounts paid to FirstNet, which are not expected to be returned to AT&T to be reinvested into our network, will be expensed in the period paid. In the event FirstNet does not reinvest any funds to construct, operate, improve and maintain this network, our maximum exposure to loss is the total amount of the sustainability payments, which would be reflected in higher expense.

The $6,500 of initial funding from FirstNet is contingent on the achievement of six operating capability milestones and certain first responder subscriber adoption targets. These milestones are based on coverage objectives of the first responder network during the construction period, which is expected to be over five years, and subscriber adoption targets. Funding payments to be received from FirstNet are reflected as a reduction from the costs capitalized in the construction of the network and, as appropriate, a reduction of associated operating expenses. As of December 31, 2020, we have collected approximately $5,000 for the completion of certain tasks and anticipate collecting the remainder of the $6,500 as we achieve milestones set out by FirstNet over the next two years. We also expect to receive approximately $200 over the next few years from FirstNet for reinvestment above the original success-based payments.

NOTE 21. CONTINGENT LIABILITIES

We are party to numerous lawsuits, regulatory proceedings and other matters arising in the ordinary course of business. In evaluating these matters on an ongoing basis, we take into account amounts already accrued on the balance sheet. In our opinion, although the outcomes of these proceedings are uncertain, they should not have a material adverse effect on our financial position, results of operations or cash flows.

We have contractual obligations to purchase certain goods or services from various other parties. Our purchase obligations are expected to be approximately $20,274 in 2021, $21,275 in total for 2022 and 2023, $11,142 in total for 2024 and 2025 and $17,919 in total for years thereafter.

See Note 13 for a discussion of collateral and credit-risk contingencies.

Dollars in millions except per share amounts

NOTE 22. ADDITIONAL FINANCIAL INFORMATION

	December 31,	
Consolidated Balance Sheets	**2020**	2019
Accounts payable and accrued liabilities:		
Accounts payable	**$31,836**	$29,640
Accrued payroll and commissions	**2,988**	3,126
Current portion of employee benefit obligation	**1,415**	1,528
Accrued participations and residuals	**2,708**	2,852
Accrued interest	**2,454**	2,498
Other	**7,631**	6,312
Total accounts payable and accrued liabilities	**$49,032**	$45,956

Consolidated Statements of Income	**2020**	2019	2018
Advertising expense	**$5,253**	$ 6,121	$ 5,100
Interest expense incurred	**$8,048**	$ 8,622	$ 8,450
Capitalized interest	**(123)**	(200)	(493)
Total interest expense	**$7,925**	$ 8,422	$ 7,957

Cash and Cash Flows We typically maintain our restricted cash balances for purchases and sales of certain investment securities and funding of certain deferred compensation benefit payments.

The following table summarizes cash and cash equivalents and restricted cash balances contained on our consolidated balance sheets:

	December 31,			
Cash and Cash Equivalents and Restricted Cash	**2020**	2019	2018	2017
Cash and cash equivalents	**$9,740**	$12,130	$5,204	$50,498
Restricted cash in Other current assets	**9**	69	61	6
Restricted cash in Other Assets	**121**	96	135	428
Cash and cash equivalents and restricted cash	**$9,870**	$12,295	$5,400	$50,932

The following table summarizes cash paid during the periods for interest and income taxes:

Consolidated Statements of Cash Flows	**2020**	2019	2018
Cash paid (received) during the year for:			
Interest	**$8,237**	$8,693	$ 8,818
Income taxes, net of refunds	**993**	1,421	(354)
Spectrum acquisitions	**1,613**	1,576	521

Noncash Investing and Financing Activities In connection with capital improvements and the acquisition of other productive assets, we negotiate favorable payment terms (referred to as vendor financing), which are reported as financing activities in our statements of cash flows when paid. We recorded $4,664 of vendor financing commitments related to capital investments in 2020, $2,632 in 2019 and $2,162 in 2018.

Labor Contracts As of January 31, 2021, we employed approximately 230,000 persons. Approximately 37% of our employees are represented by the Communications Workers of America (CWA), the International Brotherhood of Electrical Workers (IBEW) or other unions. After expiration of the agreements, work stoppages or labor disruptions may occur in the absence of new contracts or other agreements being reached. There are no significant contracts expiring in 2021. A contract covering approximately 14,000 Mobility employees in 36 states and the District of Columbia that was set to expire in February 2021 was extended until February 2022. A contract covering approximately 10,000 Mobility employees in nine Southeast states that was set to expire in February 2022 was extended until February 2023.

NOTE 23. SUBSEQUENT EVENTS (UNAUDITED)

Video Business On February 25, 2021, we signed an agreement to form a new company named DIRECTV (New DTV) with TPG Capital, which will be jointly governed by a board with representation from both AT&T and TPG. Under the agreement, we will contribute our Video business unit to New DTV for $4,250 of junior preferred units, an additional distribution preference of $4,200 and a 70% economic interest in common units. We expect to receive $7,600 in cash from New DTV at closing. TPG will contribute approximately $1,800 in cash to New DTV for $1,800 of senior preferred units and a 30% economic interest in common units. The remaining $5,800 will be funded by debt taken on by New DTV. As part of this transaction, we agreed to pay net losses under the NFL SUNDAY TICKET contract up to a cap of $2,500 over the remaining period of the contract.

The transaction is expected to close in the second half of 2021, pending customary closing conditions. The total of $7,600 of proceeds from the transaction are expected to reduce our total and net debt positions.

In the first quarter of 2021, we expect to apply held-for-sale accounting treatment to the assets and liabilities of the U.S. video business, and accordingly will include the assets in "Other current assets," and the related liabilities in "Accounts payable and accrued liabilities," on our consolidated balance sheet at March 31, 2021. The carrying amounts at December 31, 2020 of these assets and liabilities were approximately $16,150 and $4,900, respectively.

Spectrum Auction On February 24, 2021, the FCC announced that AT&T was the winning bidder for 1,621 C-Band licenses, comprised of a total of 80 MHz nationwide, including 40 MHz in Phase I. We must provide to the FCC an initial down payment of $4,681 on March 10, 2021, of which $550 was paid as an upfront payment prior to the start of the auction, and to pay a remaining $18,725 on or before March 24, 2021. We estimate that AT&T will be responsible for $955 of Incentive Payments upon clearing of Phase I spectrum and $2,112 upon clearing of Phase II spectrum. Additionally, we will be responsible for a portion of compensable relocation costs over the next several years as the spectrum is being cleared. Satellite operators have provided the FCC with relocation cost estimates totaling $3,400. AT&T intends to fund the purchase price using a combination of cash and short-term investments, funds from operations and either short-term or long-term debt, depending upon market conditions.

Report of Management

The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles. The integrity and objectivity of the data in these financial statements, including estimates and judgments relating to matters not concluded by year end, are the responsibility of management, as is all other information included in the Annual Report, unless otherwise indicated.

The financial statements of AT&T Inc. (AT&T) have been audited by Ernst & Young LLP, Independent Registered Public Accounting Firm. Management has made available to Ernst & Young LLP all of AT&T's financial records and related data, as well as the minutes of stockholders' and directors' meetings. Furthermore, management believes that all representations made to Ernst & Young LLP during its audit were valid and appropriate.

Management maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed by AT&T is recorded, processed, summarized, accumulated and communicated to its management, including its principal executive and principal financial officers, to allow timely decisions regarding required disclosure, and reported within the time periods specified by the Securities and Exchange Commission's rules and forms.

Management also seeks to ensure the objectivity and integrity of its financial data by the careful selection of its managers, by organizational arrangements that provide an appropriate division of responsibility and by communication programs aimed at ensuring that its policies, standards and managerial authorities are understood throughout the organization.

The Audit Committee of the Board of Directors meets periodically with management, the internal auditors and the independent auditors to review the manner in which they are performing their respective responsibilities and to discuss auditing, internal accounting controls and financial reporting matters. Both the internal auditors and the independent auditors periodically meet alone with the Audit Committee and have access to the Audit Committee at any time.

Assessment of Internal Control

The management of AT&T is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) or 15d-15(f) under the Securities Exchange Act of 1934. AT&T's internal control system was designed to provide reasonable assurance to the company's management and Board of Directors regarding the preparation and fair presentation of published financial statements.

AT&T management assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2020. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control – Integrated Framework* (2013 framework). Based on its assessment, AT&T management believes that, as of December 31, 2020, the company's internal control over financial reporting is effective based on those criteria.

Ernst & Young LLP, the independent registered public accounting firm that audited the financial statements included in this Annual Report, has issued an attestation report on the company's internal control over financial reporting.

John T. Stankey
Chief Executive Officer
and President

John J. Stephens
Senior Executive Vice President
and Chief Financial Officer

To the Stockholders and the Board of Directors of AT&T Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of AT&T Inc. (the Company) as of December 31, 2020 and 2019, the related consolidated statements of income, comprehensive income, cash flows and changes in stockholders' equity for each of the three years in the period ended December 31, 2020, and the related notes and financial statement schedule listed in Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 25, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Discount rates used in determining pension and postretirement benefit obligations

Description of the Matter

At December 31, 2020, the Company's pension benefit obligation was $62,158 million and exceeded the fair value of defined benefit pension plan assets of $54,606 million, resulting in an unfunded benefit obligation of $7,552 million. Additionally, at December 31, 2020, the Company's postretirement benefit obligation was $13,928 million and exceeded the fair value of postretirement plan assets of $3,843 million, resulting in an unfunded benefit obligation of $10,085 million. As explained in Note 15 to the consolidated financial statements, the Company updates the assumptions used to measure the defined benefit pension and postretirement benefit obligations, including discount rates, at December 31 or upon a remeasurement event. The Company determines the discount rates used to measure the obligations based on the development of a yield curve using high-quality corporate bonds selected to yield cash flows that correspond to the expected timing and amount of the expected future benefit payments. The selected discount rate has a significant effect on the measurement of the defined benefit pension and postretirement benefit obligations.

Auditing the defined benefit pension and postretirement benefit obligations was complex due to the need to evaluate the highly judgmental nature of the actuarial assumptions made by management, primarily the discount rate, used in the Company's measurement process. Auditing the discount rates associated with the measurement of the defined benefit pension and postretirement benefit obligations was complex because it required an evaluation of the credit quality of the corporate bonds used to develop the discount rate and the correlation of those bonds' cash inflows to the timing and amount of future expected benefit payments.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of certain controls over management's review of the determination of the discount rates used in the defined benefit pension and postretirement benefit obligations calculations.

To test the determination of the discount rate used in the calculation of the defined benefit pension and postretirement benefit obligations, we performed audit procedures that focused on evaluating, with the assistance of our actuarial specialists, the determination of the discount rates, among other procedures. For example, we evaluated the selected yield curve used to determine the discount rates applied in measuring the defined benefit pension and postretirement benefit obligations. As part of this assessment, we considered the credit quality of the corporate bonds that comprise the yield curve and compared the timing and amount of cash flows at maturity with the expected amounts and duration of the related benefit payments. As part of this assessment, we compared the Company's current projections to historical projected defined benefit pension and postretirement benefit obligations cash flows and compared the current-year benefits paid to the prior-year projected cash flows.

Uncertain tax positions

Description of the Matter

As discussed in Note 14 to the consolidated financial statements, at December 31, 2020, the Company had recorded unrecognized tax benefits of $12,451 million for uncertain tax positions. Uncertainty in a tax position may arise as tax laws are subject to interpretation. The Company uses judgment to (1) determine whether, based on the technical merits, a tax position is more likely than not to be sustained and (2) measure the amount of tax benefit that qualifies for recognition within the financial statements. Changes in facts and circumstances, such as changes in tax laws, new regulations issued by taxing authorities and communications with taxing authorities may affect the amount of uncertain tax positions and, in turn, income tax expense. Estimated tax benefits related to uncertain tax positions that are not more likely than not to be sustained are reported as unrecognized income tax benefits.

Auditing the measurement of uncertain tax positions was challenging because the measurement is based on interpretations of tax laws and legal rulings. Each tax position involves unique facts and circumstances that must be evaluated, and there may be many uncertainties around initial recognition and de-recognition of tax positions, including regulatory changes, litigation and examination activity.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's accounting process for uncertain tax positions. This included controls over identification and measurement of the benefits of the uncertain tax positions, including management's review of the inputs and calculations of unrecognized income tax benefits, both initially and on an ongoing basis.

We involved our tax professionals to assist us in assessing significant uncertain tax positions, including an evaluation of the technical merits of individual positions, the determination of whether a tax position was more-likely-than-not to be sustained, and the Company's measurement of its uncertain tax positions, including the computation of interest and penalties, among other procedures. For significant new positions, we assessed the Company's filing position, correspondence with the relevant tax authorities and third-party advice obtained by the Company, as appropriate. For existing positions, we assessed changes in facts and law, as well as settlements of similar positions for any impact to the recognized liability for the positions. We analyzed the Company's assumptions and data used to determine the amount of tax benefit to recognize and tested the accuracy of the calculations. We also evaluated the adequacy of the Company's financial statement disclosures related to uncertain tax positions included in Note 14.

Impairment of goodwill and long-lived assets

Description of the Matter

For the year ended December 31, 2020, the Company recorded asset impairments of $18,880 million, consisting primarily of $10,465 million of goodwill and $7,255 million of long-lived assets. As discussed in Note 1 to the consolidated financial statements, reporting unit goodwill is tested at least annually for impairment, and long-lived assets, including definite-lived intangible assets, are evaluated for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable over the remaining life of the asset or asset group. Estimating fair values in connection with these impairment evaluations involves the utilization of discounted cash flow models, and, in the case of reporting units, market multiples valuation approaches. As disclosed in Note 9 to the consolidated financial statements, the October 1, 2020 estimated fair values of the Turner, HBO, and Entertainment Group reporting units exceeded their carrying values by less than 10%. The Company's later separation of the Entertainment Group reporting unit into the Video and Broadband reporting units required additional impairment evaluations prior to and after the separation, pursuant to which the Company recorded a goodwill impairment charge of $8,253 million, representing the entire amount of goodwill allocated for the Video reporting unit. The Company also recorded a $2,212 million goodwill impairment charge for the Vrio reporting unit, representing the entire amount of goodwill for that reporting unit. Furthermore, as disclosed in Notes 7 and 9 to the consolidated financial statements, the Company identified impairment indicators for its Video asset group and was required to evaluate its recoverability utilizing probability-weighted expected cash flows, resulting in the aforementioned $7,255 million impairment charge.

Auditing management's impairment evaluations for the reporting unit goodwill and long-lived assets discussed above was complex because the determination of expected cash flows used in the evaluation of recoverability and the estimation of fair values involve subjective management assumptions, such as estimates of subscriber counts, cash flow probabilities, changes in average revenue per user, discount rate, capital investment and content costs. These assumptions are forward-looking and could be affected by shifts in long-term strategy and the evolving market landscape. Changes in these assumptions can have a material effect on the determination of fair value.

How We Addressed the Matter in Our Audit	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's impairment evaluation processes. Our procedures included testing controls over management's review of the valuation models and the significant assumptions described above. Our audit procedures to test management's impairment evaluations included, among others, assessing the valuation methodologies and significant assumptions discussed above and the underlying data used to develop such assumptions. For example, we compared the significant assumptions to current industry, market and economic trends, and other guideline companies in the same industry. Where appropriate, we evaluated whether changes to the Company's business model, customer base and other factors would affect the significant assumptions. We also assessed the historical accuracy of management's estimates and performed independent sensitivity analyses. We involved our valuation specialists to assist us in performing our audit procedures to test the estimated fair values of the Company's reporting units and long-lived assets. Our procedures to test management's impairment evaluation of its Video asset group also included challenging the reasonableness of the assigned probabilities discussed above and the underlying factors considered by management to develop such probabilities.

Ernst & Young LLP

We have served as the Company's auditor since 1999.

Dallas, Texas
February 25, 2021

To the Stockholders and the Board of Directors of AT&T Inc.

Opinion on Internal Control Over Financial Reporting

We have audited AT&T Inc.'s internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, AT&T Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2020 consolidated financial statements of the Company and our report dated February 25, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

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

Definition and Limitations of Internal Control Over Financial Reporting

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Ernst & Young LLP

Dallas, Texas
February 25, 2021

References

BROADBAND CONNECTIVITY

[1] Based on GWS OneScore Sept. 2020.

[2] Based on analysis by Ookla® of Speedtest Intelligence® data of average download speeds for Q1, Q2, Q3 and Q4 2019, and median download speeds for Q1, Q2 and Q3 2020. Ookla trademarks used under license and reprinted with permission.

[3] The more than 2.5 million U.S. business customer locations are included within the more than 8.5 million U.S. business customer locations on or within 1,000 feet of our fiber. Speed comparison of Internet 1000 wired upload connection speed to major cable providers 1GIG cable service with uploads of 35 Mbps (Teleogical Systems 1/2021).

SOFTWARE-BASED ENTERTAINMENT

[4] Domestic HBO Max/HBO subscribers exclude customers that are part of a free trial. Worldwide HBO Max and HBO subscribers consist of domestic and international HBO subscribers and domestic HBO Max subscribers and excludes basic subscribers and Cinemax subscribers.

[5] Represents postpaid phone subscribers on unlimited plans at end-of-year 2020 versus end-of-year 2019.

FANTASTIC STORYTELLING

[6] Source: Nielsen NPower, Average monthly reach (11/1/19-10/31/20). Based on P2+, Total Day. WarnerMedia TV = ADSM, CNN, CNNe, HLN, NBA-TV, TBSC, TNT, TOON, TRU, BOOM; Includes HBO & Warner Brothers Syndication (Linear). Based on 6 min qualifier, Live + 7 Day.

FINANCIAL STRENGTH AND CAPITAL ALLOCATION

[7] Free cash flow is cash from operating activities minus capital expenditures.

[8] Free cash flow dividend payout ratio is total dividends paid divided by free cash flow. For full year 2020, dividends paid totaled $14.956 billion.

[9] The transaction includes employees; network assets and spectrum; real estate and leases; customers, including more than 1 million wireless subscribers; and contracts. AT&T will retain DIRECTV and certain global business customer relationships and FirstNet responsibilities and relationships.

[10] Gross capital investment includes capital expenditures and cash payments for vendor financing and excludes FirstNet reimbursements. In 2021, vendor financing is expected to be about in the $2 billion range and FirstNet reimbursements are expected to be about $1 billion.

[11] Due to high variability and difficulty in predicting items that impact cash from operating activities and capital expenditures, the company is not able to provide a reconciliation between projected free cash flow and the most comparable GAAP metric without unreasonable effort.

ADVOCATING FOR SMART PUBLIC POLICIES

[12] Based on U.S. capital expenditures from 2016 to 2020.

AT&T Inc. Board of Directors

William E. Kennard, 64 [3,4,6]

Independent Chairman of the Board
Former U.S. Ambassador to the European Union
Former Chairman of the Federal Communications Commission
Director since 2014
Background: Law, telecommunications, public policy

Samuel A. Di Piazza, Jr, 70 [1,4,6]

Retired Global Chief Executive Officer
PricewaterhouseCoopers International Limited
Director since 2015
DIRECTV Director 2010–2015
Background: Public accounting

Richard W. Fisher,* 71 [2,3]

Former President and Chief Executive Officer
Federal Reserve Bank of Dallas
Director since 2015
Background: Finance, trade, regulatory

Scott T. Ford, 58 [2,4,5]

Member and Chief Executive Officer
Westrock Group, LLC
Director since 2012
Background: Telecommunications

Glenn H. Hutchins, 65 [2,4,6]

Chairman
North Island
Co-Founder
Silver Lake
Director since 2014
Background: Technology, public policy

Debra L. Lee, 66 [3,6]

Chair
Leading Women Defined Foundation
Director since 2019
Background: Media, entertainment

Stephen J. Luczo, 63 [1,2]

Managing Partner
Crosspoint Capital Partners, L.P.
Director since 2019
Background: Technology, finance, operations management

Michael B. McCallister, 68 [1,5]

Retired Chairman of the Board and Chief Executive Officer
Humana Inc.
Director since 2013
Background: Health care

Beth E. Mooney, 66 [2,4,5]

Retired Chairman and Chief Executive Officer
KeyCorp
Director since 2013
Background: Banking

Matthew K. Rose, 61 [3,4,5]

Retired Chairman and Chief Executive Officer
Burlington Northern Santa Fe, LLC
Director since 2010
Background: Freight transport

John Stankey, 58

Chief Executive Officer and President
AT&T Inc.
Director since June 2020
Background: Telecommunications, media, entertainment, technology

Cynthia B. Taylor, 59 [1,3]

President and Chief Executive Officer
Oil States International, Inc.
Director since 2013
Background: Public accounting, oil and gas

Geoffrey Y. Yang, 61 [2,5]

Founding Partner and Managing Director
Redpoint Ventures
Director since 2016
Background: Technology, media, entertainment

Committees of the Board:
(1) Audit
(2) Corporate Development and Finance
(3) Corporate Governance and Nominating
(4) Executive
(5) Human Resources
(6) Public Policy and Corporate Reputation

(Information is provided as of February 25, 2021.)

*Retiring April 30, 2021

Executive Officers of AT&T Inc. and Its Affiliates

John Stankey, 58

Chief Executive Officer
and President

Ed Gillespie, 59

Senior Executive Vice President –
External and Legislative Affairs
AT&T Services, Inc.

David Huntley, 62

Senior Executive Vice President
and Chief Compliance Officer

Jason Kilar, 49

Chief Executive Officer
Warner Media, LLC

Lori Lee, 55

Chief Executive Officer –
AT&T Latin America and
Global Marketing Officer

David McAtee II, 52

Senior Executive Vice President
and General Counsel

Jeff McElfresh, 50

Chief Executive Officer
AT&T Communications, LLC

Angela Santone, 49

Senior Executive Vice President –
Human Resources

John Stephens, 61*

Senior Executive Vice President
and Chief Financial Officer

(Information is provided
as of February 25, 2021.)

*Retiring March 31, 2021

Stockholder Information

TOLL-FREE STOCKHOLDER HOTLINE

Call us at **1-800-351-7221** between 8 a.m. and 7 p.m. Central time, Monday through Friday **(TDD 1-888-403-9700)** for help with:

- Common stock account inquiries
- Requests for assistance with your common stock account, including stock transfers
- Information on The DirectSERVICE™ Investment Program for Stockholders of AT&T Inc. (sponsored and administered by Computershare Trust Company, N.A.)

WRITTEN STOCKHOLDER REQUESTS

Please mail all account inquiries and other requests for assistance regarding your stock ownership to:

AT&T Inc.
c/o Computershare Trust
Company, N.A.
P.O. Box 505005
Louisville, KY 40233-5005

You may also reach the transfer agent for AT&T Inc. at att@computershare.com or visit the website at **www.computershare.com/att**

DIRECTSERVICE INVESTMENT PROGRAM

The DirectSERVICE Investment Program for Stockholders of AT&T Inc. is sponsored and administered by Computershare Trust Company, N.A. The program allows current stockholders to reinvest dividends, purchase additional AT&T Inc. stock or enroll in an individual retirement account. For more information, call **1-800-351-7221**.

STOCK TRADING INFORMATION

AT&T Inc. is listed on the New York Stock Exchange.
Ticker symbol: T

INFORMATION ON THE INTERNET

Information about AT&T Inc. is available on the internet at **www.about.att.com**

ANNUAL MEETING

The 2021 Annual Meeting of Stockholders of AT&T Inc. will be conducted virtually on the internet at 9:00 a.m. Central time, Friday, April 30, 2021. There will be no in-person meeting. The meeting will be accessible at **www.virtualshareholdermeeting.com/T2021**

SEC FILINGS

AT&T Inc.'s U.S. Securities and Exchange Commission filings, including the latest 10-K and proxy statement, are available on our website at **https://investors.att.com**

INVESTOR RELATIONS

Securities analysts and other members of the professional financial community may contact the Investor Relations staff as listed on our website at **https://investors.att.com**

INDEPENDENT AUDITOR

Ernst & Young LLP
2323 Victory Ave., Suite 2000
Dallas, TX 75219

CORPORATE OFFICES AND NON-STOCKHOLDER INQUIRIES

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Dallas, TX 75202
210-821-4105

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