UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form 10-K

(Mark One)

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

For the fiscal year ended December 31, 2019

or

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

For the transition period from to

Commission file number 001-15451

United Parcel Service, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**58-2480149**
(State or Other Jurisdiction of Incorporation or Organization)	***(I.R.S. Employer Identification No.)***

55 Glenlake Parkway, N.E. Atlanta, Georgia 30328
(Address of Principal Executive Offices) (Zip Code)

(404) 828-6000
(Registrant's telephone number, including area code)

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Class B common stock, par value $.01 per share	UPS	New York Stock Exchange
Floating-Rate Senior Notes due 2020	UPS20A	New York Stock Exchange
1.625% Senior Notes due 2025	UPS25	New York Stock Exchange
1% Senior Notes due 2028	UPS28	New York Stock Exchange
0.375% Senior Notes due 2023	UPS23A	New York Stock Exchange
1.500% Senior Notes due 2032	UPS32	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
Class A common stock, par value $.01 per share
(Title of Class)

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

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

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

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

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

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

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

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

The aggregate market value of the class B common stock held by non-affiliates of the registrant was $72,097,367,231 as of June 30, 2019. The registrant's class A common stock is not listed on a national securities exchange or traded in an organized over-the-counter market, but each share of the registrant's class A common stock is convertible into one share of the registrant's class B common stock.

As of February 6, 2020, there were 156,399,660 outstanding shares of class A common stock and 702,088,016 outstanding shares of class B common stock.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its annual meeting of shareowners scheduled for May 14, 2020 are incorporated by reference into Part III of this report.

UNITED PARCEL SERVICE, INC.
ANNUAL REPORT ON FORM 10-K
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PART I

Cautionary Statement About Forward-Looking Statements

This report, our Annual Report to Shareowners and our other filings with the Securities and Exchange Commission ("SEC") contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Statements other than those of current or historical fact, and all statements accompanied by terms such as "believe," "project," "expect," "estimate," "assume," "intend," "anticipate," "target," "plan" and variations thereof and similar terms, are intended to be forward-looking statements. Forward-looking statements are made subject to the safe harbor protections of the federal securities laws pursuant to Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934.

From time to time, we also include written or oral forward-looking statements in other publicly disclosed materials. Such statements relate to our intent, belief and current expectations about our strategic direction, prospects and future results, and give our current expectations or forecasts of future events; they do not relate strictly to historical or current facts. Management believes that these forward-looking statements are reasonable as and when made. However, caution should be taken not to place undue reliance on any such forward-looking statements because such statements speak only as of the date when made.

Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or anticipated results. These risks and uncertainties are described in Part I, "Item 1A. Risk Factors" and may also be described from time to time in our future reports filed with the SEC. You should consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of predictions contained in such forward-looking statements. We do not undertake any obligation to update forward-looking statements to reflect events, circumstances, changes in expectations or the occurrence of unanticipated events after the date of those statements.

Item 1. *Business*

Overview

United Parcel Service, Inc. ("UPS") was founded in 1907 as a private messenger and delivery service in Seattle, Washington. Today, we are the world's largest package delivery company, a leader in the U.S. less-than-truckload industry and a premier provider of global supply chain management solutions. The global market for these services includes transportation, distribution, contract logistics, ground freight, ocean freight, air freight, customs brokerage, insurance and financing.

We operate one of the largest airlines in the world, as well as the world's largest fleet of alternative-powered vehicles. We deliver packages each business day for1.6 million shipping customers to 9.9 million delivery customers in over 220 countries and territories. In 2019, we delivered an average of21.9 million pieces per day, or a total of 5.5 billion packages. Total revenue in 2019 was $74.094 billion.

We have three reporting segments: U.S. Domestic Package and International Package, which together we refer to as our global small package operations, and Supply Chain & Freight, all of which are described below.

Strategy

Our strategy is to provide advanced logistics solutions made possible by a broad portfolio of differentiated services and capabilities integrated into our customers' businesses. This strategy, supported by our efficient global multimodal network, enables us to deliver value to, and build lasting relationships with, our customers.

Customers are able to leverage our broad portfolio of logistics capabilities comprised of: our extensive presence in North America, Europe, Middle East, Africa, Asia Pacific and Latin America; our reliability; and our industry-leading technologies and solutions.

We offer a full range of industry-leading products, services and capabilities across a growing geographical and industry footprint. Achieving our objectives has required new methods and innovative approaches to develop and implement logistics services that address customer needs for speed to market, visibility, reliability and greater control. Recent examples include:

- the acquisition or creation of platform-based offerings such as UPS e-fulfillment and Ware2Go;
- specialized healthcare solutions such as UPS Premier, which offers prioritized handling and visibility for critical healthcare shipments;
- a full range of global customs brokerage and shipment insurance services; and
- offerings such as UPS My Choice for business that give small- and medium-sized businesses ("SMBs") greater control, visibility and data access to improve their customer service.

We monitor global trade, economic, geopolitical, regulatory and environmental factors, as well as other factors impacting the business environment. We quickly implement measures to convert risk to opportunity and help our customers adjust their supply chains to a fast-moving world. We have a long history of joint ventures and partnerships that provide operational flexibility and the ability to acquire new capabilities as we build scale, and we also forge new marketplace alliances to stay at the cutting edge of business. For example, our Digital Access Program makes it easier for SMBs to use our services by embedding our shipping solutions directly into leading e-commerce platforms.

We are a disciplined and focused business that purposefully reinvests capital to achieve both long-term strategic benefits and favorable returns. In September 2018, we communicated our commitment to continuous transformation and to invest to modernize our business and operations through state-of-the art technology. We see transformation as an ongoing commitment to enhance quality and efficiency as we deliver innovative capabilities and services. Our strategic investments are primarily focused in areas we believe will drive growth and lasting profit potential:

- services and solutions for SMBs;
- international growth markets;
- global Business to Consumer (“B2C”) and Business to Business (“B2B”) e-commerce;
- healthcare and life-sciences logistics; and
- operational improvements to drive greater productivity and the use of automation to enhance the efficiency of our network.

In recent periods, we have added approximately ten million square feet of highly automated capacity in more than forty new and remodeled facilities globally. We have also continued to implement numerous new technologies to help control the network and ensure resources are in the right place at the right time.

Products and Services; Reporting Segments

Global Small Package

Our global small package operations provide time-definite delivery services for express letters, documents, small packages and palletized freight via air and ground services. These services are supported by numerous shipping, visibility and billing technologies.

All types of service (air, ground, domestic, international, commercial and residential) are managed through a single, global integrated pickup and delivery network. We combine all packages within our network, unless dictated by specific service commitments. This enables one UPS driver to pick up customers’ shipments for any services at a scheduled time each day. Our integrated network uniquely provides operational and capital efficiencies that have less of an impact on the environment than single service network designs.

We handle packages up to 108 inches in length that weigh up to 150 pounds and are up to 165 inches in combined length and girth, as well as palletized shipments weighing more than 150 pounds. We offer same-day pickup of air and ground packages seven days a week. Our global network offers approximately 150,000 entry points where customers can tender a package to us at a location or time convenient to them. This integrated network includes UPS drivers who can accept packages, UPS drop boxes, UPS Access Point locations, The UPS Store locations, authorized shipping outlets and commercial counters, alliance locations and customer centers attached to UPS facilities. The UPS Access Point network, which includes local small businesses, national retailers and self-serve lockers, allows consumers to ship or redirect packages to an alternate delivery location or drop off pre-labeled packages, including returns. We have expanded the UPS Access Point network to total approximately 21,000 locations within the U.S. and 40,000 globally.

We have developed a robust portfolio of returns services in more than 145 countries resulting from the continued growth of online and mobile shopping that has increased our customers' need for efficient and reliable returns. This portfolio provides a range of cost-effective label options and a broad network of consumer drop points, as well as a selection of returns technologies that promote efficiency and a friction-free consumer experience. These options include solutions such as UPS Returns, as well as more-specialized services such as UPS Returns Exchange. Our technologies, such as UPS Returns Manager promote systems integration, customer ease of use and visibility of inbound merchandise, which help reduce costs and improve efficiency in our customers' reverse logistics processes.

Our global air operations are centered at our Worldport hub in Louisville, Kentucky. Our U.S. regional air hubs in Dallas, Texas; Ontario, California; Philadelphia, Pennsylvania and Rockford, Illinois support Worldport. Our European air hub is located in Cologne, Germany, and we maintain Asia Pacific air hubs in Shanghai, China; Shenzhen, China and Hong Kong. Our regional air hub in Canada is located in Hamilton, Ontario and our regional air hub for Latin America and the Caribbean is in Miami, Florida. This network design creates cost-effective package processing in our most technology-enabled facilities, which allows us to use fewer, larger and more fuel-efficient aircraft.

U.S. Domestic Package Reporting Segment

We are a leader in time-definite, guaranteed small package delivery services in the United States. We offer a full spectrum of U.S. domestic guaranteed air and ground package transportation services, and our U.S. ground fleet serves all business and residential zip codes in the contiguous United States.

- UPS's Air portfolio offers options enabling customers to specify a time-of-day guarantee for their delivery (e.g. by 8:00 A.M., 10:30 A.M., noon, end of day, etc.), while selecting from same day, next day, two day and three day delivery alternatives.
- Customers can also leverage our extensive ground network to ship using our day-definite guaranteed Ground service. We deliver more ground packages in the U.S. than any other carrier, with average daily package volume of 15 million, most within one to three business days.
- We offer UPS SurePost, an economy residential ground service for customers with non-urgent, lightweight residential shipments. UPS SurePost is a residential ground service that combines the consistency and reliability of the UPS ground network with final delivery often provided by the U.S. Postal Service.

International Package Reporting Segment

Our International Package reporting segment consists of our small package operations in Europe, Asia Pacific, Canada, Latin America and the Indian sub-continent, Middle East and Africa ("ISMEA"). We offer a wide selection of guaranteed day- and time-definite international shipping services. We offer more guaranteed time-definite express options (Express Plus, Express and Express Saver) than any other carrier.

In recent years we have continued the expansion of our Express time-definite portfolio, with certain products now reaching as many as 220 countries and territories. For international package shipments that do not require Express services, UPS Worldwide Expedited offers a reliable, deferred, guaranteed day-definite service option. The service is now available from more than 80 origin countries to more than 220 countries and territories. For cross-border ground package delivery, we offer UPS Standard delivery services within Europe, between the U.S. and Canada and between the U.S. and Mexico.

By expanding our time-definite services, we are better able to offer customers the services they need in the places they do business. For businesses with time-sensitive shipments, these upgrades can help replenish inventories quicker, improve time to market and meet urgent delivery requirements.

Europe, our largest region outside of the U.S., accounts for approximately half of our international small package segment revenue and is one of the primary drivers of our growth. We continue to make major European infrastructure investments, including new hubs in London, Paris and Eindhoven, the Netherlands.

Asia Pacific also remains a strategic market due to growth rates in intra-Asia trade. To capitalize on these opportunities, we have continued to bring faster time-in-transit to customers focused on intra-Asia trade and reduced transit times from Asia to the U.S. and Europe. Through added flight frequencies, we now provide our customers the ability to ship next day to more places in the U.S. and Europe - guaranteed - than any other express carrier. We serve more than 40 Asia Pacific countries and territories through more than two dozen alliances with local delivery companies that supplement our owned operations. For example, our joint venture with SF Express combines SF's extensive Chinese network with UPS's delivery capabilities in the U.S. and Europe, increasing our market presence and providing Chinese enterprises with greater global access. In addition, improvements to time-in-transit for UPS Express Saver and UPS Worldwide Expedited services to Shanghai have resulted in faster delivery by a full day to 185 postal codes for packages coming from Europe.

International high-growth markets remain one of our strategic imperatives. Our direct flight from the U.S. to Dubai has improved time-in-transit to key destinations in ISMEA for shippers throughout the U.S., Canada and the Americas. Markets like India also provide opportunities for growth. In support of this, we acquired full ownership of our express services unit in 2018. The unit helps Indian businesses, large and small, connect with global markets via the UPS network. This follows the opening of two integrated logistics facilities in Hyderabad and Ahmedabad from where customers are provided a 48-hour delivery timeline to markets in the U.S. and Europe. In addition to these upgrades, we have added Saturday delivery to seven countries in ISMEA and expanded Express Services to India, the Middle East and other international high-growth markets ahead of Expo 2020 in Dubai, offering greater flexibility and competitiveness.

Supply Chain & Freight

Supply Chain & Freight consists of our forwarding, truckload brokerage, logistics, UPS Freight, UPS Capital and other businesses. Supply chain complexity creates demand for a global service offering that incorporates transportation, distribution and international trade and brokerage services, with complementary financial and information services. Outsourcing non-core logistics activity is a strategy more companies are pursuing. With increased competition and growth opportunities in new markets, businesses require flexible and responsive supply chains to support their strategies. We meet this demand by offering a broad array of supply chain services in more than 200 countries and territories.

Forwarding

We are one of the largest U.S. domestic air freight carriers and among the top international air freight forwarders globally. We offer a portfolio of guaranteed and non-guaranteed global air freight services. Additionally, as one of the world's leading non-vessel operating common carriers, we provide ocean freight full-container load, less-than-container load and multimodal transportation services between most major ports around the world.

Truckload Brokerage

Our acquisition of Coyote Logistics, LLC, a U.S.-based third party logistics provider, in 2015 has resulted in synergies in the areas of purchased transportation, backhaul utilization, technology systems and industry best practices. Coyote's access to our fleet, combined with its broad carrier network, has created a customized capacity solution for all markets, customers and situations. In addition, Coyote provides access to UPS services (such as air freight, customs brokerage and global freight forwarding) for its customer base.

Our acquisition of Freightex, a U.K.- based freight brokerage firm, in 2017 added a full scale truckload brokerage and transportation management solution to our European portfolio, creating a single-source solution for shippers throughout Europe with freight ranging from parcel to full truckload. In 2018, Freightex was rebranded as Coyote Logistics to further leverage the centralized technology and business models with the market knowledge, talent and established customer and carrier bases already in Europe. Coyote Logistics's European division complements our North American truckload brokerage business, as many international shippers know and trust the Coyote truckload product.

Logistics

We provide value-added fulfillment and transportation management services to customers through our global network of owned and leased distribution centers and field stocking locations. We leverage a global network of more than 1,000 facilities in more than 100 countries to ensure products and parts are in the right place at the right time.

Our distribution centers are strategically located near UPS air and ground transportation hubs for rapid delivery to consumer and business markets. In 2019, we expanded our network to support new business growth by adding 2 million square feet of distribution capacity. We also continued to expand our cloud-based transportation and warehouse management platforms, driving higher operational efficiency and improved customer service. The result has been better visibility, more rapid onboarding of customers and improved flexibility and response times.

With the strategic focus of serving the unique, priority-handling needs of healthcare and life sciences customers, U.S. healthcare warehouse and distribution space will total approximately 5 million square feet in 2020. Key features in the new facilities include climate controls and validated coolers and freezers for customer products requiring strict temperature-controlled environments.

In 2019, we expanded our e-commerce solutions for SMBs worldwide, offering streamlined fulfillment and shipping services to consumers in the U.S. and Canada. We launched the UPS eFulfillment program to help sellers quickly and easily manage multiple marketplaces. The program, which is compatible with over 20 e-commerce marketplaces, includes a technology platform and physical fulfillment services, such as storage, order processing, packaging and shipping.

UPS Post Sales, our service parts logistics solution, relies on a global network of over 950 central and field stocking sites to provide same and next-day spare parts delivery, enabling customers to get critical equipment back up and running. This solution focuses on customers within the high tech, industrial manufacturing, automotive, healthcare and aerospace sectors. More specific to the healthcare industry, UPS has an implantable medical device solution leveraging 36 field stocking sites, which helps ensure surgical kits and devices arrive safely and on time at hospital and surgery centers. Implantable medical device firms benefit from outsourcing and optimizing their supply chain with UPS, which drives down costs and increases control and service levels.

Also in 2019, UPS announced an expansion of foreign trade zone (“FTZ”) management services in the U.S.. Since our acquisition of Zone Solutions in 2017, we have developed a comprehensive FTZ solution that helps clients manage the end-to-end process, from dealing with customers to inventory control. The integration of FTZ services with our logistics network means UPS can designate any of our 42 U.S. distribution centers as a FTZ, allowing customers to take advantage of the program’s benefits. The strategic utilization of the FTZ program provides opportunities for duty elimination and duty deferral.

UPS Freight

UPS Freight offers regional, inter-regional and long-haul less-than-truckload ("LTL") services in all 50 states, Canada, Puerto Rico, Guam, the U.S. Virgin Islands and Mexico. UPS Freight provides reliable LTL service backed by a day-definite, on-time guarantee at no additional cost. UPS Freight also provides dedicated contract carriage truckload services. User friendly shipping, visibility and billing technology offerings, including UPS WorldShip, Quantum View and UPS Billing Center, allow freight customers to create electronic bills of lading, monitor shipment progress and reconcile shipping charges.

Customs Brokerage

We are among the world’s largest customs brokers by both the number of shipments processed annually and by the number of dedicated brokerage employees worldwide. In addition to customs clearance services, we provide product classification, trade management, duty drawback and consulting services through STTAS, a UPS company.

UPS Capital

UPS Capital provides financial, insurance and payment services to support all aspects of the order-to-cash cycle and help protect companies from risk in their supply chains. Services are available in 22 countries and territories. UPS Capital also offers insured transportation of high value goods including loose gemstones, finished jewelry and wristwatches.

People

The strength of UPS is our people, working together with a common purpose. We have more than 495,000 employees (excluding temporary seasonal employees), of which 413,000 are in the U.S. and 82,000 are located internationally. Our global workforce includes approximately 87,000 management employees (40% of whom are part-time) and 408,000 hourly employees (49% of whom are part-time).

For information regarding employees employed under collective bargaining agreements, see note 6 to the audited, consolidated financial statements.

Customers

As described below, we believe that our focus on building and maintaining long-term customer relationships is a competitive strength of UPS. We serve 1.6 million shipping customers and more than 9.9 million delivery customers daily. For the year ended December 31, 2019, one customer, Amazon.com, Inc. and its affiliates, represented approximately 11.6% of our consolidated revenues, substantially all of which was within our U.S. Domestic Package segment. For additional information on our customers, see "Risk Factors - Changes in our relationships with any of our significant customers, including the loss or reduction in business from one or more of them, could have a material adverse effect on us" and note 13 to the audited, consolidated financial statements.

Competition

We offer a broad array of services in the package and freight delivery industry and compete with many local, regional, national and international logistics providers. We believe our strategy, network and competitive strengths position us well to compete in the marketplace. For additional information on our competitive environment, see "Risk Factors - Our industry is rapidly evolving. We expect to continue to face significant competition, which could adversely affect us".

Competitive Strengths

Our competitive strengths include:

Efficient Multimodal Network. We believe that our integrated global air and ground network is the most extensive in the industry. We provide all types of package services (air, ground, domestic, international, commercial and residential) through a single pickup and delivery network. We also have extensive air freight, ocean freight, ground freight and logistics networks that provide additional capabilities in the global transportation and logistics market. Our sophisticated engineering systems allow us to optimize our network efficiency and asset utilization.

Global Presence. We serve more than 220 countries and territories. We have a significant presence in all of the world's major economies.

Cutting-Edge Technology. Technology powers virtually every service we offer and every operation we perform. We are a global leader in developing technology that helps our customers enhance their shipping and logistics business processes to lower costs, improve service and increase efficiency. We offer a variety of online service options that enable our customers to integrate UPS functionality into their own businesses to send, manage and track their shipments conveniently, and also to provide their customers with better information services. We provide the infrastructure for an internet presence that extends to tens of thousands of customers who have integrated UPS tools directly into their own websites.

Broad Portfolio of Services. Our portfolio of services helps customers choose the delivery option that is most appropriate for their requirements. Increasingly, our customers benefit from business solutions that integrate many UPS services beyond package delivery. For example, our supply chain services – such as freight forwarding, truckload brokerage, customs brokerage, order fulfillment and returns management – help improve the efficiency of the entire supply chain management process.

Customer Relationships. We focus on building and maintaining long-term customer relationships. We serve 1.6 million shipping customers daily and deliver packages to more than 9.9 million delivery customers daily. Cross selling small package and supply chain services across our customer base is an important growth mechanism for UPS.

Brand Equity. We have built a leading and trusted brand that stands for quality, reliability and service innovation. The distinctive appearance of our vehicles and the professional courtesy of our drivers are major contributors to our brand equity.

Distinctive Culture. We believe that the dedication of our employees comes in large part from our distinctive "employee-owner" concept. Our employee stock ownership tradition dates back to 1927, when our founders, who believed that employee stock ownership was a vital foundation for successful business, created our first stock ownership program.

Financial Strength. Our financial strength allows us to achieve global scale; to invest in employee development, technology, transportation equipment and facilities; to pursue strategic opportunities that facilitate our growth; to service our obligations and to return value to our shareowners.

Government Regulation

We are subject to numerous laws and regulations in the countries in which we operate. Key laws and regulations are summarized below.

Air Operations

The U.S. Department of Transportation ("DOT"), the Federal Aviation Administration ("FAA") and the U.S. Department of Homeland Security, through the Transportation Security Administration ("TSA"), have regulatory authority over our air transportation services. The Federal Aviation Act of 1958, as amended, is the statutory basis for DOT and FAA authority and the Aviation and Transportation Security Act of 2001, as amended, is the basis for TSA aviation security authority.

The DOT's authority primarily relates to economic aspects of air transportation, such as operations, authority, insurance requirements, pricing, non-competitive practices, interlocking relations and cooperative agreements. The DOT also regulates, subject to the authority of the President of the United States, international routes, fares, rates and practices and is authorized to investigate and take action against discriminatory treatment of U.S. air carriers abroad. International operating rights for U.S. airlines are usually subject to bilateral agreements between the U.S. and foreign governments or, in the absence of such agreements, by principles of reciprocity. We are also subject to current and potential aviation regulations imposed by governments in other countries in which we operate, including registration and license requirements and security regulations. We have international route operating rights granted by the DOT and we may apply for additional authorities when those operating rights are available and are required for the efficient operation of our international network. The efficiency and flexibility of our international air transportation network is dependent on DOT and foreign government regulations and operating restrictions.

The FAA's authority primarily relates to safety aspects of air transportation, including certification, aircraft operating procedures, transportation of hazardous materials, record keeping standards and maintenance activities and personnel. In 1988, the FAA granted us an operating certificate, which remains in effect so long as we meet the safety and operational requirements of the applicable FAA regulations. In addition, we are subject to non-U.S. government regulation of aviation rights involving non-U.S. jurisdictions and non-U.S. customs regulation.

UPS's aircraft maintenance programs and procedures, including aircraft inspection and repair at periodic intervals, are approved for all aircraft under FAA regulations. The future cost of repairs pursuant to these programs may fluctuate according to aircraft condition, age and the enactment of additional FAA regulatory requirements.

The TSA regulates various security aspects of air cargo transportation in a manner consistent with the TSA mission statement to "protect the Nation's transportation systems to ensure freedom of movement for people and commerce." Our airport and off-airport locations, as well as our personnel, facilities and procedures involved in air cargo transportation must comply with TSA regulations.

UPS Airlines, along with a number of other U.S. domestic airlines, participates in the Civil Reserve Air Fleet ("CRAF") program. Our participation in the CRAF program allows the U.S. Department of Defense ("DOD") to requisition specified UPS Airlines aircraft for military use during a national defense emergency. The DOD is required to compensate us for the use of aircraft under the CRAF program. In addition, participation in CRAF entitles us to bid for other U.S. Government opportunities including small package and air freight.

Ground Operations

Our ground transportation of packages in the U.S. is subject to regulation by the DOT and its agency, the Federal Motor Carrier Safety Administration (the "FMCSA"). Ground transportation also falls under state jurisdiction with respect to the regulation of operations, safety and insurance. Our ground transportation of hazardous materials in the U.S. is subject to regulation by the DOT's Pipeline and Hazardous Materials Safety Administration. We also must comply with safety and fitness regulations promulgated by the FMCSA, including those relating to drug and alcohol testing and hours of service for drivers. We are subject to similar regulation in many non-U.S. jurisdictions.

The Postal Reorganization Act of 1970 created the U.S. Postal Service as an independent establishment of the executive branch of the federal government, and created the Postal Rate Commission, an independent agency, to recommend postal rates. The Postal Accountability and Enhancement Act of 2006 amended the 1970 Act to give the re-named Postal Regulatory Commission revised oversight authority over many aspects of the Postal Service, including postal rates, product offerings and service standards. We sometimes participate in proceedings before the Postal Regulatory Commission in an attempt to secure fair postal rates for competitive services.

Our ground operations are also subject to compliance with various cargo-security and transportation regulations issued by the U.S. Department of Homeland Security, including regulation by the TSA.

Customs

We are subject to the customs laws regarding the import and export of shipments in the countries in which we operate, including those related to the filing of documents on behalf of client importers and exporters. Our activities in the U.S., including customs brokerage and freight forwarding, are subject to regulation by the Bureau of Customs and Border Protection, the TSA, the U.S. Federal Maritime Commission and the DOT. Our international operations are subject to similar regulatory structures in their respective jurisdictions.

Environmental

We are subject to federal, state and local environmental laws and regulations across all of our business units. These laws and regulations cover a variety of processes, including, but not limited to: properly storing, handling and disposing of waste materials; appropriately managing waste water and stormwater; monitoring and maintaining the integrity of underground storage tanks; complying with laws regarding clean air, including those governing emissions; protecting against and appropriately responding to spills and releases and communicating the presence of reportable quantities of hazardous materials to local responders. We have established site- and activity-specific environmental compliance and pollution prevention programs to address our environmental responsibilities and remain compliant. In addition, we have created numerous programs which seek to minimize waste and prevent pollution within our operations.

Pursuant to the Federal Aviation Act, the FAA, with the assistance of the Environmental Protection Agency is authorized to establish standards governing aircraft noise. Our aircraft fleet is in compliance with current noise standards of the federal aviation regulations. Our international operations are also subject to noise regulations in certain countries in which we operate.

Communications and Data Protection

Because of our extensive use of radio and other communication facilities in our aircraft and ground transportation operations, we are subject to the Federal Communications Act of 1934, as amended. In addition, the Federal Communications Commission regulates and licenses our activities pertaining to satellite communications. There has recently been increased regulatory and enforcement focus on data protection in the U.S. (at both the state and federal level) and in other countries. For example, the European Union (“E.U.”) General Data Protection Regulation (“GDPR”), which became effective in May 2018, greatly increases the jurisdictional reach of E.U. law and increases the requirements related to personal data, including individual notice and opt-out preferences and public disclosure of significant data breaches. Additionally, violations of the GDPR can result in significant fines. Other governments have enacted or are enacting similar data protection laws, and are considering data localization laws that would govern the use of data outside of their respective jurisdictions.

Where You Can Find More Information

We maintain a website at *www.ups.com*. Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed with or furnished to the SEC pursuant to Section 13(a) of the Securities Exchange Act of 1934 are made available free of charge through our investor relations website at *www.investors.ups.com* under the heading "Financials - SEC Filings" as soon as reasonably practical after we electronically file or furnish the reports to the SEC. We have a written Code of Business Conduct that applies to all of our directors, officers and employees, including our principal executive and financial officers. It is available under the heading "ESG"- Governance Documents" on our investor relations website. In the event that we make changes in, or provide waivers from, the provisions of the Code of Business Conduct that the SEC requires us to disclose, we intend to disclose these events within four business days following the date of the amendment or waiver in that section of our investor relations website.

Our Corporate Governance Guidelines and the Charters for our Audit Committee, Compensation Committee, Executive Committee, Risk Committee and Nominating and Corporate Governance Committee are also available under the heading "ESG- Governance Documents" on our investor relations website.

Our sustainability report, which describes our activities that support our commitment to acting responsibly and contributing to society, is available at *www.sustainability.ups.com*.

We provide the addresses to our internet sites solely for information. We do not intend for any addresses to be active links or to otherwise incorporate the contents of any website into this or any other report we file with the SEC.

Item 1A. *Risk Factors*

Our business, financial condition and results are subject to numerous risks and uncertainties. In connection with any investment decision, you should carefully consider the following significant factors, which could materially affect us, including impacting our business, financial condition, results of operations, stock price or credit rating, as well as our reputation. You should read these risk factors in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 and our Consolidated Financial Statements and related notes in Item 8. These risks are not the only ones we face. We could also be affected by other events, factors or uncertainties that are unknown to us, or that we do not currently consider to be significant risks.

Changes in general economic conditions, in the U.S. and internationally, may adversely affect us.

We conduct operations in over 220 countries and territories. Our operations are subject to cyclicality affecting national and international economies in general, as well as the local economic environments in which we operate. The factors that result in general economic changes are beyond our control, and it may be difficult for us to adjust our business model to mitigate the impact of these factors. In particular, our business is affected by levels of industrial production, consumer spending and retail activity and we could be materially affected by adverse developments in these aspects of the economy. In addition, there remains substantial economic uncertainty arising from the United Kingdom's decision to leave the European Union. The U.K. and the E.U. continue to negotiate the future relationship between themselves, which could take several years to finalize. The outcome of these negotiations could result in, among other things, transportation delays, fewer goods being transported globally, additional volatility in currency exchange rates and further regulations relating to, among other things, trade, aviation and the transport of goods. Any of the foregoing could materially adversely affect us.

Our industry is rapidly evolving. We expect to continue to face significant competition, which could adversely affect us.

Our industry is rapidly evolving, including demand for faster deliveries and increased visibility into shipments. We expect continued significant competition on a local, regional, national and international basis. Our competitors include the postal services of the U.S. and other nations, various motor carriers, express companies, freight forwarders, air couriers, large transportation and e-commerce companies that are making significant investments in their capabilities, and start ups and other companies that combine technologies with crowdsourcing to focus on local market needs, some of whom may currently be our customers. Competition may also come from other sources in the future, including as new technologies are developed. Competitors have cost and organizational structures that differ from ours and from time to time may offer services or pricing terms that we may not be willing or able to offer. Additionally, to remain competitive, from time to time we may have to raise prices and our customers may not be willing to accept these higher prices. If we are unable to timely and appropriately respond to competitive pressures, we could be adversely affected.

Continued transportation industry consolidation may further increase competition. As a result of consolidation, competitors may increase their market share, improve their financial capacity and strengthen their competitive positions. Business combinations could also result in competitors providing a wider variety of services and products at competitive prices, which could adversely affect us.

Changes in our relationships with any of our significant customers, including the loss or reduction in business from one or more of them, could have a material adverse effect on us.

For the year ended December 31, 2019, one customer, Amazon.com and its affiliates, accounted for 11.6% of our consolidated revenues. Some of our other significant customers can account for a relatively significant portion of our revenues in a particular quarter or year. These customers can impact our revenues based on factors such as: customer product launches; e-commerce or other industry trends, such as the seasonality associated with the fourth quarter holiday season; business combinations and the overall growth of a customer's underlying business; as well as any disruptions to their businesses. These customers could choose to divert all or a portion of their business with us to one of our competitors, demand pricing concessions for our services, require us to provide enhanced services that increase our costs, or develop their own shipping and distribution capabilities. In addition, certain of our significant customer contracts include termination rights of either party upon the occurrence of certain events or without cause upon advance notice to the other party. If all or a portion of our business relationships with one or more significant customers were to terminate or be canceled it could materially adversely affect us.

Our business is subject to complex and stringent laws, regulations and policies which could increase our operating costs.

We are subject to complex and stringent aviation, transportation, environmental, security, labor, employment, safety, privacy and data protection and other governmental laws, regulations and policies, both in the U.S. and in other countries in which we operate. In addition, we are impacted by laws, regulations and policies that affect global trade, including tariff and trade policies, export requirements, taxes, monetary policies and other restrictions and charges. Recently, trade discussions between the U.S. and various of its trading partners have been fluid, and existing and future trade agreements are and are expected to continue to be subject to a number of uncertainties, including the imposition of new tariffs or adjustments and changes to the products covered by existing tariffs. The impact of new laws, regulations and policies or decisions or interpretations by authorities applying those laws and regulations, cannot be predicted. Compliance with any new laws or regulations may increase our operating costs or require significant capital expenditures. Any failure to comply with applicable laws, regulations or policies in the U.S. or in any of the other countries in which we operate could result in substantial fines or possible revocation of our authority to conduct our operations, which could adversely affect us.

Increased security requirements impose substantial costs on us and we could be the target of an attack or have a security breach, which could materially adversely affect us.

As a result of concerns about global terrorism and homeland security, governments around the world have adopted or may adopt stricter security requirements that will result in increased operating costs for businesses in the transportation industry. These requirements may change periodically as a result of regulatory and legislative requirements and in response to evolving threats. We cannot determine the effect that any new requirements will have on our cost structure or our operating results, and new rules or other future security requirements may increase our costs of operations and reduce operating efficiencies. Regardless of our compliance with security requirements or the steps we take to secure our facilities or fleet, we could also be the target of an attack or security breaches could occur, which could materially adversely affect us.

Increasingly stringent regulations related to climate change could materially increase our operating costs.

Regulation of greenhouse gas ("GHG") emissions exposes our transportation and logistics businesses to potentially significant new taxes, fees and other costs. Compliance with such regulation, and any increased or additional regulation, or the associated costs is further complicated by the fact that various countries and regions are following different approaches to the regulation of climate change.

For example, in 2009 the European Commission approved the extension to the airline industry of the European Union Emissions Trading Scheme (“ETS”) for GHG emissions. Under this decision, all of our flights operating within the European Union are covered by the ETS requirements, and we are required annually to purchase emission allowances in an amount exceeding the number of free allowances allocated to us under the ETS. Similarly, in 2016, the International Civil Aviation Organization (“ICAO”) passed a resolution adopting the Carbon Offsetting and Reduction Scheme for International Aviation (“CORSIA”), which is a global, market-based emissions offset program to encourage carbon-neutral growth beyond 2020. A pilot phase is scheduled to begin in 2021 in which countries may voluntarily participate, and full mandatory participation is scheduled to begin in 2027. ICAO continues to develop details regarding implementation, but compliance with CORSIA will increase our operating costs.

In the U.S., Congress in the past several years has considered various bills that would regulate GHG emissions, but these bills so far have not received sufficient Congressional support for enactment. Nevertheless, some form of federal climate change legislation is possible in the future. Even in the absence of such legislation, the Environmental Protection Agency (“EPA”), spurred by judicial interpretation of the Clean Air Act, could determine to regulate GHG emissions, especially aircraft or diesel engine emissions, and this could impose substantial costs on us.

In November 2019, the U.S. began the process to withdraw from the Paris climate accord, an agreement among 196 countries to reduce GHG emissions. The effect of that withdrawal on future U.S. policy regarding GHG emissions, on CORSIA and on other GHG regulation is uncertain. Nevertheless, the extent to which other countries implement that agreement could have an adverse direct or indirect effect on us.

We may face additional regulations regarding GHG emissions internationally and in the United States. Potential costs to us of increased regulation regarding GHG emissions, especially aircraft or diesel engine emissions, include an increase in the cost of the fuel and other energy we purchase and capital costs associated with updating or replacing our aircraft or vehicles prematurely. We cannot predict the impact any future regulation would have on our cost structure or our operating results. It is possible that such regulation could significantly increase our operating costs and that we may not be willing or able to pass such costs along to our customers. Moreover, even without such regulation, increased awareness and any adverse publicity in the global marketplace about the GHGs emitted by companies in the airline and transportation industries could harm our reputation and reduce customer demand for our services, especially our air services.

Strikes, work stoppages and slowdowns by our employees could adversely affect us.

Many of our U.S. employees are employed under a national master agreement and various supplemental agreements with local unions affiliated with the Teamsters. Our airline pilots, airline mechanics, ground mechanics and certain other employees are employed under other collective bargaining agreements. In addition, some of our international employees are employed under collective bargaining or similar agreements. Strikes, work stoppages or slowdowns by our employees could adversely affect our ability to meet our customers' needs. As a result, customers may reduce their business or stop doing business with us if they believe that such actions or threatened actions may adversely affect our ability to provide services. We may face a permanent loss of customers if we are unable to provide uninterrupted service, and this could materially adversely affect us. The terms of future collective bargaining agreements also may affect our competitive position and results of operations.

We are exposed to the effects of changing fuel and energy prices, including gasoline, diesel and jet fuel, and interruptions in supplies of these commodities.

Changing fuel and energy costs have a significant impact on our operations. We require significant quantities of fuel for our aircraft and delivery vehicles and are exposed to the risks associated with variations in the market price for petroleum products, including gasoline, diesel and jet fuel. We mitigate our exposure to changing fuel prices through our indexed fuel surcharges and through hedging transactions from time to time. If we are unable to maintain or increase our fuel surcharges, higher fuel costs could adversely impact our operating results. Even if we are able to offset changes in fuel costs with surcharges, high fuel surcharges may result in a mix shift from our higher-yielding air products to lower-yielding ground products or an overall reduction in volume. There can also be no assurance that hedging transactions will be effective to protect us from changes in fuel prices. Moreover, we could experience a disruption in energy supplies as a result of war, actions by producers or other factors beyond our control, which could have a material adverse effect on us.

Changes in exchange rates or interest rates may have a material adverse effect on us.

We conduct business across the globe with a significant portion of our revenue derived from operations outside the United States. Our operations in international markets are affected by changes in the exchange rates for local currencies, and in particular the Euro, British Pound Sterling, Canadian Dollar, Chinese Renminbi and Hong Kong Dollar.

We are exposed to changes in interest rates, primarily on our short-term debt and that portion of our long-term debt that carries floating interest rates. The impact of a 100-basis-point change in interest rates affecting our debt is discussed in the “Quantitative and Qualitative Disclosures about Market Risk” section of this report. Additionally, changes in interest rates impact the valuation of our pension and postretirement benefit obligations and the related benefit cost recognized in the income statement. The impact of changes in interest rates on our pension and postretirement benefit obligations and costs is discussed further in the "Critical Accounting Policies and Estimates" section of this report.

We monitor and manage our exposures to changes in currency exchange rates and interest rates, and use derivative instruments to mitigate the impact of changes in these rates on our financial position and results of operations; however, changes in exchange rates and interest rates cannot always be predicted or hedged and may have a material adverse effect on us.

The proposed phase out of the London Interbank Offer Rate ("LIBOR") could have an adverse effect on us.

Certain of our debt and other financial instruments have interest rates tied to LIBOR. The head of the United Kingdom Financial Conduct Authority has announced the desire to phase out the use of LIBOR by the end of 2021. There is currently no definitive information regarding the future utilization of LIBOR or any particular replacement rate. As such, the potential effect of any such event on our cost of capital cannot be determined. In addition, any further changes or reforms to the determination or supervision of LIBOR may result in a sudden or prolonged increase or decrease in reported LIBOR, which could have an adverse impact on extensions of credit held by us and could have a material adverse effect on us.

Failure to maintain our brand image and corporate reputation could adversely impact us.

Our success depends in part on our ability to maintain the image of the UPS brand and our reputation for providing excellent service to our customers. Service quality issues, actual or perceived, even when false or unfounded, could tarnish the image of our brand and may cause customers to use other companies. Also, adverse publicity surrounding labor relations, environmental concerns, security matters, political activities and similar matters, or attempts to connect our company to such issues, either in the United States or other countries in which we operate, could negatively affect our overall reputation and use of our services by customers. Social media accelerates and amplifies the scope of negative publicity, and makes responding to negative claims more difficult. Damage to our reputation and loss of brand equity could reduce demand for our services and thus have a material adverse effect on us, and could require additional resources to rebuild our reputation and restore the value of our brand.

A significant data breach or IT system disruption could materially adversely affect us, including requiring us to increase spending on data and system security.

We rely heavily on information technology networks and systems, including the Internet and a number of internally-developed systems and applications, to manage or support a wide variety of important business processes and activities throughout our operations. For example, we rely on information technology to receive package level information in advance of physical receipt of packages, to track items that move through our delivery systems, to efficiently plan deliveries, to execute billing processes, and to track and report financial and operational data. Our franchised center locations and businesses we have acquired also are reliant on the use of information technology systems to manage their business processes and activities.

In addition, the provision of service to our customers and the operation of our networks and systems involve the collection, storage and transmission of significant amounts of proprietary information and sensitive or confidential data, including personal information of customers, employees and others. To conduct our operations, we regularly move data across national borders, and consequently we are subject to a variety of continuously evolving and developing laws and regulations in the United States and abroad regarding privacy, data protection and data security. The scope of the laws that may be applicable to us is often uncertain and may be conflicting, particularly with respect to foreign laws. For example, the European Union's General Data Protection Regulation ("GDPR"), which greatly increases the jurisdictional reach of European Union law and adds a broad array of requirements for handling personal data, including the public disclosure of significant data breaches, became effective in May 2018. Other countries have enacted or are enacting data localization laws that require data to stay within their borders. All of these evolving compliance and operational requirements impose significant costs that are likely to increase over time.

Our information technology systems (as well as those of our franchisees and acquired businesses) are susceptible to damage, disruptions or shutdowns due to programming errors, defects or other vulnerabilities, power outages, hardware failures, computer viruses, cyber-attacks, ransomware attacks, malware attacks, theft, misconduct by employees or other insiders, telecommunications failures, misuse, human errors or other catastrophic events. Hackers, foreign governments, cyber-terrorists and cyber-criminals, acting individually or in coordinated groups, may launch distributed denial of service attacks or other coordinated attacks that may cause service outages, gain inappropriate or block legitimate access to systems or information, or result in other interruptions in our business. In addition, the foregoing breaches in security could expose us, our customers and franchisees, or the individuals affected, to a risk of loss, disclosure or misuse of proprietary information and sensitive or confidential data, including personal information of customers, employees and others. The techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently, may be difficult to detect and often are not recognized until launched against a target. As a result, we may be unable to anticipate these techniques or to implement adequate measures to prevent any of the events described above.

We also depend on and interact with the information technology networks and systems of third-parties for many aspects of our business operations, including our customers, and franchisees and service providers such as cloud service providers and third-party delivery services. These third parties may have access to information we maintain about our company, operations, customers, employees and vendors, or operating systems that are critical to or can significantly impact our business operations. Like us, these third parties are subject to risks imposed by data breaches and IT systems disruptions like those described above, and other events or actions that could damage, disrupt or close down their networks or systems. Security processes, protocols and standards that we have implemented and contractual provisions requiring security measures that we may have sought to impose on such third-parties may not be sufficient or effective at preventing such events. These events could result in unauthorized access to, or disruptions or denials of access to, misuse or disclosure of, information or systems that are important to our business, including proprietary information, sensitive or confidential data, and other information about our operations, customers, employees and suppliers, including personal information.

Any of these events that impact our information technology networks or systems, or those of acquired businesses, franchisees, customers, service providers or other third-parties, could result in disruptions in our operations, the loss of existing or potential customers, damage to our brand and reputation, regulatory scrutiny, and litigation and potential liability for us. Among other consequences, our customers' confidence in our ability to protect data and systems and to provide services consistent with their expectations could be impacted, further disrupting our operations. Similarly, an actual or alleged failure to comply with applicable U.S. or foreign data protection regulations or other data protection standards may expose us to litigation, fines, sanctions or other penalties.

We have invested and continue to invest in technology security initiatives, information technology risk management and disaster recovery plans. The cost and operational consequences of implementing, maintaining and enhancing further data or system protection measures could increase significantly to overcome increasingly intense, complex and sophisticated global cyber threats. Despite our best efforts, we are not fully insulated from data breaches and system disruptions. Although to date we are unaware of a data breach or system disruption, including a cyber-attack, that has been material to us, we cannot provide any assurances that such events and impacts will not be material in the future, and our efforts to deter, identify, mitigate and/or eliminate future breaches may require significant additional effort and expense and may not be successful.

Severe weather or other natural or manmade disasters could adversely affect us.

Severe weather conditions and other natural or manmade disasters, including storms, floods, fires, earthquakes, epidemics, pandemics, conflicts, unrest, or terrorist attacks, may disrupt our business and result in decreased revenues. Customers may reduce shipments, or our costs to operate our business may increase, either of which could have a material adverse effect on us. Any such event affecting one of our major facilities could result in a significant interruption in or disruption of our business.

We make significant capital investments in our business of which a significant portion is tied to projected volume levels.

We require significant capital investments in our business consisting of aircraft, vehicles, technology, facilities and sorting and other types of equipment. These investments support both our existing business and anticipated growth. Forecasting projected volume involves many factors which are subject to uncertainty, such as general economic trends, changes in governmental regulation and competition. If we do not accurately forecast our future capital investment needs, we could have excess capacity or insufficient capacity, either of which would negatively affect our revenues and profitability. In addition to forecasting our capital investment requirements, we adjust other elements of our operations and cost structure in response to adverse economic conditions; however, these adjustments may not be sufficient to allow us to maintain our operating margins.

Economic, political, social developments and other risks associated with international operations could adversely affect us.

We have significant international operations. As a result, we are continually exposed to changing economic, political and social developments that are beyond our control. Emerging markets are typically more volatile than those in the developed world, and any broad-based downturn in these markets could reduce our revenues and adversely affect our business, financial position and results of operations. We are subject to many laws governing our international operations, including those that prohibit improper payments to government officials and commercial customers, and restrict where we can do business, our shipments to certain countries and the information that we can provide to non-U.S. governments. Our failure to manage and anticipate these and other risks associated with our international operations could materially adversely affect us.

We are subject to changes in markets and our business plans that have resulted, and may in the future result, in substantial write-downs of the carrying value of our assets, thereby reducing our net income.

Our regular review of the carrying value of our assets has resulted, from time to time, in significant impairments, and we may in the future be required to recognize additional impairment charges. Changes in business strategy, government regulations, or economic or market conditions have resulted and may result in further substantial impairments of our intangible, fixed or other assets at any time in the future. In addition, we have been and may be required in the future to recognize increased depreciation and amortization charges if we determine that the useful lives of our fixed assets or intangible assets are shorter than we originally estimated. Such changes have in the past, and may in the future, reduce our net income.

Employee health and retiree health and pension benefit costs represent a significant expense to us; further cost increases could materially and adversely affect us.

Our expenses relating to employee health and retiree health and pension benefits are significant. In recent years, we have experienced significant increases in some of these costs, largely as a result of economic factors beyond our control, including, in particular, ongoing increases in healthcare costs well in excess of the rate of inflation and historically low discount rates that we use to value our benefit plan obligations. Continually increasing healthcare costs, volatility in investment returns and discount rates, as well as changes in laws, regulations and assumptions used to calculate retiree health and pension benefit expenses, may adversely affect our business, financial position, results of operations or require significant contributions to our benefit plans. Our national master agreement with the Teamsters includes provisions that are designed to mitigate certain of these healthcare expenses, but there can be no assurance that our efforts will be successful or that the failure or success of these efforts will not materially adversely affect us.

We participate in a number of trustee-managed multiemployer pension and health and welfare plans for employees covered under collective bargaining agreements. As part of the overall collective bargaining process for wage and benefit levels, we have agreed to contribute certain amounts to the multiemployer benefit plans during the contract period. The multiemployer benefit plans set benefit levels and are responsible for benefit delivery to participants. Future contribution amounts to multiemployer benefit plans will be determined only through collective bargaining, and we have no additional legal or constructive obligation to increase contributions beyond the agreed-upon amounts. However, in future collective bargaining negotiations, we could agree to make significantly higher future contributions to improve the funded status of one or more of these plans. The funded status of these multiemployer plans is impacted by various factors, including investment performance, healthcare inflation, changes in demographics and changes in participant benefit levels. At this time, we are unable to determine the amount of additional future contributions, if any, or whether any material adverse effect on us could result from our participation in these plans.

In addition to our on-going multiemployer pension plan obligations, we may have significant additional exposure with respect to benefits earned in the Central States Pension Fund (the "CSPF"). For additional information on our potential additional liabilities related to the CSPF, see note 5 to the audited, consolidated financial statements.

We may have additional tax liabilities.

We are subject to income taxes in the U.S. and many foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. For example, compliance with the 2017 United States Tax Cuts and Jobs Act (the “Tax Act”) may require the collection of information not regularly produced within our company and the exercise of significant judgment in accounting for its provisions. Many aspects of the Tax Act remain unclear and may not be clarified for some time. In addition, many state jurisdictions continue to issue guidance on the state treatment of certain aspects of the Tax Act. As regulations and guidance evolve with respect to the Tax Act, our results may differ from previous estimates and may materially affect our tax rates and our financial position.

We are regularly under audit by tax authorities in different jurisdictions. Economic and political pressures to increase tax revenue in various jurisdictions may make resolving tax disputes more difficult. Although we believe our tax estimates are reasonable, the final determination of tax audits and any related litigation in the jurisdictions where we are subject to taxation could be materially different from our historical income tax provisions and accruals. In addition, changes in U.S. federal and state or international tax laws applicable to corporate multinationals, other fundamental law changes currently being considered by many countries, and changes in taxing jurisdictions’ administrative interpretations, decisions, policies and positions may materially adversely impact our tax expense and cash flows.

We may be subject to various claims and lawsuits that could result in significant expenditures.

The nature of our business exposes us to the potential for various claims and litigation related to labor and employment, personal injury, property damage, business practices, environmental liability and other matters. Any material litigation or a catastrophic accident or series of accidents could result in significant expenditures and have a material adverse effect on us.

Our inability to effectively integrate acquired operations and realize the anticipated benefits of acquisitions, joint ventures or strategic alliances could adversely affect us.

As part of our business strategy, we may acquire businesses and form joint ventures or strategic alliances. Whether we realize the anticipated benefits from these transactions depends, in part, upon the successful integration between the businesses involved, the performance of the underlying operations, capabilities or technologies and the management of the acquired operations. Accordingly, our financial results could be materially adversely affected by our failure to effectively integrate the acquired operations, unanticipated performance issues or transaction-related charges.

Insurance and claims expenses could have a material adverse effect on us.

We have a combination of both self-insurance and high-deductible insurance programs for the risks arising out of the services we provide and the nature of our global operations, including claims exposure resulting from cargo loss, personal injury, property damage, aircraft and related liabilities, business interruption and workers' compensation. Workers' compensation, automobile and general liabilities are determined using actuarial estimates of the aggregate liability for claims incurred and an estimate of incurred but not reported claims, on an undiscounted basis. Our accruals for insurance reserves reflect certain actuarial assumptions and management judgments, which are subject to a high degree of variability. If the number or severity of claims for which we are retaining risk increases, our financial condition and results of operations could be adversely affected. If we lose our ability to self-insure these risks, our insurance costs could materially increase and we may find it difficult to obtain adequate levels of insurance coverage.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Operating Facilities

We own our headquarters, which is located in Atlanta, Georgia and consists of approximately 745,000 square feet of space in an office campus, and our UPS Supply Chain Solutions group’s headquarters, which is located in Alpharetta, Georgia and consists of approximately 310,000 square feet of office space. Our information technology headquarters is located in Parsippany, New Jersey, consisting of about 200,000 square feet of owned office space.

Our primary information technology operations are consolidated in a 444,000 square foot owned facility in New Jersey. We also own a 175,000 square foot facility in Georgia, which serves as a backup to the main information technology operations facility in New Jersey.

We own or lease over 1,000 package operating facilities in the U.S., with approximately 80 million square feet of floor space. These facilities have vehicles and drivers stationed for the pick-up and delivery of packages, and capacity to sort and transfer packages. Our larger facilities also service our vehicles and equipment, and employ specialized mechanical installations for the sorting and handling of packages. We own or lease approximately 800 facilities that support our international package operations, with approximately 24 million square feet of space.

Our aircraft are operated in a hub and spoke pattern in the U.S., with our principal air hub, Worldport, located in Louisville, Kentucky. The Worldport facility consists of over 5 million square feet and includes high-speed conveyor and computer control systems. For additional information on our air hubs, see “Item 1 - Business - Products and Services; Reporting Segments - Global Small Package”.

Our major air hub in Europe is located in Cologne, Germany, and we operate three air hubs in Asia in Shanghai, China; Shenzhen, China; and Hong Kong.

We own or lease more than 500 facilities, with approximately 38 million square feet of floor space that support our freight forwarding and logistics operations. We own and operate a logistics campus consisting of approximately 4 million square feet in Louisville, Kentucky.

We own or lease approximately 200 UPS Freight service centers with approximately 6 million square feet of floor space. The main offices of UPS Freight in Richmond, Virginia, consist of approximately 217,000 square feet of office space.

Fleet

Aircraft

The following table shows information about our aircraft fleet as ofDecember 31, 2019:

Description	Owned & Finance Leases	Operating Leases & Chartered From Others	On Order	Under Option
Boeing 757-200	75	—	—	—
Boeing 767-200	—	—		
Boeing 767-300	64	2	8	—
Boeing 767-300BCF	3	—	1	—
Boeing 767-300BDSF	2		2	
Airbus A300-600	52	—	—	—
Boeing MD-11	37	—	5	—
Boeing 747-400F	11	—	—	—
Boeing 747-400BCF	2	—	—	—
Boeing 747-8F	15	—	13	—
Other	—	309		—
Total	261	311	29	—

Vehicles

We operate a global ground fleet of approximately 125,000 package cars, vans, tractors and motorcycles. Our ground support fleet consists of 36,000 pieces of equipment designed specifically to support our aircraft fleet, ranging from non-powered container dollies and racks to powered aircraft main deck loaders and cargo tractors. We also have 52,000 containers used to transport cargo in our aircraft.

Item 3. ***Legal Proceedings***

See note 5 to the audited, consolidated financial statements for a discussion of pension related matters andnote 9 to the audited, consolidated financial statements for a discussion of judicial proceedings and other matters arising from the conduct of our business activities.

Item 4. ***Mine Safety Disclosures***

Not applicable.

Information about our Executive Officers

The information under the heading "Information about our Executive Officers" in Item 10 hereof is incorporated by reference into this Part 1.

PART II

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

Our class A common stock is not listed on a national securities exchange or traded in an organized over-the-counter market, but each share of our class A common stock is convertible into one share of our class B common stock. Our class B common stock is listed on the New York Stock Exchange under the symbol "UPS".

As of February 7, 2020, there were 155,914 and 19,196 shareowners of record of class A and class B common stock, respectively.

Our practice has been to pay dividends on a quarterly basis. The declaration of dividends is subject to the discretion of the Board of Directors and will depend on various factors, including our net income, financial condition, cash requirements, future prospects and other relevant factors.

On February 13, 2020, our Board declared a dividend of $1.01 per share, which is payable on March 10, 2020 to shareowners of record on February 25, 2020. This represents a 5.2% increase from the previous $0.96 per share quarterly dividend paid in December 2019.

A summary of repurchases of our class A and class B common stock during the fourth quarter of 2019 is as follows (in millions, except per share amounts):

	Total Number of Shares Purchased[1]	Total Number of Shares Purchased as Part of Publicly Announced Program	Average Price Paid Per Share	Approximate Dollar Value of Shares that May Yet be Purchased Under the Program (as of month-end)
October 1—October 31	0.8	0.8	$ 115.96	$ 2,495
November 1—November 30	0.6	0.6	121.81	2,416
December 1—December 31	0.7	0.7	117.99	2,334
Total October 1—December 31	2.1	2.1	$ 118.59	

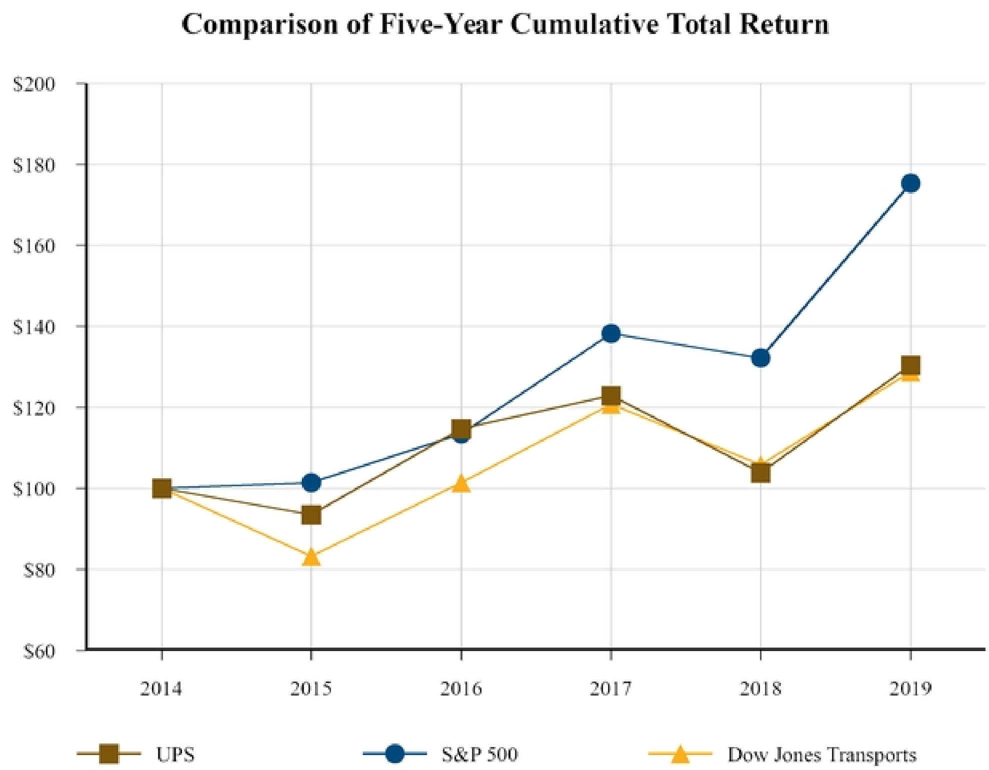
[1] Includes shares repurchased through our publicly announced share repurchase program and shares tendered to pay the exercise price and tax withholding on employee stock awards.

In May 2016, the Board of Directors approved a share repurchase authorization of $8.0 billion for shares of class A and class B common stock. We anticipate repurchasing approximately $1.0 billion of shares in 2020. For additional information on our share repurchase activities, see note 11 to the audited, consolidated financial statements included in this report.

Shareowner Return Performance Graph

The following performance graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that the Company specifically incorporates such information by reference into such filing.

The following graph shows a five-year comparison of cumulative total shareowners' returns for our class B common stock, the Standard & Poor's 500 Index and the Dow Jones Transportation Average. The comparison of the total cumulative return on investment, which is the change in the stock price plus reinvested dividends for each of the quarterly periods, assumes that $100 was invested on December 31, 2014 in the Standard & Poor's 500 Index, the Dow Jones Transportation Average and our class B common stock.



	12/31/2014		12/31/2015		12/31/2016		12/31/2017		12/31/2018		12/31/2019	
United Parcel Service, Inc.	$	100.00	$	93.50	$	114.74	$	122.93	$	103.90	$	130.39
Standard & Poor's 500 Index	$	100.00	$	101.37	$	113.49	$	138.26	$	132.19	$	175.30
Dow Jones Transportation Average	$	100.00	$	83.24	$	101.44	$	120.73	$	105.85	$	128.76

For information regarding our equity compensation plans, see Item 12 of this report.

Item 6. ***Selected Financial Data***

The following table sets forth selected financial data for each of the five years in the period ended December 31, 2019 (in millions, except per share amounts). This financial data should be read together with our consolidated financial statements and related notes, Management's Discussion and Analysis of Financial Condition and Results of Operations, including the *Supplemental Information - Items Affecting Comparability* section, and other financial data appearing elsewhere in this report.

	Years Ended December 31,				
	2019	2018	2017	2016	2015
Selected Income Statement Data					
Revenue:					
U.S. Domestic Package	$ 46,493	$ 43,593	$ 40,761	$ 38,284	$ 36,744
International Package	14,220	14,442	13,342	12,346	12,142
Supply Chain & Freight	13,381	13,826	12,482	10,980	10,300
Total Revenue	74,094	71,861	66,585	61,610	59,186
Operating Expenses:					
Compensation and benefits	38,908	37,235	34,577	32,534	31,448
Other	27,388	27,602	24,479	21,388	20,495
Total Operating Expenses	66,296	64,837	59,056	53,922	51,943
Operating Profit:					
U.S. Domestic Package	4,164	3,643	4,303	4,628	4,427
International Package	2,657	2,529	2,429	2,417	2,123
Supply Chain and Freight	977	852	797	643	693
Total Operating Profit	7,798	7,024	7,529	7,688	7,243
Other Income and (Expense):					
Investment income (expense) and other	(1,493)	(400)	61	(2,186)	435
Interest expense	(653)	(605)	(453)	(381)	(341)
Income Before Income Taxes	5,652	6,019	7,137	5,121	7,337
Income Tax Expense	1,212	1,228	2,232	1,699	2,497
Net Income	$ 4,440	$ 4,791	$ 4,905	$ 3,422	$ 4,840
Per Share Amounts:					
Basic Earnings Per Share	$ 5.14	$ 5.53	$ 5.63	$ 3.88	$ 5.37
Diluted Earnings Per Share	$ 5.11	$ 5.51	$ 5.61	$ 3.86	$ 5.34
Dividends Declared Per Share	$ 3.84	$ 3.64	$ 3.32	$ 3.12	$ 2.92
Weighted Average Shares Outstanding:					
Basic	864	866	871	883	901
Diluted	869	870	875	887	906

	As of December 31,				
	2019	2018	2017	2016	2015
Selected Balance Sheet Data:					
Cash and marketable securities	$ 5,741	$ 5,035	$ 4,069	$ 4,567	$ 4,726
Total assets	57,857	50,016	45,574	40,545	38,497
Long-term debt	21,818	19,931	20,278	12,394	11,316
Shareowners' equity	3,283	3,037	1,024	430	2,501

This table reflects the impact of the adoption of new accounting standards in 2018 and 2019. Refer to note 1 to the audited, consolidated financial statements.

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

Overview

Highlights of our annual results follow:

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Revenue (in millions)	$ 74,094	$ 71,861	$ 2,233	3.1 %
Operating Expenses (in millions)	66,296	64,837	1,459	2.3 %
Operating Profit (in millions)	$ 7,798	$ 7,024	$ 774	11.0 %
Operating Margin	10.5 %	9.8 %		
Net Income (in millions)	$ 4,440	$ 4,791	$ (351)	(7.3)%
Basic Earnings Per Share	$ 5.14	$ 5.53	$ (0.39)	(7.1)%
Diluted Earnings Per Share	$ 5.11	$ 5.51	$ (0.40)	(7.3)%
Average Daily Package Volume (in thousands)	21,880	20,677		5.8 %
Average Revenue Per Piece	$ 10.87	$ 10.98	$ (0.11)	(1.0)%

- Consolidated revenue increased 3.1%.
- Average daily package volume increased 5.8% primarily driven by our U.S. Domestic Package segment, which experienced growth from SMBs as well as several large customers, led by our largest customer, Amazon.
- Average revenue per piece is dependent upon base rates, customer and product mix, average billable weight per piece, fuel surcharge rates and currency. Average revenue per piece decreased as a result of changes in customer and product mix, and lower average billable weight per piece in our U.S. Domestic Package segment. Currency movements negatively impacted revenue per piece in our International Package segment.
- Operating profit and operating margin increased with growth and margin expansion in all segments.
- We reported net income of $4.440 billion and diluted earnings per share of $5.11. Adjusted diluted earnings per share was $7.53 after adjusting for the after-tax impacts of the following:
  - transformation strategy costs of $196 million;
  - legal contingencies and expenses of $91 million; and
  - pension mark-to-market losses recognized outside of a 10% corridor of $1.816 billion.

2018 compared to 2017

See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* of the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the Securities and Exchange Commission on February 21, 2019.

Supplemental Information - Items Affecting Comparability

We supplement the reporting of our financial information determined under generally accepted accounting principles in the United States ("GAAP") with certain non-GAAP financial measures including, as applicable, "adjusted" compensation and benefits, operating expenses, operating profit, operating margin, other income and (expense), income before income taxes, income tax expense, effective tax rate, net income and earnings per share. Adjusted financial measures may exclude the impact of period over period exchange rate changes and hedging activities, amounts related to mark-to-market gains or losses, recognition of contingencies and transformation strategy costs, as described below. We believe that these adjusted financial measures provide meaningful information to assist investors and analysts in understanding our financial results and assessing our prospects for future performance. We believe these adjusted financial measures are important indicators of our recurring results of operations because they exclude items that may not be indicative of, or are unrelated to, our underlying operating results, and provide a useful baseline for analyzing trends in our underlying businesses. Additionally, these adjusted financial measures are used internally by management for the determination of incentive compensation awards, business unit operating performance analysis and business unit resource allocation.

Non-GAAP financial measures should be considered in addition to, and not as an alternative for, our reported results prepared in accordance with GAAP. Our non-GAAP financial information does not represent a comprehensive basis of accounting. Therefore, our non-GAAP financial information may not be comparable to similarly titled measures reported by other companies.

The year over year comparisons of our financial results are affected by the following items (in millions):

	Year Ended December 31,	
Non-GAAP Adjustments	**2019**	**2018**
Operating Expenses:		
Transformation Strategy Costs	$ 255	$ 360
Legal Contingencies and Expenses	97	—
Total Adjustments to Operating Expenses	$ 352	$ 360
Other Income and (Expense):		
Defined Benefit Plans Mark-to-Market Charges	$ 2,387	$ 1,627
Total Adjustments to Other Income and (Expense)	$ 2,387	$ 1,627
Total Adjustments to Income Before Income Taxes	$ 2,739	$ 1,987
Income Tax Benefit from the Mark-to-Market Charges	$ (571)	$ (390)
Income Tax Benefit from Transformation Strategy Costs	(59)	(87)
Income Tax Benefit from Legal Contingencies and Expenses	(6)	—
Total Adjustments to Income Tax Expense	$ (636)	$ (477)
Total Adjustments to Net Income	$ 2,103	$ 1,510

These items have been excluded from comparisons of "adjusted" Compensation and benefits, Operating Expenses, Operating Profit, Operating Margin, Other Income and (Expense), Income Tax Expense and effective tax rate in the discussion that follows. The income tax benefit from transformation strategy costs, legal contingencies and expenses and the mark-to-market charges are calculated by multiplying the statutory tax rates applicable in each tax jurisdiction, including the U.S. federal jurisdiction and various U.S. state and non-U.S. jurisdictions, by the tax deductible adjustments. The blended average of the effective tax rates in 2019 and 2018 were 23.2% and 24.0%, respectively.

Impact of Changes in Foreign Currency Exchange Rates and Hedging Activities

We supplement the reporting of our revenue, revenue per piece and operating profit with non-GAAP measures that exclude the period over period impact of foreign currency exchange rate changes and hedging activities.

Currency-neutral revenue, revenue per piece and operating profit are calculated by dividing current period reported U.S. dollar revenue, revenue per piece and operating profit by the current period average exchange rates to derive current period local currency revenue, revenue per piece and operating profit. The derived amounts are then multiplied by the average foreign exchange rates used to translate the comparable results for each month in the prior year period (including the period over period impact of foreign currency hedging activities). The difference between the current period reported U.S. dollar revenue, revenue per piece and operating profit and the derived current period U.S. dollar revenue, revenue per piece and operating profit is the period over period impact of currency fluctuations.

Transformation Strategy Costs

We supplement the presentation of our operating profit, operating margin, income before income taxes, net income and earnings per share with similar non-GAAP measures that exclude the impact of costs related to restructuring programs, including transformation strategy costs. For information regarding transformation strategy costs, see note 17 to the audited, consolidated financial statements.

Costs Related to Legal Contingencies and Expenses

We supplement the presentation of our operating profit, operating margin, income before income taxes, net income and earnings per share with similar non-GAAP measures that exclude the impact of costs related to certain of our legal contingencies and expenses. For information regarding legal contingencies and expenses, see note 9 to the audited, consolidated financial statements.

Defined Benefit Plans Mark-to-Market Charges

We recognize changes in the fair value of plan assets and net actuarial gains and losses in excess of a 10% corridor for our pension and postretirement defined benefit plans immediately as part of net periodic benefit cost other than service cost. We supplement the presentation of our income before income taxes, net income and earnings per share with "adjusted" measures that exclude the impact of the portion of net periodic benefit cost other than service cost represented by the gains and losses recognized in excess of the 10% corridor and the related income tax effects. We believe excluding these mark-to-market impacts from our adjusted results provides important supplemental information to remove the volatility caused by short-term changes in market interest rates, equity prices and similar factors.

This adjusted net periodic benefit cost ($754 million in 2019 and $615 million in 2018) utilizes the expected return on plan assets (7.68% in 2019 and 2018) and the discount rate used to determine net periodic benefit cost (4.45% in 2019 and 3.81% in 2018). The unadjusted net periodic benefit cost reflects the actual return on plan assets (17.57% in 2019 and -2.38% in 2018) and the discount rate used to measure the projected benefit obligation at the December 31 measurement date (3.55% in 2019 and 4.45% in 2018).

We recognized pre-tax mark-to-market losses outside of a 10% corridor related to the remeasurement of our pension and postretirement defined benefit plans' assets and liabilities in "Other Income and (Expense)" of $2.387 and $1.627 billion for 2019 and 2018, respectively. In October 2019, we refined the bond matching approach used to determine the discount rate for our U.S. pension and postretirement plans by implementing advances in technology and modeling techniques. This refinement decreased the projected benefit obligation on our consolidated balance sheet by approximately $900 million as of December 31, 2019, decreased the pre-tax mark-to-market charge by approximately $810 million and increased net income by $616 million, or $0.71 per share on a basic and diluted basis. This change did not have an impact on adjusted net income or adjusted earnings per share.

The table below indicates the amounts associated with each component of the pre-tax mark-to-market losses, as well as the weighted-average actuarial assumptions used to determine our net periodic benefit cost, for each year:

	Year Ended December 31,	
Components of mark-to-market gain (loss) (in millions):	**2019**	**2018**
Discount rates	$ (5,670)	$ 845
Return on assets	3,850	(1,057)
Demographic and other assumption changes	(24)	(22)
Coordinating benefits attributable to the Central States Pension Fund	(543)	(1,393)
Total mark-to-market gain (loss)	$ (2,387)	$ (1,627)

	Year Ended December 31,	
Weighted-average actuarial assumptions used to determine net periodic benefit cost:	**2019**	**2018**
Expected rate of return on plan assets	7.68 %	7.68 %
Actual rate of return on plan assets	17.57 %	(2.38)%
Discount rate used for net periodic benefit cost	4.45 %	3.81 %
Discount rate at measurement date	3.55 %	4.45 %

The pre-tax mark-to-market losses for the years ended December 31,2019 and 2018, respectively, were comprised of the following components:

2019 - $2.387 billion pre-tax mark-to-market loss:

- *Return on Assets* ($3.850 billion pre-tax gain): In 2019, the actual rate of return on plan assets was higher than our expected rate of return, primarily due to strong global equity and U.S. bond markets.
- *Coordinating benefits attributable to the Central States Pension Fund*($543 million pre-tax loss): This represents our current best estimate of the additional potential coordinating benefits that may be required to be paid related to the Central States Pension Fund.
- *Discount Rates* ($5.670 billion pre-tax loss): The weighted-average discount rate for our pension and postretirement medical plans decreased from 4.45% at December 31, 2018 to 3.55% at December 31, 2019, primarily due to both a decline in U.S. treasury yields and a decrease in credit spreads on AA-rated corporate bonds in 2019.
- *Demographic and Other Assumption Changes* ($24 million pre-tax loss): This represents the difference between actual and estimated participant data and demographic factors, including items such as healthcare cost trends, compensation rate increases and rates of termination, retirement and mortality.

2018 - $1.627 billion pre-tax mark-to-market loss:

- *Return on Assets* ($1.057 billion pre-tax loss): In 2018, the actual rate of return on plan assets was lower than our expected rate of return, primarily due to weak global equity markets.
- *Coordinating benefits attributable to the Central States Pension Fund*($1.393 billion pre-tax loss): This represented our then-current best estimate of potential coordinating benefits that may be required to be paid related to the Central States Pension Fund.
- *Discount Rates* ($845 million pre-tax gain): The weighted-average discount rate for our pension and postretirement medical plans increased from 3.81% at December 31, 2017 to 4.45% at December 31, 2018, primarily due to both an increase in U.S. treasury yields and an increase in credit spreads on AA-rated corporate bonds in 2018.
- *Demographic and Other Assumption Changes* ($22 million pre-tax loss): This represents the difference between actual and estimated participant data and demographic factors, including items such as healthcare cost trends, compensation rate increases and rates of termination, retirement and mortality.

Expense Allocations

Certain operating expenses are allocated between our reporting segments using activity-based costing methods. These activity-based costing methods require us to make estimates that impact the amount of each expense category that is attributed to each segment. Changes in these estimates will directly impact the amount of expense allocated to each segment, and therefore the operating profit of each reporting segment. Our allocation methodologies are refined periodically, as necessary, to reflect changes in our businesses. There were no significant changes in our expense allocation methodologies during 2019, 2018 or 2017.

U.S. Domestic Package Operations

	Year Ended December 31,		$ Change	% Change
	2019	**2018**	**2019/2018**	**2019/2018**
Average Daily Package Volume (in thousands):				
Next Day Air	1,889	1,542		22.5 %
Deferred	1,622	1,432		13.3 %
Ground	15,176	14,498		4.7 %
Total Average Daily Package Volume	18,687	17,472		7.0 %
Average Revenue Per Piece:				
Next Day Air	$ 17.74	$ 19.53	$ (1.79)	(9.2)%
Deferred	12.62	13.12	(0.50)	(3.8)%
Ground	8.55	8.51	0.04	0.5 %
Total Average Revenue Per Piece	$ 9.83	$ 9.86	$ (0.03)	(0.3)%
Operating Days in Period	253	253		
Revenue (in millions):				
Next Day Air	$ 8,479	$ 7,618	$ 861	11.3 %
Deferred	5,180	4,752	428	9.0 %
Ground	32,834	31,223	1,611	5.2 %
Total Revenue	$ 46,493	$ 43,593	$ 2,900	6.7 %
Operating Expenses (in millions):				
Operating Expenses	$ 42,329	$ 39,950	$ 2,379	6.0 %
Transformation Strategy Costs	(108)	(235)	127	(54.0)%
Legal Contingencies and Expenses	(97)	—	(97)	N/M
Adjusted Operating Expenses	$ 42,124	$ 39,715	$ 2,409	6.1 %
Operating Profit (in millions) and Operating Margin:				
Operating Profit	$ 4,164	$ 3,643	$ 521	14.3 %
Adjusted Operating Profit	$ 4,369	$ 3,878	$ 491	12.7 %
Operating Margin	9.0 %	8.4 %		
Adjusted Operating Margin	9.4 %	8.9 %		

Revenue

The change in overall revenue was due to the following factors for the year ended December 31, 2019 versus 2018:

	Volume	Rates / Product Mix	Fuel Surcharge	Total Revenue Change
Revenue Change Drivers:				
2019/2018	7.0 %	(0.6)%	0.3 %	6.7 %

Volume

2019 compared to 2018

Our overall volume increased across all products, led by strong growth in our Next Day Air and Deferred driven by the structural shift to faster delivery in retail and e-commerce, and from additional customer volume. We experienced growth from a number of large customers and SMBs, with volume growth led by our largest customer, Amazon. This growth was enabled by our on-going investment in automated facilities and other transformation initiatives.

Business-to-consumer shipments, which represented approximately 54% of the total U.S. Domestic Package average daily volume, grew 11.3% for the year driven by the growth in e-commerce and retail. Volume grew across all products, with particularly strong growth in our Air products. Business-to-business shipments increased 2.2% for the year with volume increases in both air and ground services.

Within our Air products, overall average daily volume increased in both Next Day Air and Deferred. Strong air volume growth continued primarily in residential Next Day Air and Second Day package products, as consumers and businesses continue to demand faster delivery options, which we expect will persist. This growth was slightly offset by declines in Next Day Air letter and Second Day letter volume due to shifts in customer preferences.

We experienced year over year growth in both residential and commercial ground products. Growth in residential ground volume was driven by changes in customer mix resulting from the continued growth in e-commerce, while growth in commercial ground products was primarily driven by an increase in retail return services.

Rates and Product Mix

2019 compared to 2018

Overall revenue per piece decreased due to customer and product mix and fuel surcharge rates, partially offset by changes in base rates.

Revenue per piece for ground and air products was positively impacted by a base rate increase on December 26, 2018. UPS Ground and UPS Air services rates increased an average net 4.9%.

Revenue per piece for our Next Day Air and Deferred products decreased primarily due to a shift in customer and product mix and a decrease in average billable weight per piece, which was partially offset by the increase in base rates.

Revenue per piece for our ground products increased primarily due to base rate increases and customer and product mix, partially offset by a decrease in average billable weight per piece.

Fuel Surcharges

We apply a fuel surcharge on our domestic air and ground services. The air fuel surcharge is based on the U.S. Department of Energy's ("DOE") Gulf Coast spot price for a gallon of kerosene-type jet fuel, while the ground fuel surcharge is based on the DOE's On-Highway Diesel Fuel Price. Based on published rates, the average fuel surcharge rates for domestic air and ground products were as follows:

	Year Ended December 31,		% Point Change
	2019	2018	2019/2018
Next Day Air / Deferred	7.3 %	7.7 %	(0.4)%
Ground	7.2 %	7.0 %	0.2 %

Effective April 2, 2018, we created separate fuel surcharges for Domestic Air shipments and International Air export shipments. These surcharges are based on the U.S. Gulf Coast Jet Fuel price and are adjusted weekly. In June and October 2018, ground fuel surcharge rates were raised for all thresholds, and in October and December 2018, Domestic Air fuel surcharge rates were increased for all thresholds. Ground surcharges continue to be based on the national U.S. Average On-Highway Diesel Fuel price and adjusted weekly.

While fluctuations in fuel surcharges can be significant from period to period, fuel surcharges represent one of the many individual components of our pricing structure that impact our overall revenue and yield. Additional components include the mix of products sold, the base price and any additional charges or discounts on these services.

Revenue per piece for ground products was positively impacted by fuel surcharge rate increases during 2018, while fuel surcharge rates for air products decreased slightly for the year.

Total domestic fuel surcharge revenue increased by $140 million for the year as a result of increases in package volume and shifts in product mix, partially offset by lower fuel surcharge rates on our Air products.

Operating Expenses

2019 compared to 2018

Operating expenses, and operating expenses excluding the impact of transformation strategy costs and legal contingencies and expenses, increased largely due to pickup and delivery costs (up $1.385 billion), costs of operating our domestic integrated air and ground network (up $631 million), costs of package sorting (up $301 million) and other indirect operating costs (up $92 million).

In order to manage costs, we continually adjust our air and ground network to better match higher volume levels. In addition, we continue to deploy and utilize technology to increase package sorting and delivery productivity by reducing manual touchpoints. The growth in pickup and delivery and network operational costs was impacted by several factors:

- Higher employee compensation and benefit costs largely resulting from:
  - volume growth, which resulted in an increase in average daily union labor hours of 4.7%;
  - union pay rate and benefit increases; and
  - growth in the overall size of the workforce due to facility expansions.

  We incurred higher employee benefit expenses due to additional headcount, contractual contribution rate increases to union multiemployer plans and changes in benefit eligibility for certain union employees. These increases were slightly offset by lower pension expense for our company-sponsored plans due to higher discount rates used to measure the projected benefit obligations which reduced service costs, and lower premiums due to improved funded status.
- We incurred slightly lower fuel expense for the year, driven by declines in fuel prices and higher alternative fuel tax credits in 2019 due to the passage of additional legislation. These reductions were partially offset by increased network volume, which resulted in higher fuel usage. Aircraft block hours increased 10.3%, daily package delivery stops increased 10.9% and daily delivery miles increased 7.9%.
- Lower costs for outside contract carriers were the result of retaining additional volume within our network.

Total cost per piece, which includes transformation strategy costs and legal contingencies and expenses, decreased 0.9% for the year. Excluding the year over year impact of transformation strategy costs and legal contingencies and expenses, adjusted cost per piece decreased 0.8% for the year. Year over year cost per piece decreased due to the incremental impact of our new automated facilities and other transformation initiatives.

Operating Profit and Margin

2019 compared to 2018

Operating profit increased $521 million with operating margins increasing 60 basis points to 9.0%. Excluding the year over year impact of transformation strategy costs and legal contingencies and expenses, adjusted operating profit increased $491 million with operating margins increasing 50 basis points to 9.4%. Operating profit increased as a result of the items described above.

International Package Operations

	Year Ended December 31, 2019	Year Ended December 31, 2018	$ Change 2019/2018	% Change 2019/2018
Average Daily Package Volume (in thousands):				
Domestic	1,721	1,723		(0.1)%
Export	1,472	1,482		(0.7)%
Total Average Daily Package Volume	3,193	3,205		(0.4)%
Average Revenue Per Piece:				
Domestic	$ 6.51	$ 6.59	$ (0.08)	(1.2)%
Export	29.10	29.27	(0.17)	(0.6)%
Total Average Revenue Per Piece	$ 16.93	$ 17.08	$ (0.15)	(0.9)%
Operating Days in Period	253	253		
Revenue (in millions):				
Domestic	$ 2,836	$ 2,874	$ (38)	(1.3)%
Export	10,837	10,973	(136)	(1.2)%
Cargo & Other	547	595	(48)	(8.1)%
Total Revenue	$ 14,220	$ 14,442	$ (222)	(1.5)%
Operating Expenses (in millions):				
Operating Expenses	$ 11,563	$ 11,913	$ (350)	(2.9)%
Transformation Strategy Costs	(122)	(76)	(46)	60.5 %
Adjusted Operating Expenses	$ 11,441	$ 11,837	$ (396)	(3.3)%
Operating Profit (in millions) and Operating Margin:				
Operating Profit	$ 2,657	$ 2,529	$ 128	5.1 %
Adjusted Operating Profit	$ 2,779	$ 2,605	$ 174	6.7 %
Operating Margin	18.7 %	17.5 %		
Adjusted Operating Margin	19.5 %	18.0 %		
Currency Translation Benefit / (Cost)—(in millions)*:				
Revenue			$ (232)	
Operating Expenses			302	
Operating Profit			$ 70	

* Net of currency hedging; amount represents the change compared to the prior year.

Revenue

The change in overall revenue was due to the following factors for the year ended December 31, 2019 versus 2018:

	Volume	Rates / Product Mix	Fuel Surcharge	Currency	Total Revenue Change
Revenue Change Drivers:					
2019/2018	(0.4)%	0.4%	0.1%	(1.6)%	(1.5)%

Volume

2019 compared to 2018

Our overall average daily volume decreased slightly due to weak demand from several sectors including high tech, manufacturing, professional services, automotive and government, partially offset by higher demand in healthcare, retail and other sectors.

Export volume decreased slightly in 2019. European export volume declined across all trade lanes, while Intra-European volume grew slightly. Total U.S. export volume decreased, with declines in the Europe and Asia trade lanes partially offset by growth in the U.S. to Americas and U.S. to ISMEA trade lanes. Asia exports grew in all major trade lanes, with the exception of the United States. Export volume for the year was strongest in our non-premium Transborder Standard product, offset by declines in our premium Worldwide and Transborder Express services.

Domestic volume also decreased slightly for the year as growth in several domestic markets was more than offset by challenging economic conditions, particularly in the United Kingdom and other European countries. Additionally, a postal strike in Canada in 2018 drove additional domestic volume which did not repeat in 2019.

Rates and Product Mix

2019 compared to 2018

On December 26, 2018, we implemented an average 4.9% net increase in base and accessorial rates for international shipments originating in the United States. Rate changes for shipments originating outside the U.S. are made throughout the year and vary by geographic market. On August 26, 2019, we implemented a 1.0% increase in International Air-Import fuel surcharge.

Total average revenue per piece decreased in 2019 due entirely to a 170 basis point decrease from currency. Excluding the impact of currency, revenue per piece increased 0.8% due to increases in base rates, partially offset by declines in fuel surcharge indices.

Domestic revenue per piece decreased 120 basis points, driven entirely by a 390 basis point decrease from currency. Excluding the impact of currency, revenue per piece increased 2.7% due to base rate increases.

Export revenue per piece decreased 60 basis points, also driven entirely by a 110 basis point decrease from currency. Excluding the impact of currency, revenue per piece increased 0.5% as the trend toward our lower priced non-premium services was more than offset by base rate increases.

Fuel Surcharges

We apply fuel surcharges on our international air and ground services. The fuel surcharge for international air products originating inside or outside the United States is largely indexed to the DOE's Gulf Coast spot price for a gallon of kerosene-type jet fuel. Fuel surcharges for ground products originating outside the United States are indexed to fuel prices in the region or country where the shipments originate.

While fluctuations in fuel surcharges can be significant from period to period, fuel surcharges represent one of the many individual components of our pricing structure that impact our overall revenue and yield. Additional components include the mix of products sold, the base price and any additional charges or discounts on these services.

Total international fuel surcharge revenue decreased by $33 million in 2019, primarily due to decreases in fuel surcharge indices and decreases in volume.

Operating Expenses

2019 compared to 2018

Operating expenses, and operating expenses excluding the year over year impact of transformation strategy costs, decreased for 2019. These decreases are the results of effective management of network capacity and cost in response to lower volumes within our air, ground and local pickup and delivery networks, combined with lower fuel prices and currency exchange rate movements.

In addition to variability in usage and market prices, the manner in which we purchase fuel also influences the net impact of fuel on our results. The majority of our contracts for fuel purchases utilize index-based pricing formulas plus or minus a fixed locational/supplier differential. While many of the indices are aligned, each index may fluctuate at a different pace, driving variability in the prices paid for fuel. Because of this, our operating results may be affected should the market price of fuel suddenly change by a significant amount or change by amounts that do not result in an adjustment in our fuel surcharges, which can affect our earnings either positively or negatively in the short-term.

The cost of operating our integrated international air and ground network decreased $130 million for 2019. The decrease in network costs was primarily driven by a 2.1% decrease in aircraft block hours, due in large part to our ability to adjust our global air network to match capacity with demand, and lower package volume for the year, together with lower fuel prices. Pickup and delivery costs decreased $105 million in 2019. The remaining decrease in operating expenses was driven by a $40 million gain from the sale of surplus property in Canada, as well as decreases in the costs of package sorting and other indirect operating costs.

Operating Profit and Margin

2019 compared to 2018

Operating profit increased $128 million for the year, with operating margin increasing 120 basis points to 18.7%. Excluding the year over year impact of transformation strategy costs, adjusted operating profit increased, with adjusted operating margin up 150 basis points to 19.5%. Operating profit increased as a result of the items described above.

Supply Chain & Freight Operations

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Freight LTL Statistics:				
Revenue (in millions)	$ 2,679	$ 2,706	$ (27)	(1.0)%
Revenue Per Hundredweight	$ 26.54	$ 25.52	$ 1.02	4.0 %
Shipments (in thousands)	9,281	9,720		(4.5)%
Shipments Per Day (in thousands)	36.7	38.4		(4.5)%
Gross Weight Hauled (in millions of lbs)	10,096	10,605		(4.8)%
Weight Per Shipment (in lbs)	1,088	1,091		(0.3)%
Operating Days in Period	253	253		
Revenue (in millions):				
Forwarding	$ 5,867	$ 6,580	$ (713)	(10.8)%
Logistics	3,435	3,234	201	6.2 %
Freight	3,265	3,218	47	1.5 %
Other	814	794	20	2.5 %
Total Revenue	$ 13,381	$ 13,826	$ (445)	(3.2)%
Operating Expenses (in millions):				
Operating Expenses	$ 12,404	$ 12,974	$ (570)	(4.4)%
Transformation Strategy Costs	(25)	(49)	24	(49.0)%
Adjusted Operating Expenses	$ 12,379	$ 12,925	$ (546)	(4.2)%
Operating Profit (in millions) and Operating Margins:				
Operating Profit	$ 977	$ 852	$ 125	14.7 %
Adjusted Operating Profit	$ 1,002	$ 901	$ 101	11.2 %
Operating Margin	7.3 %	6.2 %		
Adjusted Operating Margin	7.5 %	6.5 %		
Currency Translation Benefit / (Cost)—(in millions)*:				
Revenue			$ (75)	
Operating Expenses			67	
Operating Profit			$ (8)	

* Amount represents the change compared to the prior year.

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Transformation Strategy Costs (in millions):				
Forwarding	$ 12	$ 16	$ (4)	(25.0)%
Logistics	13	22	(9)	(40.9)%
Freight	—	6	(6)	(100.0)%
Other	—	5	(5)	(100.0)%
Total Transformation Strategy Costs	$ 25	$ 49	$ (24)	(49.0)%

Revenue

2019 compared to 2018

Total revenue for the Supply Chain & Freight segment decreased $445 million in 2019 compared with 2018.

Forwarding revenue decreased primarily due to an overall decline in market demand that was impacted by global trade uncertainties. This led to lower volume and declines in market rates in our international air and ocean freight forwarding businesses. In addition, excess capacity in the truckload brokerage market depressed rates, contributing to the year over year decrease in revenue. These decreases were partially offset by yield management initiatives in our air and ocean freight businesses.

Logistics revenue increased as we experienced growth in the healthcare, mail services, retail and manufacturing sectors.

Overall UPS Freight revenue increased, as declines in LTL tonnage and shipment volume which were largely attributable to market demand and the residual impacts of the fourth quarter 2018 network disruption were more than offset by yield management initiatives and volume growth in our Ground Freight Pricing product.

Operating Expenses

2019 compared to 2018

Total operating expenses for the Supply Chain & Freight segment, and operating expenses excluding the year over year impact of transformation strategy costs, decreased in 2019 compared with 2018.

Forwarding operating expenses decreased $685 million largely due to reductions in purchased transportation. Purchased transportation expense decreased $655 million primarily due to lower tonnage and declines in market rates in our international air and ocean freight forwarding businesses as well as a decrease in volume and market rates in truckload brokerage. Cost management initiatives in our freight forwarding businesses also contributed to the reduction in operating expenses.

Logistics operating expenses increased $172 million, primarily due to increases in purchased transportation driven by increased volume and rates, particularly in our mail services business. Additionally, business investments in healthcare quality assurance and technology increased costs.

UPS Freight operating expenses decreased $54 million. Decreases in costs associated with operating our linehaul network ($49 million) and decreases in pickup and delivery costs ($40 million) were driven by lower expenses from outside transportation carriers as a result of a decline in tonnage, lower fuel surcharges and the residual impacts of the fourth quarter 2018 network disruption. These decreases were offset by increases in transportation expense for our Ground Freight Pricing product due to higher volume. Cost management initiatives and production improvements largely contributed to the overall reduction in operating expenses.

Operating Profit and Margin

2019 compared to 2018

Total operating profit for the Supply Chain & Freight segment increased$125 million in 2019 compared with 2018. Excluding the year over year impact of transformation strategy costs, adjusted operating profit increased $101 million. Operating margin increased 110 basis points to 7.3%, while the adjusted operating margin increased 100 basis points to 7.5%. Operating profit and margin were impacted by the items described above.

Consolidated Operating Expenses

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Operating Expenses (in millions):				
Compensation and Benefits:	$ 38,908	$ 37,235	$ 1,673	4.5 %
Transformation Strategy Costs	(166)	(262)	96	(36.6)%
Adjusted Compensation and Benefits	38,742	36,973	1,769	4.8 %
Repairs and Maintenance	1,838	1,732	106	6.1 %
Depreciation and Amortization	2,360	2,207	153	6.9 %
Purchased Transportation	12,590	13,409	(819)	(6.1)%
Fuel	3,289	3,427	(138)	(4.0)%
Other Occupancy	1,392	1,362	30	2.2 %
Other Expenses	5,919	5,465	454	8.3 %
Total Other Expenses	27,388	27,602	(214)	(0.8)%
Other Transformation Strategy Costs	(89)	(98)	9	(9.2)%
Legal Contingencies and Expenses	(97)	—	(97)	N/M
Adjusted Total Other Expenses	$ 27,202	$ 27,504	$ (302)	(1.1)%
Total Operating Expenses	$ 66,296	$ 64,837	$ 1,459	2.3 %
Adjusted Total Operating Expenses	$ 65,944	$ 64,477	$ 1,467	2.3 %
Currency Translation Cost / (Benefit)*			$ (369)	

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Adjustments to Operating Expenses (in millions):				
Transformation Strategy Costs:				
Compensation	$ 21	$ —	$ 21	N/M
Benefits	145	262	(117)	(44.7)%
Depreciation and Amortization	3	12	(9)	(75.0)%
Other Occupancy	8	—	8	N/M
Other Expenses	78	86	(8)	(9.3)%
Total Transformation Strategy Costs	$ 255	$ 360	$ (105)	(29.2)%
Legal Contingencies and Expenses:				
Other Expenses	$ 97	$ —	$ 97	N/M
Total Adjustments to Operating Expenses	$ 352	$ 360	$ (8)	(2.2)%

Compensation and Benefits

2019 compared to 2018

Total compensation and benefits, and total compensation and benefits excluding the year over year impact of transformation strategy costs, increased for 2019.

Total compensation costs increased $1.028 billion or 4.6%. Excluding the year over year impact of transformation strategy costs, adjusted compensation increased $1.007 billion largely due to higher U.S. Domestic direct labor costs. These costs increased as a result of additional headcount, driven by U.S. Domestic average daily volume growth that resulted in an increase in average daily union hours of 4.7%. Contractual union wage increases also contributed to the increase in compensation for hourly employees.

Benefits costs increased $645 million. Excluding the year over year impact of transformation strategy costs, adjusted benefits costs increased $762 million due to the following:

- Health and welfare costs increased $570 million, driven by higher contributions to multiemployer plans due to contractual rate increases, an overall increase in the size of the workforce and changes in eligibility for certain union employees.
- Pension and retirement benefits increased $18 million. The impacts of contractually-mandated contribution increases to multiemployer plans, as well as an increase in the size of the overall workforce, were substantially offset by lower service cost for company-sponsored plans as a result of higher discount rates.
- Vacation, excused absence, payroll taxes and other expenses increased $211 million, primarily driven by salary increases and growth in the overall size of the workforce.
- Workers' compensation expense decreased $37 million as we experienced more favorable actuarial adjustments. We evaluate the total range of actuarial outcomes when estimating losses that will ultimately occur. See note 1 to the audited, consolidated financial statements for a further description of this policy.

Repairs and Maintenance

2019 compared to 2018

The increase in repairs and maintenance expense was driven by maintenance of our aircraft, routine repairs to buildings and facilities and maintenance of our other transportation equipment, due to additional investments we have made in recent periods.

Depreciation and Amortization

2019 compared to 2018

We evaluate the useful lives of all our property, plant and equipment based on our usage, maintenance and replacement policies, and taking into account physical and economic factors that may affect the useful lives of the assets. See note 1 to the audited, consolidated financial statements for a further description of the policy.

For 2019, depreciation expense increased $365 million, and net income decreased by $287 million, or $0.33 per share on a basic and diluted basis, as a result of investments in property, plant and equipment, net of disposals and assets becoming fully depreciated. Depreciation expense decreased $212 million, and net income increased $167 million, or $0.19 per share on a basic and diluted basis, as a result of lengthening our estimated useful lives for various asset categories in the latter half of 2018. The combined effect of the foregoing was a net increase in depreciation expense of $153 million and a decrease in net income of $120 million, or $0.14 per share on a basic and diluted basis, for the year.

Purchased Transportation

2019 compared to 2018

The decrease in purchased transportation expense charged to us by third-party air, rail, ocean and truck carriers was primarily driven by the following factors:

- Expense in our Freight Forwarding and Logistics business decreased $530 million due to decreases in both market rates and volume in our air and ocean freight forwarding businesses. Our truckload brokerage business also experienced declines in rates, primarily driven by market overcapacity. These decreases were partially offset by increases due to volume growth and rate increases in our mail services business.
- U.S. Domestic Package expense decreased $186 million primarily due to lower overall usage of third-party transportation carriers.
- International Package expense decreased $100 million primarily due to favorable currency exchange rate movements.
- Other purchased transportation expense decreased $3 million due to changes in the number of leased and chartered aircraft and lower fuel surcharges passed on to us by outside carriers.

Fuel

2019 compared to 2018

The decrease in fuel expense was driven by lower jet fuel, diesel and gasoline prices as well as higher alternative fuel tax credits as a result of legislation passed in 2019. These decreases were partially offset by higher consumption due to additional aircraft block hours and vehicle miles driven by higher U.S. Domestic package volume.

Other Occupancy

2019 compared to 2018

The increase in other occupancy expense and other occupancy expense excluding the year over year impact of transformation strategy costs was primarily driven by additional operating facilities coming into service.

Other Expenses

2019 compared to 2018

Other expenses, and other expenses excluding the year over year impact of transformation strategy costs and legal contingencies and expenses, increased for 2019. The increase was attributable to various items, including adjustments to reserves for self-insured automobile liability claims, bad debt expense, technology equipment and software licenses, professional service fees and advertising. These increases were partially offset by a $40 million gain on the sale of surplus property in Canada and lower travel and entertainment expenses.

Other Income and (Expense)

The following table sets forth investment income (expense) and other and interest expense for the years ended December 31, 2019 and 2018 (in millions):

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Investment Income (Expense) and Other	$ (1,493)	$ (400)	$ (1,093)	273.3 %
Defined Benefit Plans Mark-to-Market Charges	2,387	1,627	760	46.7 %
Adjusted Investment Income (Expense) and Other	$ 894	$ 1,227	$ (333)	(27.1)%
Interest Expense	(653)	(605)	(48)	7.9 %
Total Other Income and (Expense)	$ (2,146)	$ (1,005)	$ (1,141)	113.5 %
Adjusted Other Income and (Expense)	$ 241	$ 622	$ (381)	(61.3)%

Investment Income (Expense) and Other

2019 compared to 2018

Investment income (expense) and other for the period increased $1.093 billion, which included a $760 million increase in mark-to-market pension charges. Excluding the impact of the defined benefit plan mark-to-market charges, adjusted investment income (expense) and other for the period, which includes expected investment returns on pension assets, net of interest cost on projected benefit obligations, prior service cost and investment income, decreased $333 million. Expected returns on plan assets decreased as a result of the lower asset base driven by negative asset returns in 2018, partially offset by the effects of higher discretionary contributions in 2019. Pension interest cost increased with higher year-end discount rates, ongoing plan growth and an increase in the projected benefit obligation as a result of the 2018 year-end measurement of our plans. Investment income increased as a result of higher yields on invested assets, higher overall investment balances and foreign currency exchange rate movements.

Interest Expense

2019 compared to 2018

Interest expense increased primarily due to higher average outstanding debt balances and higher effective interest rates, combined with lower capitalized interest for 2019.

Income Tax Expense

The following table sets forth income tax expense and our effective tax rate for the years ended December 31, 2019 and 2018 (in millions):

	Year Ended December 31,		$ Change	% Change
	2019	2018	2019/2018	2019/2018
Income Tax Expense:	$ 1,212	$ 1,228	$ (16)	(1.3)%
Income Tax Impact of:				
Defined Benefit Plans Mark-to-Market Charges	571	390	181	46.4 %
Transformation Strategy Costs	59	87	(28)	(32.2)%
Legal Contingencies and Expenses	6	—	6	N/M
Adjusted Income Tax Expense	$ 1,848	$ 1,705	$ 143	8.4 %
Effective Tax Rate	21.4%	20.4%		
Adjusted Effective Tax Rate	22.0%	21.3%		

For additional information on income tax expense and our effective tax rate, see note 14 to the audited, consolidated financial statements.

Liquidity and Capital Resources

As of December 31, 2019, we had $5.741 billion in cash, cash equivalents and marketable securities. We believe that our current cash position, access to commercial paper programs and debt capital markets and cash flow generated from operations should be adequate not only for operating requirements, but also to enable us to complete our capital expenditure programs, transformation strategy and to fund dividend payments, share repurchases, pension contributions and long-term debt payments through the next several years. We regularly evaluate opportunities to optimize our capital structure, including through issuances of debt or equity to refinance existing debt and to fund ongoing cash needs.

Cash Flows From Operating Activities

The following is a summary of the significant sources (uses) of cash from operating activities (in millions):

	2019	2018
Net Income	$ 4,440	$ 4,791
Non-cash operating activities[1]	6,405	6,048
Pension and postretirement benefit plan contributions (company-sponsored plans)	(2,362)	(186)
Hedge margin receivables and payables	171	482
Income tax receivables and payables	599	469
Changes in working capital and other non-current assets and liabilities	(634)	1,091
Other operating activities	20	16
Net cash from operating activities	$ 8,639	$ 12,711

[1] Represents depreciation and amortization, gains and losses on derivative transactions and foreign exchange, deferred income taxes, provisions for uncollectible accounts receivable, amortization on operating lease assets, pension and postretirement benefit expense, stock compensation expense and other non-cash items.

Cash from operating activities remained strong throughout 2018 and 2019. Most of the variability in operating cash flows during this period related to funding company-sponsored pension and postretirement benefit plans (and related cash tax deductions). Except for discretionary or accelerated fundings of our plans, contributions to our company-sponsored pension plans have largely varied in accordance with minimum funding requirements. We made discretionary contributions to our three primary, company-sponsored U.S. pension plans totaling $2.0 billion in 2019. No discretionary contributions were made in 2018. The remaining contributions in 2018 and 2019 were to our international pension plans and U.S. postretirement medical benefit plans.

Operating cash flows were impacted by changes in our working capital management whereby certain payments from the fourth quarter of 2018 shifted into the first quarter of 2019. In addition, accelerated growth in the business lifted overall working capital demand. The net hedge margin collateral received from our derivative counterparties was $171 and $482 million during 2019 and 2018, respectively, due to the change in net fair value of the derivative contracts used in our currency and interest rate hedging programs. Cash payments for income taxes were $514 million and $2 million for 2019 and 2018, respectively, primarily due to timing of deductions related to pension contributions.

As of December 31, 2019, our total worldwide holdings of cash, cash equivalents and marketable securities were $5.741 billion, of which approximately $2.564 billion was held by foreign subsidiaries. The amount of cash, cash equivalents and marketable securities held by our U.S. and foreign subsidiaries fluctuates throughout the year due to a variety of factors, including the timing of cash receipts and disbursements in the normal course of business. Cash provided by operating activities in the U.S. continues to be our primary source of funds to finance domestic operating needs, capital expenditures, share repurchases, pension contributions and dividend payments to shareowners. All cash, cash equivalents and marketable securities held by foreign subsidiaries are generally available for distribution to the U.S. without any U.S. federal income taxes. Any such distributions may be subject to foreign withholding and U.S. state taxes. When amounts earned by foreign subsidiaries are expected to be indefinitely reinvested, no accrual for taxes is provided.

Cash Flows From Investing Activities

Our primary sources (uses) of cash for investing activities were as follows (amounts in millions):

	2019	2018
Net cash used in investing activities	$ (6,061)	$ (6,330)
Capital Expenditures:		
Buildings, facilities and plant equipment	$ (2,729)	$ (3,147)
Aircraft and parts	(1,890)	(1,496)
Vehicles	(987)	(931)
Information technology	(774)	(709)
Total Capital Expenditures[1]:	$ (6,380)	$ (6,283)
Capital Expenditures as a % of revenue	8.6%	8.7%
Other Investing Activities:		
Proceeds from disposals of property, plant and equipment	$ 65	$ 37
Net change in finance receivables	$ 13	$ 4
Net (purchases), sales and maturities of marketable securities	$ 322	$ (87)
Cash paid for business acquisitions, net of cash and cash equivalents acquired	$ (6)	$ (2)
Other investing activities	$ (75)	$ 1

[1] In addition to capital expenditures of $6.380 and $6.283 billion in 2019 and 2018, respectively, there were capital expenditures relating to the principal repayments of finance lease obligations of $140 and $340 million. These are included in cash flows from financing activities.

We have commitments for the purchase of aircraft, vehicles, equipment and real estate to provide for the replacement of existing capacity and anticipated future growth. We generally fund our capital expenditures with cash from operations. Future capital spending for anticipated growth and replacement assets will depend on a variety of factors, including economic and industry conditions. In 2017 we began a multi-year investment program in our smart global logistics network which impacts all asset categories, with the largest investments in buildings, facilities and plant equipment. This investment program will continue in 2020, and we anticipate that our capital expenditures will be approximately $6.5 to $7.0 billion.

Capital expenditures on buildings, facilities and plant equipment decreased in 2019 compared to 2018 in our U.S. and international package businesses, as we completed several facility automation and capacity expansion projects in 2018. Capital spending on aircraft increased in 2019 compared 2018 due to a net increase in contract deposits on open aircraft orders and final payments associated with the delivery of aircraft. Capital spending on information technology increased in 2019 compared to 2018 due to continuing development of technology enabled solutions and capitalized software projects. Capital spending on vehicles increased in 2019 relative to 2018, largely due to the timing of vehicle replacements and expansion of the overall fleet to support volume growth.

Proceeds from the disposal of property, plant and equipment were largely attributable to the sale of an international property in 2019 and disposal of equipment in 2018. The net change in finance receivables was due to reductions in our finance portfolios in 2019 compared with 2018. Purchases and sales of marketable securities are largely determined by liquidity needs and the periodic rebalancing of investment types, and will fluctuate from period to period.

Cash paid for business acquisitions in 2019 and 2018 related to our acquisition of area franchise rights for The UPS Store, as well as other, small acquisitions in our International Small Package and Logistics business units in 2019. Other investing activities are impacted by changes in our non-current investments and various other items.

Cash Flows From Financing Activities

Our primary sources (uses) of cash for financing activities were as follows (amounts in millions, except per share data):

	2019	2018
Net cash used in financing activities	$ (1,727)	$ (5,692)
Share Repurchases:		
Cash expended for shares repurchased	$ (1,004)	$ (1,011)
Number of shares repurchased	(9.1)	(8.9)
Shares outstanding at period end	857	858
Percent increase (decrease) in shares outstanding	(0.1)%	(0.1)%
Dividends:		
Dividends declared per share	$ 3.84	$ 3.64
Cash expended for dividend payments	$ (3,194)	$ (3,011)
Borrowings:		
Net borrowings (repayments) of debt principal	$ 2,419	$ (1,622)
Other Financing Activities:		
Cash received for common stock issuances	$ 218	$ 240
Other financing activities	$ (166)	$ (288)
Capitalization:		
Total debt outstanding at year end	$ 25,238	$ 22,736
Total shareowners’ equity at year end	3,283	3,037
Total capitalization	$ 28,521	$ 25,773

For the years ended December 31, 2019 and 2018, we repurchased a total of 9.1 and 8.9 million shares of class A and class B common stock for $1.005 and $1.000 billion, respectively ($1.004 and $1.011 billion in repurchases for 2019 and 2018, respectively, are reported on the cash flow statement due to the timing of settlements). For additional information on our share repurchase activities, see note 11 to the audited, consolidated financial statements.

For the years ended December 31, 2019 and 2018, dividends reported within shareowners' equity include $147 and $178 million, respectively, of non-cash dividends that were settled in shares of class A common stock.

The declaration of dividends is subject to the discretion of the Board of Directors and depends on various factors, including our net income, financial condition, cash requirements, future prospects and other relevant factors. We expect to continue the practice of paying regular cash dividends. In February 2020, we increased our quarterly dividend payment from $0.96 to $1.01 per share, a 5.2% increase.

Issuances of debt in 2019 consisted of fixed-rate senior notes totaling $3.0 billion and commercial paper. In 2018, issuances of debt consisted primarily of commercial paper. The following is a summary of debt issuances in 2019 (in millions):

		Principal Amount in USD
2019		
Fixed-rate senior notes:		
2.200% senior notes	$	400
2.500% senior notes		400
3.400% senior notes (multiple issuances)		1,450
4.250% senior notes		750
Total	$	3,000

Repayments of debt in 2019 and 2018 consisted primarily of our $1.0 billion 5.125% fixed-rate senior notes that matured in April 2019 and our $750 million 5.50% fixed-rate senior notes that matured in January 2018. The remaining repayments of debt during the period included paydowns of commercial paper and scheduled principal payments on our finance lease obligations. We consider the overall fixed and floating interest rate mix of our portfolio and the related overall cost of borrowing when planning for future issuances and non-scheduled repayments of debt.

The amount of commercial paper outstanding fluctuates throughout the year based on daily liquidity needs. The following is a summary of our commercial paper program (in millions):

		Functional currency outstanding balance at year end		Outstanding balance at year end ($)		Average balance outstanding		Average balance outstanding ($)	Average interest rate
2019									
USD	$	2,172	$	2,172	$	1,665	$	1,665	2.24 %
EUR	€	949	$	1,062	€	903	$	1,011	(0.39)%
Total			$	3,234					

		Functional currency outstanding balance at year end		Outstanding balance at year end ($)		Average balance outstanding		Average balance outstanding ($)	Average interest rate
2018									
USD	$	1,968	$	1,968	$	2,137	$	2,137	1.81 %
EUR	€	606	$	694	€	360	$	425	(0.38)%
Total			$	2,662					

The variation in cash received from common stock issuances was primarily due to the amount of stock option exercises by employees in 2018 and 2019.

Other financing activities includes cash used to repurchase shares from employees sold to satisfy tax withholding obligations on vested stock awards of $180 and $259 million in 2019 and 2018, respectively. Net cash inflows from premium payments and settlements of capped call options for the purchase of UPS class B shares were $21 and $34 million in 2019 and 2018, respectively.

Sources of Credit

See note 8 to the audited, consolidated financial statements for a discussion of our available credit and debt covenants.

Guarantees and Other Off-Balance Sheet Arrangements

Except as disclosed in note 8 to the audited, consolidated financial statements, we do not have guarantees or other off-balance sheet financing arrangements, including variable interest entities, which we believe could have a material impact on financial condition or liquidity.

Contractual Commitments

We have contractual obligations and commitments in the form of finance leases, operating leases, debt obligations, purchase commitments and certain other liabilities. We intend to satisfy these obligations primarily through the use of cash flow from operations. The following table summarizes the expected cash outflow to satisfy our contractual obligations and commitments as of December 31, 2019 (in millions):

Commitment Type	2020	2021	2022	2023	2024	After 2024	Total
Finance Leases	$ 199	44	39	37	35	259	$ 613
Operating Leases	619	536	451	360	256	1,267	3,489
Debt Principal	4,232	2,551	2,001	2,284	1,474	12,349	24,891
Debt Interest	749	661	601	521	481	6,522	9,535
Purchase Commitments [1]	3,569	1,982	966	323	261	201	7,302
Tax Act Repatriation Liability	—	—	—	13	49	61	123
Pension Funding	1,180	—	—	—	—	—	1,180
Total	$ 10,548	$ 5,774	$ 4,058	$ 3,538	$ 2,556	$ 20,659	$ 47,133

(1) Purchase commitments includes amounts due under aircraft leases that we entered into in 2019 and our January 29, 2020 announced commitment to purchase 10,000 electric vehicles.

Our finance lease obligations relate primarily to leases on aircraft and real estate. Finance leases and operating leases are discussed further in note 10 to the audited, consolidated financial statements. Purchase commitments, as well as our debt principal obligations, are discussed further in note 8 to the audited, consolidated financial statements. The amount of interest on our debt was calculated as the contractual interest payments due on our fixed-rate debt and variable rate debt based on interest rates as of December 31, 2019. The calculations of debt interest take into account the effect of interest rate swap agreements. For debt denominated in a foreign currency, the U.S. Dollar equivalent principal amount of the debt at the end of the year was used as the basis to calculate future interest payments.

Purchase commitments represent contractual agreements to purchase assets, goods or services that are legally binding, including contracts for aircraft, construction of new or expanded facilities and orders for technology equipment and vehicles. As of December 31, 2019, we had firm commitments to lease three used and purchase eight new Boeing 767-300 aircraft, to be delivered between 2020 and 2021 and to purchase 13 new Boeing 747-8F aircraft to be delivered between 2020 and 2022. We also had a firm commitment to purchase five Boeing MD-11 aircraft to be delivered between 2020 and 2021. We paid the full purchase price for these MD-11 aircraft in December 2019; therefore these amounts are not included in the table above.

On December 22, 2017, the United States enacted into law the Tax Act requiring a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries. Companies may elect to pay the tax over eight years based on an installment schedule outlined in the Tax Act but are required under current Internal Revenue Service guidance to offset certain overpayments of tax against the liability. We made this election and have reflected our remaining transition tax due by year as a contractual obligation.

There are no anticipated required minimum cash contributions to our qualified U.S. pension plans (these plans are discussed further in note 5 to the audited, consolidated financial statements). The amount of any minimum funding requirement, as applicable, for these plans could change significantly in future periods depending on many factors, including future plan asset returns, discount rates, other actuarial assumptions and changes to pension plan funding regulations. A decline in discount rates or a sustained significant decline in equity or bond returns could result in our domestic pension plans being subject to significantly higher minimum funding requirements. Actual contributions made in future years could materially differ and consequently required minimum contributions beyond 2020 cannot be reasonably estimated.

As discussed in note 6 to the audited, consolidated financial statements, we are not currently subject to any minimum contributions or surcharges with respect to the multiemployer pension and health and welfare plans in which we participate. Contribution rates to these multiemployer pension and health and welfare plans are established through the collective bargaining process. As we are not subject to any minimum contribution levels, we have not included any amounts in the contractual commitments table with respect to these multiemployer plans.

The table above does not include approximately $228 million of liabilities for uncertain tax positions because we are uncertain if or when such amounts will ultimately be settled in cash. Uncertain tax positions are further discussed in note 14 to the audited, consolidated financial statements.

As of December 31, 2019, we had outstanding letters of credit totaling approximately $1.267 billion issued in connection with our self-insurance reserves and other routine business requirements. We also issue surety bonds as an alternative to letters of credit in certain instances, and as of December 31, 2019, we had $1.327 billion of surety bonds written. As of December 31, 2019, we had unfunded loan commitments totaling $131 million associated with UPS Capital.

We believe that funds from operations and borrowing programs will provide adequate sources of liquidity and capital resources to meet our expected long-term needs for the operation of our business, including anticipated capital expenditures, transformation strategy and pension contributions for the foreseeable future.

Contingencies

See note 5 to the audited, consolidated financial statements for a discussion of pension related matters and note 9 for a discussion of judicial proceedings and other matters arising from the conduct of our business activities.

Collective Bargaining Agreements

Status of Collective Bargaining Agreements

See note 6 to the audited, consolidated financial statements for a discussion of the status of collective bargaining agreements.

Multiemployer Benefit Plans

We contribute to a number of multiemployer pension and health and welfare plans under the terms of collective bargaining agreements that cover our union represented employees. Our current collective bargaining agreements set forth the annual contribution increases allotted to the plans that we participate in, and we are in compliance with these contribution rates. These limitations will remain in effect throughout the terms of the existing collective bargaining agreements.

New Accounting Pronouncements

Recently Adopted Accounting Standards

See note 1 to the audited, consolidated financial statements for a discussion of recently adopted accounting standards.

Accounting Standards Issued But Not Yet Effective

See note 1 to the audited, consolidated financial statements for a discussion of accounting standards issued, but not yet effective.

Rate Adjustments

Effective December 29, 2019, the rates and accessorial charges for UPS Ground, UPS Air and International services increased by an average net 4.9%. UPS Air Freight rates within and between the U.S., Canada and Puerto Rico increased an average net 4.2%. Density-based UPS Freight non-contractual LTL rates using Tariff 580 increased an average net 3.9%.

These rate changes are customary and occur on an annual basis. Rate changes for shipments originating outside the U.S. are made throughout the year and vary by geographic market.

Critical Accounting Policies and Estimates

This discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which are prepared in accordance with GAAP. As indicated in note 1 to the audited, consolidated financial statements, the amounts of assets, liabilities, revenue and expenses reported in our financial statements are affected by estimates and judgments that are necessary to comply with GAAP. We base our estimates on prior experience and assumptions and third-party input that we consider reasonable to our circumstances. Actual results could differ materially from our estimates, which would affect the related amounts reported in our consolidated financial statements. While estimates and judgments are applied in arriving at many reported amounts, we believe that the following critical accounting policies involve a higher degree of judgment and complexity.

Contingencies

As discussed in note 9 to the audited, consolidated financial statements, we are involved in various legal proceedings and subject to various contingencies. The events that may impact our contingent liabilities are often unique and generally are not predictable. At the time a contingency is identified, we consider all relevant facts as part of our evaluation. We record a liability for a loss when the loss is probable of occurring and reasonably estimable. Events may arise that were not anticipated and the outcome of a contingency may result in a loss to us that differs from our previously estimated liability. This difference could be material. Income taxes and self-insurance are discussed below. Except as disclosed in note 9 to the audited, consolidated financial statements, other contingent losses that were probable and estimable were not material to our financial position or results of operations as of, or for the year ended, December 31, 2019. In addition, we have certain contingent liabilities that have not been recognized as of, or for the year ended, December 31, 2019, because a loss was not reasonably estimable.

Goodwill and Intangible Impairment

We test goodwill for impairment in each of our reporting units on an annual basis. Our U.S. Domestic Package segment is a reporting unit. In our International Package reporting segment, we have the following reporting units: Europe, Asia, Americas and ISMEA. In our Supply Chain & Freight segment we have the following reporting units: Forwarding, Logistics, UPS Mail Innovations, UPS Freight, The UPS Store, UPS Capital, Marken and Coyote Logistics. Our annual goodwill impairment testing date is July 1st for each reporting unit owned at the testing date. In assessing goodwill for impairment, we initially evaluate qualitative factors to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the qualitative assessment is not conclusive and it is necessary to calculate the fair value of a reporting unit, then we utilize a two-step process to test goodwill for impairment. First, a comparison of the fair value of the applicable reporting unit with the aggregate carrying value, including goodwill, is performed. If the carrying amount of a reporting unit exceeds the reporting unit's fair value, we perform the second step of the goodwill impairment test to determine the amount of impairment loss. The second step includes comparing the implied fair value of the affected reporting unit's goodwill with the carrying value of that goodwill.

We primarily determine the fair value of our reporting units using a discounted cash flow ("DCF") model and supplement this with observable valuation multiples for comparable companies, as appropriate. The completion of the DCF model requires that we make a number of significant assumptions to produce an estimate of future cash flows. These assumptions include projections of future revenue, costs, capital expenditures and working capital changes, as well as assumptions about the estimated cost of capital and other relevant variables. The projections that we use in our DCF model are updated annually and will change over time based on the historical performance and changing business conditions for each of our reporting units. The determination of whether goodwill is impaired involves a significant level of judgment in these assumptions, and changes in our business strategy, government regulations, or economic or market conditions could significantly impact these judgments. We routinely monitor market conditions and other factors to determine if interim impairment tests are necessary. If impairment indicators are present in future periods, the resulting impairment charges could have a material impact on our results of operations.

None of the reporting units incurred any goodwill impairment charges in2019 or 2018. Changes in our forecasts could cause carrying values of our reporting units to exceed their fair values in future periods, potentially resulting in a goodwill impairment charge. During the year, management monitored the actual performance of the business relative to the fair value assumptions used during our annual goodwill impairment test. For the periods presented, no triggering events were identified that required an interim impairment test. Based on most recent tests, the fair value of all our reporting units exceed their carrying value.

A trade name with a carrying value of$200 million and licenses with a carrying value of $4 million as of December 31, 2019 are considered to be indefinite-lived intangibles, and therefore are not amortized. Impairment tests for indefinite-lived intangibles are performed on an annual basis. We determined that the income approach, specifically the relief from royalty method, is the most appropriate valuation method for the trade name. The estimated fair value of the trade name is compared to the carrying value of the asset. If the carrying value of the trade name exceeds its estimated fair value, an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds its fair value. This valuation approach requires that we make a number of assumptions to estimate fair value. These assumptions include projections of future revenues, market royalty rates, tax rates, discount rates and other relevant variables. The projections we use in the model are updated annually and will change over time based on the historical performance and changing business conditions.

All of our remaining recorded intangible assets are deemed to be finite-lived intangibles, and are amortized over their estimated useful lives. Impairment tests for these intangible assets are only performed when a triggering event occurs that indicates that the carrying value of the intangible may not be recoverable based on the undiscounted future cash flows of the intangible. If the carrying amount of the intangible is determined not to be recoverable, a write-down to fair value is recorded. Fair values are determined based on a DCF model. If impairment indicators are present in future periods, the resulting impairment charges could have a material impact on our results of operations. Impairments of finite-lived intangible assets were $2 and $12 million in 2019 and 2018, respectively. There were no impairments of indefinite-lived intangible assets in 2019 or 2018.

Self-Insurance Accruals

We self-insure costs associated with workers’ compensation claims, automobile liability, health and welfare and general business liabilities, up to certain limits. Insurance reserves are established for estimates of the loss that we will ultimately incur on reported claims, as well as loss estimates for claims that have been incurred but not yet reported. Recorded balances are based on third-party actuarial estimates, which incorporate historical loss experience and judgments about the present and expected cost per claim. Trends in actual experience are a significant factor in the determination of our reserves.

Workers’ compensation, automobile liability and general liability insurance claims may take several years to completely settle. Consequently, actuarial estimates are required to project the ultimate cost that will be incurred to fully resolve a claim. A number of factors can affect the actual cost of a claim, including the length of time the claim remains open, trends in healthcare costs, the results of any related litigation and with respect to workers’ compensation claims and changes in legislation. Furthermore, claims may emerge in a future year for events that occurred in a prior year at a rate that differs from actuarial projections. All of these factors can result in revisions to actuarial projections and produce a material difference between estimated and actual operating results. Based on our historical experience, during 2019 we changed our self-insurance reserves from the central estimate to the low end of the actuarial range of losses. We believe our estimated reserves for such claims are adequate; actual experience in claim frequency and/or severity could materially differ from our estimates and affect our results of operations. For additional information on our self-insurance reserves, refer to note 1 of the audited, consolidated financial statements.

We sponsor a number of health and welfare insurance plans for our employees. Liabilities and expenses related to these plans are based on estimates of, among other things, the number of employees and eligible dependents covered under the plans, anticipated medical usage by participants and overall trends in medical costs and inflation. We believe our estimates are reasonable/appropriate. Actual experience may differ from these estimates and, therefore, produce a material difference between estimated and actual operating results.

Pension and Postretirement Medical Benefits

Our pension and other postretirement benefit costs are calculated using various actuarial assumptions and methodologies. These assumptions include discount rates, healthcare cost trend rates, inflation, compensation increase rates, expected returns on plan assets, mortality rates and other factors. The assumptions utilized in recording the obligations under our plans represent our best estimates, and we believe that they are reasonable, based on information as to historical experience and performance as well as other factors that might cause future expectations to differ from past trends.

Differences in actual experience or changes in assumptions may affect our pension and other postretirement obligations and future expenses. The primary factors contributing to actuarial gains and losses each year are (1) changes in the discount rate used to value pension and postretirement benefit obligations as of the measurement date, (2) differences between the expected and the actual return on plan assets, (3) changes in demographic assumptions including mortality, (4) participant experience different from demographic assumptions and (5) changes in coordinating benefits with plans not sponsored by UPS. In October 2019, we refined the bond matching approach used to determine the discount rate for our U.S. pension and postretirement plans by implementing advances in technology and modeling techniques. This refinement decreased the projected benefit obligation on our consolidated balance sheet by approximately $900 million as of December 31, 2019, decreased the pre-tax mark-to-market charge by approximately $810 million and increased net income by $616 million, or $0.71 per share on a basic and diluted basis.

We recognize changes in the fair value of plan assets and net actuarial gains or losses in excess of a corridor (defined as 10% of the greater of the fair value of plan assets or the plans' projected benefit obligations) in pension expense annually at December 31st each year. The remaining components of pension expense (herein referred to as "ongoing net periodic benefit cost"), primarily service and interest costs and the expected return on plan assets, are reported on a quarterly basis.

The following sensitivity analysis shows the impact of a 25 basis point change in the assumed discount rate and return on assets for our pension and postretirement benefit plans, and the resulting increase/(decrease) on our obligations and expense as of, and for the year ended, December 31, 2019 (in millions).

Pension Plans	**25 Basis Point Increase**	**25 Basis Point Decrease**
Discount Rate:		
Effect on ongoing net periodic benefit cost	$ (37)	$ 38
Effect on net periodic benefit cost for amounts recognized outside the 10% corridor	(1,390)	2,043
Effect on projected benefit obligation	(2,156)	2,294
Return on Assets:		
Effect on ongoing net periodic benefit cost[1]	(100)	100
Effect on net periodic benefit cost for amounts recognized outside the 10% corridor[2]	(100)	100
Postretirement Medical Plans		
Discount Rate:		
Effect on ongoing net periodic benefit cost	3	(3)
Effect on net periodic benefit cost for amounts recognized outside the 10% corridor	(37)	48
Effect on accumulated postretirement benefit obligation	(55)	65
Healthcare Cost Trend Rate:		
Effect on ongoing net periodic benefit cost	1	(1)
Effect on net periodic benefit cost for amounts recognized outside the 10% corridor	4	(5)
Effect on accumulated postretirement benefit obligation	14	(16)

(1) Amount calculated based on 25 basis point increase / decrease in the expected return on assets.
(2) Amount calculated based on 25 basis point increase / decrease in the actual return on assets.

Refer to note 5 to the audited, consolidated financial statements for information on our potential liability for coordinating benefits related to the Central States Pension Fund.

Depreciation, Residual Value and Impairment of Fixed Assets

As of December 31, 2019, we had $30.482 billion of net fixed assets, the most significant category of which is aircraft. In accounting for fixed assets, we make estimates of the expected useful lives, the expected residual values and the potential for impairment based on the fair values of the assets and the cash flows which they generate.

In estimating the lives and expected residual values of aircraft, we rely upon actual experience with the same or similar aircraft types. Revisions to these estimates could be caused by changes to our maintenance programs, changes in the utilization of the aircraft, governmental regulations on aging aircraft and changing market prices of new and used aircraft of the same or similar types. We periodically evaluate these estimates and assumptions, and adjust them as necessary. Adjustments are accounted for on a prospective basis through depreciation expense. In 2019, we revised our estimates of the useful lives and residual values for certain airframes, engines and related rotable parts. This change increased the useful lives of certain fleet types and reduced the useful lives and residual values of the majority of our used aircraft. The net impact to 2019 depreciation expense was not material. In estimating cash flows, we project future volume levels for our different air products in all geographic regions in which we do business. Adverse changes in these volume forecasts, or a shortfall of our actual volume compared with our projections, could result in our current aircraft capacity exceeding current or projected demand. This situation could lead to an excess of a particular aircraft, resulting in an aircraft impairment charge or a reduction of the expected life of an aircraft (thus resulting in increased depreciation expense).

We evaluate the useful lives of our property, plant and equipment based on our usage, maintenance and replacement policies, and taking into account physical and economic factors that may affect the useful lives of the assets. As part of our ongoing investment in transformation in 2018, we revised our estimates of useful lives for building improvements, vehicles and plant equipment based on our current assessment of these factors. In general, these changes in estimate had the effect of lengthening the useful lives of vehicles, building improvements and plant equipment, and were applied prospectively beginning in 2018 through depreciation expense. See "Consolidated Operating Expenses" of this "Management's Discussion and Analysis of Financial Condition and Results of Operations" for the discussion of the impacts to "Depreciation and Amortization." See note 1 to the audited, consolidated financial statements for a discussion of our accounting policies andnote 4 for a discussion of the change in estimated useful lives.

We review long-lived assets for impairment when circumstances indicate the carrying amount of an asset may not be recoverable based on the undiscounted future cash flows of the asset. If the carrying amount of the asset is determined not to be recoverable, a write-down to fair value is recorded. Fair values are determined based on quoted market values, discounted cash flows or external appraisals, as appropriate. We review long-lived assets for impairment at the individual asset or the asset group level for which the lowest level of independent cash flows can be identified. The circumstances that would indicate potential impairment may include, but are not limited to, a significant change in the extent to which an asset is utilized and operating or cash flow losses associated with the use of the asset.

There were no impairment charges on our property, plant and equipment during2019 or 2018.

Fair Value Measurements

In the normal course of business, we hold and issue financial instruments that contain elements of market risk, including derivatives, marketable securities, finance receivables, pension assets, other investments and debt. Certain of these financial instruments are required to be recorded at fair value, principally derivatives, marketable securities, pension assets and certain other investments. Fair values are based on listed market prices, when such prices are available. To the extent that listed market prices are not available, fair value is determined based on other relevant factors, including dealer price quotations. If listed market prices or other relevant factors are not available, inputs are developed from unobservable data reflecting our own assumptions and include situations where there is little or no market activity for the asset or liability. Certain financial instruments, including over-the-counter derivative instruments, are valued using pricing models that consider, among other factors, contractual and market prices, correlations, time value, credit spreads and yield curve volatility factors. Changes in the fixed income, foreign exchange and commodity markets will impact our estimates of fair value in the future, potentially affecting our results of operations. A quantitative sensitivity analysis of our exposure to changes in commodity prices, foreign currency exchange rates and interest rates is presented in the “Quantitative and Qualitative Disclosures about Market Risk” section of this report.

Certain non-financial assets and liabilities are measured at fair value on a nonrecurring basis, including property, plant, and equipment, goodwill and intangible assets. These assets are not measured at fair value on a recurring basis; however, they are subject to fair value adjustments in certain circumstances, such as when there is evidence of an impairment.

For acquisitions, we allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired customers, technology and trade names from a market participant perspective, useful lives and discount rates. Management’s estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable. As a result, actual results may differ from estimates. During the measurement period, which is one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

Income Taxes

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of income by legal entity and jurisdiction, tax credits, benefits and deductions, and in the calculation of deferred tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes, as well as tax, interest and penalties related to uncertain tax positions. Significant changes to these estimates may result in an increase or decrease to our tax provision in a subsequent period.

We assess the likelihood that we will be able to recover our deferred tax assets. If recovery is not likely, we must increase our provision for taxes by recording a valuation allowance against the deferred tax assets that we estimate will not ultimately be recoverable. We believe that we will ultimately recover a substantial majority of the deferred tax assets recorded on our consolidated balance sheets. However, should there be a change in our ability to recover our deferred tax assets, our tax provision would increase in the period in which we determined that the recovery was not likely.

The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax regulations. We recognize liabilities for uncertain tax positions based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. Once it is determined that the position meets the recognition threshold, the second step requires us to estimate and measure the largest amount of tax benefit that is more likely than not to be realized upon ultimate settlement. The difference between the amount of recognizable tax benefit and the total amount of tax benefit from positions filed or to be filed with the tax authorities is recorded as a liability for uncertain tax benefits. It is inherently difficult and subjective to estimate such amounts, as we have to determine the probability of various possible outcomes. We reevaluate uncertain tax positions on a quarterly basis. This evaluation is based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, effectively settled issues under audit and new audit activity. Such a change in recognition or measurement could result in the recognition of a tax benefit or an additional charge to the tax provision.

See note 14 to the audited consolidated financial statements for a discussion of impacts of the Tax Act.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

We are exposed to market risk from changes in certain commodity prices, foreign currency exchange rates, interest rates and equity prices. All of these market risks arise in the normal course of business, as we do not engage in speculative trading activities. In order to manage the risk arising from these exposures, we utilize a variety of commodity, foreign exchange and interest rate forward contracts, options and swaps. A discussion of our accounting policies for derivative instruments and further disclosures are provided in note 1 to the audited, consolidated financial statements.

Commodity Price Risk

We are exposed to changes in the prices of refined fuels, principally jet-A, diesel and unleaded gasoline, as well as changes in the price of natural gas and other alternative fuels. Currently, the fuel surcharges that we apply to our domestic and international package and LTL services are the primary means of reducing the risk of adverse fuel price changes. In order to mitigate the impact of fuel surcharges imposed on us by outside carriers, we regularly adjust the rates we charge for our freight brokerage, inter-modal and truckload services. The majority of our contracts for fuel purchases utilize index-based pricing formulas plus or minus a fixed locational/supplier differential. While many of the indices are aligned, each index may fluctuate at a different pace, driving variability in the prices paid for fuel. Because of this, our operating results may be affected should the market price of fuel suddenly change by a significant amount or change by amounts that do not result in an adjustment in our fuel surcharges, which can significantly affect our earnings either positively or negatively in the short-term. Additionally, we periodically use a combination of option, forward and futures contracts to provide partial protection from changing fuel and energy prices. As of December 31, 2019 and 2018, however, we had no commodity contracts outstanding.

Foreign Currency Exchange Risk

We have foreign currency risks related to our revenue, operating expenses and financing transactions in currencies other than the local currencies in which we operate. We are exposed to currency risk from the potential changes in functional currency values of our foreign currency-denominated assets, liabilities and cash flows. Our most significant foreign currency exposures relate to the Euro, British Pound Sterling, Canadian Dollar, Chinese Renminbi and Hong Kong Dollar. We use forwards as well as a combination of purchased and written options to hedge forecasted cash flow currency exposures. These derivative instruments generally cover forecasted foreign currency exposures for periods of 12 to 48 months. We also utilize forward contracts to hedge portions of our anticipated cash settlements of intercompany transactions and interest payments on certain debt subject to foreign currency remeasurement.

Interest Rate Risk

We have issued debt instruments, including debt associated with finance leases, that accrue expense at fixed and floating rates of interest. We use a combination of interest rate swaps as part of our program to manage the fixed and floating interest rate mix of our total debt portfolio and related overall cost of borrowing. The notional amount, interest payment and maturity dates of the swaps match the terms of the associated debt. We also utilize forward starting swaps and similar instruments to lock in all or a portion of the borrowing cost of anticipated debt issuances. Our floating-rate debt and interest rate swaps subject us to risk resulting from changes in short-term (primarily LIBOR) interest rates. For a discussion of the risks associated with the anticipated cessation of LIBOR, see Item 1A. Risk Factors - "The proposed phase out of the London Interbank Offer Rate ("LIBOR") could have an adverse effect on us".

We also are subject to interest rate risk with respect to our pension and postretirement benefit obligations, as changes in interest rates will effectively increase or decrease our liabilities associated with these benefit plans, which also results in changes to the amount of pension and postretirement benefit expense recognized in future periods.

We have investments in debt securities, as well as cash-equivalent instruments, some of which accrue income at variable rates of interest. Additionally, we hold a portfolio of finance receivables that accrue income at fixed and floating rates of interest.

Sensitivity Analysis

The following analysis provides quantitative information regarding our exposure to foreign currency exchange risk, interest rate risk and equity price risk embedded in our existing financial instruments. We utilize valuation models to evaluate the sensitivity of the fair value of financial instruments with exposure to market risk that assume instantaneous, parallel shifts in exchange rates, interest rate yield curves and commodity and equity prices. For options and instruments with non-linear returns, models appropriate to the instrument are utilized to determine the impact of market shifts.

There are certain limitations inherent in the sensitivity analyses presented, primarily due to the assumption that exchange rates change in a parallel fashion and that interest rates change instantaneously. In addition, the analyses are unable to reflect the complex market reactions that normally would arise from the market shifts modeled. While this is our best estimate of the impact of the specified interest rate scenarios, these estimates should not be viewed as forecasts. We adjust the fixed and floating interest rate mix of our interest rate sensitive assets and liabilities in response to changes in market conditions. Additionally, changes in the fair value of foreign currency derivatives and commodity derivatives are offset by changes in the cash flows of the underlying hedged foreign currency and commodity transactions.

	Shock-Test Result As of December 31,	
(in millions)	**2019**	**2018**
Change in Fair Value:		
Currency Derivatives[1]	$ (786)	$ (743)
Change in Annual Interest Expense:		
Variable Rate Debt[2]	$ 64	$ 58
Interest Rate Derivatives[2]	$ 37	$ 47
Change in Annual Interest Income:		
Marketable Securities[3]	$ —	$ 1

(1) The potential change in fair value from a hypothetical 10% weakening of the U.S. Dollar against local currency exchange rates across all maturities.

(2) The potential change in annual interest expense resulting from a hypothetical 100 basis point increase in short-term interest rates, applied to our variable rate debt and swap instruments (excluding hedges of anticipated debt issuances).

(3) The potential change in interest income resulting from a hypothetical 100 basis point increase in short-term interest rates, applied to our variable rate investment holdings.

The sensitivity of our pension and postretirement benefit obligations to changes in interest rates is quantified in “Critical Accounting Policies and Estimates”. The sensitivity in the fair value and interest income of our finance receivables due to changes in interest rates was not material as of December 31, 2019 and 2018.

Item 8. ***Financial Statements and Supplementary Data***

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Report of Independent Registered Public Accounting Firm

To the Shareowners and Board of Directors of
United Parcel Service, Inc.
Atlanta, Georgia

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of United Parcel Service, Inc. and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also 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, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 20, 2020, expressed an unqualified opinion on the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 1 to the financial statements, the Company has changed its method of accounting for leases due to the adoption of Financial Accounting Standards Board Accounting Standards Update 2016-02, *Leases (Topic 842)*. This change has been applied on a modified retrospective basis effective on January 1, 2019.

Basis for Opinion

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

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

Critical Audit 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 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.

Central States Pension Fund coordinating benefit obligation assumptions - Refer to Note 5, Company-Sponsored Employee Benefit Plans (Actuarial Assumptions - Central States Pension Fund), to the financial statements

Critical Audit Matter Description

The Company was a contributing employer to the Central States Pension Fund ("CSPF") until 2007 when it withdrew and fully funded its allocable share of unvested benefits. The Company agreed to provide coordinating benefits in the UPS/IBT Full Time Employee Pension Plan ("UPS/IBT Plan") to CSPF participants whose last employer was the Company and who had not retired as of January 1, 2008 (the "UPS Transfer Group") if the CSPF were to lawfully reduce benefits consistent with the terms of its withdrawal agreement with the Company. The CSPF has asserted that, absent legislative reform, it will become insolvent in 2025. If the CSPF were to become insolvent consistent with that assertion, the Company may be required to provide coordinating benefits through the UPS/IBT Plan to the UPS Transfer Group.

Under accounting standards generally accepted in the United States of America ("GAAP"), the Company is required to determine its best estimate of the eventual outcome of this matter and is prohibited from anticipating potential changes in law in making that best estimate. The Company considered potential outcomes based on the existing legislative framework, including the eventual insolvency of the CSPF or an approved application to reduce benefits under the U.S. Multiemployer Pension Reform Act ("MPRA"). As the Company cannot consider a legislative solution when making its best estimate of its projected benefit obligation, the Company believes the trustees of the CSPF (the "Trustees") would be more likely to pursue an application to reduce benefits under the MPRA than they would be to allow the insolvency of the CSPF.

Based upon this possible outcome, the Company developed assumptions related to 1) the order in which benefits would be reduced to groups of participants under MPRA, 2) whether CSPF can reduce benefits to the UPS Transfer Group under MPRA without the Company's consent, 3) the timing and effective date of a MPRA application, and 4) the actuarial assumptions associated with the timing of future CSPF cash flows. Based on the Company's deterministic cash flow projection, management recorded a projected benefit obligation of $2.6 billion for the CSPF coordinating benefits at December 31, 2019. Given that the passage of time or changes in actuarial assumptions could reduce or eliminate the effectiveness of a MPRA application in the future, it is reasonably possible that, at the next measurement date, the projected benefit obligation could increase by approximately $2.2 billion, resulting in a total obligation for the CSPF coordinating benefits of $4.8 billion. The Company also developed disclosures of the risks and uncertainties associated with this matter.

The assumptions require significant management judgment and the following audit considerations:

1. Auditing management's conclusion that the CSPF benefits to the UPS Transfer Group cannot be reduced without first exhausting benefit reductions to the other CSPF participants is challenging because there appears to be multiple legal interpretations of the benefit reduction provisions of MPRA and those provisions have not yet been litigated.
2. Auditing management's conclusion that the CSPF could not reduce benefits to the UPS Transfer Group without the Company's consent requires judgment because the agreement between CSPF and the Company requiring such consent was made before the passage of MPRA and has not yet been litigated.
3. Auditing management's assumptions related to the timing and effective date of a MPRA application is subjective.
4. Auditing the actuarial assumptions used to estimate the timing and present value of future CSPF cash flows is challenging because the underlying data is limited to information made publicly available by the CSPF.
5. Auditing the sufficiency of the Company's disclosure of this matter in the footnotes to the financial statements is challenging due to the number of uncertainties associated with the potential obligation.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures to address the Company's assumptions used to measure its potential obligation to pay for CSPF coordinating benefits to the UPS Transfer Group (the "Coordinating Benefits") included the following, among others:

- We tested the effectiveness of controls over Coordinating Benefits assumptions, including those over the determination of the accounting model, the key legal positions relevant to determining its Coordinating Benefits obligation, the other actuarial assumptions used to project the potential Coordinating Benefits obligation; and the related financial statement disclosures.

- With the assistance of professionals in our firm having expertise in pension accounting, we evaluated the Company's conclusions regarding the accounting model applied to the Coordinating Benefits obligation through consideration of possible alternatives under GAAP.

- We evaluated the Company's assumptions used in determining the most likely outcome of the CSPF matter under the existing legislative framework. In order to evaluate the Company's expectation that the Trustees would pursue another benefit suspension in order to avoid insolvency, we obtained evidence regarding the fiduciary responsibilities of the Trustees to govern the CSPF in a manner that continues to provide benefits to participants and their beneficiaries.

- We evaluated the Company's conclusion that 1) the CSPF could not reduce benefits to the UPS Transfer Group under MPRA without first exhausting benefit reductions to the other CSPF participants and 2) the CSPF could not reduce benefits without obtaining the Company's consent based on the terms of an agreement between the CSPF and the Company. Specifically, we examined letters from internal and external counsel describing both counsel's conclusion that those positions are more likely than not to be sustained if they were to be litigated. With the assistance of professionals in our firm having expertise in legal matters, we also evaluated whether the legal arguments supporting this assertion had substantive legal basis.

- With the assistance of our actuarial specialists, we tested the underlying data and actuarial model used by management to estimate the potential obligation to provide Coordinating Benefits, including consideration of (1) the expected timing of CSPF benefit reductions; (2) the discount rate; (3) the projected contributions and benefit payments; and (4) the expected return on CSPF assets. Further, because the data used by management is limited to publicly available CSPF information, we considered whether other available sources of data may yield a more precise estimate.

- We compared the Company's footnote disclosure relating to this matter to the information communicated between management and the Company's audit committee to evaluate whether significant uncertainties had been omitted from the disclosure.

Valuation of U.S. hedge fund, risk parity, private debt, private equity and real estate investments - Refer to Note 5, Company-Sponsored Employee Benefit Plans (Fair Value Measurements), to the financial statements

Critical Audit Matter Description

The Company's U.S. pension and postretirement medical benefit plans (the "U.S. Plans") held hedge fund, risk parity, private debt, private equity and real estate investments valued at $7.6 billion as of December 31, 2019.

The Company determines the reported values of the U.S. Plans' investments in hedge, risk parity, private debt, private equity and real estate funds primarily based on the estimated net asset value ("NAV") of the fund. In order to estimate NAV, the Company evaluates audited and unaudited financial reports from fund managers, and makes adjustments, as appropriate, for investment activity between the date of the financial reports and December 31st. These investments are not actively traded, and their values can only be estimated using these subjective assumptions.

Auditing the estimated NAV of these hedge fund, risk parity, private debt, private equity and real estate instruments requires a high degree of auditor judgment and subjectivity to evaluate the completeness, reliability and relevance of the inputs used by management.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the inputs used by management to estimate the NAV of the U.S. Plans' hedge fund, risk parity, private debt, private equity and real estate investments included the following, among others:

- We tested the effectiveness of controls, including those related to the reliability of values reported by fund managers, the relevance of asset class benchmark returns, and the completeness and accuracy of unobservable inputs related to the underlying assets of the funds.

- For certain investments, we confirmed directly with the respective fund manager its preliminary estimate of the fund's NAV as of December 31, 2019.

- We evaluated the Company's ability to accurately estimate NAV for these funds by comparing each fund's recorded valuation as of its most recent fiscal year end to the audited fund financial statements (which are received in arrears of the Company's reporting timetable).

Revenue - Refer to Note 2, Revenue Recognition, to the financial statements

Critical Audit Matter Description

Approximately 80 percent of the Company's revenues are from its global small package operations that provide time-definite delivery services for express letters, documents, small packages and palletized freight via air and ground services. The Company's global small package revenues are comprised of a significant volume of low-dollar transactions sourced from systems that were primarily developed by the Company. The processing of transactions, including the recording of them, is highly automated and based on contractual terms with the Company's customers.

Auditing global small package revenue required a significant extent of effort and the involvement of professionals with expertise in information technology ("IT") necessary for us to identify, test, and evaluate the Company's systems, software applications, and automated controls.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company's systems to process global small package revenue transactions included the following, among others:

- With the assistance of our IT specialists, we:
    - Identified the significant systems used to process global small package revenue transactions and tested the effectiveness of the general IT controls over each of these systems, including testing of user access controls, change management controls, and IT operations controls.
    - Tested the effectiveness of system interface controls and automated controls within the global small package revenue stream, as well as the controls designed to ensure the accuracy and completeness of revenue. We tested the effectiveness of controls over the relevant global small package revenue business processes, including those in place to reconcile the various systems to the Company's general ledger.
- We performed analytical procedures to evaluate the Company's recorded revenue and evaluate trends.
- For a sample of customers, we read the Company's contract with the customer and evaluated the Company's pattern of revenue recognition for the customer. In addition, we evaluated the accuracy of the Company's recorded global small package revenue for a sample of customer invoices.

/s/ Deloitte & Touche LLP

Atlanta, Georgia
February 20, 2020

We have served as the Company's auditor since 1969.

UNITED PARCEL SERVICE, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS
(In millions)

	December 31, 2019	December 31, 2018
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 5,238	$ 4,225
Marketable securities	503	810
Accounts receivable, net	9,552	8,958
Current income taxes receivable	382	940
Other current assets	1,428	1,277
Total Current Assets	17,103	16,210
Property, Plant and Equipment, Net	30,482	26,576
Operating Lease Right-Of-Use Assets	2,856	—
Goodwill	3,813	3,811
Intangible Assets, Net	2,167	2,075
Investments and Restricted Cash	24	170
Deferred Income Tax Assets	330	141
Other Non-Current Assets	1,082	1,033
Total Assets	$ 57,857	$ 50,016
LIABILITIES AND SHAREOWNERS' EQUITY		
Current Liabilities:		
Current maturities of long-term debt and commercial paper	$ 3,420	$ 2,805
Current maturities of operating leases	538	—
Accounts payable	5,555	5,188
Accrued wages and withholdings	2,552	3,047
Self-insurance reserves	914	810
Accrued group welfare and retirement plan contributions	793	715
Other current liabilities	1,641	1,522
Total Current Liabilities	15,413	14,087
Long-Term Debt and Finance Leases	21,818	19,931
Non-Current Operating Leases	2,391	—
Pension and Postretirement Benefit Obligations	10,601	8,347
Deferred Income Tax Liabilities	1,632	1,619
Self-Insurance Reserves	1,282	1,571
Other Non-Current Liabilities	1,437	1,424
Shareowners' Equity:		
Class A common stock (156 and 163 shares issued in 2019 and 2018)	2	2
Class B common stock (701 and 696 shares issued in 2019 and 2018)	7	7
Additional paid-in capital	150	—
Retained earnings	9,105	8,006
Accumulated other comprehensive loss	(5,997)	(4,994)
Deferred compensation obligations	26	32
Less: Treasury stock (0.4 shares in 2019 and 0.6 shares in 2018)	(26)	(32)
Total Equity for Controlling Interests	3,267	3,021
Noncontrolling Interests	16	16
Total Shareowners' Equity	3,283	3,037
Total Liabilities and Shareowners' Equity	$ 57,857	$ 50,016

See notes to audited, consolidated financial statements.

UNITED PARCEL SERVICE, INC. AND SUBSIDIARIES
STATEMENTS OF CONSOLIDATED INCOME
(In millions, except per share amounts)

	Years Ended December 31,		
	2019	2018	2017
Revenue	$ 74,094	$ 71,861	$ 66,585
Operating Expenses:			
Compensation and benefits	38,908	37,235	34,577
Repairs and maintenance	1,838	1,732	1,601
Depreciation and amortization	2,360	2,207	2,282
Purchased transportation	12,590	13,409	11,696
Fuel	3,289	3,427	2,690
Other occupancy	1,392	1,362	1,155
Other expenses	5,919	5,465	5,055
Total Operating Expenses	66,296	64,837	59,056
Operating Profit	7,798	7,024	7,529
Other Income and (Expense):			
Investment income (expense) and other	(1,493)	(400)	61
Interest expense	(653)	(605)	(453)
Total Other Income and (Expense)	(2,146)	(1,005)	(392)
Income Before Income Taxes	5,652	6,019	7,137
Income Tax Expense	1,212	1,228	2,232
Net Income	$ 4,440	$ 4,791	$ 4,905
Basic Earnings Per Share	$ 5.14	$ 5.53	$ 5.63
Diluted Earnings Per Share	$ 5.11	$ 5.51	$ 5.61

STATEMENTS OF CONSOLIDATED COMPREHENSIVE INCOME (LOSS)
(In millions)

	Years Ended December 31,		
	2019	2018	2017
Net Income	$ 4,440	$ 4,791	$ 4,905
Change in foreign currency translation adjustment, net of tax	48	(149)	86
Change in unrealized gain (loss) on marketable securities, net of tax	6	—	(1)
Change in unrealized gain (loss) on cash flow hedges, net of tax	72	485	(321)
Change in unrecognized pension and postretirement benefit costs, net of tax	(1,129)	272	(148)
Comprehensive Income (Loss)	$ 3,437	$ 5,399	$ 4,521

See notes to audited, consolidated financial statements.

UNITED PARCEL SERVICE, INC. AND SUBSIDIARIES
STATEMENTS OF CONSOLIDATED CASH FLOWS
(In millions)

	Years Ended December 31, 2019	2018	2017
Cash Flows From Operating Activities:			
Net income	$ 4,440	$ 4,791	$ 4,905
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation and amortization	2,360	2,207	2,282
Pension and postretirement benefit expense	3,141	2,242	1,643
Pension and postretirement benefit contributions	(2,362)	(186)	(7,794)
Self-insurance reserves	(185)	(86)	—
Deferred tax (benefit) expense	100	758	1,224
Stock compensation expense	915	634	584
Other (gains) losses	74	293	37
Changes in assets and liabilities, net of effects of business acquisitions:			
Accounts receivable	(717)	(421)	(1,022)
Other assets	698	754	(984)
Accounts payable	419	1,034	599
Accrued wages and withholdings	(446)	505	200
Other liabilities	182	170	(243)
Other operating activities	20	16	48
Net cash from operating activities	8,639	12,711	1,479
Cash Flows From Investing Activities:			
Capital expenditures	(6,380)	(6,283)	(5,227)
Proceeds from disposals of property, plant and equipment	65	37	24
Purchases of marketable securities	(561)	(973)	(1,630)
Sales and maturities of marketable securities	883	886	1,990
Net change in finance receivables	13	4	5
Cash paid for business acquisitions, net of cash and cash equivalents acquired	(6)	(2)	(134)
Other investing activities	(75)	1	1
Net cash (used in) investing activities	(6,061)	(6,330)	(4,971)
Cash Flows From Financing Activities:			
Net change in short-term debt	310	63	(250)
Proceeds from long-term borrowings	5,205	1,202	12,016
Repayments of long-term borrowings	(3,096)	(2,887)	(3,939)
Purchases of common stock	(1,004)	(1,011)	(1,813)
Issuances of common stock	218	240	247
Dividends	(3,194)	(3,011)	(2,771)
Other financing activities	(166)	(288)	(203)
Net cash (used in)/from financing activities	(1,727)	(5,692)	3,287
Effect Of Exchange Rate Changes On Cash, Cash Equivalents and Restricted Cash	20	(91)	53
Net Increase (Decrease) In Cash, Cash Equivalents and Restricted Cash	871	598	(152)
Cash, Cash Equivalents and Restricted Cash:			
Beginning of period	4,367	3,769	3,921
End of period	$ 5,238	$ 4,367	$ 3,769
Cash Paid During The Period For:			
Interest (net of amount capitalized)	$ 628	$ 595	$ 428
Income taxes (net of refunds and overpayments)	$ 514	$ 2	$ 1,559

See notes to audited, consolidated financial statements.

NOTE 1. SUMMARY OF ACCOUNTING POLICIES

Basis of Financial Statements and Business Activities

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("GAAP"), and include the accounts of United Parcel Service, Inc., and all of its consolidated subsidiaries (collectively "UPS" or the "Company"). All intercompany balances and transactions have been eliminated.

We provide transportation services, primarily domestic and international letter and package delivery. Through our Supply Chain & Freight subsidiaries, we are also a global provider of specialized transportation, logistics and financial services.

Use of Estimates

The preparation of our consolidated financial statements requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, the reported amounts of revenues and expenses and the disclosure of contingencies. Estimates have been prepared on the basis of the most current and best information, and actual results could differ materially from those estimates.

Revenue Recognition

U.S. Domestic and International Package Operations—Revenue is recognized over time as we perform the services in the contract.

Forwarding —Freight forwarding revenue and the expense related to the transportation of freight are recognized over time as we perform the services. Truckload brokerage revenue and related transportation costs are recognized over time as we perform the services. Customs brokerage revenue is recognized upon completing documents necessary for customs entry purposes.

Logistics —In our Logistics business we have a right to consideration from customers in an amount that corresponds directly with the value to the customers of our performance completed to date, and as such we recognize revenue in the amount to which we have a right to invoice the customer.

UPS Freight—Revenue is recognized over time as we perform the services in the contract.

Financial Services—Income on loans and direct finance leases is recognized on the effective interest method. Accrual of interest income is suspended at the earlier of the time at which collection of an account becomes doubtful or the account becomes 90 days delinquent. Income on operating leases is recognized on the straight-line method over the terms of the underlying leases.

Principal vs. Agent Considerations—We utilize independent contractors and third-party carriers in the performance of some transportation services. GAAP requires us to evaluate whether our businesses themselves promise to transfer services to the customer (as the principal) or to arrange for services to be provided by another party (as the agent) using a control model. Based on our evaluation of the control model, we determined that all of our major businesses act as the principal rather than the agent within their revenue arrangements. Revenue and the associated purchased transportation costs are reported on a gross basis within our statements of consolidated income.

Refer to note 2 for further discussion of our revenue recognition policies.

Cash and Cash Equivalents

Cash and cash equivalents consist of highly liquid investments that are readily convertible into cash. We consider securities with maturities of three months or less, when purchased, to be cash equivalents. The carrying amount of these securities approximates fair value because of the short-term maturity of these instruments.

Investments

Debt securities are either classified as trading or available-for-sale securities and are carried at fair value. Unrealized gains and losses on trading securities are reported as investment income (expense) and other on the statements of consolidated income. Unrealized gains and losses on available-for-sale securities are reported as accumulated other comprehensive income ("AOCI"), a separate component of shareowners' equity. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and accretion is included in investment income (expense) and other, along with interest and dividends. The cost of securities sold is based on the specific identification method; realized gains and losses resulting from such sales are included in investment income (expense) and other.

We periodically review our available-for-sale investments for indications of other-than-temporary impairment considering many factors, including the extent and duration to which a security's fair value has been less than its cost, overall economic and market conditions and the financial condition and specific prospects for the issuer. Impairment of available-for-sale securities results in a charge to income when a market decline below cost is other-than-temporary.

Inventories

Fuel and other materials and supplies inventories are recognized as inventory when purchased, and then charged to expense when used in our operations. Jet fuel, diesel and unleaded gasoline inventories are valued at the lower of average cost or net realizable value. Total inventories were $511 and $421 million as of December 31, 2019 and 2018, respectively, and are included in "Other current assets" on the consolidated balance sheets.

Property, Plant and Equipment

Property, plant and equipment are carried at cost. We evaluate the useful lives of our property, plant and equipment based on our usage, maintenance and replacement policies, and taking into account physical and economic factors that may affect the useful lives of the assets. As part of our ongoing investment in transformation in 2018, we revised our estimates of useful lives for building improvements, vehicles and plant equipment based on our current assessment of these factors. In 2019, we revised our estimates of useful lives and residual values for certain airframes, engines and related rotable parts. The changes in estimate had the effect of lengthening the useful lives of building improvements, vehicles, plant equipment and certain aircraft, and reduced the useful lives and residual values of the majority of our used aircraft.

Depreciation and amortization are provided by the straight-line method over the estimated useful lives of the assets, which are as follows:

- Aircraft: 12 to 40 years
- Buildings: 20 to 40 years
- Leasehold Improvements: lesser of asset useful life or lease term
- Plant Equipment: 3 to 20 years
- Technology Equipment: 3 to 5 years
- Vehicles: 6 to 15 years

For substantially all of our aircraft, the costs of major airframe and engine overhauls, as well as routine maintenance and repairs, are charged to expense as incurred.

Interest incurred during the construction period of certain property, plant and equipment is capitalized until the underlying assets are placed in service, at which time amortization of the capitalized interest begins, straight-line, over the estimated useful lives of the related assets. Capitalized interest was $91 and $97 million in 2019 and 2018, respectively.

We review long-lived assets for impairment when circumstances indicate the carrying amount of an asset may not be recoverable based on its undiscounted future cash flows. If the carrying amount of the asset is determined not to be recoverable, a write-down to fair value is recorded. Fair values are determined based on quoted market values, discounted cash flows or external appraisals, as appropriate. We review long-lived assets for impairment at the individual asset or the asset group level for which the lowest level of independent cash flows can be identified.

Leased Assets

For a discussion of our accounting policies related to leased assets, refer tonote 10.

Goodwill and Intangible Assets

Costs of purchased businesses in excess of net identifiable assets acquired (goodwill), and indefinite-lived intangible assets are tested for impairment at least annually, unless changes in circumstances indicate an impairment may have occurred sooner. We are required to test goodwill on a reporting unit basis. A reporting unit is the operating segment unless, for businesses within that operating segment, discrete financial information is prepared and regularly reviewed by management, in which case such a component business is the reporting unit.

In assessing goodwill for impairment, we initially evaluate qualitative factors to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. We consider several factors, including macroeconomic conditions, industry and market conditions, overall financial performance of the reporting unit, changes in management, strategy or customers and relevant reporting unit-specific events such as a change in the carrying amount of net assets, a more likely than not expectation of selling or disposing of all, or a portion of, a reporting unit, and the testing for recoverability of a significant asset group within a reporting unit. If this qualitative assessment results in a conclusion that it is more likely than not that the fair value of a reporting unit exceeds the carrying value, then no further testing is performed for that reporting unit.

If the qualitative assessment is not conclusive and it is necessary to calculate the fair value of a reporting unit, then we utilize a two-step process to test goodwill for impairment. First, a comparison of the fair value of the applicable reporting unit with the aggregate carrying value, including goodwill, is performed. If the carrying amount of a reporting unit exceeds its calculated fair value, then the second step is performed, and an impairment charge is recognized for the amount, if any, by which the carrying amount of goodwill exceeds its implied fair value. We primarily determine the fair value of our reporting units using a discounted cash flow model and supplement this with observable valuation multiples for comparable companies, as appropriate.

A trade name with a carrying value of$200 million and licenses with a carrying value of $4 million as of December 31, 2019 are considered to be indefinite-lived intangibles, and therefore are not amortized. Indefinite-lived intangible assets are reviewed for impairment at least annually. We determined that the income approach, specifically the relief from royalty method, is the most appropriate valuation method to estimate the fair value of the trade name. The estimated fair value of the trade name is compared to the carrying value of the asset. If the carrying value of the trade name exceeds its estimated fair value, an impairment charge is recognized for the amount by which the carrying amount of the asset exceeds its fair value.

Finite-lived intangible assets, including trademarks, licenses, patents, customer lists, non-compete agreements and franchise rights are amortized on a straight-line basis over the estimated useful lives of the assets, which range from 2 to 22 years. Capitalized software is generally amortized over 7 years.

Self-Insurance Accruals

We self-insure costs associated with workers' compensation claims, automobile liability, health and welfare and general business liabilities, up to certain limits. Insurance reserves are established for estimates of the loss that we will ultimately incur on reported claims, as well as estimates of claims that have been incurred but not yet reported. The expected ultimate cost for claims incurred is estimated based upon historical loss experience and judgments about the present and expected levels of cost per claim. Trends in actual experience are a significant factor in the determination of our reserves.

Workers' compensation, automobile liability and general liability insurance claims may take several years to completely settle. Consequently, actuarial estimates are required to project the ultimate cost that will be incurred to fully resolve a claim. A number of factors can affect the actual cost of a claim, including the length of time the claim remains open, trends in healthcare costs, the results of any related litigation and with respect to workers' compensation claims, changes in legislation. Furthermore, claims may emerge in a future year for events that occurred in a prior year at a rate that differs from actuarial projections. All of these factors can result in revisions to actuarial projections and produce a material difference between estimated and actual operating results. Based on our historical experience, during 2019 we changed our self-insurance reserves from the central estimate to the low end of the actuarial range of losses. The principal result of this change was a decrease in expense of $94 million and an increase in net income of $72 million, or $0.08 per share on a basic and diluted basis. We believe our estimated reserves for such claims are adequate, but actual experience in claim frequency and/or severity could materially differ from our estimates and affect our results of operations.

We sponsor a number of health and welfare insurance plans for our employees. These liabilities and related expenses are based on estimates of the number of employees and eligible dependents covered under the plans, anticipated medical usage by participants and overall trends in medical costs and inflation.

Pension and Postretirement Benefits

We incur certain employment-related expenses associated with pension and postretirement medical benefits. These pension and postretirement medical benefit costs for company-sponsored benefit plans are calculated using various actuarial assumptions and methodologies, including discount rates, expected returns on plan assets, healthcare cost trend rates, inflation, compensation increase rates, mortality rates and coordination of benefits with plans not sponsored by UPS. Actuarial assumptions are reviewed on an annual basis, unless circumstances require an interim remeasurement of any of our plans.

We recognize changes in the fair value of plan assets and net actuarial gains or losses in excess of a corridor (defined as10% of the greater of the fair value of plan assets or the plan's projected benefit obligation) in net periodic benefit cost other than service cost annually at December 31st each year. The remaining components of pension expense, primarily service and interest costs and the expected return on plan assets, are recorded on a quarterly basis.

For eligible employees hired after July 1, 2016, UPS contributes annually to a defined contribution plan. We recognize expense for the required contribution quarterly, and we recognize a liability for any contributions due and unpaid (included in “Other current liabilities”).

During June 2017, we amended the UPS Retirement Plan and Excess Coordinating Plan to cease accrual of additional benefits for future service for non-union participants effective January 1, 2023. We remeasured plan assets and pension benefit obligations for the affected pension plans as of June 30, 2017 to recognize the impact of this change.

We participate in a number of trustee-managed multiemployer pension and health and welfare plans for employees covered under collective bargaining agreements. Our contributions to these plans are determined in accordance with the respective collective bargaining agreements. We recognize expense for the contractually required contribution for each period, and we recognize a liability for any contributions due and unpaid within “Other current liabilities”.

Income Taxes

Income taxes are accounted for on an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our consolidated financial statements or tax returns. In estimating future tax consequences, we generally consider all expected future events other than proposed changes in the tax law or rates. Valuation allowances are provided if it is more likely than not that a deferred tax asset will not be realized.

We recognize liabilities for uncertain tax positions based on a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. Once it is determined that the position meets the recognition threshold, the second step requires us to estimate and measure the largest amount of tax benefit that is more likely than not to be realized upon ultimate settlement. The difference between the amount of recognizable tax benefit and the total amount of tax benefit from positions filed or to be filed with the tax authorities is recorded as a liability for uncertain tax benefits. It is inherently difficult and subjective to estimate such amounts, as we have to determine the probability of various possible outcomes. We reevaluate uncertain tax positions on a quarterly basis. This evaluation is based on factors including, but not limited to, changes in facts or circumstances, changes in tax law, effectively settled issues under audit and new audit activity. Such a change in recognition or measurement could result in the recognition of a tax benefit or an additional charge to the tax provision.

In January 2018, the Financial Accounting Standards Board ("FASB") released guidance on the accounting for tax on the Global Intangible Low-Taxed Income ("GILTI") provisions of the Tax Cuts and Jobs Act (the "Tax Act"). The GILTI provisions impose U.S. tax on certain foreign income in excess of a deemed return on tangible assets of foreign corporations. The guidance indicates that either accounting for deferred taxes related to GILTI inclusions or treating any taxes on GILTI inclusions as period costs are both acceptable methods subject to an accounting policy election. We elect to treat any potential GILTI inclusions as period costs.

Foreign Currency Translation and Remeasurement

We translate the results of operations of our foreign subsidiaries using average exchange rates during each period, whereas balance sheet accounts are translated using exchange rates at the end of each period. Balance sheet currency translation adjustments are recorded in AOCI. Pre-tax foreign currency transaction gains (losses) from remeasurement, net of hedging, included in investment income (expense) and other were $(6), $(19) and $3 million in 2019, 2018 and 2017, respectively.

Stock-Based Compensation

All share-based awards to employees are measured based on their fair values and expensed over the period during which an employee is required to provide service in exchange for the award (the vesting period), less estimated forfeitures. We have issued employee share-based awards under the UPS Incentive Compensation Plan that are subject to specific vesting conditions, including service conditions, where the awards cliff vest or vest ratably over a one, three, or five year period (the "nominal vesting period") or at the date the employee retires (as defined by the plan), if earlier. Compensation cost is generally recognized immediately for awards granted to retirement-eligible employees, or over the period from the grant date to the date retirement eligibility is achieved, if that is expected to occur during the nominal vesting period. We estimate forfeiture rates based on historical rates of forfeitures for awards with similar characteristics, historical rates of employee turnover and the nature and terms of the vesting conditions of the awards. We reevaluate our forfeiture rates on an annual basis.

Fair Value Measurements

Our financial assets and liabilities measured at fair value on a recurring basis have been categorized based upon a fair value hierarchy. Level 1 inputs utilize quoted prices in active markets for identical assets or liabilities. Level 2 inputs are based on other observable market data, such as quoted prices for similar assets and liabilities, and inputs other than quoted prices that are observable, such as interest rates and yield curves. Level 3 inputs are developed from unobservable data reflecting our own assumptions, and include situations where there is little or no market activity for the asset or liability.

Certain non-financial assets and liabilities are measured at fair value on a nonrecurring basis, including property, plant, and equipment, goodwill and intangible assets. These assets are subject to fair value adjustments in certain circumstances, such as when there is evidence of an impairment. A general description of the valuation methodologies used for assets and liabilities measured at fair value, including the general classification of such assets and liabilities pursuant to the valuation hierarchy, is included in each footnote with fair value measurements present.

For acquisitions, we allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets, including but are not limited to, future expected cash flows from acquired customers, acquired technology and trade names from a market participant perspective, useful lives and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which is one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

Derivative Instruments

We recognize all derivative instruments as assets or liabilities in the consolidated balance sheets at fair value. The accounting for changes in the fair value of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, further, on the type of hedging relationship. For those derivative instruments that are designated and qualify as hedging instruments, a company must designate the derivative, based upon the exposure being hedged, as a cash flow hedge, a fair value hedge or a hedge of a net investment in a foreign operation.

A cash flow hedge refers to hedging the exposure to variability in expected future cash flows that is attributable to a particular risk. For derivative instruments that are designated and qualify as cash flow hedges, the gain or loss on the derivative instrument is reported as a component of AOCI, and reclassified into earnings in the same period during which the hedged transaction affects earnings.

A fair value hedge refers to hedging the exposure to changes in the fair value of an existing asset or liability in the consolidated balance sheets that is attributable to a particular risk. For derivative instruments that are designated and qualify as fair value hedges, the gain or loss on the derivative instrument is recognized in the statements of consolidated income during the current period, as well as the offsetting gain or loss on the hedged item.

A net investment hedge refers to the use of cross currency swaps, forward contracts or foreign currency denominated debt to hedge portions of net investments in foreign operations. For hedges that meet the hedge accounting requirements, the net gains or losses attributable to changes in spot exchange rates are recorded in the foreign currency translation adjustment within AOCI, and are recorded in the income statement when the hedged item affects earnings.

Adoption of New Accounting Standards

In May 2014, the FASB issued an accounting standards update ("ASU") that changes the revenue recognition for companies that enter into contracts with customers to transfer goods or services ("*Revenue from Contracts with Customers")*. The standard is a comprehensive new revenue recognition model that requires revenue to be recognized in a manner depicting the transfer of goods or services to a customer at an amount that reflects the consideration expected to be received in exchange for those goods or services. The FASB also issued a number of updates to this standard. Effective January 1, 2018, we adopted the requirements of this ASU using the full retrospective method. See note 2 for disclosures required by this ASU.

In January 2016, the FASB issued an ASU which addresses certain aspects of the recognition, measurement, presentation and disclosure of financial instruments. We adopted this standard on January 1, 2018. The adoption of this ASU did not have a material impact on our consolidated financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which requires lessees to recognize a right-of-use asset and lease liability on their balance sheet for all leases with terms beyond twelve months. The new standard also requires enhanced disclosures that provide more transparency and information to financial statement users about lease portfolios. Effective January 1, 2019, we adopted the requirements of this ASU using the modified retrospective approach. We elected the transition package of practical expedients permitted within the standard. As a result, we did not reassess initial direct costs, lease classification, or whether our contracts contain or are leases. We also made an accounting policy election to not recognize right-of-use assets and liabilities for leases with an original lease term of twelve months or less, unless the leases include options to renew or purchase the underlying asset that are reasonably certain to be exercised.

The adoption on January 1, 2019 resulted in the recognition of right-of-use assets for operating leases of approximately $2.65 billion and operating lease liabilities of approximately $2.70 billion. The consolidated financial statements for the year ended December 31, 2019 are presented under the new standard, while comparative periods presented have not been adjusted and continue to be reported in accordance with the previous standard. See note 10 for additional disclosures required by this ASU.

In August 2016, the FASB issued an ASU that addressed the classification and presentation of specific cash flow matters. The guidance also clarified how the predominance principle should be applied when cash receipts and cash payments have aspects of more than one class of cash flows. The guidance was applied retrospectively. We adopted this standard on January 1, 2018. This standard did not have a material impact on our statements of consolidated cash flows.

In November 2016, the FASB issued an ASU intended to reduce diversity in practice by adding or clarifying guidance on classification and presentation of changes in restricted cash on the statement of cash flows ("*Restricted Cash")*. Effective January 1, 2018, we adopted the requirements of this ASU retrospectively. As a result of this update, restricted cash is included within cash and cash equivalents on our statements of consolidated cash flows.

In March 2017, the FASB issued an ASU to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost ("*Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost")*. The update requires employers to report the current service cost component in the same line item as other compensation costs arising from services rendered by employees during the period. The other components of net periodic benefit cost are required to be presented separately from service cost and outside of income from operations. Effective January 1, 2018, we adopted the requirements of this ASU retrospectively, as required. As a result of this update, the net amount of interest cost, prior service cost and expected return on plan assets is now presented as other income.

In March 2017, the FASB issued an ASU requiring the premium on callable debt securities to be amortized to the earliest call date. We adopted this standard on January 1, 2019. It did not have a material impact on our consolidated financial position, results of operations or cash flows.

In May 2017, the FASB issued an ASU to provide clarity and reduce complexity on when to apply modification accounting to existing share-based payment awards. We adopted this standard on January 1, 2018. This ASU did not have a material impact on our consolidated financial position, results of operations or cash flows.

In August 2017, the FASB issued an ASU to enhance recognition of the economic results of hedging activities in the financial statements. In addition, the update made certain targeted improvements to simplify the application of hedge accounting guidance and increase transparency regarding the scope and results of hedging activities. We adopted this standard on January 1, 2019. It did not have a material impact on our consolidated financial position, results of operations or cash flows but did require additional disclosures. See note 16 for disclosures required by this ASU.

In February 2018, the FASB issued an ASU that allows a reclassification from AOCI to retained earnings for stranded tax effects resulting from the Tax Act. Effective January 1, 2018, we early adopted this ASU and elected to reclassify the income tax effects of the Tax Act from AOCI to retained earnings. This resulted in a $735 million increase to retained earnings and a $735 million decrease to AOCI. Our current accounting policy for releasing income tax effects from other comprehensive income is based on a portfolio approach.

In August 2018, the FASB issued an ASU that modifies the disclosure requirements for employers that sponsor defined benefit pension and postretirement plans. The update eliminates the disclosures for amounts in AOCI expected to be recognized as components of net periodic cost over the next fiscal year and the effects of a one percentage point change in the assumed healthcare cost trend rate. The update adds disclosure requirements to include the weighted-average interest crediting rates for cash balance plans and a narrative description of the significant gains and losses related to changes in the benefit obligation for the period. We early adopted this standard for the year ended December 31, 2018 with retrospective application. The adoption of this ASU did not have a material impact on our consolidated financial position, results of operations or cash flows.

We have recast our consolidated financial statements from amounts previously reported due to the adoption of new revenue recognition, pension and restricted cash standards. The unaudited consolidated statements of operations, which reflect the adoption of the new ASUs, are as follows (in millions):

	Twelve months ended December 31, 2017				
	As Previously Reported	**Adjustments (a)**	**Adjustments (b)**	**Adjustments (c)**	**As Recast**
Revenue	$ 65,872	$ 713	$ —	$ —	$ 66,585
Operating Expenses:					
Compensation and benefits	34,588	—	(11)	—	34,577
Repairs and maintenance	1,600	1	—	—	1,601
Depreciation and amortization	2,282	—	—	—	2,282
Purchased transportation	10,989	707	—	—	11,696
Fuel	2,690	—	—	—	2,690
Other occupancy	1,155	—	—	—	1,155
Other expenses	5,039	16	—	—	5,055
Total Operating Expenses	58,343	724	(11)	—	59,056
Operating Profit	7,529	(11)	11	—	7,529
Other Income and (Expense):					
Investment income (expense) and other	72	—	(11)	—	61
Interest expense	(453)	—	—	—	(453)
Total Other Income and (Expense)	(381)	—	(11)	—	(392)
Income Before Income Taxes	7,148	(11)	—	—	7,137
Income Tax Expense (Benefit)	2,238	(6)	—	—	2,232
Net Income	$ 4,910	$ (5)	$ —	$ —	$ 4,905
Basic Earnings Per Share	$ 5.64	$ (0.01)	$ —	$ —	$ 5.63
Diluted Earnings Per Share	$ 5.61	$ —	$ —	$ —	$ 5.61

(a) Recast to reflect the adoption of *Revenue from Contracts with Customers.*

(b) Recast to reflect the adoption of *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.*

(c) Recast to reflect the adoption of *Restricted Cash.*

The unaudited impacted consolidated statement of cash flows line items, which reflect the adoption of the new ASUs, are as follows (in millions):

	Twelve Months Ended December 31, 2017				
	As Previously Reported	Adjustments (a)	Adjustments (b)	Adjustments (c)	As Recast
Net Income	$ 4,910	$ (5)	$ —	$ —	$ 4,905
Adjustments to reconcile net income to net cash from operating activities:					
Deferred tax (benefit) expense	1,230	(6)	—	—	1,224
Other assets	(982)	(2)	—	—	(984)
Accounts payable	592	7	—	—	599
Accrued wages and withholdings	193	7	—	—	200
Other liabilities	(241)	(2)	—	—	(243)
Other operating activities	47	1			48
Cash flows from operating activities	1,479	—	—	—	1,479
Purchase of marketable securities	(1,634)	—	—	4	(1,630)
Net cash used in investing activities	(4,975)	—	—	4	(4,971)
Net decrease in cash, cash equivalents and restricted cash	(156)	—	—	4	(152)
Cash, cash equivalents and restricted cash at the beginning of period	3,476	—	—	445	3,921
Cash, cash equivalents and restricted cash at the end of period	$ 3,320	$ —	$ —	$ 449	$ 3,769

(a) Recast to reflect the adoption of *Revenue from Contracts with Customers.*

(b) Recast to reflect the adoption of *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.*

(c) Recast to reflect the adoption of *Restricted Cash.*

Other accounting pronouncements adopted during the periods covered by the consolidated financial statements did not have a material impact on our consolidated financial position, results of operations or cash flows.

Accounting Standards Issued But Not Yet Effective

In June 2016, the FASB issued an ASU introducing an expected credit loss methodology for the measurement of financial assets not accounted for at fair value. The methodology replaces the probable, incurred loss model for those assets. The standard will be effective for us in the first quarter of 2020. We are substantially complete with our evaluation of the adoption on our consolidated financial statements and internal controls over financial reporting. This adoption will not have a material impact on our consolidated financial position, results of operations or cash flows. We will update our process for calculating our allowance for doubtful accounts to include reasonable and supportable forecasts that could affect expected collectability.

In January 2017, the FASB issued an ASU to simplify the accounting for goodwill impairment. The update removes Step 2 of the goodwill impairment test, which requires a hypothetical purchase price allocation. Under this ASU, goodwill impairment will be the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The standard will be effective for us in the first quarter of 2020. We do not expect this ASU to have a material impact on our consolidated financial position, results of operations or cash flows.

In December 2019, the FASB issued an ASU to simplify the accounting for income taxes. The update removes certain exceptions to the general income tax principles. The standard will be effective for us in the first quarter of 2021. We are evaluating the impact of its adoption on our consolidated financial statements and internal control over financial reporting environment, but do not expect this ASU to have a material impact on our consolidated financial position, results of operations or cash flows.

Other accounting pronouncements issued, but not effective until after December 31, 2019, are not expected to have a material impact on our consolidated financial position, results of operations or cash flows.

NOTE 2. REVENUE RECOGNITION

Revenue Recognition

Substantially all of our revenues are from contracts associated with the pick-up, transportation and delivery of packages and freight ("transportation services"), whether carried out or arranged by UPS, either domestically or internationally, which generally occurs over a short period of time. Additionally, we provide value-added logistics services to customers, both domestically and internationally, through our global network of company-owned and leased distribution centers and field stocking locations.

Disaggregation of Revenue

	Year Ended December 31,		
	2019	2018	2017
Revenue:			
Next Day Air	$ 8,479	$ 7,618	$ 7,088
Deferred	5,180	4,752	4,422
Ground	32,834	31,223	29,251
U.S. Domestic Package	$ 46,493	$ 43,593	$ 40,761
Domestic	$ 2,836	$ 2,874	$ 2,646
Export	10,837	10,973	10,170
Cargo & Other	547	595	526
International Package	$ 14,220	$ 14,442	$ 13,342
Forwarding	$ 5,867	$ 6,580	$ 5,674
Logistics	3,435	3,234	3,017
Freight	3,265	3,218	3,000
Other	814	794	791
Supply Chain & Freight	$ 13,381	$ 13,826	$ 12,482
Consolidated revenue	$ 74,094	$ 71,861	$ 66,585

We account for a contract when both parties have approved the contract and are committed to perform their obligations, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable.

Performance Obligations

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the basis of revenue recognition in accordance with GAAP. To determine the proper revenue recognition method for contracts, we evaluate whether two or more contracts should be combined and accounted for as a single contract, and whether the combined or single contract should be accounted for as more than one performance obligation. This evaluation requires judgment, and the decision to combine a group of contracts or to separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period. Within most of our contracts, the customer contracts with us to provide distinct services, such as transportation services. The vast majority of our contracts with customers for transportation services include only one performance obligation; the transportation services themselves. However, if a contract is separated into more than one performance obligation, we allocate the total transaction price to each performance obligation based on the estimated relative standalone selling prices of the promised goods or services underlying each performance obligation. We frequently sell standard transportation services with observable standalone sales prices. In these instances, the observable standalone sales are used to determine the standalone selling price.

In certain business units, such as Logistics, we sell customized, customer-specific solutions in which we provide a significant service of integrating a complex set of tasks and components into a single capability (even if that single capability results in the delivery of multiple units). Hence, the entire contract is accounted for as one performance obligation. In these cases we typically use the expected cost plus a margin approach to estimate the standalone selling price of each performance obligation.

Satisfaction of Performance Obligations

We generally recognize revenue over time as we perform the services in the contract because of the continuous transfer of control to the customer. Our customers receive the benefit of our services as the goods are transported from one location to another. Further, if we were unable to complete delivery to the final location, another entity would not need to reperform the transportation service already performed.

As control transfers over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgment and is based on the nature of the products or services to be provided. We use the cost-to-cost measure of progress for our package delivery contracts because it best depicts the transfer of control to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including ancillary or accessorial fees and reductions for estimated customer incentives, are recorded proportionally as costs are incurred. Costs to fulfill include labor and other direct costs and an allocation of indirect costs. For our freight and freight forwarding contracts, an output method of progress based on time-in-transit is utilized as the timing of costs incurred does not best depict the transfer of control to the customer. In our Logistics business we have a right to consideration from customers in an amount that corresponds directly with the value to the customers of our performance completed to date, and as such we recognize revenue in the amount to which we have a right to invoice the customer.

Variable Consideration

It is common for our contracts to contain customer incentives, guaranteed service refunds or other provisions that can either increase or decrease the transaction price. These variable amounts are generally dependent upon achievement of certain incentive tiers or performance metrics. We estimate variable consideration at the most likely amount to which we expect to be entitled. We include estimated amounts of revenue, which may be reduced by incentives or other contract provisions, in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based on an assessment of anticipated customer spending and all information (historical, current and forecasted) that is reasonably available to us.

Contract Modifications

Contracts are often modified to account for changes in the rates we charge our customers or to add additional distinct services. We consider contract modifications to exist when the modification either creates new, or changes the existing, enforceable rights and obligations. Contract modifications that add additional distinct goods or services are treated as separate contracts. Contract modifications that do not add distinct goods or services typically change the price of existing services. These contract modifications are accounted for prospectively as the remaining performance obligations are distinct.

Payment Terms

Under the typical payment terms of our customer contracts, the customer pays at periodic intervals (i.e. every 14 days, 30 days, 45 days, etc.) for shipments included on invoices received. Invoices are generated each week on the week-ending day, which is Saturday for the majority of our U.S. Domestic Package business, but could be another day depending on the business unit or the specific agreement with the customer. It is not customary business practice to extend payment terms past 90 days, and as such, we do not have a practice of including a significant financing component within our contracts with customers.

Principal vs. Agent Considerations

In our transportation businesses, we utilize independent contractors and third-party carriers in the performance of some transportation services. GAAP requires us to evaluate, using a control model, whether our businesses themselves promise to transfer services to the customer (as the principal) or to arrange for services to be provided by another party (as the agent). Based on our evaluation of the control model, we determined that all of our major businesses act as the principal rather than the agent within their revenue arrangements. Revenue and the associated purchased transportation costs are both reported on a gross basis within our statements of consolidated income.

Accounts Receivable, Net

Accounts receivable, net, include amounts billed and currently due from customers. The amounts due are stated at their net estimated realizable value. Losses on accounts receivable are recognized when they are incurred, which requires us to make our best estimate of the probable losses inherent in our customer receivables at each balance sheet date. These estimates require consideration of historical loss experience, adjusted for current conditions, trends in customer payment frequency, and judgments about the probable effects of relevant observable data, including present economic conditions and the financial health of specific customers and market sectors. Our risk management process includes standards and policies for reviewing major account exposures and concentrations of risk.

Our total allowance for doubtful accounts as of December 31, 2019 and 2018 was $93 and $94 million, respectively. Our total provision for doubtful accounts charged to expense before recoveries during the years ended December 31, 2019 and 2018 was $194 and $118 million, respectively.

Contract Assets and Liabilities

Contract assets include billed and unbilled amounts resulting from in-transit packages, as we have an unconditional right to payment only once all performance obligations have been completed (i.e. packages have been delivered), and our right to payment is not solely based on the passage of time. Amounts may not exceed their net realizable value. Contract assets are generally classified as current and the full balance is converted each quarter based on the short-term nature of the transactions.

Contract liabilities consist of advance payments and billings in excess of revenue as well as deferred revenue. Advance payments and billings in excess of revenue represent payments received from our customers that will be earned over the contract term. Deferred revenue represents the amount of consideration due from customers related to in-transit shipments that has not yet been recognized as revenue based on our selected measure of progress. We classify advance payments and billings in excess of revenue as either current or long-term, depending on the period over which the advance payment will be earned. We classify deferred revenue as current based on the timing of when we expect to recognize revenue, which typically occurs within a short window after period-end. The full balance of deferred revenue is converted each quarter based on the short-term nature of the transactions. Our contract assets and liabilities are reported in a net position on a contract-by-contract basis at the end of each reporting period. In order to determine revenue recognized in the period from contract liabilities, we first allocate revenue to the individual contract liability balance outstanding at the beginning of the period until the revenue exceeds that deferred revenue balance.

Contract assets related to in-transit packages were $272 and $234 million at December 31, 2019 and 2018, respectively, net of deferred revenue related to in-transit packages of $264 and $236 million at December 31, 2019 and 2018, respectively. Contract assets are included within "Other current assets" in the consolidated balance sheets. Short-term contract liabilities related to advanced payments from customers were $7 and $5 million at December 31, 2019 and 2018, respectively. Short-term contract liabilities are included within "Other current liabilities" in the consolidated balance sheets. Long-term contract liabilities related to advanced payments from customers were $26 million at December 31, 2019 and December 31, 2018. Long-term contract liabilities are included within "Other Non-Current Liabilities" in the consolidated balance sheets.

NOTE 3. INVESTMENTS AND RESTRICTED CASH

The following is a summary of marketable securities classified as trading and available-for-sale at December 31, 2019 and 2018 (in millions):

	Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
2019				
Current trading marketable securities:				
Corporate debt securities	$ 112	$ —	$ —	$ 112
Equity securities	2	—	—	2
Total trading marketable securities	114	—	—	114
Current available-for-sale securities:				
U.S. government and agency debt securities	191	2	—	193
Mortgage and asset-backed debt securities	46	1	—	47
Corporate debt securities	130	3	—	133
Non-U.S. government debt securities	16	—	—	16
Total available-for-sale marketable securities	383	6	—	389
Total current marketable securities	$ 497	$ 6	$ —	$ 503

	Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
2018				
Current trading marketable securities:				
Corporate debt securities	$ 137	$ —	$ —	$ 137
Equity securities	2	—	—	2
Total trading marketable securities	139	—	—	139
Current available-for-sale securities:				
U.S. government and agency debt securities	297	1	(1)	297
Mortgage and asset-backed debt securities	82	—	(1)	81
Corporate debt securities	275	—	(2)	273
Non-U.S. government debt securities	20	—	—	20
Total available-for-sale marketable securities	674	1	(4)	671
Total current marketable securities	$ 813	$ 1	$ (4)	$ 810

Total current marketable securities that were pledged as collateral for our self-insurance requirements had an estimated fair value of $389 and $587 million at December 31, 2019 and 2018, respectively.

The gross realized gains on sales of available-for-sale securities totaled $3 million in 2019. There were no gross realized gains on sales of available-for-sale securities in 2018 or 2017. The gross realized losses on sales of available-for-sale securities totaled $2, $4 and $2 million in 2019, 2018 and 2017, respectively.

There were no material impairment losses recognized on marketable securities during 2019, 2018 or 2017.

Investment Other-Than-Temporary Impairments

We have concluded that no material other-than-temporary impairment losses existed as ofDecember 31, 2019. In making this determination, we considered the financial condition and prospects of each issuer, the magnitude of the losses compared with the investments' cost, the probability that we will be unable to collect all amounts due according to the contractual terms of the security, the credit rating of the security and our ability and intent to hold these investments until the anticipated recovery in market value occurs.

Unrealized Losses

The following table presents the age of gross unrealized losses and fair value by investment category for all securities in a loss position as ofDecember 31, 2019 (in millions):

	Less Than 12 Months		12 Months or More		Total	
	Fair Value	**Unrealized Losses**	**Fair Value**	**Unrealized Losses**	**Fair Value**	**Unrealized Losses**
U.S. government and agency debt securities	$ 42	$ —	$ —	$ —	$ 42	$ —
Mortgage and asset-backed debt securities	3	—	5	—	8	—
Corporate debt securities	6	—	2	—	8	—
Non-U.S. government debt securities	9	—	2	—	11	—
Total marketable securities	$ 60	$ —	$ 9	$ —	$ 69	$ —

The unrealized losses for the corporate debt securities, mortgage and asset-backed debt securities, and U.S. government and agency debt securities are primarily due to changes in market interest rates. We have both the intent and ability to hold these securities for a time necessary to recover the cost basis.

Maturity Information

The amortized cost and estimated fair value of marketable securities atDecember 31, 2019, by contractual maturity, are shown below (in millions). Actual maturities may differ from contractual maturities because the issuers of the securities may have the right to prepay obligations with or without prepayment penalties.

	Cost	**Estimated Fair Value**
Due in one year or less	$ 118	$ 118
Due after one year through three years	328	332
Due after three years through five years	6	6
Due after five years	43	45
	495	501
Equity securities	2	2
	$ 497	$ 503

Non-Current Investments and Restricted Cash

Non-current investments and restricted cash are primarily associated with our self-insurance obligations. We entered into an escrow agreement with an insurance carrier to guarantee these obligations. This agreement requires us to provide collateral to the insurance carrier, which is invested in various marketable securities and cash equivalents. Collateral provided is reflected in "Cash, Cash Equivalents and Restricted Cash" in the statements of consolidated cash flows. In 2019 we liquidated our investment balance associated with this agreement and pledged the required collateral with a surety bond. At December 31, 2019 and 2018, we had $0 and $142 million, respectively, in restricted cash. For additional information on surety bonds written at December 31, 2019, see note 8.

We held a $21 and $19 million investment in a variable life insurance policy to fund benefits for the UPS Excess Coordinating Benefit Plan at December 31, 2019 and 2018, respectively. The quarterly change in investment fair value is recognized in "Investment income (expense) and other" in the statements of consolidated income. Additionally, we held escrowed cash related to the acquisition and disposition of certain assets of $3 and $9 million at December 31, 2019 and 2018, respectively. These amounts are classified as “Investments and Restricted Cash” in the consolidated balance sheets.

A reconciliation of cash and cash equivalents and restricted cash from the consolidated balance sheets to the statements of consolidated cash flows is shown below (in millions):

	December 31, 2019	December 31, 2018	December 31, 2017
Cash and cash equivalents	$ 5,238	$ 4,225	$ 3,320
Restricted cash	$ —	$ 142	$ 449
Total cash, cash equivalents and restricted cash	$ 5,238	$ 4,367	$ 3,769

Fair Value Measurements

Marketable securities valued utilizing Level 1 inputs include active exchange-traded equity securities and equity index funds, and most U.S. government debt securities, as these securities all have quoted prices in active markets. Marketable securities valued utilizing Level 2 inputs include asset-backed securities, corporate bonds and municipal bonds. These securities are valued using market corroborated pricing, matrix pricing or other models that utilize observable inputs such as yield curves.

We maintain holdings in certain investment partnerships that are measured at fair value utilizing Level 3 inputs (classified as “Other non-current investments” in the tables below, and as “Other Non-Current Assets” in the consolidated balance sheets). These partnership holdings do not have quoted prices, nor can they be valued using inputs based on observable market data. These investments are valued internally using a discounted cash flow model with two significant inputs: (1) the after-tax cash flow projections for each partnership, and (2) a risk-adjusted discount rate consistent with the duration of the expected cash flows for each partnership. The weighted-average discount rates used to value these investments were 7.40% and 8.16% as of December 31, 2019 and 2018, respectively. These inputs, and the resulting fair values, are updated on a quarterly basis.

The following table presents information about our investments measured at fair value on a recurring basis as ofDecember 31, 2019 and 2018, and indicates the fair value hierarchy of the valuation techniques utilized to determine such fair value (in millions):

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
2019				
Marketable Securities:				
U.S. government and agency debt securities	$ 193	$ —	$ —	$ 193
Mortgage and asset-backed debt securities	—	47	—	47
Corporate debt securities	—	245	—	245
Equity securities	—	2	—	2
Non-U.S. government debt securities	—	16	—	16
Total marketable securities	193	310	—	503
Other non-current investments	21	—	1	22
Total	$ 214	$ 310	$ 1	$ 525

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
2018				
Marketable Securities:				
U.S. government and agency debt securities	$ 297	$ —	$ —	$ 297
Mortgage and asset-backed debt securities	—	81	—	81
Corporate debt securities	—	410	—	410
Equity securities	—	2	—	2
Non-U.S. government debt securities	—	20	—	20
Total marketable securities	297	513	—	810
Other non-current investments	19	—	2	21
Total	$ 316	$ 513	$ 2	$ 831

There were no transfers of investments between Level 1 and Level 2 during the years endedDecember 31, 2019 or 2018.

NOTE 4. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment, including both owned assets as well as assets subject to finance leases, consists of the following as of December 31, 2019 and 2018 (in millions):

	2019	2018
Vehicles	$ 10,613	$ 9,820
Aircraft	19,045	17,499
Land	2,087	2,000
Buildings	5,046	4,808
Building and leasehold improvements	4,898	4,323
Plant equipment	13,849	11,833
Technology equipment	2,206	2,093
Construction-in-progress	1,983	2,112
	59,727	54,488
Less: Accumulated depreciation and amortization	(29,245)	(27,912)
	$ 30,482	$ 26,576

As part of our ongoing investment in transformation, in 2018 we made prospective revisions to our estimates of useful lives for building improvements, vehicles and plant equipment which in general had the effect of lengthening the useful lives of these categories.

For 2019, depreciation expense increased $365 million, and net income decreased by $287 million, or $0.33 per share on a basic and diluted basis, as a result of investments in property, plant and equipment, net of disposals and assets becoming fully depreciated. Depreciation expense decreased $212 million, and net income increased $167 million, or $0.19 per share on a basic and diluted basis, as a result of lengthening our estimated useful lives for various asset categories in the latter half of 2018. The combined effect of the foregoing was a net increase in depreciation expense of $153 million and a decrease in net income of $120 million, or $0.14 per share on a basic and diluted basis, for 2019.

For 2018, this resulted in a decrease in depreciation expense and an increase in operating income of $286 million and an increase to net income of $228 million or $0.26 per share on a basic and diluted basis. Separately, capital investments in additional property, plant and equipment, net of disposals and fully-depreciated assets, resulted in an increase in depreciation expense of $257 million and a decrease to net income of $205 million or $0.24 per share on a basic and diluted basis in 2018. Combining both impacts resulted in a net decrease of $29 million to depreciation expense, and an increase to net income of $23 million or $0.03 per share on both a basic and diluted basis in 2018.

We monitor our aircraft fleet utilization in light of current and projected volume levels, aircraft fuel prices and other factors. Additionally, we monitor our other property, plant and equipment categories for any indicators that the carrying value of the assets may not be recoverable. No impairment charges on property, plant and equipment were recorded in 2019 or 2018.

NOTE 5. COMPANY SPONSORED EMPLOYEE BENEFIT PLANS

We sponsor various retirement and pension plans, including defined benefit and defined contribution plans which cover our employees worldwide.

U.S. Pension Benefits

In the U.S. we maintain the following single-employer defined benefit pension plans: the UPS Retirement Plan, the UPS Pension Plan, the UPS/IBT Full-Time Employee Pension Plan and the UPS Excess Coordinating Benefit Plan, a non-qualified plan.

The UPS Retirement Plan is noncontributory and includes substantially all eligible employees of participating domestic subsidiaries hired prior to July 1, 2016 who are not members of a collective bargaining unit, as well as certain employees covered by a collective bargaining agreement. This plan generally provides for retirement benefits based on average compensation earned by employees prior to retirement. Benefits payable under this plan are subject to maximum compensation limits and the annual benefit limits for a tax-qualified defined benefit plan as prescribed by the Internal Revenue Service (“IRS”).

The UPS Pension Plan is noncontributory and includes certain eligible employees of participating domestic subsidiaries and members of collective bargaining units that elect to participate in the plan. This plan generally provides for retirement benefits based on service credits earned by employees prior to retirement.

The UPS/IBT Full Time Employee Pension Plan is noncontributory and includes employees that were previously members of the Central States Pension Fund ("CSPF"), a multiemployer pension plan, in addition to other eligible employees who are covered under certain collective bargaining agreements. This plan generally provides for retirement benefits based on service credits earned by employees prior to retirement.

The UPS Excess Coordinating Benefit Plan is a non-qualified plan that provides benefits to certain participants in the UPS Retirement Plan, hired prior to July 1, 2016, for amounts that exceed the benefit limits described above.

In the year ended December 31, 2017, we amended the UPS Retirement Plan and the UPS Excess Coordinating Benefit Plan to cease accruals of additional benefits for future service and compensation for non-union participants effective January 1, 2023. We remeasured plan assets and pension benefit obligations for the affected pension plans as of June 30, 2017, resulting in a net actuarial gain of $569 million. This reflected a curtailment gain of $1.525 billion resulting from the benefit plan changes that was partially offset by net actuarial losses of $956 million, driven by a reduction of approximately 32 basis points in the discount rate compared to December 31, 2016, offset by actual asset returns approximately 275 basis points above our expected return as of the remeasurement date. The net curtailment gain reduced the actuarial loss recorded in AOCI in the equity section of the consolidated balance sheets. As actuarial losses were within the corridor (defined as 10% of the greater of the fair value of plan assets and the plan's projected benefit obligation), there was no impact to the statement of consolidated income as a result of this remeasurement.

During the fourth quarter of 2019, certain former U.S. employees were offered the option to receive a one-time payment of their vested pension benefit. Approximately 18,800 former employees accepted this option, accelerating $820 million in benefit payments during 2019 while reducing the number of participants who are due future payments from U.S. pension plans. As the cost of these settlements did not exceed the plans' service cost and interest cost for the year, the impact of the settlement was not recognized in earnings.

International Pension Benefits

We also sponsor various defined benefit plans covering certain of our international employees. The majority of our international obligations are for defined benefit plans in Canada and the United Kingdom. In addition, many of our international employees are covered by government-sponsored retirement and pension plans. We are not directly responsible for providing benefits to participants of government-sponsored plans.

U.S. Postretirement Medical Benefits

We also sponsor postretirement medical plans in the U.S. that provide healthcare benefits to our non-union retirees, as well as select union retirees who meet certain eligibility requirements and who are not otherwise covered by multiemployer plans. Generally, this includes employees with at least 10 years of service who have reached age 55 and employees who are eligible for postretirement medical benefits from a Company-sponsored plan pursuant to collective bargaining agreements. We have the right to modify or terminate certain of these plans. These benefits have been provided to certain retirees on a noncontributory basis; however, in many cases, retirees are required to contribute all or a portion of the total cost of the coverage.

Defined Contribution Plans

We also sponsor a defined contribution plan for employees not covered under collective bargaining agreements, and several smaller defined contribution plans for certain employees covered under collective bargaining agreements. The Company matches, in shares of UPS common stock or cash, a portion of the participating employees' contributions. Matching contributions charged to expense were $130, $127 and $119 million for 2019, 2018 and 2017, respectively.

In addition to current benefits under the UPS 401(k) Savings Plan, non-union employees hired after July 1, 2016, receive a retirement contribution. UPS contributes 3% to 8% of eligible pay to the UPS 401(k) Savings Plan based on years of vesting service and business unit. Contributions under this plan are subject to maximum compensation and contribution limits for a tax-qualified defined contribution plan as prescribed by the IRS. Contributions charged to expense were $67, $28 and $23 million for 2019, 2018 and 2017 respectively.

Effective June 23, 2017, the Company amended the UPS 401(k) Savings Plan so that non-union employees who currently participate in the UPS Retirement Plan will, in addition to current benefits under the UPS 401(k) Savings Plan, earn a retirement contribution beginning January 1, 2023. UPS will contribute 5% to 8% of eligible compensation to the UPS 401(k) Savings Plan based on years of vesting service. The amendment also provides for transition contributions for certain participants. There was no impact to the statement of consolidated income for 2019, 2018 and 2017 as a result of this change.

The UPS Restoration Savings Plan is a non-qualified plan that provides benefits to certain participants in the UPS 401(k) Savings Plan for amounts that exceed the benefit limits described above.

Contributions are also made to defined contribution money purchase plans under certain collective bargaining agreements. Amounts charged to expense were $97, $92 and $91 million for 2019, 2018 and 2017, respectively.

Net Periodic Benefit Cost

Information about net periodic benefit cost for the company-sponsored pension and postretirement defined benefit plans is as follows (in millions):

	U.S. Pension Benefits			U.S. Postretirement Medical Benefits			International Pension Benefits		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Net Periodic Benefit Cost:									
Service cost	$ 1,439	$ 1,661	$ 1,543	$ 23	$ 29	$ 29	$ 57	$ 62	$ 60
Interest cost	2,067	1,799	1,813	108	104	112	47	45	40
Expected return on assets	(3,130)	(3,201)	(2,883)	(8)	(8)	(7)	(76)	(77)	(66)
Amortization of prior service cost	218	193	192	7	7	7	2	1	1
Actuarial (gain) loss	2,296	1,603	729	37	—	53	54	24	18
Curtailment and settlement loss	—	—	—	—	—	—	—	—	2
Net periodic benefit cost	$ 2,890	$ 2,055	$ 1,394	$ 167	$ 132	$ 194	$ 84	$ 55	$ 55

Actuarial Assumptions

The table below provides the weighted-average actuarial assumptions used to determine the net periodic benefit cost.

	U.S. Pension Benefits			U.S. Postretirement Medical Benefits			International Pension Benefits		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Discount rate	4.50%	3.84%	4.41%	4.51%	3.82%	4.23%	2.94%	2.78%	2.75%
Rate of compensation increase	4.25%	4.25%	4.27%	N/A	N/A	N/A	3.24%	3.22%	3.17%
Expected return on assets	7.75%	7.75%	8.75%	7.20%	7.20%	8.75%	5.69%	5.76%	5.65%
Cash balance interest credit rate	2.98%	2.50%	2.91%	N/A	N/A	N/A	3.17%	3.07%	2.65%

The table below provides the weighted-average actuarial assumptions used to determine the benefit obligations of our plans.

	U.S. Pension Benefits		U.S. Postretirement Medical Benefits		International Pension Benefits	
	2019	2018	2019	2018	2019	2018
Discount rate	3.60%	4.50%	3.59%	4.51%	2.21%	2.94%
Rate of compensation increase	4.22%	4.25%	N/A	N/A	3.00%	3.24%
Cash balance interest credit rate	2.50%	2.98%	N/A	N/A	2.59%	3.17%

A discount rate is used to determine the present value of our future benefit obligations. To determine the discount rate for our U.S. pension and postretirement benefit plans, we use a bond matching approach to select specific bonds that would satisfy our projected benefit payments. We believe the bond matching approach reflects the process we would employ to settle our pension and postretirement benefit obligations. In October 2019, we refined our bond matching approach by implementing advances in technology and modeling techniques. This refinement decreased the projected benefit obligation on our consolidated balance sheet for our U.S. pension and postretirement plans by approximately $900 million as of December 31, 2019. Additionally, we estimate that this refinement in method decreased our pre-tax mark-to-market charge by approximately $810 million and increased net income by $616 million, or $0.71 per share on a basic and diluted basis. For our international plans, the discount rate is determined by matching the expected cash flows of a sample plan of similar duration to a yield curve based on long-term, high quality fixed income debt instruments available as of the measurement date. These assumptions are updated each measurement date, which is typically annually.

As of December 31, 2019, the impact of each basis point change in the discount rate on the projected benefit obligation of our pension and postretirement medical benefit plans is as follows (in millions):

	Increase (Decrease) in the Projected Benefit Obligation	
	Pension Benefits	Postretirement Medical Benefits
One basis point increase in discount rate	$ (86)	$ (2)
One basis point decrease in discount rate	92	3

The Society of Actuaries ("SOA") published mortality tables and improvement scales are used in developing the best estimate of mortality for U.S. plans. In October 2019, the SOA published updated mortality tables and an updated improvement scale, both of which reduced expected mortality improvements from previously published tables and improvement scale. Based on our perspective of future longevity, we updated the mortality assumptions to incorporate these updated tables and improvement scale for purposes of measuring pension and other postretirement benefit obligations.

Assumptions for the expected return on plan assets are used to determine a component of net periodic benefit cost for the year. The assumption for our U.S. plans is developed using a long-term projection of returns for each asset class. Our asset allocation targets are reviewed and, if necessary, updated taking into consideration plan changes, funded status and actual performance. The expected return for each asset class is a function of passive, long-term capital market assumptions and excess returns generated from active management. The capital market assumptions used are provided by independent investment advisors, while excess return assumptions are supported by historical performance, fund mandates and investment expectations.

For plans outside the U.S., consideration is given to local market expectations of long-term returns. Strategic asset allocations are determined by plan, based on the nature of liabilities and considering the demographic composition of the plan participants.

Actuarial Assumptions - Central States Pension Fund

UPS was a contributing employer to the CSPF until 2007 when we withdrew from the CSPF and fully funded our allocable share of unfunded vested benefits by paying a $6.1 billion withdrawal liability. Under a collective bargaining agreement with the International Brotherhood of Teamsters (“IBT”), UPS agreed to provide coordinating benefits in the UPS/IBT Full Time Employee Pension Plan (“UPS/IBT Plan”) for UPS participants whose last employer was UPS and who had not retired as of January 1, 2008 (“the UPS Transfer Group”) in the event that benefits are lawfully reduced by the CSPF in the future consistent with the terms of our withdrawal agreement with the CSPF. Under our withdrawal agreement with the CSPF, benefits to the UPS Transfer Group cannot be reduced without our consent and can only be reduced in accordance with applicable law.

In December 2014, Congress passed the Multiemployer Pension Reform Act (“MPRA”). This change in law for the first time permitted multiemployer pension plans to reduce benefit payments to retirees, subject to specific guidelines in the statute and government approval. In September 2015, the CSPF submitted a proposed pension benefit reduction plan to the U.S. Department of the Treasury (“Treasury”). In May 2016, Treasury rejected the proposed plan submitted by the CSPF. In the first quarter of 2018, Congress established a Joint Select Committee to develop a recommendation to improve the solvency of multiemployer plans and the Pension Benefit Guaranty Corporation (“PBGC”) before a November 30, 2018 deadline. While the Committee’s efforts failed to meet its deadline, the Committee made significant progress towards finding solutions that will address the long term solvency of multiemployer pension plans. In the third quarter of 2019, the U.S. House of Representatives passed the Rehabilitation for Multiemployer Pensions Act of 2019 to provide assistance to critical and declining multiemployer pension plans. This bill is now with the U.S. Senate for consideration. UPS will continue to work with all stakeholders, including legislators and regulators, to implement an acceptable solution.

The CSPF has said that it believes a legislative solution to its funded status is necessary or that it will become insolvent in 2025, and we expect that the CSPF will continue to explore options to avoid insolvency. Numerous factors could affect the CSPF’s funded status and UPS’s potential obligation to pay coordinating benefits under the UPS/IBT Plan. Any obligation to pay coordinating benefits will be subject to a number of significant uncertainties, including whether the CSPF submits a revised MPRA filing and the terms thereof, or whether it otherwise seeks federal government assistance, as well as the terms of any applicable legislation, the extent to which benefits are paid by the PBGC and our ability to successfully defend legal positions we may take in the future under the MPRA, including the suspension ordering provisions, our withdrawal agreement and other applicable law.

We account for the potential obligation to pay coordinating benefits to the UPS Transfer Group under Accounting Standards Codification Topic 715- Compensation-Retirement Benefits (“ASC 715”), which requires us to provide a best estimate of various actuarial assumptions, including the eventual outcome of this matter, in measuring our pension benefit obligation at the December 31st measurement date. While we currently believe the most likely outcome to this matter and the broader systemic problems facing multiemployer pension plans is intervention by the federal government, ASC 715 does not permit anticipation of changes in law in making a best estimate of pension liabilities.

As such, our best estimate of the next most likely outcome at the December 31, 2019 measurement date is that the CSPF will submit and implement another benefit reduction plan under the MPRA during 2020. We believe any MPRA filing would be designed to forestall insolvency by reducing benefits to participants other than the UPS Transfer Group to the maximum extent permitted, and then reducing benefits to the UPS Transfer Group by a lesser amount.

We evaluated this outcome using a deterministic cash flow projection, reflecting updated estimated CSPF cash flows and investment earnings, the lack of legislative action and the absence of a MPRA filing by the CSPF in 2019. As a result, at the December 31, 2019 measurement date, the best estimate of our projected benefit obligation for coordinating benefits that may be required to be directly provided by the UPS/IBT Plan to the UPS Transfer Group is $2.6 billion.

The future value of this estimate will be influenced by the terms and timing of any MPRA filing, changes in our discount rate, rate of return on assets and other actuarial assumptions, presumed solvency of the PBGC, as well as potential solutions resulting from federal government intervention. Any such event may result in a decrease or an increase in the best estimate of our projected benefit obligation. If the uncertainties are not resolved, it is reasonably possible that our projected benefit obligation could increase by approximately $2.2 billion, resulting in a total obligation for coordinating benefits of approximately$4.8 billion. If a future change in law occurs, it may be a significant event requiring an interim remeasurement of the UPS/IBT Plan at the date the law is enacted. We will continue to assess the impact of these uncertainties on our projected benefit obligation in accordance with ASC 715.

Other Actuarial Assumptions

Healthcare cost trends are used to project future postretirement medical benefits payable from our plans. For2019 U.S. plan obligations, future postretirement medical benefit costs were forecasted assuming an initial annual rate of increase of 6.5%, decreasing to 4.5% by the year 2024 and with consistent annual increases at that ultimate level thereafter.

Funded Status

The following table discloses the funded status of our plans and the amounts recognized in our consolidated balance sheets as ofDecember 31st (in millions):

	U.S. Pension Benefits		U.S. Postretirement Medical Benefits		International Pension Benefits	
	2019	2018	2019	2018	2019	2018
Funded Status:						
Fair value of plan assets	$ 46,172	$ 39,554	$ 37	$ 26	$ 1,558	$ 1,284
Benefit obligation	(54,039)	(45,333)	(2,616)	(2,510)	(1,906)	(1,552)
Funded status recognized at December 31	$ (7,867)	$ (5,779)	$ (2,579)	$ (2,484)	$ (348)	$ (268)
Funded Status Recognized in our Balance Sheet:						
Other non-current assets	$ —	$ —	$ —	$ —	$ 34	$ 35
Other current liabilities	(22)	(20)	(200)	(195)	(5)	(4)
Pension and postretirement benefit obligations	(7,845)	(5,759)	(2,379)	(2,289)	(377)	(299)
Net liability at December 31	$ (7,867)	$ (5,779)	$ (2,579)	$ (2,484)	$ (348)	$ (268)
Amounts Recognized in AOCI:						
Unrecognized net prior service cost	$ (800)	$ (1,018)	$ (16)	$ (21)	$ (12)	$ (14)
Unrecognized net actuarial gain (loss)	(5,404)	(3,967)	(240)	(32)	(162)	(100)
Gross unrecognized cost at December 31	(6,204)	(4,985)	(256)	(53)	(174)	(114)
Deferred tax assets (liabilities) at December 31	1,497	1,205	62	13	40	28
Net unrecognized cost at December 31	$ (4,707)	$ (3,780)	$ (194)	$ (40)	$ (134)	$ (86)

The accumulated benefit obligation for our pension plans as of the measurement dates in2019 and 2018 was $57.553 and $45.704 billion, respectively.

Benefit payments under the pension plans include$27 and $23 million paid from employer assets in2019 and 2018, respectively. Benefit payments (net of participant contributions) under the postretirement medical benefit plans include $82 and $87 million paid from employer assets in2019 and 2018, respectively. Such benefit payments from employer assets are also categorized as employer contributions.

At December 31, 2019 and 2018, the projected benefit obligation, the accumulated benefit obligation and the fair value of plan assets for pension plans with benefit obligations in excess of plan assets were as follows (in millions):

	Projected Benefit Obligation Exceeds the Fair Value of Plan Assets		Accumulated Benefit Obligation Exceeds the Fair Value of Plan Assets	
	2019	2018	2019	2018
U.S. Pension Benefits:				
Projected benefit obligation	$ 54,039	$ 45,333	$ 54,039	$ 45,333
Accumulated benefit obligation	53,194	44,284	53,194	44,284
Fair value of plan assets	46,172	39,554	46,172	39,554
International Pension Benefits:				
Projected benefit obligation	$ 1,319	$ 630	$ 1,319	$ 630
Accumulated benefit obligation	1,210	539	1,210	539
Fair value of plan assets	948	339	948	339

The accumulated postretirement benefit obligation presented in the funded status table exceeds plan assets for all U.S. postretirement medical benefit plans.

Benefit Obligations and Fair Value of Plan Assets

The following tables provide a reconciliation of the changes in the plans' benefit obligations and fair value of plan assets as of the respective measurement dates in each year (in millions).

	U.S. Pension Benefits		U.S. Postretirement Medical Benefits		International Pension Benefits	
	2019	2018	2019	2018	2019	2018
Benefit Obligations:						
Projected benefit obligation at beginning of year	$ 45,333	$ 45,847	$ 2,510	$ 2,792	$ 1,552	$ 1,651
Service cost	1,439	1,661	23	29	57	62
Interest cost	2,067	1,799	108	104	47	45
Gross benefits paid	(2,394)	(1,390)	(288)	(263)	(40)	(33)
Plan participants' contributions	—	—	30	26	3	3
Plan amendments	—	331	—	—	1	13
Actuarial (gain)/loss	7,594	(2,915)	233	(178)	213	(81)
Foreign currency exchange rate changes	—	—		—	47	(110)
Curtailments and settlements	—	—		—	(2)	(1)
Other	—	—		—	28	3
Projected benefit obligation at end of year	$ 54,039	$ 45,333	$ 2,616	$ 2,510	$ 1,906	$ 1,552

	U.S. Pension Benefits		U.S. Postretirement Medical Benefits		International Pension Benefits	
	2019	2018	2019	2018	2019	2018
Fair Value of Plan Assets:						
Fair value of plan assets at beginning of year	$ 39,554	$ 41,932	$ 26	$ 183	$ 1,284	$ 1,333
Actual return on plan assets	6,991	(1,007)	(5)	(7)	171	(6)
Employer contributions	2,021	19	274	87	67	80
Plan participants' contributions	—	—	30	26	3	3
Gross benefits paid	(2,394)	(1,390)	(288)	(263)	(40)	(33)
Foreign currency exchange rate changes	—	—	—	—	49	(92)
Curtailments and settlements	—	—	—	—	(2)	(1)
Other	—	—	—	—	26	—
Fair value of plan assets at end of year	$ 46,172	$ 39,554	$ 37	$ 26	$ 1,558	$ 1,284

<u>2019 - $8.040 billion pre-tax actuarial loss related to benefit obligation</u>:

- *Discount Rates* ($7.477 billion pre-tax loss): The weighted-average discount rate for our pension and postretirement medical plans decreased from 4.45% at December 31, 2018 to 3.55% at December 31, 2019, primarily due to both a decline in U.S. treasury yields and a decrease in credit spreads on AA-rated corporate bonds in 2019. This was partially offset by a refinement to our bond matching approach from advances in technology and modeling techniques.
- *Coordinating benefits attributable to the Central States Pension Fund* ($603 million pre-tax loss): This represents our current best estimate of the additional potential coordinating benefits that may be required to be paid related to the Central States Pension Fund before taking into account the impact of the change in discount rates.
- *Demographic and Assumption Changes* ($40 million pre-tax gain): This represents the difference between actual and estimated participant data and demographic factors, including items such as healthcare cost trends, compensation changes, rates of termination, retirement, mortality and other changes.

<u>2018 - $3.174 billion pre-tax actuarial gain related to benefit obligation</u>:

- *Discount Rates* ($4.829 billion pre-tax gain): The weighted-average discount rate for our pension and postretirement medical plans increased from 3.81% at December 31, 2017 to 4.45% at December 31, 2018, primarily due to both an increase in U.S. treasury yields and an increase in credit spreads on AA-rated corporate bonds in 2018.
- *Coordinating benefits attributable to the Central States Pension Fund* ($1.550 billion pre-tax loss): This represents our current best estimate of potential coordinating benefits that may be required to be paid related to the Central States Pension Fund.
- *Demographic and Assumption Changes* ($105 million pre-tax loss): This represents the difference between actual and estimated participant data and demographic factors, including items such as healthcare cost trends, compensation rate increases and rates of termination, retirement and mortality.

Pension and Postretirement Plan Assets

Under the governance of plan trustees, the Investment Committee establishes investment guidelines and strategies and regularly monitors the performance of investments and investment managers. The investment guidelines address items such as establishing appropriate governance provisions; defining investment objectives; determining strategic asset allocation; monitoring and reporting the investments on a regular basis; appointing/dismissing investment managers, custodians, consultants and advisors; risk management; determining/defining the mandates for investment managers; rebalancing of assets and determining investment restrictions/prohibited investments.

Pension assets are invested in accordance with applicable laws and regulations. The primary long-term investment objectives for pension assets are to: (1) provide for a reasonable amount of long-term growth of capital given prudent levels of risk exposure while minimizing permanent loss of capital; (2) generate investment results that meet or exceed the long-term rate of return assumption for the plans and (3) match the duration of the liabilities and assets of the plans to reduce the need for large employer contributions in the future. In furtherance of these objectives, investment managers are engaged to actively manage assets within the guidelines and strategies set forth by the Investment Committee. Active managers are monitored regularly and their performance is compared to applicable benchmarks.

Fair Value Measurements

Pension assets valued utilizing Level 1 inputs include equity investments, corporate debt instruments and U.S. government securities. Fair values were determined by closing prices for those securities traded on national stock exchanges, while securities traded in the over-the-counter market and listed securities for which no sale was reported on the valuation date are valued at the mean between the last reported bid and asked prices.

Level 2 assets include certain bonds that are valued based on yields currently available on comparable securities of other issues with similar credit ratings; mortgage-backed securities that are valued based on cash flow and yield models using acceptable modeling and pricing conventions; and certain investments that are pooled with other investments in a commingled fund. We value our investments in commingled funds by taking the percentage ownership of the underlying assets, each of which has a readily determinable fair value.

Fair value estimates for certain investments are based on unobservable inputs that are not corroborated by observable market data and are thus classified as Level 3.

Investments that do not have a readily determinable fair value, and which provide a net asset value ("NAV") or its equivalent developed consistent with FASB measurement principles, are valued using NAV as a practical expedient. These investments are not classified in Levels 1, 2, or 3 of the fair value hierarchy but instead included within the subtotals by asset category. Such investments include hedge funds, risk parity funds, real estate investments, private debt and private equity funds. Investments in hedge funds and risk parity funds are valued using the reported NAV as of December 31st. Real estate investments, private debt and private equity funds are valued at NAV per the most recent partnership audited financial reports, and adjusted, as appropriate, for investment activity between the date of the financial reports and December 31st. Due to the inherent limitations in obtaining a readily determinable fair value measurement for alternative investments, the fair values reported may differ from the values that would have been used had readily available market information for the alternative investments existed. These investments are described further below:

- Hedge Funds: Plan assets are invested in hedge funds that pursue multiple strategies to diversify risk and reduce volatility. Most of these hedge funds allow redemptions either quarterly or semi-annually after a two to three month notice period, while others allow for redemption after only a brief notification period with no restriction on redemption frequency. No unfunded commitments existed with respect to hedge funds as of December 31, 2019.

- Risk Parity Funds: Plan assets are invested in risk parity strategies in order to provide diversification and balance risk/return objectives. These strategies reflect a multi-asset class balanced risk approach generally consisting of equity, interest rates, credit and commodities. These funds allow for monthly redemptions with only a brief notification period. No unfunded commitments existed with respect to risk parity funds as of December 31, 2019.

- Real Estate, Private Debt and Private Equity Funds: Plan assets are invested in limited partnership interests in various private equity, private debt and real estate funds. Limited provision exists for the redemption of these interests by the limited partners that invest in these funds until the end of the term of the partnerships, typically ranging between 10 and 15 years from the date of inception. An active secondary market exists for similar partnership interests, although no particular value (discount or premium) can be guaranteed. At December 31, 2019, unfunded commitments to such limited partnerships totaling approximately $2.241 billion are expected to be contributed over the remaining investment period, typically ranging between three and six years.

The fair values of U.S. and international pension and postretirement benefit plan assets by asset category as of December 31, 2019 are presented below (in millions), as well as the percentage that each category comprises of our total plan assets and the respective target allocations.

	Total Assets[(1)]	Level 1	Level 2	Level 3	Percentage of Plan Assets	Target Allocation
Asset Category (U.S. Plans):						
Cash and cash equivalents	$ 964	$ 818	$ 146	$ —	2.1%	1-5
Equity Securities:						
U.S. Large Cap	6,607	2,889	3,718	—		
U.S. Small Cap	505	376	129	—		
Emerging Markets	2,039	1,523	516	—		
Global Equity	2,892	2,553	339	—		
International Equity	4,591	2,499	2,092	—		
Total Equity Securities	16,634	9,840	6,794	—	36.0	25-55
Fixed Income Securities:						
U.S. Government Securities	14,077	12,980	1,097	—		
Corporate Bonds	5,051	—	5,051	—		
Global Bonds	50	—	50	—		
Municipal Bonds	24	—	24	—		
Total Fixed Income Securities	19,202	12,980	6,222	—	41.5	35-55
Other Investments:						
Hedge Funds	3,273	—	1,380	—	7.1	5-15
Private Equity	3,030	—	—	—	6.6	1-10
Private Debt	772	—	—	—	1.7	1-10
Real Estate	1,940	149	74	—	4.2	1-10
Structured Products[(2)]	153	—	153	—	0.3	1-5
Risk Parity Funds	241	—	—	—	0.5	1-10
Total U.S. Plan Assets	$ 46,209	$ 23,787	$ 14,769	$ —	100.0%	
Asset Category (International Plans):						
Cash and cash equivalents	$ 72	$ 32	$ 40	—	4.6	1-10
Equity Securities:						
Local Markets Equity	209	—	209	—		
U.S. Equity	47	—	47	—		
Emerging Markets	33	33	—	—		
International / Global Equity	441	179	262	—		
Total Equity Securities	730	212	518	—	46.8	30-60
Fixed Income Securities:						
Local Government Bonds	94	—	94	—		
Corporate Bonds	177	20	157	—		
Global Bonds	110	110	—	—		
Total Fixed Income Securities	381	130	251	—	24.5	25-45
Other Investments:						
Real Estate	128	—	80	—	8.2	5-10
Other	247	—	218	12	15.9	1-20
Total International Plan Assets	$ 1,558	$ 374	$ 1,107	$ 12	100.0%	
Total Plan Assets	$ 47,767	$ 24,161	$ 15,876	$ 12		

(1) Certain investments that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy but are included in the category totals.
(2) Represents mortgage and asset-backed securities.

The fair values of U.S. and international pension and postretirement benefit plan assets by asset category as of December 31, 2018 are presented below (in millions), as well as the percentage that each category comprises of our total plan assets and the respective target allocations.

	Total Assets[1]	Level 1	Level 2	Level 3	Percentage of Plan Assets	Target Allocation
Asset Category (U.S. Plans):						
Cash and cash equivalents	$ 157	$ 108	$ 49	$ —	0.4%	1-5
Equity Securities:						
U.S. Large Cap	5,276	2,155	3,121	—		
U.S. Small Cap	542	386	156	—		
Emerging Markets	1,859	1,436	423	—		
Global Equity	2,320	2,056	264	—		
International Equity	3,670	2,189	1,481	—		
Total Equity Securities	13,667	8,222	5,445	—	34.5	25-55
Fixed Income Securities:						
U.S. Government Securities	12,295	11,922	373	—		
Corporate Bonds	4,303	—	4,301	2		
Global Bonds	55	—	55	—		
Municipal Bonds	16	—	16	—		
Total Fixed Income Securities	16,669	11,922	4,745	2	42.1	35-55
Other Investments:						
Hedge Funds	3,154	—	1,185	—	8.0	5-15
Private Equity	2,763	—	—	—	7.0	1-10
Private Debt	836	—	178	—	2.1	1-10
Real Estate	1,989	152	53	—	5.0	1-10
Structured Products[2]	138	—	138	—	0.4	1-5
Risk Parity Funds	207	—	—	—	0.5	1-10
Total U.S. Plan Assets	$ 39,580	$ 20,404	$ 11,793	$ 2	100.0%	
Asset Category (International Plans):						
Cash and cash equivalents	$ 45	$ 4	$ 41	—	3.5	1-10
Equity Securities:						
Local Markets Equity	171	—	171	—		
U.S. Equity	34	—	34	—		
Emerging Markets	33	33	—	—		
International / Global Equity	348	150	198	—		
Total Equity Securities	586	183	403	—	45.6	30-60
Fixed Income Securities:						
Local Government Bonds	102	24	78	—		
Corporate Bonds	195	54	141	—		
Global Bonds	27	27	—	—		
Total Fixed Income Securities	324	105	219	—	25.2	25-45
Other Investments:						
Real Estate	121	—	76	—	9.4	5-10
Other	208	—	191	4	16.3	1-20
Total International Plan Assets	$ 1,284	$ 292	$ 930	$ 4	100.0%	
Total Plan Assets	$ 40,864	$ 20,696	$ 12,723	$ 6		

[1] Certain investments that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy but are included in the category totals.
[2] Represents mortgage and asset-backed securities.

The following table presents the changes in the Level 3 instruments measured on a recurring basis for the years ended December 31, 2019 and 2018 (in millions).

	Corporate Bonds	Other	Total
Balance on January 1, 2018	$ 8	$ —	$ 8
Actual Return on Assets:			
Assets Held at End of Year	—	—	—
Assets Sold During the Year	(7)	—	(7)
Purchases	11	9	20
Sales	(10)	(5)	(15)
Transfers Into (Out of) Level 3	—	—	—
Balance on December 31, 2018	$ 2	$ 4	$ 6
Actual Return on Assets:			
Assets Held at End of Year	—	1	1
Assets Sold During the Year	(4)	—	(4)
Purchases	4	7	11
Sales	(2)		(2)
Transfers Into (Out of) Level 3	—	—	—
Balance on December 31, 2019	$ —	$ 12	$ 12

There were no shares of UPS class A or B common stock directly held in plan assets as of December 31, 2019 or December 31, 2018.

Expected Cash Flows

Information about expected cash flows for the pension and postretirement benefit plans is as follows (in millions):

	U.S. Pension Benefits	U.S. Postretirement Medical Benefits	International Pension Benefits
Expected Employer Contributions:			
2020 to plan trusts	$ 1,000	$ 186	$ 62
2020 to plan participants	21	11	5
2020	$ 1,645	$ 241	$ 32
2021	1,802	225	36
2022	1,942	215	41
2023	2,085	206	46
2024	2,230	196	52
2025 - 2029	13,293	857	353

Our funding policy for U.S. plans is to contribute amounts annually that are at least equal to the amounts required by applicable laws and regulations, or to directly fund payments to plan participants, as applicable. International plans will be funded in accordance with local regulations. Additional discretionary contributions may be made when deemed appropriate to meet the long-term obligations of the plans. Expected benefit payments for pensions will be primarily paid from plan trusts. Expected benefit payments for postretirement medical benefits will be paid from plan trusts and corporate assets.

NOTE 6. MULTIEMPLOYER EMPLOYEE BENEFIT PLANS

We contribute to a number of multiemployer defined benefit plans under the terms of collective bargaining agreements that cover our union-represented employees. These plans generally provide for retirement, death and/or termination benefits for eligible employees within the applicable collective bargaining units, based on specific eligibility/participation requirements, vesting periods and benefit formulas. The risks of participating in these multiemployer plans are different from single-employer plans in the following aspects:

- Assets contributed to a multiemployer plan by one employer may be used to provide benefits to employees of other participating employers.
- If we negotiate to cease participating in a multiemployer plan, we may be required to pay that plan an amount based on our allocable share of its underfunded status, referred to as a "withdrawal liability". However, cessation of participation in a multiemployer plan and subsequent payment of any withdrawal liability is subject to the collective bargaining process.
- If any of the multiemployer pension plans in which we participate enter critical status, and our contributions are not sufficient to satisfy any rehabilitation plan funding schedule, we could be required under the Pension Protection Act of 2006 to make additional surcharge contributions to the multiemployer pension plan in the amount of five to ten percent of the existing contributions required by our labor agreement. Such surcharges would cease upon the ratification of a new collective bargaining agreement, and could not recur unless a plan re-entered critical status at a later date.

The discussion that follows sets forth the financial impact on our results of operations and cash flows for the years ended December 31, 2019, 2018 and 2017, from our participation in multiemployer benefit plans. As part of the overall collective bargaining process for wage and benefit levels, we have agreed to contribute certain amounts to the multiemployer benefit plans during the contract period. The multiemployer benefit plans set benefit levels and are responsible for benefit delivery to participants. Future contribution amounts to multiemployer benefit plans are determined only through collective bargaining, and we have no additional legal or constructive obligation to increase contributions beyond the agreed-upon amounts (except potential surcharges under the Pension Protection Act of 2006 as described above).

The number of employees covered by our multiemployer pension plans has remained consistent over the past three years, and there have been no significant changes that affect the comparability of 2019, 2018 and 2017 contributions. We recognize expense for the contractually-required contribution for each period, and we recognize a liability for any contributions due and unpaid at the end of a reporting period.

Status of Collective Bargaining Agreements

As of December 31, 2019, we had approximately 290,000 employees employed under a national master agreement and various supplemental agreements with local unions affiliated with the Teamsters. The current National Master Agreement ("NMA") was ratified on April 28, 2019, and runs through July 31, 2023. Most of the economic provisions of the NMA are retroactive to August 1, 2018, which is the effective date of the NMA. The UPS Freight business unit national master agreement was ratified on November 11, 2018.

We have approximately 2,900 pilots who are employed under a collective bargaining agreement with the Independent Pilots Association ("IPA"), which becomes amendable on September 1, 2021. On February 10, 2020, the Company and the IPA reached a tentative agreement on a two-year contract extension. Upon ratification, the extension will go into effect on September 1, 2021 and become amendable September 1, 2023.

We have approximately 1,500 airline mechanics who are covered by a collective bargaining agreement with Teamsters Local 2727 which becomes amendable November 1, 2023. In addition, approximately 3,300 of our auto and maintenance mechanics who are not employed under agreements with the Teamsters are employed under collective bargaining agreements with the International Association of Machinists and Aerospace Workers ("IAM"). On May 2, 2019, the IAM ratified a new collective bargaining agreement which runs through July 31, 2024.

Multiemployer Pension Plans

The following table outlines our participation in multiemployer pension plans for the periods ended December 31, 2019, 2018 and 2017, and sets forth our calendar year contributions and accruals for each plan. The "EIN/Pension Plan Number" column provides the Employer Identification Number ("EIN") and the three-digit plan number. The most recent Pension Protection Act zone status available in 2019 and 2018 relates to the plans' two most recent fiscal year ends. The zone status is based on information that we received from the plans' administrators and is certified by each plan's actuary. Plans certified in the red zone are generally less than 65% funded; plans certified in the orange zone are both less than 80% funded and have an accumulated funding deficiency, or are expected to have a deficiency in any of the next six plan years; plans certified in the yellow zone are less than 80% funded; and plans certified in the green zone are at least 80% funded. The "FIP/RP Status Pending/Implemented" column indicates whether a financial improvement plan ("FIP") for yellow/orange zone plans, or a rehabilitation plan ("RP") for red zone plans, is either pending or has been implemented. As of December 31, 2019, all plans that have either a FIP or RP requirement have had the respective plan implemented.

Our collectively-bargained contributions satisfy the requirements of all implemented FIPs and RPs and do not currently require the payment of any surcharges. In addition, minimum contributions outside of the agreed upon contractual rates are not required. For the plans detailed in the following table, the expiration date of the associated collective bargaining agreements is July 31, 2023, with the exception of the Automotive Industries Pension Plan, the Automotive Machinists Pension Trust and the IAM National Pension Fund / National Pension Plan, which have a July 31, 2024 expiration date. For all plans detailed in the following table, we provided more than 5% of the total plan contributions from all employers for 2019, 2018 and 2017 (as disclosed in the annual filing with the Department of Labor for each respective plan).

Certain plans have been aggregated in the "all other multiemployer pension plans" line in the following table, as the contributions to each of these individual plans are not material.

	EIN / Pension Plan	Pension Protection Act Zone Status		FIP / RP Status Pending /	(in millions) UPS Contributions and Accruals			Surcharge
Pension Fund	Number	2019	2018	Implemented	2019	2018	2017	Imposed
Central Pennsylvania Teamsters Defined Benefit Plan	23-6262789-001	Green	Green	No	48	44	40	No
Employer-Teamsters Local Nos. 175 & 505 Pension Trust Fund	55-6021850-001	Red	Red	Yes/Implemented	14	13	12	No
Hagerstown Motor Carriers and Teamsters Pension Fund	52-6045424-001	Red	Red	Yes/Implemented	10	9	8	No
I.A.M. National Pension Fund / National Pension Plan	51-6031295-002	Green	Green	No	41	38	35	No
International Brotherhood of Teamsters Union Local No. 710 Pension Fund	36-2377656-001	Green	Green	No	142	129	118	No
Local 705, International Brotherhood of Teamsters Pension Plan	36-6492502-001	Yellow	Yellow	Yes/Implemented	113	104	93	No
Local 804 I.B.T. & Local 447 I.A.M.—UPS Multiemployer Retirement Plan	51-6117726-001	Yellow	Yellow	Yes/Implemented	112	116	110	No
Milwaukee Drivers Pension Trust Fund	39-6045229-001	Green	Green	No	48	42	38	No
New England Teamsters & Trucking Industry Pension Fund	04-6372430-001	Red	Red	Yes/Implemented	120	121	114	No
New York State Teamsters Conference Pension and Retirement Fund	16-6063585-074	Red	Red	Yes/Implemented	119	108	100	No
Teamster Pension Fund of Philadelphia and Vicinity	23-1511735-001	Yellow	Yellow	Yes/Implemented	74	66	60	No
Teamsters Joint Council No. 83 of Virginia Pension Fund	54-6097996-001	Green	Green	No	75	69	64	No
Teamsters Local 639—Employers Pension Trust	53-0237142-001	Green	Green	No	68	61	55	No
Teamsters Negotiated Pension Plan	43-6196083-001	Green	Green	No	37	34	32	No
Truck Drivers and Helpers Local Union No. 355 Retirement Pension Plan	52-6043608-001	Green	Green	No	24	22	20	No
United Parcel Service, Inc.—Local 177, I.B.T. Multiemployer Retirement Plan	13-1426500-419	Red	Red	Yes/Implemented	100	95	88	No
Western Conference of Teamsters Pension Plan	91-6145047-001	Green	Green	No	939	868	772	No
Western Pennsylvania Teamsters and Employers Pension Fund	25-6029946-001	Red	Red	Yes/Implemented	34	31	30	No
All Other Multiemployer Pension Plans					102	72	81	
				Total Contributions	$ 2,220	$ 2,042	$ 1,870	

Agreement with the New England Teamsters and Trucking Industry Pension Fund

In 2012, we reached an agreement with the New England Teamsters and Trucking Industry Pension Fund ("NETTI Fund"), a multiemployer pension plan in which UPS is a participant, to restructure the pension liabilities for approximately 10,200 UPS employees represented by the Teamsters. As of December 31, 2019 and 2018, we had $845 and $852 million, respectively, recognized in "Other Non-Current Liabilities" as well as $7 million as of December 31, 2019 and 2018 recorded in "Other current liabilities" on our consolidated balance sheets representing the remaining balance of the NETTI Fund withdrawal liability. This liability is payable in equal monthly installments over a remaining term of approximately 43 years. Based on the borrowing rates currently available to the Company for long-term financing of a similar maturity, the fair value of the NETTI Fund withdrawal liability as of December 31, 2019 and 2018 was $929 and $832 million, respectively. We utilized Level 2 inputs in the fair value hierarchy of valuation techniques to determine the fair value of this liability.

Multiemployer Health and Welfare Plans

We also contribute to a number of multiemployer health and welfare plans covering both active and retired employees. Healthcare benefits are provided to participants who meet certain eligibility requirements as covered under the applicable collective bargaining unit. The following table sets forth our calendar year plan contributions and accruals. Certain plans have been aggregated in the “all other multiemployer health and welfare plans” line, as the contributions to each of these individual plans are not material.

	(in millions) UPS Contributions and Accruals		
Health and Welfare Fund	**2019**	**2018**	**2017**
Bay Area Delivery Drivers	37	40	37
Central Pennsylvania Teamsters Health & Pension Fund	31	29	27
Central States, South East & South West Areas Health and Welfare Fund	2,899	2,530	2,366
Delta Health Systems—East Bay Drayage Drivers	30	30	29
Joint Council #83 Health & Welfare Fund	45	40	37
Local 804 Welfare Trust Fund	101	90	84
Milwaukee Drivers Pension Trust Fund—Milwaukee Drivers Health and Welfare Trust Fund	48	43	38
New York State Teamsters Health & Hospital Fund	71	62	59
Northern California General Teamsters (DELTA)	157	153	132
Northern New England Benefit Trust	59	54	50
Oregon / Teamster Employers Trust	51	43	38
Teamsters 170 Health & Welfare Fund	19	18	17
Teamsters Benefit Trust	47	48	46
Teamsters Local 251 Health & Insurance Plan	18	17	15
Teamsters Local 638 Health Fund	53	48	43
Teamsters Local 639—Employers Health & Pension Trust Funds	32	29	27
Teamsters Local 671 Health Services & Insurance Plan	20	19	17
Teamsters Union 25 Health Services & Insurance Plan	59	56	52
Teamsters Western Region & Local 177 Health Care Plan	769	656	605
Truck Drivers and Helpers Local 355 Baltimore Area Health & Welfare Fund	19	18	16
Utah-Idaho Teamsters Security Fund	37	32	29
Washington Teamsters Welfare Trust	67	57	52
All Other Multiemployer Health and Welfare Plans	141	156	156
Total Contributions	$ 4,810	$ 4,268	$ 3,972

NOTE 7. GOODWILL AND INTANGIBLE ASSETS

The following table indicates the allocation of goodwill by segment (in millions):

	U.S. Domestic Package	International Package	Supply Chain & Freight	Consolidated
Balance on January 1, 2018	$ 715	$ 435	$ 2,722	$ 3,872
Acquired	—	—	—	—
Currency / Other	—	(18)	(43)	(61)
Balance on December 31, 2018	$ 715	$ 417	$ 2,679	$ 3,811
Acquired	—	2	3	5
Currency / Other	—	(3)	—	(3)
Balance on December 31, 2019	$ 715	$ 416	$ 2,682	$ 3,813

2019 Goodwill Activity

The goodwill acquired in the International Package segment is related to our January 2019 acquisition of Transmodal Services Private Limited in India. The goodwill acquired in the Supply Chain & Freight segment is primarily due to July 2019 acquisitions by Marken in Europe.

The remaining change in goodwill for the International Package segment was due to immaterial purchase accounting adjustments and the impact of changes in the value of the U.S. Dollar on the translation of non-U.S. Dollar goodwill balances.

2018 Goodwill Activity

The change in goodwill for both the Supply Chain & Freight and the International Package segments was due to immaterial purchase accounting adjustments and the impact of changes in the value of the U.S. Dollar on the translation of non-U.S. Dollar goodwill balances.

Goodwill Impairment

We completed our annual goodwill impairment evaluation, as of July 1st, on a reporting unit basis. For the periods presented, no triggering events were identified that required an interim impairment test.

U.S. Domestic Package is our largest reporting segment and reporting unit. In our International Package reporting segment, we have the following reporting units: Europe, Asia, Americas and ISMEA. In our Supply Chain & Freight segment we have the following reporting units: Forwarding, Logistics, UPS Mail Innovations, UPS Freight, The UPS Store, UPS Capital, Marken and Coyote.

In assessing our goodwill for impairment, we initially evaluate qualitative factors to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the qualitative assessment is not conclusive and it is necessary to calculate the fair value of a reporting unit, then we utilize a two-step process to test goodwill for impairment. First, a comparison of the fair value of the applicable reporting unit with the aggregate carrying value, including goodwill, is performed. We primarily determine the fair value of our reporting units using a discounted cash flow model, and supplement this with observable valuation multiples for comparable companies, as applicable. If the carrying amount of a reporting unit exceeds the reporting unit's fair value, we perform the second step of the goodwill impairment test to determine the amount of impairment loss. The second step includes comparing the implied fair value of the affected reporting unit's goodwill with the carrying value of that goodwill.

In 2019, we utilized a qualitative assessment to determine that it was more likely than not that the reporting unit fair value exceeded the carrying value for U.S. Domestic Package, Forwarding, Logistics, Coyote, UPS Mail Innovations and The UPS Store. For the remaining reporting units owned at the annual goodwill impairment testing date, we utilized the two-step process to test goodwill for impairment. We did not have any goodwill impairment charges in 2019, 2018 or 2017. Cumulatively, our Supply Chain & Freight segment has recorded $622 million of goodwill impairment charges, while our International and U.S. Domestic Package segments have not recorded any goodwill impairment charges.

Intangible Assets

The following is a summary of intangible assets at December 31, 2019 and 2018 (in millions):

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Weighted-Average Amortization Period (in years)
December 31, 2019				
Capitalized software	$ 4,125	$ (2,704)	$ 1,421	6.9
Licenses	117	(64)	53	3.9
Franchise rights	146	(109)	37	20.0
Customer relationships	730	(282)	448	10.6
Trade name	200	—	200	N/A
Trademarks, patents and other	29	(21)	8	7.7
Total Intangible Assets	$ 5,347	$ (3,180)	$ 2,167	7.7
December 31, 2018				
Capitalized software	$ 3,693	$ (2,478)	$ 1,215	
Licenses	117	(36)	81	
Franchise rights	145	(105)	40	
Customer relationships	736	(217)	519	
Trade name	200	—	200	
Trademarks, patents and other	52	(31)	20	
Total Intangible Assets	$ 4,943	$ (2,867)	$ 2,075	

A trade name and licenses with carrying values of $200 and $4 million, respectively, as of December 31, 2019 are deemed to be indefinite-lived intangible assets, and therefore are not amortized. Impairment tests for indefinite-lived intangible assets are performed on an annual basis. All of our other recorded intangible assets are deemed to be finite-lived intangibles, and are thus amortized over their estimated useful lives. Impairment tests for these intangible assets are only performed when a triggering event occurs that may indicate that the carrying value of the intangible may not be recoverable. Impairments of finite-lived intangible assets were $2 and $12 million in 2019 and 2018, respectively.

Amortization of intangible assets was $377, $339 and $287 million during 2019, 2018 and 2017, respectively. Expected amortization of finite-lived intangible assets recorded as of December 31, 2019 for the next five years is as follows (in millions): 2020—$481; 2021—$403; 2022—$332; 2023—$276; 2024—$220. Amortization expense in future periods will be affected by business acquisitions, software development, licensing agreements, franchise rights purchased and other factors.

NOTE 8. DEBT AND FINANCING ARRANGEMENTS

The carrying value of our outstanding debt obligations, as of December 31, 2019 and 2018 consists of the following (in millions):

	Principal Amount	Maturity	Carrying Value 2019	Carrying Value 2018
Commercial paper	$ 3,243	2020	$ 3,234	$ 2,662
Fixed-rate senior notes:				
5.125% senior notes	1,000	2019	—	998
3.125% senior notes	1,500	2021	1,524	1,492
2.050% senior notes	700	2021	699	698
2.450% senior notes	1,000	2022	1,003	1,023
2.350% senior notes	600	2022	598	597
2.500% senior notes	1,000	2023	995	994
2.800% senior notes	500	2024	497	496
2.200% senior notes	400	2024	398	—
2.400% senior notes	500	2026	498	498
3.050% senior notes	1,000	2027	992	991
3.400% senior notes	750	2029	745	—
2.500% senior notes	400	2029	397	—
6.200% senior notes	1,500	2038	1,483	1,482
4.875% senior notes	500	2040	490	490
3.625% senior notes	375	2042	368	368
3.400% senior notes	500	2046	491	491
3.750% senior notes	1,150	2047	1,136	1,136
4.250% senior notes	750	2049	742	—
3.400% senior notes	700	2049	688	—
Floating-rate senior notes:				
Floating-rate senior notes	350	2021	349	349
Floating-rate senior notes	400	2022	399	399
Floating-rate senior notes	500	2023	499	499
Floating-rate senior notes	1,041	2049-2067	1,028	1,029
8.375% Debentures:				
8.375% debentures	424	2020	426	419
8.375% debentures	276	2030	281	274
Pound Sterling Notes:				
5.500% notes	87	2031	86	84
5.125% notes	597	2050	566	546
Euro Senior Notes:				
0.375% senior notes	783	2023	779	797
1.625% senior notes	783	2025	779	798
1.000% senior notes	560	2028	556	570
1.500% senior notes	560	2032	556	569
Floating-rate senior notes	560	2020	559	572
Canadian senior notes:				
2.125% senior notes	573	2024	571	548
Finance lease obligations	498	2020 – 2210	498	534
Facility notes and bonds	320	2029 – 2045	320	320
Other debt	8	2020 – 2025	8	13
Total debt	$ 26,388		25,238	22,736
Less: current maturities			(3,420)	(2,805)
Long-term debt			$ 21,818	$ 19,931

Commercial Paper

We are authorized to borrow up to $10.0 billion under a U.S. commercial paper program and €5.0 billion (in a variety of currencies) under a European commercial paper program. We had the following amounts outstanding under these programs as of December 31, 2019: $2.172 billion with an average interest rate of 1.90% and €949 million ($1.062 billion) with an average interest rate of -0.44%. As of December 31, 2019, we have classified the entire commercial paper balance as a current liability on our consolidated balance sheets. The amount of commercial paper outstanding under these programs in 2020 is expected to fluctuate.

Debt Classification

We have classified both our 8.375% debentures due April 2020 with a principal balance of $424 million, and our €500 million ($560 million) floating-rate senior notes due July 2020, as long-term debt based on our intent and ability to refinance the debt as of December 31, 2019. We have classified certain floating-rate senior notes that are putable by the note holders as long-term debt due to our intent and ability to refinance the debt if the put option is exercised by the note holders.

Debt Issuances

On March 15, 2019 we issued two series of notes, both in the principal amounts of $750 million. These fixed-rate notes bear interest at 3.40% and 4.25% and will mature on March 15, 2029 and March 15, 2049, respectively. Interest on the fixed-rate senior notes is payable semi-annually, beginning September 2019. The 3.40% fixed-rate senior notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of remaining scheduled payments of principal and interest due from the redemption date until three months prior to maturity, discounted to the redemption date on a semi-annual basis at the discount rate of the Treasury Rate plus 15 basis points, plus accrued and unpaid interest. The 4.25% fixed-rate senior notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of remaining scheduled payments of principal and interest due from the redemption date until six months prior to maturity discounted to the redemption date on a semi-annual basis at the discount rate of the Treasury Rate plus 20 basis points, plus accrued and unpaid interest.

On August 16, 2019 we issued three series of notes, two with principal amounts of $400 million and one in the principal amount of $700 million. These notes bear interest at 2.20%, 2.50% and 3.40%, respectively, and will mature on September 1, 2024, September 1, 2029 and September 1, 2049, respectively. Interest on the notes is payable semi-annually, beginning March 2020. The 2.20% senior notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of scheduled payments of principal and interest due from the redemption date until one month prior to maturity, discounted to the redemption date on a semi-annual basis at the discount rate of the Treasury Rate plus 10 basis points, plus accrued and unpaid interest. The 2.50% senior notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of scheduled payments of principal and interest due from the redemption date until three months prior to maturity discounted to the redemption date on a semi-annual basis at the discount rate of the Treasury Rate plus 15 basis points, plus accrued and unpaid interest. The 3.40% senior notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of scheduled payments of principal and interest due from the redemption date until six months prior to maturity, discounted to the redemption date on a semi-annual basis at the discount rate of the Treasury Rate plus 20 basis points, plus accrued and unpaid interest.

Fixed-Rate Senior Notes

All of our fixed-rate notes pay interest semi-annually, and allow for redemption by UPS at any time by paying the greater of the principal amount or a "make-whole" amount, plus accrued interest. We subsequently entered into interest rate swaps on several of these notes, which effectively converted the fixed interest rates on the notes to variable LIBOR-based interest rates. The average interest rate payable on the notes where fixed interest rates were swapped to variable-based interest rates, including the impact of the interest rate swaps, for 2019 and 2018 were as follows:

	Principal Value	Maturity	Average Effective Interest Rate 2019	Average Effective Interest Rate 2018
5.50% senior notes	$ 750	2018	—%	3.63%
5.125% senior notes	1,000	2019	4.48%	3.99%
3.125% senior notes	1,500	2021	2.59%	2.32%
2.45% senior notes	1,000	2022	3.03%	2.77%

On April 1, 2019, our $1.00 billion 5.125% senior notes matured and were repaid in full.

8.375% Debentures

The 8.375% debentures consist of two separate tranches, as follows:

- $276 million of the debentures have a maturity of April 1, 2030. These debentures have an 8.375% interest rate until April 1, 2020, and, thereafter, the interest rate will be 7.62% for the final 10 years. These debentures are redeemable in whole or in part at our option at any time. The redemption price is equal to the greater of 100% of the principal amount and accrued interest, or the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the date of redemption (at a benchmark treasury yield plus five basis points) plus accrued interest.
- $424 million of the debentures have a maturity of April 1, 2020. These debentures are not subject to redemption prior to maturity.

Interest is payable semi-annually in April and October for both tranches and neither tranche is subject to sinking fund requirements. We subsequently entered into interest rate swaps on the 2020 debentures, which effectively converted the fixed interest rates on the debentures to variable LIBOR-based interest rates. The average interest rate payable on the 2020 debentures, including the impact of the interest rate swaps, for 2019 and 2018 was 7.20% and 6.93%, respectively.

Floating-Rate Senior Notes

The floating-rate senior notes, with principal amounts totaling $1.041 billion, bear interest at either one or three-month LIBOR, less a spread ranging from 30 to 45 basis points. The average interest rate for 2019 and 2018 was 2.05% and 1.76%, respectively. These notes are callable at various times after 30 years at a stated percentage of par value, and putable by the note holders at various times after one year at a stated percentage of par value. The notes have maturities ranging from 2049 through 2067. We classified the floating-rate senior notes that are putable by the note holder as long-term liabilities, due to our intent and ability to refinance the debt if the put option is exercised by the note holder.

The remaining three floating-rate senior notes in the principal amounts of $350, $400, and $500 million, bear interest at three-month LIBOR, plus a spread ranging from 15 to 45 basis points. The average interest rate for 2019 and 2018 was 2.82% and 2.50%, respectively. These notes are not callable. The notes have maturities ranging from 2021 through 2023.

Finance Lease Obligations

We have certain property, plant and equipment subject to finance leases. For additional information on finance lease obligations, see note 10.

Facility Notes and Bonds

We have entered into agreements with certain municipalities or related entities to finance the construction of, or improvements to, facilities that support our operations in the United States. These facilities are located around airport properties in Louisville, Kentucky; Dallas, Texas; and Philadelphia, Pennsylvania. Under these arrangements, we enter into a lease or loan agreement that covers the debt service obligations on the bonds issued by these entities, as follows:

- Bonds with a principal balance of $149 million issued by the Louisville Regional Airport Authority associated with our Worldport facility in Louisville, Kentucky. The bonds, which are due in January 2029, bear interest at a variable rate, and the average interest rates for2019 and 2018 were 1.49% and 1.43%, respectively.
- Bonds with a principal balance of $42 million and due in November 2036 issued by the Louisville Regional Airport Authority associated with our air freight facility in Louisville, Kentucky. The bonds bear interest at a variable rate, and the average interest rates for 2019 and 2018 were 1.49% and 1.39%, respectively.
- Bonds with a principal balance of $29 million issued by the Dallas / Fort Worth International Airport Facility Improvement Corporation associated with our Dallas, Texas airport facilities. The bonds are due in May 2032 and bear interest at a variable rate, however the variable cash flows on the obligation have been swapped to a fixed 5.11%.
- Bonds with a principal balance of $100 million issued by the Delaware County, Pennsylvania Industrial Development Authority associated with our Philadelphia, Pennsylvania airport facilities. These bonds, which are due September 2045, bear interest at a variable rate. The average interest rate for 2019 and 2018 was 1.48% and 1.35%, respectively.

Pound Sterling Notes

The Pound Sterling notes consist of two separate tranches, as follows:

- Notes with a principal amount of £66 million accrue interest at a 5.50% fixed rate, and are due in February 2031. These notes are not callable.
- Notes with a principal amount of £455 million accrue interest at a 5.125% fixed rate, and are due in February 2050. These notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount and accrued interest, or the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the date of redemption at a benchmark U.K. government bond yield plus 15 basis points, plus accrued interest.

Canadian Dollar Senior Notes

The Canadian Dollar notes consist of a single series a follows:

- Notes in the principal amount of C$750 million, which bear interest at a 2.125% fixed interest rate and mature in May 2024. Interest on the notes is payable semi-annually. The notes are callable at our option, in whole or in part at the Government of Canada yield plus 21.5 basis points, and on or after the par call date, at par value.

Euro Senior Notes

The Euro notes consist of four separate issuances, as follows:

- Notes in the principal amount of €500 million accrue interest at a 1% fixed rate and are due in November 2028. Interest is payable annually on the notes. These notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the date of redemption at a benchmark comparable German government bond yield plus 15 basis points, plus accrued interest.
- Notes with a principal amount of €500 million accrue interest at a variable rate equal to three-month EURIBOR plus 43 basis points and are due in July 2020. Interest is payable quarterly on the notes. These notes are not callable. The notes bear interest at a variable rate, and the average interest rates for 2019 and 2018 were 0.08% and 0.11%, respectively.

- Notes with a principal amount of €700 million accrue interest at a 1.625% fixed rate and are due in November 2025. Interest is payable annually on the notes. These notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the date of redemption at a benchmark German government bond yield plus 20 basis points, plus accrued interest.
- Notes with principal amounts of €700 million and €500 million accrue interest at 0.375% and 1.500% fixed rates, respectively, and are due in November 2023 and November 2032, respectively. Interest on these notes is payable annually. The notes are callable at our option at a redemption price equal to the greater of 100% of the principal amount, or the sum of the present values of the remaining scheduled payments of principal and interest thereon discounted to the date of redemption at a benchmark comparable government bond yield plus 10 and 20 basis points, respectively, plus accrued interest.

Contractual Commitments

The following table sets forth the aggregate annual principal payments due under our long-term debt and the aggregate amounts expected to be spent for purchase commitments (in millions).

Year	Debt Principal	Purchase Commitments[1]
2020	$ 4,232	3,569
2021	2,551	1,982
2022	2,001	966
2023	2,284	323
2024	1,474	261
After 2024	12,349	201
Total	$ 24,891	$ 7,302

[1] Purchase commitments includes amounts due under aircraft leases that we entered into in 2019 and our January 29, 2020 announced commitment to purchase 10,000 electric vehicles.

As of December 31, 2019, we had outstanding letters of credit totaling approximately $1.267 billion issued in connection with our self-insurance reserves and other routine business requirements. We also issue surety bonds as an alternative to letters of credit in certain instances, and as of December 31, 2019, we had $1.327 billion of surety bonds written.

Sources of Credit

We maintain two credit agreements with a consortium of banks. One of these agreements provides revolving credit facilities of $2.0 billion, and expires on December 8, 2020. Generally, amounts outstanding under this facility bear interest at a periodic fixed rate equal to LIBOR for the applicable interest period and currency denomination, plus an applicable margin. Alternatively, a fluctuating rate of interest equal to the highest of (1) the rate of interest last quoted by The Wall Street Journal as the prime rate in the United States; (2) the Federal Funds effective rate plus 0.50%; and (3) LIBOR for a one month interest period plus 1.00%, plus an applicable margin, may be used at our discretion. In each case, the applicable margin for advances bearing interest based on LIBOR is a percentage determined by quotations from Markit Group Ltd. for our 1-year credit default swap spread, subject to a minimum rate of 0.25% and a maximum rate of 1.00%. The applicable margin for advances bearing interest based on the prime rate is 1.00% below the applicable margin for LIBOR advances (but not lower than 0.00%). We are also able to request advances under this facility based on competitive bids for the applicable interest rate. There were no amounts outstanding under this facility as of December 31, 2019.

The second agreement provides revolving credit facilities of $2.5 billion, and expires on December 11, 2023. Generally, amounts outstanding under this facility bear interest at a periodic fixed rate equal to LIBOR for the applicable interest period and currency denomination, plus an applicable margin. Alternatively, a fluctuating rate of interest equal to the highest of (1) the rate of interest last quoted by The Wall Street Journal as the prime rate in the United States; (2) the Federal Funds effective rate plus 0.50%; and (3) LIBOR for a one month interest period plus 1.00%, plus an applicable margin, may be used at our discretion. In each case, the applicable margin for advances bearing interest based on LIBOR is a percentage determined by quotations from Markit Group Ltd. for our 1-year credit default swap spread, interpolated for a period from the date of determination of such credit default swap spread in connection with a new interest period until the latest maturity date of this facility then in effect (but not less than a period of one year). The minimum applicable margin rate is 0.10% and the maximum applicable margin rate is 0.75% per annum. The applicable margin for advances bearing interest based on the prime rate is 1.00% below the applicable margin for LIBOR advances (but not less than 0.00%). We are also able to request advances under this facility based on competitive bids. There were no amounts outstanding under this facility as of December 31, 2019.

Debt Covenants

Our existing debt instruments and credit facilities subject us to certain financial covenants. As of December 31, 2019 and for all prior periods presented, we have satisfied these financial covenants. These covenants limit the amount of secured indebtedness that we may incur, and limit the amount of attributable debt in sale-leaseback transactions, to 10% of net tangible assets. As of December 31, 2019, 10% of net tangible assets is equivalent to $3.646 billion; however, we have no covered sale-leaseback transactions or secured indebtedness outstanding. We do not expect these covenants to have a material impact on our financial condition or liquidity.

Fair Value of Debt

Based on the borrowing rates currently available to the Company for long-term debt with similar terms and maturities, the fair value of long-term debt, including current maturities, is approximately $26.949 and $23.293 billion as of December 31, 2019 and 2018, respectively. We utilized Level 2 inputs in the fair value hierarchy of valuation techniques to determine the fair value of all of our debt instruments.

NOTE 9. LEGAL PROCEEDINGS AND CONTINGENCIES

We are involved in a number of judicial proceedings and other matters arising from the conduct of our business.

Although there can be no assurance as to the ultimate outcome, we have generally denied, or believe we have a meritorious defense and will deny, liability in all pending matters, including (except as otherwise noted herein) the matters described below, and we intend to vigorously defend each matter. We accrue amounts associated with legal proceedings when and to the extent a loss becomes probable and can be reasonably estimated. The actual costs of resolving legal proceedings may be substantially higher or lower than the amounts accrued on those claims.

For matters as to which we are not able to estimate a possible loss or range of losses, we are not able to determine whether any such loss will have a material adverse effect on our business, financial condition, results of operations or liquidity. For matters in this category, we have indicated in the descriptions that follow the reasons that we are unable to estimate the possible loss or range of losses.

Judicial Proceedings

In February 2015, the State and City of New York filed suit against UPS in the U.S. District Court for the Southern District of New York, arising from alleged shipments of cigarettes to New York State and City residents. The complaint asserted claims under various federal and state laws. The complaint also included a claim that UPS violated the Assurance of Discontinuance it entered into with the New York Attorney General in 2005 concerning cigarette deliveries. On March 24, 2017, the District Court issued an opinion and order finding liability against UPS on each of the plaintiffs' causes of action. On May 25, 2017, the District Court issued a corrected opinion and order on liability and an order awarding the plaintiffs damages of $9 million and penalties of $238 million. Following an appeal, on November 7, 2019, the U.S. Court of Appeals for the Second Circuit issued an order awarding the plaintiffs damages of $19 million and penalties of $79 million. An accrual of $100 million with respect to this matter is included on our consolidated balance sheets at December 31, 2019. We estimate that the amount of losses could be up to$247 million, plus interest; however, the amount of penalties ultimately payable, if any, is subject to a variety of complex factors and potential outcomes that could be determined in future legal proceedings, which would include a petition for a writ of certiorari with the U.S. Supreme Court.

We are a defendant in a number of lawsuits filed in state and federal courts containing various class action allegations under state wage-and-hour laws. At this time, we do not believe that any loss associated with any matter would have a material adverse effect on our financial condition, results of operations or liquidity. One of these matters, Hughes v. UPS Supply Chain Solutions, Inc. and United Parcel Service, Inc. had previously been certified as a class action in Kentucky state court. In the second quarter of 2019, the court granted our motion for judgment on the pleadings related to the wage-and-hour claims. The plaintiffs have appealed this decision.

Other Matters

In October 2015, the Department of Justice ("DOJ") informed us of an industry-wide inquiry into the transportation of mail under the United States Postal Service ("USPS") International Commercial Air contracts. In October 2017, we received a Civil Investigative Demand seeking certain information relating to our contracts. The DOJ has indicated it is investigating potential violations of the False Claims Act or other statutes. We are cooperating with the DOJ. We are unable to predict what action, if any, might be taken in the future by any government authorities as a result of their investigation. Accordingly, at this time, we are not able to estimate a possible loss or range of losses that may result from this matter or to determine whether such loss, if any, would have a material adverse effect on our financial condition, results of operations or liquidity.

In August 2016, Spain's National Markets and Competition Commission ("CNMC") announced an investigation into10 companies in the commercial delivery and parcel industry, including UPS, related to alleged nonaggression agreements to allocate customers. In May 2017, UPS received a Statement of Objections issued by the CNMC. In July 2017, UPS received a Proposed Decision from the CNMC. On March 8, 2018, the CNMC adopted a final decision, finding an infringement and imposing a fine on UPS of €19 million. UPS appealed the decision and in September 2018, obtained a suspension of the implementation of the decision (including payment of the fine). The appeal is pending. There are multiple factors that prevent us from being able to estimate a possible loss or range of losses that may result from this matter or to determine whether such loss, if any, would have a material adverse effect on our financial condition, results of operations or liquidity including: (1) we are vigorously defending ourselves and believe that we have a number of meritorious legal defenses; and (2) there are unresolved questions of law and fact that could be important to the ultimate resolution of this matter.

In February 2018, the Turkish Competition Authority ("Authority") opened an investigation into nine companies in the small package industry, including UPS, related to alleged customer allocations in violation of Turkish competition law. In April 2018, the Authority consolidated this investigation with two other investigations involving similar allegations. The consolidated investigation involves over 30 companies. In January 2020, the Authority held a hearing and announced a summary decision, finding an infringement and imposing an immaterial fine on UPS. We do not believe that any loss associated with this matter will have a material adverse effect on our financial condition, results of operations or liquidity.

We are a party in various other matters that arose in the normal course of business. We do not believe that the eventual resolution of these other matters (either individually or in the aggregate), including any reasonably possible losses in excess of current accruals, will have a material adverse effect on our financial condition, results of operations or liquidity.

NOTE 10. LEASES

We adopted ASU 2016-02, *Leases (Topic 842)*, on January 1, 2019. The standard requires lessees to recognize a right-of-use ("ROU") asset and lease liability for all leases. Some of our leases contain both lease and non-lease components, which we have elected to treat as a single lease component. We have also elected not to recognize leases that have an original lease term, including reasonably certain renewal or purchase options, of twelve months or less in our consolidated balance sheets for all classes of underlying assets. Lease costs for short-term leases are recognized on a straight-line basis over the lease term. We elected the package of transition practical expedients for existing contracts, which allowed us to carry forward our historical assessments of whether contracts are, or contain, leases, lease classification and determination of initial direct costs.

We lease property and equipment under finance and operating leases. We have finance and operating leases for package centers, airport facilities, warehouses, corporate office space, aircraft, aircraft engines, information technology equipment (primarily mainframes, servers and copiers), vehicles and various other equipment used in operating our business. Certain leases for real estate and aircraft contain options to purchase, extend or terminate the lease. Determining the lease term and amount of lease payments to include in the calculation of the ROU asset and lease liability for leases containing options requires the use of judgment to determine whether the exercise of an option is reasonably certain, and if the optional period and payments should be included in the calculation of the associated ROU asset and liability. In making this determination, we consider all relevant economic factors that would compel us to exercise or not exercise an option.

When our leases contain future payments that are dependent on an index or rate, such as the consumer price index, we initially measure the lease liability and ROU asset using the index or rate at the commencement date. In subsequent periods, lease payments dependent on an index or rate are not remeasured. Rather, changes to payments due to a change in an index or rate are recognized in our statements of consolidated income in the period of the change.

When available, we use the rate implicit in the lease to discount lease payments; however, the rate implicit in the lease is not readily determinable for substantially all of our leases. For these leases, we use an estimate of our incremental borrowing rate to discount lease payments based on information available at lease commencement. The incremental borrowing rate is derived using multiple inputs including our credit rating, the impact of full collateralization, lease term and denominated currency. The remaining lease terms vary from 1 month to 190 years.

Aircraft

In addition to the aircraft that we own, we have leases for 342 aircraft. Of these leased aircraft, 31 are classified as finance leases, 14 are classified as operating leases and the remaining 297 are classified as short-term leases. A majority of the obligations associated with the aircraft classified as finance leases have been legally defeased. Most of our long-term aircraft operating leases are operated by a third party to handle package and cargo volume in geographic regions where, due to government regulations, we are restricted from operating an airline.

In order to meet customers' needs, we charter aircraft to handle package and cargo volume on certain international trade lanes and domestic routes. Due to the nature of these agreements, primarily being that either party can cancel the agreement with short notice, we have classified these as short-term leases. Additionally, all of the lease payments associated with these charter agreements are variable in nature based on the number of hours flown.

Real Estate

We have operating and finance leases for package centers, airport facilities, warehouses, corporate office space and expansion facilities utilized during peak shipping periods. Many of our leases contain charges for common area maintenance or other miscellaneous expenses that are updated based on landlord estimates. Due to this variability, the cash flows associated with these charges are not included in the minimum lease payments used in determining the ROU asset and associated lease liability.

Some of our real estate leases contain options to renew or extend the lease or terminate the lease before the expiration date. These options are factored into the determination of the lease term and lease payments when their exercise is considered to be reasonably certain.

We also enter into real estate leases that contain lease incentives, such as tenant improvement allowances or move-in allowances, that are received or receivable at lease commencement. These incentives reduce lease payments for classification purposes and reduce the initial ROU asset. When lease incentives are receivable at lease commencement, they also reduce the initial lease liability.

From time to time, we enter into leases with the intention of purchasing the property, either through purchase options with a fixed price or a purchase agreement negotiated contemporaneously with the lease agreement. We classify these leases as finance leases and include the purchase date and purchase price in the lease term and lease payments, respectively, when the option to exercise or purchase is reasonably certain.

Transportation and other equipment

We enter into both long-term and short-term leases for transportation equipment to supplement our capacity or meet contractual demands. Some of these assets are leased on a month-to-month basis and the leases can be terminated without penalty. The lease term for these types of leases is determined by the length of the underlying customer contract or based on the judgment of the business unit. We also enter into multi-year leases for trailers to increase capacity during periods of high demand, which are typically only used for 90-120 days during the year. These leases are treated as short-term as the cumulative right-of-use is less than 12 months over the term of the contract.

The remainder of our leases are primarily related to equipment used in our air operations, vehicles required to meet capacity needs during periods of higher demand for our shipping services, technology equipment and office equipment used in our facilities.

Some of our transportation and technology equipment leases require us to make additional lease payments based on the underlying usage of the assets. Due to the variable nature of these costs, these are expensed as incurred and are not included in the ROU asset and lease liability.

The components of lease expense for the year endedDecember 31, 2019 are as follows (in millions):

	Year Ended December 31, 2019
Operating lease costs	$ 643
Finance lease costs:	
Amortization of assets	$ 73
Interest on lease liabilities	19
Total finance lease costs	92
Variable lease costs	206
Short-term lease costs	1,122
Total lease costs	$ 2,063

Supplemental information related to leases and location within our consolidated balance sheets are as follows (in millions, except lease term and discount rate):

		December 31, 2019
Operating Leases:		
Operating lease right-of-use assets	$	2,856
Current maturities of operating leases	$	538
Non-current operating leases		2,391
Total operating lease liabilities	$	2,929
Finance Leases:		
Aircraft	$	2,087
Buildings		272
Vehicles, plant equipment, technology equipment and other		27
Accumulated amortization		(884)
Property, plant and equipment, net	$	1,502
Current maturities of long-term debt, commercial paper and finance leases	$	181
Long-term debt and finance leases		317
Total finance lease liabilities	$	498
Weighted average remaining lease term (in years):		
Operating leases		9.7
Finance leases		8.9
Weighted average discount rate:		
Operating leases		2.78%
Finance leases		4.03%

Supplemental cash flow information related to leases is as follows (in millions):

		Year Ended December 31, 2019
Cash paid for amounts included in measurement of liabilities:		
Operating cash flows from operating leases	$	620
Operating cash flows from finance leases		19
Financing cash flows from finance leases		140
Right-of-use assets obtained in exchange for lease liabilities:		
Operating leases	$	810
Finance leases	$	110

Maturities of lease liabilities as of December 31, 2019 are as follows (in millions):

	Finance Leases	Operating Leases
2020	$ 199	$ 619
2021	44	536
2022	39	451
2023	37	360
2024	35	256
Thereafter	259	1,267
Total lease payments	613	3,489
Less: Imputed interest	(115)	(560)
Total lease obligations	498	2,929
Less: Current obligations	(181)	(538)
Long-term lease obligations	$ 317	$ 2,391

As of December 31, 2019, we have additional leases which have not commenced. These leases will commence when we are granted access to the property, such as when leasehold improvements are completed by the lessor or a certificate of occupancy is obtained. These leases will commence in 2020.

Disclosures related to periods prior to adoption of the new lease standard

Rent expense related to our operating leases was $959 and $804 million for 2018 and 2017, respectively. The following table sets forth the aggregate minimum lease payments under capital and operating leases as of December 31, 2018 (in millions):

	Capital Leases	Operating Leases
2019	$ 158	$ 578
2020	95	477
2021	42	399
2022	39	325
2023	36	262
After 2023	293	926
Total lease payments	663	2,967
Less: Imputed interest	(129)	
Total lease obligations	534	
Less: Current obligations	(140)	
Long-term lease obligations	$ 394	

NOTE 11. SHAREOWNERS' EQUITY

Capital Stock, Additional Paid-In Capital and Retained Earnings

We maintain two classes of common stock, which are distinguished from each other by their respective voting rights. Class A shares of UPS are entitled to10 votes per share, whereas class B shares are entitled to one vote per share. Class A shares are primarily held by UPS employees and retirees, as well as trusts and descendants of the Company's founders, and these shares are fully convertible into class B shares at any time. Class B shares are publicly traded on the New York Stock Exchange ("NYSE") under the symbol "UPS". Class A and B shares both have a $0.01 par value, and as of December 31, 2019, there were 4.6 billion class A shares and 5.6 billion class B shares authorized to be issued. Additionally, there are 200 million preferred shares authorized to be issued, with a par value of $0.01 per share. As of December 31, 2019, no preferred shares had been issued.

The following is a rollforward of our common stock, additional paid-in capital, retained earnings and non-controlling interests accounts for the year ended December 31, 2019, 2018 and 2017 (in millions, except per share amounts):

Year Ended December 31:	2019		2018		2017	
	Shares	Dollars	Shares	Dollars	Shares	Dollars
Class A Common Stock:						
Balance at beginning of year	163	$ 2	173	$ 2	180	$ 2
Common stock purchases	(3)	—	(3)	—	(4)	—
Stock award plans	5	—	3	—	4	—
Common stock issuances	3	—	4	—	3	—
Conversions of class A to class B common stock	(12)	—	(14)	—	(10)	—
Class A shares issued at end of year	156	$ 2	163	$ 2	173	$ 2
Class B Common Stock:						
Balance at beginning of year	696	$ 7	687	$ 7	689	$ 7
Common stock purchases	(7)	—	(5)	—	(12)	—
Conversions of class A to class B common stock	12	—	14	—	10	—
Class B shares issued at end of year	701	$ 7	696	$ 7	687	$ 7
Additional Paid-In Capital:						
Balance at beginning of year		$ —		$ —		$ —
Stock award plans		778		419		396
Common stock purchases		(1,005)		(859)		(813)
Common stock issuances		356		406		363
Option premiums received (paid)		21		34		54
Balance at end of year		$ 150		$ —		$ —
Retained Earnings:						
Balance at beginning of year		$ 8,006		$ 5,852		$ 4,880
Net income attributable to controlling interests		4,440		4,791		4,905
Dividends ($3.84, $3.64, and $3.32 per share) [1]		(3,341)		(3,189)		(2,928)
Common stock purchases		—		(141)		(1,003)
Reclassification from AOCI pursuant to the early adoption of ASU 2018-02		—		735		—
Other		—		(42)		(2)
Balance at end of year		$ 9,105		$ 8,006		$ 5,852
Non-Controlling Interests						
Balance at beginning of year		$ 16		$ 30		$ 24
Change in non-controlling interests		—		(14)		6
Balance at end of year		$ 16		$ 16		$ 30

[1] The dividend per share amount is the same for both class A and class B common stock. Dividends include $147, $178 and $157 million for 2019, 2018 and 2017, respectively, that were settled in shares of class A common stock.

In May 2016, the Board of Directors approved a share repurchase authorization of $8.0 billion for shares of class A and class B common stock, which has no expiration date. As of December 31, 2019, we had 2.334 billion of this share repurchase authorization available.

Share repurchases may be in the form of accelerated share repurchase programs, open market purchases or other such methods as we deem appropriate. The timing of share repurchases will depend upon market conditions. Unless terminated earlier by the Board, the program will expire when we have purchased all shares authorized for repurchase under the program.

For the years ended December 31, 2019, 2018 and 2017, we repurchased a total of 9.1, 8.9 and 16.1 million shares of class A and class B common stock for $1.005, $1.000 and $1.816 billion, respectively ($1.004, $1.011 and $1.813 billion in repurchases for 2019, 2018 and 2017, respectively, are reported on the cash flow statement due to the timing of settlements).

From time to time, we enter into share repurchase programs with large financial institutions to assist in our buyback of company stock. These programs may allow us to repurchase our shares at a price below the weighted average UPS share price for a given period. We did not enter into any such program during the years ended December 31, 2019, 2018 or 2017.

In order to lower the average cost of acquiring shares in our ongoing share repurchase program, we periodically enter into structured repurchase agreements involving the use of capped call options for the purchase of UPS class B shares. We pay a fixed sum of cash upon execution of each agreement in exchange for the right to receive either a pre-determined amount of cash or stock. Upon expiration of each agreement, if the closing market price of our common stock is above the pre-determined price, we will have our initial investment returned with a premium in either cash or shares (at our election). If the closing market price of our common stock is at or below the pre-determined price, we will receive the number of shares specified in the agreement. We received net premiums of $21, $34 and $54 million during the years ended December 31, 2019, 2018 and 2017, respectively, related to entering into and settling capped call options for the purchase of class B shares. As of December 31, 2019, we had no capped call options outstanding.

Accumulated Other Comprehensive Income (Loss)

We recognize activity in AOCI for unrealized holding gains and losses on available-for-sale securities, foreign currency translation adjustments, unrealized gains and losses from derivatives that qualify as hedges of cash flows and unrecognized pension and postretirement benefit costs. Additionally, effective January 1, 2018, we adopted an ASU that allows a reclassification from AOCI to retained earnings for stranded tax effects resulting from the Tax Act (see note 1 for further information). The activity in AOCI for the years ended December 31, 2019, 2018 and 2017 is as follows (in millions):

Year Ended December 31:	2019	2018	2017
Foreign Currency Translation Gain (Loss), Net of Tax:			
Balance at beginning of year	$ (1,126)	$ (930)	$ (1,016)
Translation adjustment (net of tax effect of $10, $37 and $(161))	48	(149)	86
Reclassification to retained earnings pursuant to the early adoption of ASU 2018-02	—	(47)	—
Balance at end of year	$ (1,078)	$ (1,126)	$ (930)
Unrealized Gain (Loss) on Marketable Securities, Net of Tax:			
Balance at beginning of year	$ (2)	$ (2)	$ (1)
Current period changes in fair value (net of tax effect of $4, $(1) and $(1))	11	(3)	(2)
Reclassification to earnings (net of tax effect of $(1), $1 and $1)	(5)	3	1
Balance at end of year	$ 4	$ (2)	$ (2)
Unrealized Gain (Loss) on Cash Flow Hedges, Net of Tax:			
Balance at beginning of year	$ 40	$ (366)	$ (45)
Current period changes in fair value (net of tax effect of $61, $135 and $(190))	195	429	(316)
Reclassification to retained earnings pursuant to the early adoption of ASU 2018-02	—	(79)	—
Reclassification to earnings (net of tax effect of $(39), $18 and $(3))	(123)	56	(5)
Balance at end of year	$ 112	$ 40	$ (366)
Unrecognized Pension and Postretirement Benefit Costs, Net of Tax:			
Balance at beginning of year	$ (3,906)	$ (3,569)	$ (3,421)
Reclassification to earnings (net of tax effect of $626, $439 and $269)	1,988	1,389	731
Reclassification to retained earnings pursuant to the early adoption of ASU 2018-02	—	(609)	—
Net actuarial gain (loss) and prior service cost resulting from remeasurements of plan assets and liabilities (net of tax effect of $(979), $(355) and $(180))	(3,117)	(1,117)	(879)
Balance at end of year	$ (5,035)	$ (3,906)	$ (3,569)
Accumulated other comprehensive income (loss) at end of year	$ (5,997)	$ (4,994)	$ (4,867)

Detail of the gains (losses) reclassified from AOCI to the statements of consolidated income for the years endedDecember 31, 2019, 2018 and 2017 is as follows (in millions):

Year Ended December 31:	Amount Reclassified from AOCI			
	2019	2018	2017	Affected Line Item in the Income Statement
Unrealized Gain (Loss) on Marketable Securities:				
Realized gain (loss) on sale of securities	6	(4)	(2)	Investment income (expense) and other
Income tax (expense) benefit	(1)	1	1	Income tax expense
Impact on net income	5	(3)	(1)	Net income
Unrealized Gain (Loss) on Cash Flow Hedges:				
Interest rate contracts	(15)	(24)	(27)	Interest expense
Foreign exchange contracts	177	(50)	35	Revenue
Income tax (expense) benefit	(39)	18	(3)	Income tax expense
Impact on net income	123	(56)	5	Net income
Unrecognized Pension and Postretirement Benefit Costs:				
Prior service costs	(227)	(201)	(200)	Investment income (expense) and other
Remeasurement of benefit obligation	(2,387)	(1,627)	(800)	Investment income (expense) and other
Income tax (expense) benefit	626	439	269	Income tax expense
Impact on net income	(1,988)	(1,389)	(731)	Net income
Total amount reclassified for the year	$ (1,860)	$ (1,448)	$ (727)	Net income

Deferred Compensation Obligations and Treasury Stock

We maintain a deferred compensation plan whereby certain employees were previously able to elect to defer the gains on stock option exercises by deferring the shares received upon exercise into a rabbi trust. The shares held in this trust are classified as treasury stock, and the liability to participating employees is classified as "Deferred compensation obligations" in the shareowners' equity section of the consolidated balance sheets. The number of shares needed to settle the liability for deferred compensation obligations is included in the denominator in both the basic and diluted earnings per share calculations. Employees are generally no longer able to defer the gains from stock options exercised subsequent to December 31, 2004.

Activity in the deferred compensation program for the years endedDecember 31, 2019, 2018 and 2017 is as follows (in millions):

Year Ended December 31:	2019		2018		2017	
	Shares	Dollars	Shares	Dollars	Shares	Dollars
Deferred Compensation Obligations:						
Balance at beginning of year		$ 32		$ 37		$ 45
Reinvested dividends		2		2		2
Benefit payments		(8)		(7)		(10)
Balance at end of year		$ 26		$ 32		$ 37
Treasury Stock:						
Balance at beginning of year	(1)	$ (32)	(1)	$ (37)	(1)	$ (45)
Reinvested dividends	—	(2)	—	(2)	—	(2)
Benefit payments	1	8	—	7	—	10
Balance at end of year	—	$ (26)	(1)	$ (32)	(1)	$ (37)

NOTE 12. STOCK - BASED COMPENSATION

The UPS Incentive Compensation Plan permits the grant of non-qualified and incentive stock options, stock appreciation rights, restricted stock and stock units, and restricted performance shares and units to eligible employees. On May 14, 2018 our shareholders approved our 2018 Omnibus Incentive Compensation Plan under which we are authorized to issue an additional 26 million shares. Each share issued in the form of restricted stock units and restricted performance units (collectively referred to as "Restricted Units"), stock options and other permitted awards reduces the share reserve by one share. We had 13 million shares available to be issued under the Incentive Compensation Plan as of December 31, 2019.

The primary compensation programs offered under the UPS Incentive Compensation Plan include the UPS Management Incentive Award program, the Coyote Restricted Stock Award, the UPS Long-Term Incentive Performance Award program and the UPS Stock Option program. These awards are discussed in the following paragraphs. The total expense recognized in our income statement under all stock compensation award programs was $915, $634 and $584 million during 2019, 2018 and 2017, respectively. The associated income tax benefit recognized in our statements of consolidated income was $216, $186 and $227 million during 2019, 2018 and 2017, respectively. The cash income tax benefit received from the exercise of stock options and the lapsing of Restricted Units was $148, $175 and $276 million during 2019, 2018 and 2017, respectively.

Management Incentive Award Program ("MIP")

Non-executive management earning the right to receive MIP awards is determined annually by the Salary Committee, which is comprised of executive officers of UPS. Awards granted to executive officers are determined annually by the Compensation Committee of the UPS Board of Directors. Our MIP provides, with certain exceptions, that one-half to two-thirds of the annual award will be made in Restricted Units, depending upon the level of management involved. The remaining one-third to one-half of the award is electable in the form of cash or unrestricted shares of class A common stock, and is fully vested at the time of grant.

Upon vesting, Restricted Units result in the issuance of the equivalent number of UPS class A common shares after required tax withholdings. Except in the case of death, Restricted Units granted under the MIP prior to 2019 vest over a five-year period with approximately 20% of the award vesting at each anniversary date of the grant. The grant value, less estimated forfeitures, is expensed on a straight-line basis over the requisite service period, except in the case of death, disability or retirement, in which case immediate expensing occurs. These historical awards will continue to vest through 2023.

Beginning with the MIP award in the first quarter of 2019, Restricted Units vest one year following the grant date, except in the case of death, disability or retirement, in which case immediate vesting occurs. The grant value, less estimated forfeitures, is expensed on a straight-line basis over the requisite service period, except in the case of death, disability or retirement, in which case immediate expensing occurs. All Restricted Units granted are subject to early cancellation or vesting under certain conditions. Dividends earned on Restricted Units are reinvested in additional Restricted Units at each dividend payable date until they have fully vested.

Coyote Restricted Stock Award

In August 2015 we acquired Coyote, a U.S.-based truckload brokerage company. During the third quarter of 2015, we granted Restricted Units to eligible Coyote management employees. The vesting of Restricted Units granted under this award varied between one and four years with an equal number of restricted units vesting at each anniversary date, except in the case of death or disability, in which case immediate vesting occurred. The entire grant was expensed on a straight-line basis over the requisite service period, except in the case of death or disability, in which case immediate expensing occurred. All Restricted Units granted under this award had vested as of December 31, 2019.

As of December 31, 2019, we had the following outstanding Restricted Units, including reinvested dividends, granted under the MIP:

	Shares (in thousands)	Weighted-Average Grant Date Fair Value	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Nonvested at January 1, 2019	10,139	$ 104.47		
Vested	(5,100)	102.54		
Granted	5,516	108.78		
Reinvested Dividends	410	N/A		
Forfeited / Expired	(226)	107.22		
Nonvested at December 31, 2019	10,739	$ 106.94	0.71	$ 1,257
Restricted Units Expected to Vest	12,690	$ 106.59	0.74	$ 1,485

The fair value of each Restricted Unit is the NYSE closing price of class B common stock on the date of grant. The weighted-average grant date fair value of Restricted Units granted during 2019, 2018 and 2017 was $108.78, $110.95 and $105.62, respectively. The total fair value of Restricted Units vested was $457, $596 and $534 million in 2019, 2018 and 2017, respectively. As of December 31, 2019, there was $341 million of total unrecognized compensation cost related to nonvested Restricted Units. That cost is expected to be recognized over a weighted-average period of two years and one month.

Long-Term Incentive Performance ("LTIP") Program

We award Restricted Units in conjunction with our LTIP program to certain eligible employees. Performance targets are equally-weighted among consolidated operating return on invested capital, growth in currency-constant consolidated revenue and total shareowner return relative to a peer group of companies ("RTSR"). The Restricted Units granted under this award vest at the end of a three-year period, except in the case of death, disability or retirement, in which case immediate vesting occurs on a prorated basis. The number of Restricted Units earned will be based on the percentage achievement of the performance targets set forth on the grant date. The range of percentage achievement can vary from 0% to 200% of the target award.

For the two-thirds of the award related to consolidated operating return on invested capital and growth in currency-constant consolidated revenue, we recognize the grant date fair value of these units, less estimated forfeitures, as compensation expense ratably over the vesting period, based on the number of awards expected to be earned. The remaining one-third of the award related to RTSR is valued using a Monte Carlo model. This portion of the award, less estimated forfeitures, is recognized as compensation expense ratably over the vesting period.

The weighted-average assumptions used by year, and the calculated weighted-average fair values of the RTSR portion of the grants, are as follows:

	2019	2018	2017
Risk-free interest rate	2.23%	2.61%	1.46%
Expected volatility	19.64%	16.51%	16.59%
Weighted-average fair value of units granted	$ 123.44	$ 137.57	$ 119.29
Share payout	115.04%	123.47%	113.55%

There is no expected dividend yield as units earn dividend equivalents.

As of December 31, 2019, we had the following Restricted Units outstanding, including reinvested dividends, that were granted under our LTIP program:

	Shares (in thousands)	Weighted-Average Grant Date Fair Value	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Nonvested at January 1, 2019	1,701	$ 108.63		
Vested	(898)	106.12		
Granted	974	107.30		
Reinvested Dividends	83	N/A		
Forfeited / Expired	(169)	108.60		
Nonvested at December 31, 2019	1,691	$ 109.18	1.54	$ 198
Restricted Units Expected to Vest	1,677	$ 109.16	1.55	$ 196

The fair value of each Restricted Unit is the NYSE closing price of class B common stock on the date of grant. The weighted-average grant date fair value of Restricted Units granted during 2019, 2018 and 2017 was $107.30, $111.42 and $105.65, respectively. The total fair value of Restricted Units vested was $71, $97 and $71 million in 2019, 2018 and 2017, respectively. As of December 31, 2019, there was $103 million of total unrecognized compensation cost related to nonvested Restricted Units. That cost is expected to be recognized over a weighted-average period of one year and eight months.

Non-qualified Stock Options

We maintain stock option plans, under which options are granted to purchase shares of UPS class A common stock. Stock options granted in connection with the UPS Incentive Compensation Plan must have an exercise price at least equal to the NYSE closing price of UPS class B common stock on the date the option is granted.

Executive officers and certain senior managers receive a non-qualified stock option grant annually, in which the value granted is determined as a percentage of salary. Options granted generally vest over a five-year period with approximately 20% of the award vesting at each anniversary date of the grant. All options granted are subject to earlier cancellation or vesting under certain conditions. The options granted will expire ten years after the date of the grant. Option holders may exercise their options via the payment of cash or class A common stock and new class A shares are issued upon exercise.

The following is an analysis of options to purchase shares of class A common stock issued and outstanding:

	Shares (in thousands)	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in millions)
Outstanding at January 1, 2019	1,384	$ 95.36		
Exercised	(147)	69.33		
Granted	261	111.68		
Forfeited / Expired	—	—		
Outstanding at December 31, 2019	1,498	$ 100.74	6.37	$ 24
Options Vested and Expected to Vest	1,498	$ 100.74	6.37	$ 24
Exercisable at December 31, 2019	915	$ 96.12	5.25	$ 19

The fair value of each option grant is estimated using the Black-Scholes option pricing model. The weighted-average assumptions used, by year, and the calculated weighted-average fair values of options, are as follows:

	2019	2018	2017
Expected dividend yield	2.94%	2.93%	2.89%
Risk-free interest rate	2.60%	2.84%	2.15%
Expected life in years	7.5	7.5	7.5
Expected volatility	17.79%	16.72%	17.81%
Weighted-average fair value of options granted	$ 16.34	$ 15.23	$ 14.70

Expected volatilities are based on the historical returns on our stock and the implied volatility of our publicly-traded options. The expected dividend yield is based on the recent historical dividend yields for our stock, taking into account changes in dividend policy. The risk-free interest rate is based on the term structure of interest rates at the time of the option grant. The expected life represents an estimate of the period of time options are expected to remain outstanding, and we have relied upon a combination of the observed exercise behavior of our prior grants with similar characteristics, the vesting schedule of the grants and an index of peer companies with similar grant characteristics in estimating this variable.

We received cash of $7, $12 and $41 million during 2019, 2018 and 2017, respectively, from option holders resulting from the exercise of stock options. The total intrinsic value of options exercised during 2019, 2018 and 2017 was $5, $6 and $22 million, respectively. As of December 31, 2019, there was $2 million of total unrecognized compensation cost related to nonvested options. That cost is expected to be recognized over a weighted-average period of three years and five months.

The following table summarizes information about stock options outstanding and exercisable at December 31, 2019:

	Options Outstanding			Options Exercisable	
Exercise Price Range	Shares (in thousands)	Weighted-Average Remaining Contractual Term (in years)	Weighted-Average Exercise Price	Shares (in thousands)	Weighted-Average Exercise Price
$65.01 - $80.00	157	1.52	$ 74.06	157	$ 74.06
$80.01 - $95.00	100	3.17	82.89	100	82.89
$95.01 - $110.00	985	6.75	103.93	635	103.09
$110.01 - $125.00	256	9.13	111.80	23	111.80
	1,498	6.37	$ 100.74	915	$ 96.12

Discounted Employee Stock Purchase Plan

We maintain an employee stock purchase plan for all eligible employees. Under this plan, shares of UPS class A common stock may be purchased at quarterly intervals at 95% of the NYSE closing price of UPS class B common stock on the last day of each quarterly period. Employees purchased 1, 0.9 and 0.9 million shares at average prices of $102.11, $105.53 and $108.98 per share, during 2019, 2018 and 2017, respectively. This plan is not considered to be compensatory, and therefore no compensation cost is measured for the employees' purchase rights.

NOTE 13. SEGMENT AND GEOGRAPHIC INFORMATION

We report our operations in three segments: U.S. Domestic Package operations, International Package operations and Supply Chain & Freight operations. Package operations represent our most significant business and are broken down into regional operations around the world. Regional operations managers are responsible for both domestic and export products within their geographic area.

U.S. Domestic Package

Domestic Package operations include the time-definite delivery of letters, documents and packages throughout the United States.

International Package

International Package operations include delivery to more than 220 countries and territories worldwide, including shipments wholly outside the United States, as well as shipments with either origin or destination outside the United States. Our International Package reporting segment includes the operations of our Europe, Asia, Americas and ISMEA operating segments.

Supply Chain & Freight

Supply Chain & Freight includes our Forwarding, Logistics, Coyote, Marken, UPS Mail Innovations, UPS Freight and other aggregated business units. Our Forwarding, Logistics and UPS Mail Innovations units provide services in more than 200 countries and territories worldwide and include international air and ocean freight forwarding, customs brokerage, distribution and post-sales services, mail and consulting services. UPS Freight offers a variety of less-than-truckload and truckload services to customers in North America. Coyote offers truckload brokerage services primarily in the United States. Marken is a global provider of supply chain solutions to the healthcare and life sciences industry. Other aggregated business units within this segment include The UPS Store and UPS Capital.

In evaluating financial performance, we focus on operating profit as a segment's measure of profit or loss. Operating profit is before investment income (expense) and other, interest expense and income taxes. The accounting policies of the segments are the same as those described in the "Supplemental Information - Items Affecting Comparability" section of Management's Discussion and Analysis, with certain expenses allocated between the segments using activity-based costing methods. As we operate an integrated, global multimodal network, we evaluate many of our capital expenditure decisions at a network level. Accordingly, expenditures on property, plant and equipment by segment are not presented. Unallocated assets are comprised primarily of cash, marketable securities and certain investment partnerships. In 2018, we changed the segment allocation methodology for certain shared assets. All prior periods have been recast to reflect this change in methodology.

Segment information for the years endedDecember 31, 2019, 2018 and 2017 is as follows (in millions):

	2019	2018	2017
Revenue:			
U.S. Domestic Package	$ 46,493	$ 43,593	$ 40,761
International Package	14,220	14,442	13,342
Supply Chain & Freight	13,381	13,826	12,482
Consolidated	$ 74,094	$ 71,861	$ 66,585
Operating Profit:			
U.S. Domestic Package	$ 4,164	$ 3,643	$ 4,303
International Package	2,657	2,529	2,429
Supply Chain & Freight	977	852	797
Consolidated	$ 7,798	$ 7,024	$ 7,529
Assets:			
U.S. Domestic Package	$ 32,795	$ 28,216	$ 25,449
International Package	14,044	12,070	10,361
Supply Chain & Freight	9,045	8,411	8,267
Unallocated	1,973	1,319	1,497
Consolidated	$ 57,857	$ 50,016	$ 45,574
Depreciation and Amortization Expense:			
U.S. Domestic Package	$ 1,520	$ 1,375	$ 1,479
International Package	547	526	509
Supply Chain & Freight	293	306	294
Consolidated	$ 2,360	$ 2,207	$ 2,282

Revenue by product type for the years endedDecember 31, 2019, 2018 and 2017 is as follows (in millions):

	2019	2018	2017
U.S. Domestic Package:			
Next Day Air	$ 8,479	$ 7,618	$ 7,088
Deferred	5,180	4,752	4,422
Ground	32,834	31,223	29,251
Total U.S. Domestic Package	46,493	43,593	40,761
International Package:			
Domestic	2,836	2,874	2,646
Export	10,837	10,973	10,170
Cargo	547	595	526
Total International Package	14,220	14,442	13,342
Supply Chain & Freight:			
Forwarding	5,867	6,580	5,674
Logistics	3,435	3,234	3,017
Freight	3,265	3,218	3,000
Other	814	794	791
Total Supply Chain & Freight	13,381	13,826	12,482
Consolidated	$ 74,094	$ 71,861	$ 66,585

Geographic information for the years ended December 31, 2019, 2018 and 2017 is as follows (in millions):

	2019	2018	2017
United States:			
Revenue	$ 58,699	$ 56,115	$ 52,080
Long-lived assets	$ 27,976	$ 24,918	$ 21,141
International:			
Revenue	$ 15,395	$ 15,746	$ 14,505
Long-lived assets	$ 9,567	$ 8,577	$ 7,966
Consolidated:			
Revenue	$ 74,094	$ 71,861	$ 66,585
Long-lived assets	$ 37,543	$ 33,495	$ 29,107

Long-lived assets include property, plant and equipment, pension and postretirement benefit assets, long-term investments, goodwill and intangible assets.

No countries outside of the United States provided 10% or more of consolidated revenue for the years ended December 31, 2019, 2018 or 2017. For the year ended December 31, 2019, Amazon.com, Inc. and its affiliates ("Amazon") represented 11.6% of our consolidated revenues. Substantially all of this revenue was attributed to our U.S. Domestic Package segment. As of December 31, 2019, Amazon accounted for approximately 16.9% of accounts receivable, net, included within the consolidated balance sheets. No single customer represented 10% or more of our consolidated revenues for the years ended December 31, 2018 or 2017.

NOTE 14. INCOME TAXES

The income tax expense (benefit) for the years ended December 31, 2019, 2018 and 2017 consists of the following (in millions):

		2019		2018		2017
Current:						
U.S. Federal	$	570	$	89	$	671
U.S. State and Local		183		7		49
Non-U.S.		359		374		288
Total Current		1,112		470		1,008
Deferred:						
U.S. Federal		255		668		1,115
U.S. State and Local		(93)		75		118
Non-U.S.		(62)		15		(9)
Total Deferred		100		758		1,224
Total Income Tax Expense	$	1,212	$	1,228	$	2,232

Income before income taxes includes the following components (in millions):

		2019		2018		2017
United States	$	3,972	$	4,307	$	5,987
Non-U.S.		1,680		1,712		1,150
Total Income Before Income Taxes:	$	5,652	$	6,019	$	7,137

A reconciliation of the statutory federal income tax rate to the effective income tax rate for the years ended December 31, 2019, 2018 and 2017 consists of the following:

	2019	2018	2017
Statutory U.S. federal income tax rate	21.0 %	21.0 %	35.0 %
U.S. state and local income taxes (net of federal benefit)	1.4	1.4	1.5
Non-U.S. tax rate differential	0.3	0.2	(2.0)
U.S. federal tax credits	(1.4)	(1.1)	(1.8)
Income tax benefit from the Tax Cuts and Jobs Act and other non-U.S. tax law changes	—	—	(3.6)
Defined benefit plans mark-to-market charge tax rate differential [1]	—	—	1.5
Non-U.S. valuation allowance release	(1.2)	—	—
Other	1.3	(1.1)	0.7
Effective income tax rate	21.4 %	20.4 %	31.3 %

[1] Impact of applying Tax Act corporate rate enacted of 21% versus 35%

Our effective tax rate is affected by recurring factors, such as statutory tax rates in the jurisdictions in which we operate and the relative amounts of taxable income we earn in those jurisdictions. It is also affected by discrete items that may occur in any given year, but may not be consistent from year to year.

Our effective tax rate was 21.4% in 2019, compared with 20.4% in 2018 and 31.3% in 2017, primarily due to the effects of the aforementioned recurring factors and the following discrete tax items.

Tax Cuts and Jobs Act

On December 22, 2017, the United States enacted into law the Tax Act. The Tax Act made broad and complex changes to the U.S. tax code, including a permanent corporate rate reduction to 21% and a transition to a territorial international system effective in 2018. The Tax Act includes provisions that affected 2017, including: (1) requiring a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries (“Transition Tax”) that is payable over eight years; (2) requiring a remeasurement of all U.S. deferred tax assets and liabilities to the newly enacted corporate tax rate of 21% and (3) providing for additional first-year depreciation that allows full expensing of qualified property placed into service after September 27, 2017.

In late December 2017, the SEC staff issued Staff Accounting Bulletin ("SAB") 118, which provided guidance on accounting for the tax effects of the Tax Act. SAB 118 provided a measurement period up to one year from the Tax Act enactment date for companies to complete the related accounting under GAAP. We recorded a $272 million provisional benefit inclusive of our Transition Tax liability, the change in our indefinite reinvestment assertion for certain foreign subsidiaries and the remeasurement of our U.S. net deferred tax liabilities for the year ended December 31, 2017. During the fourth quarter of 2018, we completed our accounting for the Tax Act based on the current regulatory guidance available at the end of the SAB 118 measurement period and recorded no material net adjustments to our provisional estimate.

The Tax Act also enacted provisions that took effect in 2018 including but not limited to: (1) a provision that imposes U.S. tax on certain foreign subsidiary income known as GILTI, (2) a new deduction for Foreign-Derived Intangible Income ("FDII"), (3) additional limitations on tax deductions for expenses such as interest and executive compensation and (4) a new minimum tax based on certain payments from a U.S. company to foreign related parties known as the Base Erosion and Anti-Abuse Tax ("BEAT").

We included the impact of each of the newly effective Tax Act provisions in our computation of the 2018 and 2019 income tax expense. Throughout 2018 and 2019, the U.S. Department of the Treasury and IRS issued regulatory guidance clarifying certain provisions of the Tax Act, and we anticipate additional regulatory guidance and technical clarifications during future years. When additional guidance is issued, we will recognize the related tax impact in the quarter of enactment.

2019 Discrete Items

In the fourth quarter of 2019, we recognized an income tax benefit of $571 million related to pre-tax mark-to-market losses of$2.387 billion on our pension and postretirement defined benefit plans. This income tax benefit was generated at a higher average tax rate than the 2019 U.S. federal statutory tax rate because it included the effect of U.S. state and local and foreign taxes.

We recorded pre-tax transformation strategy costs of $255 million during the year ended December 31, 2019. As a result, we recorded an additional income tax benefit of $59 million. This income tax benefit was generated at a higher average tax rate than the 2019 U.S. federal statutory tax rate due to the effect of U.S. state and local and foreign taxes.

As discussed in note 9, $97 million of legal contingencies and expenses were accrued during 2019 in respect of certain legal proceedings for which we recorded an additional income tax benefit of $6 million. This income tax benefit was generated at a lower average tax rate than the U.S. federal statutory tax rate due to the portion of the accrual related to penalties, which are not deductible for tax purposes.

As of December 31, 2018, we maintained a valuation allowance against certain deferred tax assets, primarily related to foreign net operating loss carryforwards. As of each reporting date, we consider new evidence, both positive and negative, that could affect the future realization of deferred tax assets. During 2019, we determined that there is sufficient positive evidence to conclude that it is more likely than not that the deferred tax assets related to certain foreign net operating loss carryforwards will be realized. This conclusion is primarily related to achieving cumulative three-year income and anticipated future earnings within the relevant jurisdiction. Accordingly, we reversed the related valuation allowance and recognized a discrete tax benefit of approximately $68 million.

Other factors that impacted our 2019 effective tax rate include favorable tax provisions enacted in the Taxpayer Certainty and Disaster Tax Relief Act of 2019.

2018 Discrete Items

The decrease in our effective tax rate from 2017 to 2018 was primarily due to the impact of the Tax Act which reduced the U.S. federal corporate income tax rate from 35% to 21% effective January 1, 2018.

In the fourth quarter of 2018, we recognized an income tax benefit of $390 million related to pre-tax mark-to-market losses of $1.627 billion on our pension and postretirement defined benefit plans. This income tax benefit was generated at a higher average tax rate than the 2018 U.S. federal statutory tax rate because it included the effect of U.S. state and local and foreign taxes.

We recorded pre-tax transformation strategy costs of $360 million during the year ended December 31, 2018. As a result, we recorded an additional income tax benefit of $87 million. This income tax benefit was generated at a higher average tax rate than the 2018 U.S. federal statutory tax rate due to the effect of U.S. state and local and foreign taxes.

The recognition of excess tax benefits and deficiencies related to share-based compensation in income tax expense resulted in a net tax benefit of $8 million and reduced our effective tax rate by 0.6% during the year ended December 31, 2018.

Other factors that impacted our 2018 effective tax rate include favorable resolutions of uncertain tax positions, favorable U.S. state and local tax law changes, favorable tax provisions enacted in the Bipartisan Budget Act of 2018 and discrete tax credits associated with the filing of our 2017 U.S. federal income tax return.

*2017 Discrete Item*s

In addition to the impact of the Tax Act described above, the following discrete items were recorded during the year ended December 31, 2017.

In the fourth quarter of 2017, we recognized an income tax benefit of $193 million related to pre-tax mark-to-market losses of $800 million on our pension and postretirement defined benefit plans. This income tax benefit was generated at a lower average tax rate than the 2017 U.S. federal statutory tax rate due to future tax rate changes enacted by the Tax Act and differences between U.S. and foreign statutory rates, which was partially offset by the effect of U.S. state and local taxes.

In the fourth quarter of 2017, tax law changes were enacted in certain non-U.S. jurisdictions in which we operate. As a result, we recorded a decrease to our foreign net deferred tax assets of $14 million with a corresponding net increase to deferred tax expense of $14 million.

In the first quarter of 2017, we adopted a new accounting standard that requires the recognition of excess tax benefits related to share-based compensation in income tax expense, which resulted in tax benefits for the year ended December 31, 2017 of $71 million and reduced our effective tax rate by 1.0%.

Other Items

Beginning in 2012, we were granted a tax incentive for certain of our non-U.S. operations, which is effective through December 31, 2021. The tax incentive is conditional upon our meeting specific employment and investment thresholds. The impact of this tax incentive decreased non-U.S. tax expense by $27 million, $27 million and $24 million (increased diluted earnings per share by $0.03, $0.03 and $0.03) for 2019, 2018 and 2017, respectively.

Deferred income tax assets and liabilities are comprised of the following atDecember 31, 2019 and 2018 (in millions):

	2019	2018
Fixed assets and capitalized software	$ (4,720)	$ (4,010)
Operating lease right-of-use assets	(685)	—
Other	(538)	(493)
Deferred tax liabilities	(5,943)	(4,503)
Pension and postretirement benefits	2,522	1,743
Loss and credit carryforwards	328	298
Insurance reserves	413	437
Stock compensation	249	189
Accrued employee compensation	287	274
Operating lease liabilities	691	—
Other	205	196
Deferred tax assets	4,695	3,137
Deferred tax assets valuation allowance	(54)	(112)
Deferred tax asset (net of valuation allowance)	4,641	3,025
Net deferred tax asset (liability)	$ (1,302)	$ (1,478)
Amounts recognized in the consolidated balance sheets:		
Deferred tax assets	$ 330	$ 141
Deferred tax liabilities	(1,632)	(1,619)
Net deferred tax asset (liability)	$ (1,302)	$ (1,478)

The valuation allowance changed by $(58), $(14) and $(33) million during the years ended December 31, 2019, 2018 and 2017, respectively.

We have a U.S. federal capital loss carryforward of $21 million as of December 31, 2019, $20 million of which expires on December 31, 2021, and the remainder of which expires on December 31, 2022. In addition, we have U.S. federal tax credit carryforwards of $3 million, which can be carried forward for periods ranging from ten years to twenty years.

Further, we have U.S. state and local operating loss and credit carryforwards as follows (in millions):

	2019	2018
U.S. state and local operating loss carryforwards	$ 1,374	$ 1,014
U.S. state and local credit carryforwards	$ 110	$ 80

The U.S. state and local operating loss carryforwards and credits can be carried forward for periods ranging from one year to indefinitely. We also have non-U.S. loss carryforwards of $670 million as of December 31, 2019, the majority of which may be carried forward indefinitely. As indicated in the table above, we have established a valuation allowance for certain U.S. federal, state and non-U.S. carryforwards due to the uncertainty resulting from a lack of previous taxable income within the applicable tax jurisdictions and other limitations.

Undistributed earnings and profits ("E&P") of our foreign subsidiaries amounted to$6.060 billion at December 31, 2019. As a result of the Tax Act, during the year ended December 31, 2017, we changed our indefinite reinvestment assertion with respect to the earnings of certain foreign subsidiaries. For all other foreign subsidiaries, we continue to assert that these earnings are indefinitely reinvested. $1.597 billion of the undistributed E&P of our foreign subsidiaries is considered to be indefinitely reinvested and, accordingly, no deferred income taxes have been provided thereon. Upon distribution of those earnings in the form of dividends or otherwise, we would be subject to U.S. state and local taxes and withholding taxes payable in various jurisdictions. Determination of the amount of unrecognized deferred income tax liability is not practicable because of the complexities associated with its hypothetical calculation.

The following table summarizes the activity related to our uncertain tax positions (in millions):

	Tax	Interest	Penalties
Balance at January 1, 2017	$ 144	$ 50	$ 6
Additions for tax positions of the current year	16	—	—
Additions for tax positions of prior years	33	14	3
Reductions for tax positions of prior years for:			
Changes based on facts and circumstances	(24)	(18)	—
Settlements during the period	(6)	(3)	—
Lapses of applicable statute of limitations	(3)	—	—
Balance at December 31, 2017	160	43	9
Additions for tax positions of the current year	47	—	1
Additions for tax positions of prior years	7	10	—
Reductions for tax positions of prior years for:			
Changes based on facts and circumstances	(43)	(8)	(5)
Settlements during the period	(1)	(1)	—
Lapses of applicable statute of limitations	(3)	—	—
Balance at December 31, 2018	167	44	5
Additions for tax positions of the current year	6	—	—
Additions for tax positions of prior years	51	13	—
Reductions for tax positions of prior years for:			
Changes based on facts and circumstances	(45)	(4)	(1)
Settlements during the period	(3)	(1)	—
Lapses of applicable statute of limitations	(4)	—	—
Balance at December 31, 2019	$ 172	$ 52	$ 4

The total amount of gross uncertain tax positions as ofDecember 31, 2019, 2018 and 2017 that, if recognized, would affect the effective tax rate was $171, $165 and $159 million, respectively. Our continuing policy is to recognize interest and penalties associated with income tax matters as a component of income tax expense.

We file income tax returns in the U.S. federal jurisdiction, most U.S. state and local jurisdictions, and many non-U.S. jurisdictions. We have substantially resolved all U.S. federal income tax matters for tax years prior to 2015.

A number of years may elapse before an uncertain tax position is audited and ultimately settled. It is difficult to predict the ultimate outcome or the timing of resolution for uncertain tax positions. It is reasonably possible that the liability for uncertain tax positions could significantly increase or decrease within the next twelve months. Items that may cause changes to uncertain tax positions include the timing of interest deductions and the allocation of income and expense between tax jurisdictions. These changes could result from the settlement of ongoing litigation, the completion of ongoing examinations, the expiration of the statute of limitations, additional regulatory guidance on the Tax Act or other unforeseen circumstances. At this time, an estimate of the range of the reasonably possible change cannot be made.

NOTE 15. EARNINGS PER SHARE

The earnings per share amounts are the same for class A and class B common shares as the holders of each class are legally entitled to equal per share distributions whether through dividends or in liquidation.

The following table sets forth the computation of basic and diluted earnings per share (in millions, except per share amounts):

	2019	2018	2017
Numerator:			
Net income attributable to common shareowners	$ 4,440	$ 4,791	$ 4,905
Denominator:			
Weighted-average shares	859	860	865
Deferred compensation obligations	—	1	1
Vested portion of restricted shares	5	5	5
Denominator for basic earnings per share	864	866	871
Effect of Dilutive Securities:			
Restricted performance units	5	4	3
Stock options	—	—	1
Denominator for diluted earnings per share	869	870	875
Basic Earnings Per Share	$ 5.14	$ 5.53	$ 5.63
Diluted Earnings Per Share	$ 5.11	$ 5.51	$ 5.61

Diluted earnings per share for the years ended December 31, 2019, 2018 and 2017 exclude the effect of 0.5, 0.2 and 0.1 million shares, respectively, of common stock that may be issued upon the exercise of employee stock options because such effect would be antidilutive.

NOTE 16. DERIVATIVE INSTRUMENTS AND RISK MANAGEMENT

Risk Management Policies

Changes in fuel prices, interest rates and foreign currency exchange rates impact our results of operations. These exposures are actively monitored by management. To manage the impact of these exposures, we enter into a variety of derivative financial instruments. Our objective is to manage, where it is deemed appropriate to do so, fluctuations in earnings and cash flows associated with changes in foreign currency rates, commodity prices and interest rates. It is our policy and practice to use derivative financial instruments only to the extent necessary to manage exposures. As we use price sensitive instruments to hedge a certain portion of our existing and anticipated transactions, we expect that any loss in value from those instruments generally would be offset by increases in the value of those hedged transactions. We do not hold or issue derivative financial instruments for trading or speculative purposes.

Credit Risk Management

The forward contracts, swaps and options discussed below contain an element of risk that the counterparties may be unable to meet the terms of the agreements; however, we seek to minimize such risk exposures for these instruments by limiting the counterparties to banks and financial institutions that meet established credit guidelines and by monitoring counterparties to prevent concentrations of credit risk with any single counterparty.

We have agreements with all of our active counterparties (covering the majority of our derivative positions) containing early termination rights and/or zero threshold bilateral collateral provisions whereby cash is required based on the net fair value of derivatives associated with those counterparties.

At December 31, 2019 and 2018, we held cash collateral of $495 and $325 million, respectively, under these agreements; this collateral is included in "Cash and cash equivalents" on the consolidated balance sheets and its use by UPS is not restricted. At December 31, 2019 and 2018 respectively, no additional collateral was required to be posted with our counterparties.

Events such as a counterparty credit rating downgrade (depending on the ultimate rating level) could also allow us to take additional protective measures such as the early termination of trades. Alternatively, we could be required to provide additional collateral or terminate transactions with certain counterparties in the event of a downgrade of our credit rating. The amount of collateral required would be determined by the net fair value of the associated derivatives with each counterparty. We have not historically incurred, and do not expect to incur in the future, any losses as a result of counterparty default.

At December 31, 2019, there were no instruments in a net liability position that were not covered by the zero threshold bilateral collateral provisions.

Types of Hedges

Commodity Risk Management

Currently, the fuel surcharges that we apply to our domestic and international package and less-than-truckload services are the primary means of reducing the risk of adverse fuel price changes on our business. In order to mitigate the impact of fuel surcharges imposed on us by outside carriers, we regularly adjust the rates we charge for our freight brokerage, inter-modal and truckload services. We periodically enter into derivative contracts on energy commodity products to manage the price risk associated with forecasted transactions involving refined fuels, principally jet-A, diesel and unleaded gasoline. The objective of the hedges is to reduce the variability of cash flows, due to changing fuel prices, associated with the forecasted transactions involving those products. We normally designate and account for these contracts as cash flow hedges of the underlying forecasted transactions involving these fuel products and, therefore, the resulting gains and losses from these hedges are recognized as a component of fuel expense or revenue when the underlying transactions occur.

Foreign Currency Risk Management

To protect against the reduction in value of forecasted foreign currency cash flows from our international package business, we maintain a foreign currency cash flow hedging program. Our most significant foreign currency exposures relate to the Euro, British Pound Sterling, Canadian Dollar, Chinese Renminbi and Hong Kong Dollar. We hedge portions of our forecasted revenue denominated in foreign currencies with option and forward contracts. We normally designate and account for these contracts as cash flow hedges of anticipated foreign currency denominated revenue and, therefore, the resulting gains and losses from these hedges are recognized as a component of international package revenue when the underlying sales transactions occur.

We also hedge portions of our anticipated cash settlements of intercompany transactions and interest payments on certain debt subject to foreign currency remeasurement using foreign currency forward contracts. We normally designate and account for these contracts as cash flow hedges of forecasted foreign currency denominated transactions; therefore, the resulting gains and losses from these hedges are recognized as a component of investment income and other when the underlying transactions are subject to currency remeasurement.

We hedge our net investment in certain foreign operations with foreign currency denominated debt instruments. The use of foreign denominated debt as the hedging instrument allows the debt to be remeasured to foreign currency translation adjustment within AOCI to offset the translation risk from those investments. Balances in the cumulative translation adjustment accounts remain until the sale or substantially complete liquidation of the foreign entity, upon which they are recognized as a component of investment income and other.

Interest Rate Risk Management

Our indebtedness under our various financing arrangements creates interest rate risk. We use a combination of derivative instruments as part of our program to manage the fixed and floating interest rate mix of our total debt portfolio and related overall cost of borrowing. The notional amount, interest payment date and maturity date of the swaps match the terms of the associated debt being hedged. Interest rate swaps allow us to maintain a target range of floating-rate debt within our capital structure.

We have designated and account for the majority of our interest rate swaps that convert fixed-rate interest payments into floating-rate interest payments as hedges of the fair value of the associated debt instruments. Therefore, the gains and losses resulting from fair value adjustments to the interest rate swaps and fair value adjustments to the associated debt instruments are recorded to interest expense in the period in which the gains and losses occur. We have designated and account for interest rate swaps that convert floating-rate interest payments into fixed-rate interest payments as cash flow hedges of the forecasted payment obligations. The gains and losses resulting from fair value adjustments to the interest rate swaps are recorded to AOCI.

We periodically hedge the forecasted fixed-coupon interest payments associated with anticipated debt offerings by using forward starting interest rate swaps, interest rate locks or similar derivatives. These agreements effectively lock a portion of our interest rate exposure between the time the agreement is entered into and the date when the debt offering is completed, thereby mitigating the impact of interest rate changes on future interest expense. These derivatives are settled commensurate with the issuance of the debt, and any gain or loss upon settlement is amortized as an adjustment to the effective interest yield on the debt.

Outstanding Positions

The notional amounts of our outstanding derivative positions were as follows as ofDecember 31, 2019 and 2018 (in millions):

		2019	2018
Currency Hedges:			
Euro	EUR	4,571	4,924
British Pound Sterling	GBP	1,494	2,037
Canadian Dollar	CAD	1,402	1,443
Hong Kong Dollar	HKD	3,327	3,642
Singapore Dollar	SGD	—	20
Interest Rate Hedges:			
Fixed to Floating Interest Rate Swaps	USD	3,674	4,674
Floating to Fixed Interest Rate Swaps	USD	778	778

As of December 31, 2019 and 2018, we had no outstanding commodity hedge positions.

Balance Sheet Recognition

The following table indicates the location in the consolidated balance sheets where our derivative assets and liabilities have been recognized, the fair value hierarchy level applicable to each derivative type and the related fair values of those derivatives (in millions).

We have master netting arrangements with substantially all of our counterparties giving us the right of offset for our derivative positions. However, we have not elected to offset the fair value positions of our derivative contracts recorded in the consolidated balance sheets. The columns labeled "Net Amounts if Right of Offset had been Applied" indicate the potential net fair value positions by type of contract and location in the consolidated balance sheets had we elected to apply the right of offset.

			Gross Amounts Presented in Consolidated Balance Sheets		Net Amounts if Right of Offset had been Applied	
Asset Derivatives	**Balance Sheet Location**	**Fair Value Hierarchy Level**	**2019**	**2018**	**2019**	**2018**
Derivatives designated as hedges:						
Foreign exchange contracts	Other current assets	Level 2	$ 138	$ 90	$ 131	$ 83
Interest rate contracts	Other current assets	Level 2	2	1	2	1
Foreign exchange contracts	Other non-current assets	Level 2	252	230	236	215
Interest rate contracts	Other non-current assets	Level 2	21	14	20	6
Derivatives not designated as hedges:						
Foreign exchange contracts	Other current assets	Level 2	7	7	7	5
Foreign exchange contracts	Other non-current assets	Level 2	—	1	—	1
Interest rate contracts	Other non-current assets	Level 2	12	18	11	18
Total Asset Derivatives			$ 432	$ 361	$ 407	$ 329

			Gross Amounts Presented in Consolidated Balance Sheets		Net Amounts if Right of Offset had been Applied	
Liability Derivatives	**Balance Sheet Location**	**Fair Value Hierarchy Level**	**2019**	**2018**	**2019**	**2018**
Derivatives designated as hedges:						
Foreign exchange contracts	Other current liabilities	Level 2	$ 7	$ 7	$ —	$ —
Foreign exchange contracts	Other non-current liabilities	Level 2	16	15	—	—
Interest rate contracts	Other non-current liabilities	Level 2	11	41	10	33
Derivatives not designated as hedges:						
Foreign exchange contracts	Other current liabilities	Level 2	—	3	—	1
Foreign exchange contracts	Other non-current liabilities	Level 2	—	1	—	1
Interest rate contracts	Other non-current liabilities	Level 2	3	—	2	—
Total Liability Derivatives			$ 37	$ 67	$ 12	$ 35

Our foreign exchange, interest rate and investment market price derivatives are largely comprised of over-the-counter derivatives, which are primarily valued using pricing models that rely on market observable inputs such as yield curves, currency exchange rates and investment forward prices; therefore, these derivatives are classified as Level 2. At December 31, 2019 and 2018 we did not have any derivatives that were classified as Level 1 (valued using quoted prices in active markets for identical assets) or Level 3 (valued using significant unobservable inputs).

Balance Sheet Location of Hedged Item in Fair Value Hedges

The following table indicates the amounts that were recorded in the consolidated balance sheets related to cumulative basis adjustments for fair value hedges as of December 31, 2019 and December 31, 2018 (in millions).

Line Item in the Consolidated Balance Sheets in Which the Hedged Item is Included	Carrying Amount of Hedged Liabilities	Cumulative Amount of Fair Value Hedge Adjustments	Carrying Amount of Hedged Liabilities	Cumulative Amount of Fair Value Hedge Adjustments
	December 31, 2019	December 31, 2019	December 31, 2018	December 31, 2018
Long-Term Debt and Finance Leases	3,234	40	4,207	16

The cumulative amount of fair value hedging losses remaining for any hedged assets and liabilities for which hedge accounting has been discontinued as of December 31, 2019 is $17 million. These amounts will be recognized over the next11 years.

Income Statement and AOCI Recognition

The following table indicates the amount of gains and losses that have been recognized in the income statement for the fair value and cash flow hedges, as well as the associated gain or (loss) for the underlying hedged item for fair value hedges for the years ended December 31, 2019 and 2018 (in millions):

Location and Amount of Gain (Loss) Recognized in Income on Fair Value and Cash Flow Hedging Relationships	Year Ended December 31, 2019 Revenue	Year Ended December 31, 2019 Interest Expense	Year Ended December 31, 2019 Investment Income and Other	Year Ended December 31, 2018 Revenue	Year Ended December 31, 2018 Interest Expense	Year Ended December 31, 2018 Investment Income and Other
Gain or (loss) on fair value hedging relationships:						
Interest Contracts:						
Hedged items	$ —	$ (38)	$ —	$ —	$ 57	$ —
Derivatives designated as hedging instruments	—	38	—	—	(57)	—
Gains or (loss) on cash flow hedging relationships:						
Interest Contracts:						
Amount of gain or (loss) reclassified from accumulated other comprehensive income	—	(15)	—	—	(24)	—
Foreign Exchange Contracts:						
Amount of gain or (loss) reclassified from accumulated other comprehensive income	177	—	—	(50)	—	—
Total amounts of income and expense line items presented in the statement of income in which the effects of fair value or cash flow hedges are recorded	$ 177	$ (15)	$ —	$ (50)	$ (24)	$ —

The following table indicates the amount of gains and (losses) that have been recognized in AOCI for the years ended December 31, 2019 and 2018 for those derivatives designated as cash flow hedges (in millions):

	Amount of Gain (Loss) Recognized in AOCI on Derivatives	
Derivative Instruments in Cash Flow Hedging Relationships	**2019**	**2018**
Interest rate contracts	$ 6	$ 1
Foreign exchange contracts	250	563
Total	$ 256	$ 564

As of December 31, 2019, there were $162 million of pre-tax gains related to cash flow hedges that are currently deferred in AOCI that are expected to be reclassified to income over the 12 month period ended December 31, 2020. The actual amounts that will be reclassified to income over the next 12 months will vary from this amount as a result of changes in market conditions. The maximum term over which we are hedging exposures to the variability of cash flows is approximately 13 years.

The following table indicates the amount of gains and losses that have been recognized in AOCI within foreign currency translation adjustment for the years ended December 31, 2019 and 2018 for those instruments designated as net investment hedges (in millions):

	Amount of Gain (Loss) Recognized in AOCI on Debt	
Non-derivative Instruments in Net Investment Hedging Relationships	**2019**	**2018**
Foreign denominated debt	$ 75	$ 211
Total	$ 75	$ 211

Additionally, we maintain interest rate swaps, foreign exchange forwards and investment market price forward contracts that are not designated as hedges. The interest rate swap contracts are intended to provide an economic hedge of portions of our outstanding debt. The foreign exchange forward contracts are intended to provide an economic offset to foreign currency remeasurement and settlement risk for certain assets and liabilities on our consolidated balance sheets. The investment market price forward contracts are intended to provide an economic offset to fair value fluctuations of certain investments in marketable securities.

We also periodically terminate interest rate swaps and foreign exchange options by entering into offsetting swap and foreign currency positions with different counterparties. As part of this process, we de-designate our original swap and foreign exchange contracts. These transactions provide an economic offset that effectively eliminates the effects of changes in market valuation.

The following is a summary of the amounts recorded in the statements of consolidated income related to fair value changes and settlements of these interest rate swaps, foreign currency forward and investment market price forward contracts not designated as hedges for the years ended December 31, 2019 and 2018 (in millions):

		Amount of Gain (Loss) Recognized in Income	
Derivative Instruments Not Designated in Hedging Relationships	**Location of Gain (Loss) Recognized in Income**	**2019**	**2018**
Interest rate contracts	Interest expense	$ (9)	$ (9)
Foreign exchange contracts	Investment income and other	(1)	(102)
Investment market price contracts	Investment income and other	—	16
Total		$ (10)	$ (95)

NOTE 17. TRANSFORMATION STRATEGY COSTS

In the first quarter of 2018, we launched the first phase of a multi-year, enterprise-wide transformation strategy impacting our organization. Over the next several years additional phases will be implemented. The program includes investments, as well as changes in processes and technology, that impact global direct and indirect operating costs.

The table below presents the transformation strategy costs for the years endedDecember 31, 2019 and 2018 (in millions):

	Year Ended December 31,	
Transformation Strategy Costs	**2019**	**2018**
Compensation and benefits	$ 166	$ 262
Total other expenses	89	98
Total Transformation Strategy Costs	$ 255	$ 360
Income Tax Benefit from Transformation Strategy Costs	(59)	(87)
After Tax Transformation Strategy Costs	$ 196	$ 273

The income tax effects of transformation strategy costs are calculated by multiplying the amount of the adjustments by the statutory tax rates applicable in each tax jurisdiction.

NOTE 18. QUARTERLY INFORMATION (UNAUDITED)

Our revenue, segment operating profit, other income and (expense), net income, basic and diluted earnings per share on a quarterly basis are presented below (in millions, except per share amounts):

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
	2019	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Revenue:								
U.S. Domestic Package	$ 10,480	$ 10,227	$ 11,150	$ 10,354	$ 11,455	$ 10,437	$ 13,408	$ 12,575
International Package	3,459	3,533	3,505	3,602	3,494	3,478	3,762	3,829
Supply Chain & Freight	3,221	3,353	3,393	3,500	3,369	3,529	3,398	3,444
Total revenue	17,160	17,113	18,048	17,456	18,318	17,444	20,568	19,848
Operating Profit:								
U.S. Domestic Package	666	756	1,208	939	1,216	949	1,074	999
International Package	528	594	663	618	667	536	799	781
Supply Chain & Freight	200	170	272	216	245	242	260	224
Total operating profit	1,394	1,520	2,143	1,773	2,128	1,727	2,133	2,004
Total Other Income and (Expense)	$ 46	$ 141	$ 61	$ 153	$ 78	$ 162	$ (2,331)	$ (1,461)
Net Income	$ 1,111	$ 1,345	$ 1,685	$ 1,485	$ 1,750	$ 1,508	$ (106)	$ 453
Net Income Per Share:								
Basic	$ 1.28	$ 1.55	$ 1.95	$ 1.71	$ 2.03	$ 1.74	$ (0.12)	$ 0.52
Diluted	$ 1.28	$ 1.55	$ 1.94	$ 1.71	$ 2.01	$ 1.73	$ (0.12)	$ 0.52

Our quarterly results were impacted by transformation strategy costs, legal contingencies and expenses and defined benefit plan mark-to-market charges. The table below presents the impact on operating profit and other income and (expense) for each period.

(in millions, except per share amounts)	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
	2019	2018	2019	2018	2019	2018	2019	2018
Impact to Operating Profit								
Transformation Strategy - Employee Benefits	$ 106	$ —	$ 2	$ 192	$ 41	$ 70	$ 17	$ —
Transformation Strategy - Other Costs	17	—	19	71	22	27	31	—
Legal Contingencies and Expenses	—	—	—	—	—	—	97	—
Allocation of Matters Impacting Operating Profit to Segments								
U.S. Domestic Package	$ 28	—	18	196	26	39	133	—
International Package	84	—	2	36	26	40	10	—
Supply Chain & Freight	11	—	1	31	11	18	2	—
Impact to Other Income and (Expense)								
Defined Benefit Plan Mark-to-Market Charges	$ —	$ —	$ —	$ —	$ —	$ —	$ 2,387	$ 1,627

Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

None.

Item 9A. *Controls and Procedures*

Evaluation of Disclosure Controls and Procedures:

As of the end of the period covered by this report, management, including our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures. Based upon, and as of the date of, the evaluation, our Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective to ensure that information required to be disclosed in the reports we file and submit under the Exchange Act is recorded, processed, summarized and reported as and when required and is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control:

There were no changes in the Company's internal control over financial reporting during the quarter endedDecember 31, 2019 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting:

UPS management is responsible for establishing and maintaining adequate internal control over financial reporting for United Parcel Service, Inc. and its subsidiaries (the "Company"). Based on the criteria for effective internal control over financial reporting established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, management has assessed the Company's internal control over financial reporting as effective as of December 31, 2019. The independent registered public accounting firm of Deloitte & Touche LLP, as auditors of the consolidated balance sheets of United Parcel Service, Inc. and its subsidiaries as of December 31, 2019 and the related statements of consolidated income, consolidated comprehensive income and consolidated cash flows for the year ended December 31, 2019, has issued an attestation report on the Company's internal control over financial reporting, which is included herein.

Report of Independent Registered Public Accounting Firm

To the Shareowners and Board of Directors of
United Parcel Service, Inc.
Atlanta, Georgia

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of United Parcel Service, Inc. and subsidiaries (the "Company") as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements as of and for the year ended December 31, 2019, of the Company and our report dated February 20, 2020, expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the Company's adoption of a new accounting standard.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

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

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

Atlanta, Georgia
February 20, 2020

Item 9B. ***Other Information***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance***

Information about our Executive Officers

Name and Office	Age	Principal Occupation and Employment For the Last Five Years
David P. Abney Chairman and Chief Executive Officer	64	Chief Executive Officer (2014 - present), Chairman (2016 - present) Senior Vice President and Chief Operating Officer (2007 - 2014).
Norman M. Brothers, Jr. Senior Vice President, General Counsel and Corporate Secretary	52	Senior Vice President, General Counsel and Corporate Secretary (2016 - present), Corporate Legal Department Manager (2014 - 2016), Vice President, Corporate Legal (2004 - 2014).
Nando Cesarone Senior Vice President and President, UPS International	48	President, UPS International (2018 - present), Europe Region Manager (2016 - 2018), Asia Pacific Region Manager (2013 - 2016).
Philippe Gilbert Senior Vice President and President, UPS Supply Chain Solutions	55	President, UPS Supply Chain Solutions (2019 - present), Regional CEO, Americas, DB Schenker Logistics (2015 - 2018), Regional CEO, West Europe, DB Schenker Logistics (2013 - 2015).
Kate M. Gutmann Senior Vice President, Chief Sales and Solutions Officer	51	Chief Sales and Solutions Officer; Senior Vice President The UPS Store and UPS Capital (2017 - present), Senior Vice President, Worldwide Sales and Solutions (2014 - 2017), President, Worldwide Sales (2011 - 2014).
Brian Newman Senior Vice President, Chief Financial Officer and Treasurer	51	Chief Financial Officer and Treasurer (2019 - present), Executive Vice President, Finance and Operations, Latin America, PepsiCo, Inc. (2017 - 2019), Executive Vice President, Global Operations, PepsiCo, Inc. (2015 - 2017), Global Head of e-Commerce, PepsiCo, Inc. (2014 - 2015).
Juan R. Perez Senior Vice President, Chief Information Officer	53	Chief Information Officer and Engineering Officer (2017 - present), Chief Information Officer (2016 - 2017), Vice President, Information Services (2011 - 2016).
Scott A. Price Senior Vice President, Chief Transformation Officer	57	Chief Strategy Transformation Officer (2017 - present), Executive Vice President of Global Leverage - Walmart International, Walmart Stores, Inc. (2017), Chief Administrative Officer and Executive Vice President - Walmart International, Walmart Stores Inc. (2016 - 2017), Chief Executive Officer and President of Walmart Asia Pte. Ltd. (2014 - 2016).
Charlene Thomas Senior Vice President, Chief Human Resources Officer	52	Chief Human Resources Officer (2019 - present), President, Human Capital Transformation (2019), West Region Manager (2018 - 2019), North Atlantic District Manager (2018), Mid-South District Manager (2016-2018), West-OPS Package Operations Manager (2016), U.S. Operations Training Staff Manager (2015-2016).
Kevin Warren Senior Vice President, Chief Marketing Officer	57	Chief Marketing Officer (2018 - present), Executive Vice President and Chief Commercial Officer, Xerox Corp. (2017 - 2018), President, Commercial Business Group, Xerox Corp. (2016 - 2017), President, Industrial, Retail and Hospitality Business Group, Xerox Corp. (2015 - 2016), President of Strategic Growth Initiatives, Xerox Corp. (2014 - 2015).
George Willis Senior Vice President and President, United States Operations	55	President, U.S. Operations (2018 - present), President, West Region (2015 - 2018), U.K., Ireland, and Nordics District Manager (2013 - 2015).

Information about our directors is presented under the caption “Our Board of Directors" in our definitive proxy statement for the Annual Meeting of Shareowners to be held on May 14, 2020 (the “Proxy Statement”) and is incorporated herein by reference.

Information about our Audit Committee is presented under the caption “Our Board of Directors - Committees of the Board of Directors” and "Audit Committee Matters" in our Proxy Statement and is incorporated herein by reference.

Information about our Code of Business Conduct is presented under the caption “Where You Can Find More Information” in Part I, Item 1 of this report.

Item 11. ***Executive Compensation***

Information about our board and executive compensation is presented under the captions “Our Board of Directors - Director Compensation" and "Executive Compensation" in our Proxy Statement and is incorporated herein by reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

Information about security ownership is presented under the caption “Ownership of Our Securities - Securities Ownership of Certain Beneficial Owners and Management” in our Proxy Statement and is incorporated herein by reference.

Information about our equity compensation plans is presented under the caption “Executive Compensation - Equity Compensation Plans” in our Proxy Statement and is incorporated herein by reference.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence***

Information about transactions with related persons is presented under the caption “Corporate Governance - Conflicts of Interest and Related Person Transactions” in our Proxy Statement and is incorporated herein by reference.

Information about director independence is presented under the caption “Corporate Governance - Director Independence” in our Proxy Statement and is incorporated herein by reference.

Item 14. ***Principal Accountant Fees and Services***

Information about aggregate fees billed to us by our principal accountant is presented under the caption “Audit Committee Matters - Principal Accounting Firm Fees” in our Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules***

(a) *Documents filed as a part of this report:*

1. *Financial Statements*.

See Item 8 for the financial statements filed with this report.

2. *Financial Statement Schedules*.

None.

3. *Exhibits*.

See the Exhibit Index below for a list of the exhibits incorporated by reference into or filed with this report.

(b) *Exhibits Required To Be Filed*

See Item 15(a)1 above

(c) *Financial Statement Schedules Required To Be Filed*

See Item 15(a) 2 above

Item 16. ***Form 10-K Summary***

None.

EXHIBIT INDEX

Exhibit No.		Description
3.1	—	Restated Certificate of Incorporation of United Parcel Service, Inc. (incorporated by reference to Exhibit 3.3 to Form 8-K filed on May 12, 2010).
3.2	—	Amended and Restated Bylaws of United Parcel Service, Inc. as of November 17, 2017 (incorporated by reference to Exhibit 3.1 to Form 8-K, filed on November 17, 2017).
4.1	—	Indenture relating to 8 3/8% Debentures due April 1, 2020 (incorporated by reference to Exhibit 4(c) to Registration Statement No. 33-32481, filed on December 7, 1989)[1].
4.2	—	Indenture dated as of December 18, 1997 (incorporated by reference to Exhibit T-3C to Form T-3 (No. 022-22295), filed on December 18, 1997) [1].
4.3	—	Indenture dated as of January 26, 1999 (incorporated by reference to Exhibit 4.1 to Pre-Effective Amendment No. 1 to Form S-3 (No. 333-08369), filed on January 26, 1999) [1].
4.4	—	Form of First Supplemental Indenture to Indenture dated as of January 26, 1999 (incorporated by reference to Exhibit 4.2 to Post-Effective Amendment No. 1 to Form S-3 (No. 333-08369-01), filed on March 15, 2000).
4.5	—	Second Supplemental Indenture dated as of September 21, 2001 to Indenture dated as of January 26, 1999 (incorporated by reference to Exhibit 4 to Form 10-Q for the quarter ended September 30, 2001).
4.6	—	Indenture dated as of August 26, 2003 (incorporated by reference to Exhibit 4.1 to Form S-3 (No. 333-108272), filed on August 27, 2003).
4.7	—	First Supplemental Indenture dated as of November 15, 2013 to Indenture dated as of August 26, 2003 (incorporated by reference to Exhibit 4.2 to Form S-3ASR (No. 333-192369), filed on November 15, 2013).
4.8	—	Second Supplemental Indenture dated as of May 18, 2017 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on May 18, 2017).
4.9	—	Form of 6.20% Senior Notes due January 15, 2038 (incorporated by reference to Exhibit 4.3 to Form 8-K, filed on January 15, 2008).
4.10	—	Form of 3.125% Senior Notes due January 15, 2021 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on November 12, 2010).
4.11	—	Form of 4.875% Senior Notes due November 15, 2040 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on November 12, 2010).
4.12	—	Form of 2.450% Senior Notes due October 1, 2022 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on September 27, 2012).
4.13	—	Form of 3.625% Senior Notes due October 1, 2042 (incorporated by reference to Exhibit 4.3 to Form 8-K, filed on September 27, 2012).
4.14	—	Form of Floating Rate Senior Notes due December 15, 2064 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on December 15, 2014).
4.15	—	Form of Floating Rate Senior Notes due September 15, 2065 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on September 17, 2015).
4.16	—	Form of Floating Rate Senior Notes due July 15, 2020 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on November 20, 2015).
4.17	—	Form of 1.625% Senior Notes due November 15, 2025 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on November 20, 2015).
4.18	—	Form of Floating Rate Senior Notes due March 15, 2066 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on April 1, 2016).
4.19	—	Form of 2.40% Senior Notes Due November 2026 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on October 25, 2016).
4.20	—	Form of 3.40% Senior Notes Due November 2046 (incorporated by reference to Exhibit 4.3 to Form 8-K, filed on October 25, 2016).

4.21	—	Form of 1.00% Senior Notes Due November 2028 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on October 25, 2016).
4.22	—	Form of Floating Rate Senior Notes due March 15, 2067 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on March 31, 2017).
4.23	—	Form of Floating Rate Senior Notes due May 16, 2022 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on May 16, 2017).
4.24	—	Form of 2.350% Senior Notes due May 16, 2022 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on May 16, 2017)
4.25	—	Form of 2.125% Senior Notes due May 21, 2024 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on May 18, 2017).
4.26	—	Form of 0.375% Senior Notes due November 15, 2023 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on November 13, 2017).
4.27	—	Form of 1.500% Senior Notes due November 15, 2032 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on November 13, 2017).
4.28	—	Form of Floating Rate Senior Notes due April 1, 2021 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on November 14, 2017).
4.29	—	Form of Floating Rate Senior Notes due April 1, 2023 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on November 14, 2017).
4.30	—	Form of 2.050% Senior Notes due April 1, 2021 (incorporated by reference to Exhibit 4.3 to Form 8-K, filed on November 14, 2017).
4.31	—	Form of 2.500% Senior Notes due April 1, 2023 (incorporated by reference to Exhibit 4.4 to Form 8-K, filed on November 14, 2017).
4.32	—	Form of 2.800% Senior Notes due November 15, 2024 (incorporated by reference to Exhibit 4.5 to Form 8-K, filed on November 14, 2017).
4.33	—	Form of 3.050% Senior Notes due November 15, 2027 (incorporated by reference to Exhibit 4.6 to Form 8-K, filed on November 14, 2017).
4.34	—	Form of 3.750% Senior Notes due November 15, 2047 (incorporated by reference to Exhibit 4.7 to Form 8-K, filed on November 14, 2017).
4.35	—	Form of Floating Rate Senior Notes due November 15, 2067 (incorporated by reference to Exhibit 4.8 to Form 8-K, filed on November 14, 2017).
4.36	—	Form of 3.400% Senior Notes due March 15, 2029 (incorporated by reference to Exhibit 4.1 to Form 8-K, filed on March 15, 2019).
4.37	—	Form of 4.250% Senior Notes due March 15, 2049 (incorporated by reference to Exhibit 4.2 to Form 8-K, filed on March 15, 2019).
4.38	—	Form of 2.200% Senior Notes due September 1, 2024 (incorporated by reference to Exhibit 4.1 to Form 8-K filed on August 16, 2019).
4.39	—	Form of 2.500% Senior Notes due September 1, 2029 (incorporated by reference to Exhibit 4.2 to Form 8-K filed on August 16, 2019).
4.40	—	Form of 3.400% Senior Notes due September 1, 2049 (incorporated by reference to Exhibit 4.3 to Form 8-K filed on August 16, 2019).
4.41	—	Description of Securities.
10.1	—	UPS Retirement Plan Amendment and Restatement Effective January 1, 2014 (incorporated by reference to Exhibit 10.1 to Form 10-K for the year ended December 31, 2014).*
10.1(a)	—	Amendment No. 1 to UPS Retirement Plan, as Amended and Restated, effective as of June 30, 2016 (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2016).*

10.1(b)	—	Amendment Four to the Amended and Restated UPS Retirement Plan effective June 23, 2017 (incorporated by reference to Exhibit 10.2 to Form 8-K, filed on June 27, 2017).*
10.2	—	UPS 401(k) Savings Plan, Amendment and Restatement effective as of January 1, 2017 (incorporated by reference to Exhibit 10.1 to Form 8-K, filed on June 27, 2017).*
10.3	—	UPS Restoration Savings Plan effective January 1, 2017 (incorporated by reference to Exhibit 10.3 to Form 8-K, filed on June 27, 2017).*
10.4	—	Amendment One to the Amended and Restated UPS Excess Coordinating Benefit Plan effective June 23, 2017 (incorporated by reference to Exhibit 10.4 to Form 8-K, filed on June 27, 2017).*
10.4(a)	—	UPS Excess Coordinating Benefit Plan, as Amended and Restated, effective as of January 1, 2012 (incorporated by reference to Exhibit 10.5 to Form 10-K for the year ended December 31, 2012).*
10.5	—	United Parcel Service, Inc. 2012 Omnibus Incentive Compensation Plan (incorporated by reference to Annex A to the Definitive Proxy Statement, filed on March 12, 2012).*
10.5(a)	—	Form of Long-Term Incentive Performance Award Agreement (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2011).*
10.5(b)	—	Form of Non-Employee Director Restricted Stock Unit Award Agreement (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2019).*
10.5(c)	—	UPS Management Incentive Program Terms and Conditions effective as of January 1, 2011 (incorporated by reference to Exhibit 10.10(3) to the Form 10-K) for the year ended December 31, 2010).*
10.5(d)	—	UPS Stock Option Program Terms and Conditions effective as of January 1, 2012 (incorporated by reference to Exhibit 10.7(4) to the Form 10-K for the year ended December 31, 2011).*
10.5(e)	—	UPS Long-Term Incentive Performance Program Terms and Conditions effective as of January 1, 2012 (incorporated by reference to Exhibit 10.7(5) to the Form 10-K for the year ended December 31, 2011).*
10.6	—	Form of UPS Deferred Compensation Plan as Amended and Restated effective January 1, 2012 (incorporated by reference to Exhibit 10.6 to Form 10-K for the year ended December 31, 2018).*
10.6(a)	—	Amendment No. 1 to Amended and Restated UPS Deferred Compensation Plan (incorporated by reference to Exhibit 10.7(1) to the Form 10-K for the year ended December 31, 2012).*
10.7	—	2015 Omnibus Incentive Compensation Plan (incorporated by reference to Annex A to the Definitive Proxy Statement filed on March 24, 2015).*
10.8	—	2018 Omnibus Incentive Compensation Plan (incorporated by reference to Annex A to the Definitive Proxy Statement filed on March 16, 2018).*
10.8(a)	—	UPS Management Incentive Program Amended and Restated Terms and Conditions effective November 8, 2018 (incorporated by reference to Exhibit 10.8(a) to Form 10-K for the year ended December 31, 2018).*
10.8(b)	—	UPS Stock Option Program Amended and Restated Terms and Conditions effective November 8, 2018 (incorporated by reference to Exhibit 10.8(b) to Form 10-K for the year ended December 31, 2018).*
10.8(c)	—	UPS Long-Term Incentive Performance Program Amended and Restated Terms and Conditions effective as of November 8, 2018 (incorporated by reference to Exhibit 10.8(c) to Form 10-K for the year ended December 31, 2018).*
10.9	—	Employment offer letter agreement between the Company and Scott Price, dated November 28, 2017 (incorporated by reference to Exhibit 10.9 to Form 10-K for the year ended December 31, 2018).*
10.10	—	Form of Protective Covenant Agreement between the Company and Scott Price (incorporated by reference to Exhibit 10.10 to Form 10-K for the year ended December 31, 2018).*
10.11	—	Employment offer letter agreement between the Company and Kevin Warren, dated May 5, 2018 (incorporated by reference to Exhibit 10.11 to Form 10-K for the year ended December 31, 2018).*
10.12	—	Form of Protective Covenant Agreement between the Company and Kevin Warren (incorporated by reference to Exhibit 10.12 to Form 10-K for the year ended December 31, 2018).*
10.13	—	Employment offer letter agreement between the Company and Brian Newman, dated August 7, 2019 (incorporated by reference to Exhibit 10.1 to Form 8-K filed on August 13, 2019).*

10.14	—	Protective Covenant Agreement between the Company and Brian Newman, dated August 7, 2019 (incorporated by reference to Exhibit 10.2 to Form 8-K filed on August 13, 2019).*
10.15	—	Transition Agreement between the Company and James J. Barber, dated October 21, 2019 (incorporated by reference to Exhibit 10.1 to Form 8-K, filed on October 22, 2019).*
10.16	—	UPS Long-Term Incentive Performance Program Amended and Restated Terms and Conditions effective as of February 13, 2020*.
21	—	Subsidiaries.
23	—	Consent of Deloitte & Touche LLP.
31.1	—	Certificate of the Principal Executive Officer Pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	—	Certificate of the Principal Financial Officer Pursuant to Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	—	Certification of the Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	—	Certification of the Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	—	The following financial information from the Annual Report on Form 10-K for the year ended December 31, 2019, formatted in Inline XBRL (Extensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Income, (iii) the Consolidated Statements of Comprehensive Income (Loss), (iv) the Consolidated Statements of Cash Flows and (v) the Notes to the Consolidated Financial Statements.
104	—	Cover Page Interactive Data File - The cover page from this Annual Report on Form 10-K for the year ended December 31, 2019 is formatted in iXBRL (included as Exhibit 101).

(1) Filed in paper format.

* Management contract or compensatory plan or arrangement.

SIGNATURES

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

UNITED PARCEL SERVICE, INC.
(REGISTRANT)

By: /S/ DAVID P. ABNEY
David P. Abney
Chairman and Chief Executive Officer (Principal Executive Officer)

Date: February 20, 2020

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

Signature	Title	Date
/S/ DAVID P. ABNEY **David P. Abney**	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	February 20, 2020
/S/ BRIAN NEWMAN **Brian Newman**	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	February 20, 2020
/S/ RODNEY C. ADKINS **Rodney C. Adkins**	Director	February 20, 2020
/S/ MICHAEL J. BURNS **Michael J. Burns**	Director	February 20, 2020
/S/ WILLIAM R. JOHNSON **William R. Johnson**	Director	February 20, 2020
/S/ ANN M. LIVERMORE **Ann M. Livermore**	Director	February 20, 2020
/S/ RUDY H.P. MARKHAM **Rudy H. P. Markham**	Director	February 20, 2020
/S/ FRANCK J. MOISON **Franck J. Moison**	Director	February 20, 2020
/S/ CLARK T. RANDT, JR. **Clark T. Randt, Jr.**	Director	February 20, 2020
/S/ CHRISTIANA SMITH SHI **Christiana Smith Shi**	Director	February 20, 2020
/S/ JOHN T. STANKEY **John T. Stankey**	Director	February 20, 2020
/S/ CAROL B. TOMÉ **Carol B. Tomé**	Director	February 20, 2020
/S/ KEVIN M. WARSH **Kevin M. Warsh**	Director	February 20, 2020

Exhibit 4.41

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

United Parcel Service, Inc. (the "Corporation," "we," "us" and "our") has six classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended: (i) our Class B Common Stock, par value $0.01 per share (our "class B common stock"), (ii) our Floating-Rate Senior Notes due 2020, (iii) our 1.625% Senior Notes due 2025, (iv) our 1.000% Senior Notes due 2028, (v) our 0.375% Senior Notes due 2023, and (vi) our 1.500% Senior Notes due 2032.

DESCRIPTION OF CLASS B COMMON STOCK

The following summary description sets forth some of the general terms and provisions of our Class B common stock. The description of our Class B common stock is a summary and is subject to and qualified by reference to the applicable provisions of our restated certificate of incorporation (our "certificate of incorporation"), our amended and restated bylaws (our "bylaws"), and relevant provisions of Delaware law. Our certificate of incorporation and bylaws have been incorporated by reference or filed as an exhibit to the Annual Report on Form 10-K to which this description is an exhibit.

General

We are authorized to issue a total of 10,200,000,000 shares of common stock, of which:

- 4,600,000,000 are shares of class A common stock, par value $.01 per share our ("class A common stock," and together with our class B common stock, our "common stock"), and
- 5,600,000,000 are shares of class B common stock.

Our board of directors has the authority to make, alter, amend and repeal our bylaws in any manner not inconsistent with Delaware law or our certificate of incorporation.

Voting Rights

Generally, all shares of our common stock have the same relative rights, preferences and limitations, except as follows:

- shares of class A common stock have 10 votes per share;
- shares of class B common stock have one vote per share; and
- shares of class A common stock may be converted at any time by the holder into an equal number of shares of class B common stock and, if transferred to certain transferees, are automatically converted into shares of class B common stock immediately upon transfer.

Except as otherwise required by law, our certificate of incorporation or our bylaws, (1) the holders of each class of common stock will vote together as a single class, subject to any right that may be conferred upon holders of preferred stock to vote together with holders of common stock, on all matters submitted to a vote of stockholders of the Corporation and (2) matters submitted to a vote of stockholders will be approved by the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote thereon.

Our certificate of incorporation requires a vote of at least 80% of the voting power of all outstanding shares of our capital stock entitled to vote generally in the election of directors to amend provisions of our certificate of incorporation prohibiting stockholder action by written consent and relating to calling a special meeting of stockholders and the business to be transacted at such meeting.

Subject to certain exceptions specified in our certificate of incorporation, our certificate of incorporation limits the voting rights of any person who is the beneficial owner (as defined in our certificate of incorporation) of more than 25% of the voting power of the then outstanding shares of our capital stock entitled to vote generally in the election of directors. Our certificate of incorporation requires a vote of at least 80% of the voting power of all outstanding shares of our capital stock entitled to vote generally in the election of directors (after taking into account this provision) to amend this provision of our certificate of incorporation.

Our board of directors is not classified, and holders of our common stock do not have cumulative voting rights.

Dividend Rights

Dividends may be paid on our common stock out of funds legally available for dividends, when and if declared by our board of directors. In the case of a distribution of our common stock, each class of common stock receives a distribution of only shares of the same class of common stock. For example, only shares of class B common stock may be distributed with respect to class B common stock.

Liquidation, Dissolution or Similar Rights

Holders of our common stock are entitled to share ratably in any dividends and in any assets available for distribution on liquidation, dissolution or winding-up, subject, if any of our preferred stock is then outstanding, to any preferential rights of such preferred stock.

No Preemptive, Redemption or Conversion Rights

Our common stock is not redeemable, has no sinking fund provision or subscription rights and does not entitle the holder to any preemptive rights.

Preferred Stock

We are authorized to issue up to 200,000,000 shares of preferred stock, par value $0.01 per share. No shares of preferred stock are currently outstanding. Subject to limitations prescribed by law, the board of directors is authorized at any time to (i) issue one or more series of preferred stock, (ii) determine the designation for any series by number, letter or title that shall distinguish the series from any other series of preferred stock; and (iii) determine the number of shares in any series. The board of directors is further authorized to determine, for each series of preferred stock, (a) whether dividends on that series of preferred stock will be cumulative, noncumulative or partially cumulative, (b) the dividend rate (or method for determining the rate), (c) the liquidation preference per share of that series of preferred stock, if any, (d) any conversion provisions applicable to that series of preferred stock, (e) any redemption or sinking fund provisions applicable to that series of preferred stock, (f) the voting rights of that series of preferred stock, if any, and (g) the terms of any other preferences or rights, if any, applicable to that series of preferred stock. Our board of directors, without shareowner approval, may issue preferred stock with voting and conversion rights, which could adversely affect the voting power of the holders of common stock. If we issue preferred stock, it may have the effect of delaying, deferring or preventing a change of control.

Forum Selection Clause

Under our bylaws, unless the Corporation, in writing, selects or consents to the selection of an alternative forum, the sole and exclusive forum for any current or former stockholder (including any current or former beneficial owner) to bring internal corporate claims (as defined in our bylaws), to the fullest extent permitted by law, and subject to applicable jurisdictional requirements, shall be the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court or a federal court located within the State of Delaware).

DESCRIPTION OF DEBT SECURITIES

Description of Floating-Rate Senior Notes due 2020, 1.625% Senior Notes due 2025, 1.000% Senior Notes due 2028, 0.375% Senior Notes due 2023 and 1.500% Senior Notes due 2032

The following summary of our above-referenced debt securities is based on and qualified by the indenture, dated as of August 26, 2003, as supplemented from time to time, entered into with The Bank of New York Mellon Trust Company, N.A. (as successor to Citibank, N.A.), as trustee (the “indenture”), and the Floating-Rate Senior Notes due 2020 (the “Floating Rate Notes”), 1.625% Senior Notes due 2025 (the “2025 Notes”), 1.000% Senior Notes due 2028 (the “2028 Notes”), 0.375% Senior Notes due 2023 (the “2023 Notes”) and 1.500% Senior Notes due 2032 (the “2032 Notes”; the 2025 Notes, 2028 Notes, 2023 Notes and 2032 Notes collectively, the “Fixed Rate Notes”; the Fixed Rate Notes together with the Floating Rate Notes, the “notes”). For a complete description of the terms and provisions of our notes, refer to the indenture and the forms of notes, each of which is incorporated by reference or filed as an exhibit to this Annual Report on Form 10-K.

The term "business day" means any day, other than a Saturday or Sunday, (i) which is not a day on which banking institutions in the City of New York or London are authorized or required by law or executive order to close and (ii) on which the Trans-European Automated Real-time Gross Settlement Express Transfer system, or the TARGET2 system, or any successor thereto, operates.

Listing

The notes are listed on the New York Stock Exchange.

The Floating Rate Notes

General

The Floating Rate Notes:

- were issued in an aggregate initial principal amount of €500,000,000, subject to our ability to issue additional Floating Rate Notes which may be of the same series as the Floating Rate Notes as described under "—Further Issues,"
- mature on July 15, 2020,
- are our unsecured and unsubordinated obligations, ranking equally with our other present and future outstanding unsecured and unsubordinated indebtedness,
- were issued as a separate series under the indenture,
- are not redeemable by us prior to the stated maturity except upon certain tax events described herein,
- are not repayable at the option of the holders prior to the stated maturity, and
- are not subject to any sinking fund.

Interest

The Bank of New York Mellon, London Branch, or such other person appointed by us, acts as calculation agent for the Floating Rate Notes.

The Floating Rate Notes bear interest at a floating rate determined in the manner provided below, payable quarterly in arrears on January 15, April 15, July 15 and October 15 of each year and on the maturity date or any redemption date of the Floating Rate Notes (each, a "Floating Rate Notes Interest Payment Date") to the persons in whose names the Floating Rate Notes are registered at the close of business on the 15th calendar day (whether or not a business day) immediately preceding the related Floating Rate Notes Interest Payment Date or, if the notes are represented by one or more global notes, the close of business on the business day (for this purpose a day on which Clearstream and Euroclear are open for business) immediately preceding the related Floating Rate Notes Interest Payment Date; provided, however, that interest payable on the maturity date or any redemption date shall be payable to the person to whom the principal of such Floating Rate Notes shall be payable.

If any Floating Rate Notes Interest Payment Date (other than the maturity date or any redemption date) falls on a day that is not a business day, the Floating Rate Notes Interest Payment Date will be postponed to the next succeeding business day and interest will accrue to but excluding such Floating Rate Notes Interest Payment Date, except that if such business day falls in the next succeeding calendar month, the applicable Floating Rate Notes Interest Payment Date will be the immediately preceding business day. If the maturity date or any redemption date of the Floating Rate Notes falls on a day that is not a business day, the payment of principal, premium, if any, and interest, if any, otherwise payable on such date will be postponed to the next succeeding business day, and no interest on such payment will accrue from and after the maturity date or such redemption date, as applicable. The rights of holders of beneficial interests of Floating Rate Notes to receive the payments of interest on such notes are subject to the applicable procedures of Euroclear and Clearstream.

The interest rate resets quarterly on January 15, April 15, July 15 and October 15 of each year (each an "Interest Reset Date"). However, if any Interest Reset Date would otherwise be a day that is not a business day, such Interest Reset Date will be the next succeeding day that is a business day, except that if the next succeeding business day falls in the next succeeding calendar month, the applicable Interest Reset Date will be the immediately preceding business day.

The interest periods are the periods from and including an Interest Reset Date to but excluding the immediately succeeding Interest Reset Date, except that the final interest period will be the period from and including the Interest Reset Date immediately preceding the maturity date to but excluding the maturity date (each an "Interest Period"). The interest rate per annum for the Floating Rate Notes in any Interest Period will be equal to Three-Month EURIBOR plus 43 basis points (0.43%) (the "Interest Rate"), as determined by the calculation agent. However, the minimum interest rate on the Floating Rate Notes shall not be less than 0.000%. The Interest Rate in effect for the 15 calendar days prior to any redemption date earlier than the maturity date will be the Interest Rate in effect on the 15th day preceding such earlier redemption date.

The Interest Rate on the Floating Rate Notes is limited to the maximum rate permitted by New York law, as the same may be modified by United States law of general application.

Upon the request of any holder of Floating Rate Notes, the calculation agent will provide the Interest Rate then in effect and, if determined, the Interest Rate that will become effective on the next Interest Reset Date.

The calculation agent will determine Three-Month EURIBOR for each Interest Period on the second TARGET System Day prior to the first day of such Interest Period (the "Interest Determination Date").

"Three-Month EURIBOR" and "Six-Month EURIBOR," with respect to any Interest Determination Date, are the offered rates for deposits of euros having maturities of three months and six months, respectively, that appear on "Reuters Page EURIBOR 01" at approximately

11:00 a.m., Brussels time, on such Interest Determination Date. If on an Interest Determination Date, such rate does not appear on the "Reuters Page EURIBOR 01" as of 11:00 a.m., Brussels time, or if "Reuters Page EURIBOR 01" is not available on such date, the calculation agent will obtain such rate from Bloomberg L.P.'s page "BBAM."

If no offered rate appears on "Reuters Page EURIBOR 01" or Bloomberg L.P.'s page "BBAM" on an Interest Determination Date, Three-Month EURIBOR, will be determined for such Interest Determination Date on the basis of the rates at approximately 11:00 a.m., Brussels time, on such Interest Determination Date at which deposits in euros are offered to prime banks in the euro-zone inter-bank market by the principal euro-zone office of each of four major banks in such market selected and identified by us (the "Reference Banks"), for a term of three months commencing on the applicable Interest Reset Date and in a principal amount of not less than €1,000,000 that is representative for a single transaction in euros in such market at such time. We will ensure the calculation agent is provided with the complete contact details of the relevant personnel at each of the Reference Banks that they will be required to contact in order to obtain the relevant Interest Rate. The calculation agent will request the principal euro-zone office of each of such banks to provide a quotation of its rate. If at least two such quotations are provided, Three-Month EURIBOR for such Interest Period will be the arithmetic mean (rounded upwards) of such quotations. If fewer than two such quotations are provided, Three-Month EURIBOR for such Interest Period will be the arithmetic mean (rounded upwards) of the rates quoted at approximately 11:00 a.m., Brussels time, on such Interest Determination Date by three major banks in the euro-zone, selected and identified by us, for loans in euros to leading European banks, for a term of three months commencing on the applicable Interest Reset Date and in a principal amount of not less than €1,000,000 that is representative for a single transaction in such market at such time; provided, however, that if the banks so selected are not quoting as mentioned above, the Interest Rate will be the same as the Interest Rate determined on the immediately preceding Interest Reset Date, or, if none, the Interest Rate will be the initial interest rate.

All percentages resulting from any calculation of any Interest Rate for the Floating Rate Notes will be rounded, if necessary, to the nearest one hundred thousandth of a percentage point, with five one-millionths of a percentage point rounded upward (*e.g.*, 9.876545% (or .09876545) would be rounded to 9.87655% (or .0987655)), and all euro amounts will be rounded to the nearest cent, with one-half cent being rounded upward. The amount of interest payable in respect of each Floating Rate Note will be calculated by applying the applicable Interest Rate for such Interest Period to the outstanding principal amount of such Floating Rate Notes, multiplying the product by the actual number of days in such Interest Period and dividing by 360. Each calculation of the Interest Rate on the Floating Rate Notes by the calculation agent will (in the absence of manifest error) be final and binding on us, the trustee and the noteholders of the Floating Rate Notes.

Promptly upon such determination, the calculation agent will notify us and the trustee (if the calculation agent is not the trustee) of the Interest Rate for the new Interest Period.

The Fixed Rate Notes

General

The Fixed Rate Notes:

- were issued in an aggregate initial principal amount of €700,000,000, in the case of the 2025 Notes, €500,000,000, in the case of the 2028 Notes, €700,000,000, in the case of the 2023 Notes, and €500,000,000, in the case of the 2032 Notes, each subject to our ability to issue additional Fixed Rate Notes which may be of the same series as the Fixed Rate Notes as described under "—Further Issues,"
- mature on November 15, 2025, in the case of the 2025 Notes, November 15, 2028, in the case of the 2028 Notes, November 15, 2023, in the case of the 2023 Notes, and November 15, 2032, in the case of the 2032 Notes,
- bear interest at a rate of 1.625% per annum, in the case of the 2025 Notes, 1.000%, in the case of the 2028 Notes, 0.375%, in the case of the 2023 Notes, and 1.500%, in the case of the 2032 Notes,
- are our unsecured and unsubordinated obligations, ranking equally with our other present and future outstanding unsecured and unsubordinated indebtedness,
- were each issued as a separate series under the indenture,
- are redeemable by us prior to the stated maturity at the times and prices described herein,
- are not repayable at the option of the holders prior to the stated maturity, and
- are not subject to any sinking fund.

Interest

The Fixed Rate Notes bear interest at a rate of (i) 1.625% per annum, in the case of the 2025 Notes, (ii) 1.000% per annum, in the case of the 2028 Notes, (iii) 0.375% per annum, in the case of the 2023 Notes, and (iv) 1.500% per annum, in the case of the 2032 Notes, from the most recent date to which interest has been paid or provided for, payable annually in arrears on November 15 of each year (each a "Fixed Rate Notes Interest Payment Date"), to holders of record at the close of business (a) on the November 1st (whether or not a business day) immediately preceding the interest payment date, in the case of the 2025 Notes and the 2028 Notes, and (b) on the November 15th (whether or not a business day) immediately preceding the interest payment date, in the case of the 2023 Notes and the 2032 Notes, or, in each case, if the Fixed Rate Notes are represented by one or more global notes, on the business day (for this purpose a day on which Clearstream and Euroclear are open for business) immediately preceding the Fixed Rate Notes Interest Payment Date; provided, however, that interest payable on the maturity date of the Fixed Rate Notes or any redemption date of the Fixed Rate Notes shall be payable to the person to whom the principal of such Fixed Rate Notes shall be payable.

Interest payable on the Fixed Rate Notes on any Fixed Rate Note Interest Payment Date, redemption date or maturity date shall be the amount of interest accrued from, and including, the next preceding Fixed Rate Note Interest Payment Date in respect of which interest has been paid or duly provided for (or from and including the original issue date of the Fixed Rate Notes, if no interest has been paid or duly provided for) to, but excluding, such Fixed Rate Note Interest Payment Date, redemption date or maturity date, as the case may be. This payment convention is referred to as ACTUAL/ACTUAL (ICMA) as defined in the rulebook of the International Capital Markets Association. If any Fixed Rate Note Interest Payment Date falls on a day that is not a business day, the interest payment will be made on the next succeeding day that is a business day, but no additional interest will accrue as a result of the delay in payment. If the maturity date or any redemption date of the Fixed Rate Notes falls on a day that is not a business day, the related payment of principal, premium, if any, and interest will be made on the next succeeding business day as if it were made on the date such payment was due, and no interest will accrue on the amounts so payable for the period from and after such date to the next succeeding business day. The rights of holders of beneficial interests in Fixed Rate Notes to receive the payments of interest on such notes are subject to the applicable procedures of Euroclear and Clearstream.

Optional Redemption of the Fixed Rate Notes

The Fixed Rate Notes are redeemable at any time:

- prior to August 15, 2025 (three months prior to their maturity), in the case of the 2025 Notes, prior to August 15, 2028 (three months prior to their maturity), in the case of the 2028 Notes, prior to August 15, 2023 (three months prior to their maturity), in the case of the 2023 Notes, and prior to August 15, 2032 (three months prior to maturity), in the case of the 2032 Notes, in each case as a whole or in part,
  - at our option, on at least 30 days', in the case of the 2025 Notes and the 2028 Notes, or on at least 10 days', in the case of the 2023 Notes and the 2032 Notes, but not more than 60 days', prior notice mailed (or otherwise transmitted in accordance with the applicable procedures of Euroclear or Clearstream) to the registered address of each holder of the Fixed Rate Notes to be redeemed,
  - at a redemption price equal to
    - the greater of:
      - 100% of the principal amount of the Fixed Rate Notes to be redeemed; and
      - the sum of the present values of the Remaining Scheduled Payments (as defined below) of principal and interest on the Fixed Rate Notes to be redeemed (not including any portion of such payments of interest accrued as of the date of redemption) discounted to the date of redemption on an annual basis (ACTUAL/ACTUAL (ICMA)) at the applicable Comparable Government Bond Rate (as defined below) plus 20 basis points, in the case

of the 2025 Notes and the 2032 Notes, 15 basis points, in the case of the 2028 Notes, and 10 basis points, in the case of the 2023 Notes;

- together with, in each case, accrued and unpaid interest, if any, on the principal amount of the Fixed Rate Notes to be redeemed to, but excluding, the redemption date.

- on or after August 15, 2025 (three months prior to maturity), in the case of the 2025 Notes, on or after August 15, 2028 (three months prior to maturity), in the case of the 2028 Notes, on or after August 15, 2023 (three months prior to maturity), in the case of the 2023 Notes, and on or after August 15, 2032 (three months prior to maturity), in the case of the 2032 Notes, in each case as a whole or in part,

  - at our option, on at least 30 days', in the case of the 2025 Notes and the 2028 Notes, or on at least 10 days', in the case of the 2023 Notes and the 2032 Notes, but not more than 60 days', prior notice mailed (or otherwise transmitted in accordance with the applicable procedures of Euroclear or Clearstream) to the registered address of each holder of the Fixed Rate Notes to be redeemed,

  - at a redemption price equal to 100% of the principal amount of the Fixed Rate Notes to be redeemed, plus accrued and unpaid interest, if any, on the principal amount of the Fixed Rate Notes to be redeemed to, but excluding, the redemption date.

If money sufficient to pay the redemption price of all of the Fixed Rate Notes (or portions thereof) to be redeemed on the redemption date is deposited with the trustee or paying agent on or before the redemption date and certain other conditions are satisfied, then on and after such redemption date, interest will cease to accrue on such notes (or such portion thereof) called for redemption.

"Comparable Government Bond Rate" means the yield to maturity, expressed as a percentage (rounded to three decimal places, with 0.0005 being rounded upwards), on the third business day prior to the date fixed for redemption, of the Comparable Government Bond (as defined below) on the basis of the middle market price of the Comparable Government Bond prevailing at 11:00 a.m. (London time) on such business day as determined by an independent investment bank selected by us.

"Comparable Government Bond" means, in relation to any Comparable Government Bond Rate calculation, at the discretion of an independent investment bank selected by us, a German government bond whose maturity is closest to the maturity of the applicable notes to be redeemed, or if such independent investment bank in its discretion determines that such similar bond is not in issue, such other German government bond as such independent investment bank may, with the advice of three brokers of, and/or market makers in, German government bonds selected by us, determine to be appropriate for determining the Comparable Government Bond Rate.

“Remaining Scheduled Payments” means, with respect to each Fixed Rate Note to be redeemed, the remaining scheduled payments of the principal thereof and interest thereon that would be due after the related redemption date but for such redemption; provided, however, that, if such redemption date is not a Fixed Rate Notes Interest Payment Date with respect to such Fixed Rate Note, the amount of the next succeeding scheduled interest payment thereon will be deemed to be reduced (solely for the purposes of this calculation) by the amount of interest accrued thereon to such redemption date.

Unless we default in payment of the redemption price, on and after the redemption date, interest will cease to accrue on the applicable Fixed Rate Notes or portions thereof called for redemption. On or before the redemption date, we will deposit with the paying agent or set aside, segregate and hold in trust (if we are acting as paying agent), funds sufficient to pay the redemption price of, and accrued and unpaid interest on, such Fixed Rate Notes to be redeemed on that redemption date. If fewer than all of the Fixed Rate Notes are to be redeemed, the trustee will select, not more than 60 days prior to the redemption date, the particular Fixed Rate Notes or portions thereof to be redeemed from the outstanding Fixed Rate Notes not previously called for redemption by such method as the trustee deems fair and appropriate; provided that if the Fixed Rate Notes are represented by one or more global notes, beneficial interests in the Fixed Rate Notes will be selected for redemption by Euroclear and Clearstream in accordance with their respective standard procedures therefor; provided, however, that no Fixed Rate Notes of a principal amount of €100,000 or less shall be redeemed in part.

We may at any time, and from time to time, purchase the notes at any price or prices in the open market or otherwise.

Payment of Additional Amounts

We will, subject to the exceptions and limitations set forth below, pay to or on account of a beneficial owner of a note who is not a United States person for U.S. federal income tax purposes such additional amounts as may be necessary to ensure that every net payment by us of the principal of and interest on such note, after deduction or withholding for or on account of any present or future tax, assessment or other governmental charge imposed upon or as a result of such payment, by the United States or any political subdivision or taxing authority of the United States, will not be less than the amount that would have been payable had no such deduction or withholding been required. However, we will not pay additional amounts for or on account of:

1. any such tax, assessment or other governmental charge which would not have been so imposed but for (i) the existence of any present or former connection between the holder or beneficial owner of a note (or between a fiduciary, settlor, beneficiary, member or shareholder of such person, if such person is an estate, a trust, a partnership or a corporation) and the United States, including, without limitation, such person (or such fiduciary, settlor, beneficiary, member or shareholder) being or having been a citizen or resident thereof or being or having been engaged in a trade or business or present therein or having, or having had, a permanent establishment therein or (ii) the presentation, where required, by the holder of any such note for payment on a date more than 15

calendar days after the date on which such payment became due and payable or the date on which payment thereof is duly provided for, whichever occurs later;

2. any estate, inheritance, gift, sales, transfer or personal property tax or any similar tax, assessment or governmental charge;
3. any tax, assessment or other governmental charge imposed by reason of the holder or beneficial owner's past or present status as a personal holding company or foreign personal holding company or controlled foreign corporation or passive foreign investment company for U.S. federal income tax purposes or as a corporation which accumulates earnings to avoid United States federal income tax or as a private foundation or other tax-exempt organization;
4. any tax, assessment or other governmental charge which is payable otherwise than by withholding from payments on or in respect of any note;
5. any tax, assessment or other governmental charge which would not have been imposed but for the failure to comply with certification, information or other reporting requirements concerning the nationality, residence or identity of the holder or beneficial owner of such note, if such compliance is required by statute or by regulation of the United States or of any political subdivision or taxing authority thereof or therein as a precondition to relief or exemption from such tax, assessment or other governmental charge;
6. any tax, assessment or other governmental charge that would not have been imposed but for a failure by the holder or beneficial owner (or any financial institution through which the holder or beneficial owner holds any note or through which payment on the note is made) to comply with any certification, information, identification, documentation or other reporting requirements (including entering into and complying with an agreement with the Internal Revenue Service) imposed pursuant to, or complying with any requirements imposed under an intergovernmental agreement entered into between the United States and the government of another country in order to implement the requirements of, Sections 1471 through 1474 of the Internal Revenue Code as in effect on the date of issuance of the notes or any successor or amended version of these provisions, to the extent such successor or amended version is not materially more onerous to comply with than these provisions as enacted on such date;
7. any tax, assessment or other governmental charge imposed by reason of such beneficial owner's past or present status as the actual or constructive owner of 10% or more of the total combined voting power of all of our classes of stock entitled to vote or as a direct or indirect affiliate of us;
8. any tax, assessment or other governmental charge required to be deducted or withheld by any paying agent from a payment on a note upon presentation of such note, where required, if such payment can be made without such deduction or withholding upon presentation of such note, where required, to any other paying agent; or

any combination of two or more of items (1), (2), (3), (4), (5), (6), (7) and (8), nor shall additional amounts be paid with respect to any payment on a note to a United States Alien Holder who is a fiduciary or partnership or other than the sole beneficial owner of such payment to the extent such payment would be required by the laws of the United States (or any political subdivision thereof) to be included in the income, for tax purposes, of a beneficiary or settlor with respect to such fiduciary or a member of such partnership or a beneficial owner who would not have been entitled to the additional amounts had such beneficiary, settlor, member or beneficial owner been the holder of the note.

The term "United States Alien Holder" means any beneficial owner of a note that is not, for United States federal income tax purposes, (i) a citizen or resident of the United States, (ii) a corporation, partnership or other entity created or organized in or under the laws of the United States or any political subdivision thereof, (iii) an estate whose income is subject to United States federal income tax regardless of its source, or (iv) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons have the authority to control all substantial decisions of the trust or if such trust has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person. Except as specifically provided under this heading "—Payment of Additional Amounts," we will not be required to make any payment for any tax, assessment or other governmental charge imposed by any government or a political subdivision or taxing authority of or in any government or political subdivision.

We undertake that, to the extent permitted by law, we will maintain a paying agent in a Member State of the European Union (if any) that will not require withholding or deduction of tax pursuant to European Council Directive 2003/48/EC on the taxation of savings income or any law implementing or complying with, or introduced to conform to, such European Council Directive.

Redemption for Tax Reasons

We may redeem the notes of each series prior to maturity in whole, but not in part, on not more than 60 days' notice and not less than 30 days' notice, in the case of the 2025 Notes and the 2028, or not less than 10 days' notice, in the case of the 2023 Notes and the 2032 Notes, at a redemption price equal to 100% of their principal amount plus any accrued interest and additional amounts to, but not including, the date fixed for redemption if we determine that, as a result of any change in, or amendment to, the laws (or any regulations or rulings promulgated thereunder) of the United States or of any political subdivision or taxing authority thereof or therein affecting taxation, or any change in, or amendment to, an official position regarding the application or interpretation of such laws, regulations or rulings, which change or amendment is announced and becomes effective on or after the date of issuance of the notes, we have or will become obligated to pay additional amounts with respect to the notes as described above under "—Payment of Additional Amounts."

If we exercise our option to redeem the notes, we will deliver to the trustee a certificate signed by an authorized officer stating that we are entitled to redeem the notes and an opinion of independent tax counsel to the effect that the circumstances described above exist.

Defeasance and Covenant Defeasance

We may elect, at our option at any time, to have the provisions of Section 13.02 of the indenture, relating to defeasance and discharge of indebtedness, or Section 13.03 of the indenture, relating to defeasance of certain restrictive covenants in the indenture, applied to the notes of any series, or to any specified part of a series. Defeasance refers to the discharge of some or all of our obligations under the indenture.

Defeasance and Discharge

Upon our exercise of our option to have Section 13.02 of the indenture apply to any series of the notes, we will be deemed to have been discharged from all obligations with respect to the notes (except for certain obligations to exchange or register the transfer of notes, to replace stolen, lost or mutilated notes, to maintain paying agencies and to hold money for payment in trust) upon the irrevocable deposit in trust for the benefit of the holders of the notes of money or U.S. Government Obligations, or both, which, through the payment of principal and interest in respect thereof in accordance with their terms, will provide money in an amount sufficient to pay the principal of and any premium and interest on the notes on the respective stated maturities in accordance with the terms of the indenture and the notes. Defeasance or discharge may occur only if, among other things, we have delivered to the trustee an opinion of counsel to the effect that, we have received from, or there has been published by, the United States Internal Revenue Service a ruling, or there has been a change in tax law, in any case to the effect that holders of the notes will not recognize gain or loss for federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge were not to occur.

As used in this exhibit, “U.S. Government Obligations” means any security which is (i) a direct obligation of the United States of America for the payment of which the full faith and credit of the United States of America is pledged or (ii) an obligation of a person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America, which in either case (i) or (ii), is not callable or redeemable at the option of the issuer thereof, and shall also include a depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act of 1933, as amended) as custodian with respect to any U.S. Government Obligation or a specific payment of principal of or interest on any such U.S. Government Obligation held by such custodian for the account of the holder of a depositary receipt, provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the U.S. Government Obligation or the specific payment of principal or interest with respect to the U.S. Government Obligation evidenced by such depositary receipt.

Issuance in Euros

Initial holders will be required to pay for the notes in euros, and all payments of interest and principal, including payments made upon any redemption of the notes, will be payable in euros.

If, on or after the date of this exhibit, the euro is unavailable to us due to the imposition of exchange controls or other circumstances beyond our control or if the euro is no longer being used by the then member states of the European Union that have adopted the euro as their currency or for the settlement of transactions by public institutions of or within the international banking community, then all payments in respect of the notes will be made in U.S. dollars until the euro is again available to us or so used. The amount payable on any date in euros will be converted into U.S. dollars on the basis of the most recently available market exchange rate for the euro. Any payment in respect of the notes so made in U.S. dollars will not constitute an event of default under the notes or the indenture governing the notes. Neither the trustee nor the paying agent shall have any responsibility for any calculation or conversion in connection with the foregoing.

As used in this exhibit, “market exchange rate” means the noon buying rate in The City of New York for cable transfers of euros as certified for customs purposes (or, if not so certified, as otherwise determined) by the United States Federal Reserve Board.

Investors will be subject to foreign exchange risks as to payments of principal and interest that may have important economic and tax consequences to them.

Further Issues

We may from time to time, without notice to or the consent of the registered holders of notes, create and issue further notes ranking equally with each series of the notes in all respects. Such further notes may be consolidated and form a single series with each series of the notes and have the same terms as to ranking, redemption or otherwise as such series (other than the issue date and public offering price of such further notes and, if applicable, the first payment of interest following the issue date of such further notes).

Book-Entry System

Each series of the notes were issued in the form of one or more global notes (each a “global note”) in fully registered form, without coupons, and were deposited on the closing date with, or on behalf of, a common depositary for, and in respect of interests held through, Euroclear Bank S.A./N.V. (“Euroclear”) and Clearstream Banking, *société anonyme* (“Clearstream”). Except as described herein, certificates will not be issued in exchange for beneficial interests in the global notes.

Except as set forth below, the global notes may be transferred, in whole and not in part, only to a common depositary for Euroclear or Clearstream or its nominee.

Beneficial interests in the global notes are represented, and transfers of such beneficial interests are effected, through accounts of financial institutions acting on behalf of beneficial owners as direct or indirect participants in Euroclear or Clearstream. Those beneficial interests are in denominations of €100,000 and integral multiples of €1,000 in excess thereof. Investors may hold notes directly through Euroclear or Clearstream, if they are participants in such systems, or indirectly through organizations that are participants in such systems.

Owners of beneficial interests in the global notes are not entitled to have notes registered in their names, and will not receive or be entitled to receive physical delivery of notes in definitive form. Except as provided below, beneficial owners are not considered the owners or holders of the notes under the indenture, including for purposes of receiving any reports delivered by us or the trustee pursuant to the indenture. Accordingly, each beneficial owner must rely on the procedures of the clearing systems and, if such person is not a participant of the clearing systems, on the procedures of the participant through which such person owns its interest, to exercise any rights of a holder under the indenture. Under existing industry practices, if we request any action of holders or a beneficial owner desires to give or take any action which a holder is entitled to give or take under the indenture, the clearing systems would authorize their participants holding the relevant beneficial interests to give or take action and the participants would authorize beneficial owners owning through the participants to give or take such action or would otherwise act upon the instructions of beneficial owners. Conveyance of notices and other communications by the clearing systems to their participants, by the participants to indirect participants and by the participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. The laws of some jurisdictions require that certain purchasers of securities take physical delivery of such securities in certificated form. These limits and laws may impair the ability to transfer beneficial interests in global notes.

Persons who are not Euroclear or Clearstream participants may beneficially own notes held by the common depositary for Euroclear and Clearstream only through direct or indirect participants in Euroclear and Clearstream. So long as the common depositary for Euroclear and Clearstream is the registered owner of the global note, the common depositary for all purposes will be considered the sole holder of the notes represented by the global note under the indenture and the global notes.

Euroclear and Clearstream may discontinue providing services with respect to the notes at any time by giving reasonable notice to the issuer or its agent. Under these circumstances, in the event that a successor securities depositary is not obtained, certificates for the notes are required to be printed and delivered. We may decide to discontinue the use of the system of book-entry-only transfers through Euroclear and Clearstream (or any successor securities depository). In that event, certificates for the notes will be printed and delivered to Euroclear and Clearstream.

Secondary market sales of book-entry interests in the notes held through Euroclear or Clearstream to purchasers of book-entry interests in the global notes through Euroclear or Clearstream will be conducted in accordance with the normal rules and operating procedures of Euroclear and Clearstream and will be settled using the procedures applicable to conventional eurobonds in same-day funds.

Notices

The trustee will mail notices by first class mail, postage prepaid, to each registered holder’s address as it appears in the security register (or otherwise transmit such notices in accordance with applicable procedures of Euroclear or Clearstream). The trustee will only mail or transmit these notices to the registered holder of the notes, and consequently holders of beneficial interests will not receive these notices unless we reissue the notes in fully certificated form.

The Trustee, Paying Agent, Calculation Agent, Transfer Agent and Security Registrar

The Bank of New York Mellon Trust Company, N.A. is the trustee, transfer agent and security registrar with respect to the notes and maintains various commercial and investment banking relationships with us and with affiliates of ours. It is also the trustee under the indenture. The Bank of New York Mellon, London Branch, acts as paying agent with respect to the notes and calculation agent with respect to the Floating Rate Notes.

Principal of, premium, if any, and interest on the notes will be payable at the office of the paying agent or, at our option, payment of interest may be made by check mailed to the holders of the notes at their respective addresses set forth in the register of holders; *provided* that all payments of principal, premium, if any, and interest with respect to the notes represented by one or more global notes deposited with, or on behalf of, a common depositary, and registered in the name of the nominee of the common depositary for the accounts of Clearstream and Euroclear will be made through the facilities of the common depositary. We may change the paying agent without prior notice to the holders, and we or any of our subsidiaries may act as paying agent. We undertake to maintain a paying agent in a member state of the European Union that, to the extent permitted by law, will not be obliged to withhold or deduct tax pursuant to the European Union Directive 2003/48/EC regarding the taxation of savings income in relation to the Floating Rate Notes.

Governing Law

The indenture and the notes for all purposes shall be governed by and construed in accordance with the laws of the State of New York.

Exhibit 10.16

UPS LONG-TERM INCENTIVE PERFORMANCE PROGRAM

Amended and Restated Terms and Conditions

Approved February 12, 2020

1. Establishment, Objectives and Duration.

1.1 Establishment of the Program and Effective Date. The Compensation Committee of the Board of Directors of United Parcel Service, Inc. ("Committee") hereby amends and restates the terms and conditions of the UPS Long-Term Incentive Performance Program ("LTIP") which provides for Awards in the form of Restricted Performance Units ("Units") pursuant to the United Parcel Service, Inc. 2018 Omnibus Incentive Compensation Plan ("ICP"). Unless otherwise defined in this document, capitalized terms shall have the meanings set forth in the ICP. These LTIP Terms and Conditions shall be effective for any LTIP awards made on or after the date set forth above ("LTIP Effective Date").

1.2 Objectives of the LTIP. The objectives of the LTIP are to align incentive pay with long-term performance related to key business objectives, enhance retention of key talent, and align the interests of shareowners with the incentive compensation opportunity for executives.

1.3 Duration of the Program. The LTIP shall commence on the LTIP Effective Date and shall remain in effect, subject to the right of the Committee to amend or terminate the LTIP at any time pursuant to Section 13.6 hereof.

2. Administration.

2.1 Authority of the Committee. The LTIP shall be administered by the Committee, which shall have the same power and authority to administer the LTIP as it does to administer the ICP.

2.2 Decisions Binding. All decisions of the Committee shall be final, conclusive and binding on all persons, including the Company, its stockholders, any employee, and their estates and beneficiaries.

3. Units Subject to Award. Your target number of Units subject to an Award is determined by (1) the product of (a) your Target LTIP Award Percentage on Exhibit A multiplied by (b) your annualized monthly salary in effect on the grant date specified in your award document (the "Grant Date"), then (2) divided by the Fair Market Value of a share of the

Company’s class B common stock (the “Stock”) on the Grant Date, rounded up to the nearest whole number of Units.

4. **Award Document.** You will receive an Award Document that specifies the Grant Date, the target number of Units subject to an Award, and such other provisions as the Committee shall determine.

5. **Acceptance.** You must expressly accept the terms and conditions of your Award. To accept, log on to Merrill Lynch Benefits Online at www.benefits.ml.com, select Equity Plan > Grant Information > Pending Acceptance. If you do not accept your Award in the manner instructed by the Company, the Units subject to an Award may be subject to cancellation. If you do not wish to receive this Award, then you understand that you must reject the Award by contacting Investor Services (investorsvcs@ups.com or (404) 828-8807) no later than 90 days following the Grant Date specified in your Award Document in which case the Award will be cancelled.

6. **Performance Metrics; Earned Units.** The number of Units earned for an Award will be determined based upon the Company’s (a) adjusted earnings per share growth and (b) adjusted free cash flow performance, each during a three-year performance period (the “Performance Period”), subject to modification based on (c) total shareholder return performance during the Performance Period. Performance and payout will be determined independently for each metric.

   6.1 **Adjusted Earnings Per Share Growth.** Adjusted earnings per share is determined by dividing the Company’s adjusted net income available to common shareowners by the diluted weighted average shares outstanding during the Performance Period. The adjusted earnings per share growth target is the projected average annual adjusted earnings per share growth during each of the years within the Performance Period. The actual adjusted earnings per share growth for each year of the Performance Period will be compared to the target and assigned a payout percentage; the average of the three payout percentages will be used to calculate the final payout percentage under this metric. Following the completion of the Performance Period, the Committee will certify (i) the actual adjusted earnings per share growth for the Performance Period; (ii) the actual adjusted earnings per share growth for the Performance Period as compared to the target; and (iii) the final payout percentage for this metric.

   6.2 **Adjusted Free Cash Flow.** Adjusted free cash flow is determined by reducing the Company’s adjusted cash flow from operations by adjusted capital expenditures and proceeds from disposals of fixed assets, and adjusting for net changes in finance receivables, other investing activities and discretionary pension contributions. The adjusted free cash flow target is the projected aggregate adjusted free cash flow generated during the entire three years of the Performance

Period. Following the completion of the Performance Period, the Committee will certify (i) the actual adjusted free cash flow for the Performance Period; (ii) the actual adjusted free cash flow for the Performance Period as compared to the target; and (iii) the final payout percentage for this metric.

6.3 **Total Shareholder Return.** Total shareholder return measures the total return on an investment in the Stock to an investor (stock price appreciation plus dividends). The total return on the Stock shall be compared with the total return on the stocks of the companies listed on the Standard & Poor's 500 Composite Index ("Index") at the beginning of the Performance Period. The Committee shall then assign the Company a percentile rank relative to the companies listed on the Index (the "S&P 500 Companies") based on total shareholder return performance ("relative total shareholder return" or "RTSR"). Following the completion of the Performance Period, the Committee will certify (i) the Company's actual total shareholder return for the Performance Period; (ii) the total shareholder return of each of the S&P 500 Companies during the Performance Period; (iii) the percentile ranking for the Company as compared to S&P 500 Companies for the Performance Period; and (iv) the final payout modifier, if any, for the Award as described below.

6.3.1 **Payout Modifier**: The number of Units earned under an Award may be modified up or down, if applicable, based on RTSR as follows:

Total Shareholder Return **Percentile Rank Relative to S&P 500 Companies**	**Payout Modifier**
Above 75th percentile	+20%
Between 25th and 75th percentile	None
Below 25th percentile	-20%

6.3.2 **TSR Calculation**: TSR is determined as follows:

$$\text{TSR} = \frac{(\text{Ending Average} + \text{Dividends Paid}) - \text{Beginning Average}}{\text{Beginning Average}}$$

Beginning Average: the average closing price of a share of the respective S&P 500 Company's common stock for the 20 trading days prior to the start of the Performance Period on which shares of such company's common stock were traded.

Ending Average: the average closing price of a share of the respective S&P 500 Company’s common stock over the last 20 trading days of the Performance Period, accounting for compounding Dividends Paid, on which shares of such company’s common stock were traded.

Dividends Paid: the total of all dividends paid on one share of the respective S&P 500 Company’s common stock during the Performance Period, provided that the record date occurs during the Performance Period, and provided further that dividends shall be treated as though they are reinvested on the day of payment using the closing price of a share of the respective S&P 500 Company’s common stock on that day.

6.4 **Adjustments.** In determining attainment of performance targets the Committee will have discretion to exclude the effect of unusual or infrequently occurring items, charges for restructurings (including employee severance liabilities, asset impairment costs, and exit costs), discontinued operations, extraordinary items and the cumulative effect of changes in accounting treatment, and may determine to exclude the effect of other items, each determined in accordance with GAAP (to the extent applicable) and as identified in the financial statements, notes to the financial statement or discussion and analysis of management.

7. **Calculation of Units Earned.** The number of Units earned under an Award will be calculated as follows:

(a) Adjusted Earnings Per Share Payout % x ½ Target Number of Units	+	(b) Adjusted Free Cash Flow Payout % x ½ Target Number of Units	+/ -	(c) RTSR Payout Modifier (if applicable)	=	Award Payout % (Based on Target Number of Units)

The Award Payout % is then multiplied by the target number of Units received under the Award, plus any dividend equivalent units (described below), to determine the total number of Units earned for the Award.

8. **Transferability.** You may not sell, gift, or otherwise transfer or dispose of any Units.

9. **Vesting Terms.** If you remain an active employee through the last business day of the Performance Period, then the number of Units that vest following the end of the Performance Period, if any, will be based on the achievement of the performance goals related to each of the performance metrics set forth herein. Shares attributable to the number of vested Units and dividend equivalent units (described below), if any, will be transferred to you during the calendar quarter following the end of the Performance

Period. Except as set forth below, if employment with the Company is terminated after the Date of Grant but prior to the last business day of the Performance Period, then your unvested Units will be forfeited.

9.1 **Death.** If you are an active employee for six continuous months from the beginning of the Performance Period and your employment terminates prior to the last business day of the Performance Period as a result of death, then Shares attributable to a prorated number of Units (calculated at target based on the number of months worked during the Performance Period) will be transferred to your estate no later than 90 days after the date of your death.

9.2 **Disability or Retirement.** If you are an active employee for six continuous months from the beginning of the Performance Period and your employment terminates prior to the last business day of the Performance Period as a result of disability or Retirement (as defined below), then Shares attributable to a prorated number of vested Units (based on actual results and the number of months worked during the Performance Period) will be transferred to you during the calendar quarter following the end of the Performance Period.

9.3 **Demotion.** If you are an active employee for six continuous months from the beginning of the Performance Period and, prior to the last business day of the Performance Period, you are demoted to a position that would have been ineligible to receive an LTIP award, then Shares attributable to a prorated number of vested Units (based on actual results and the number of months worked during the Performance Period prior to the demotion) will be transferred to you during the calendar quarter following the end of the Performance Period.

For purposes of the LTIP, Retirement is defined as (a) the attainment of age 55 with a minimum of 10 years of continuous employment accompanied by the cessation of employment with the Company and all Subsidiaries, (b) the attainment of age 60 with a minimum of 5 years of continuous employment accompanied by the cessation of employment with the Company and all Subsidiaries, or (c) "retirement" as determined by the Committee in its sole discretion.

10. **Repayment.** If an Award has been paid to an Executive Participant or to his or her spouse or beneficiary, and the Committee later determines that financial results used to determine the amount of that Award are materially restated and that the Executive Participant engaged in fraud or intentional misconduct, then the Company will seek repayment or recovery of the Award, as appropriate, notwithstanding any contrary provision of the ICP. In addition, any benefits you may receive hereunder shall be subject to repayment or forfeiture as may be required to comply with the requirements of the U.S. Securities and Exchange Commission or any applicable law, including the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act, or any securities exchange on which the Stock is traded, as may be in effect from time to time.

11. **Withholding.** Awards shall be reduced for applicable taxes or you will be required to remit taxes to the Company in accordance with the terms of the ICP.

12. **Dividend Equivalents.** Dividends payable on the number of shares represented by your Units (including whole and fractional Units) will be allocated to your account in the form of dividend equivalent units ("DEUs") (whole and fractional). DEUs will be allocated to your account each time dividends are paid by (i) multiplying the cash (or stock) dividend paid per share of the Company's class B common stock by the number of outstanding target number Units (and previously credited DEUs) prior to adjustment for the dividend, and (ii) dividing the product by the NYSE closing price of the Company's class B common stock on the day the dividend is declared, provided that the record date occurs after the Grant Date. DEUs will be subject to the same vesting conditions as the underlying Award.

13. **Miscellaneous.**

13.1 Awards Subject to the Terms of the ICP. LTIP Awards are subject to the terms of the ICP.

13.2 **Section 409A.** Each Award is intended either to be exempt from Section 409A or to comply with Section 409A. To the extent that benefits provided under an Award constitute deferred compensation for purposes of Section 409A and to the extent that deferred compensation is payable upon a "separation from service" as defined in Section 409A, no amount of deferred compensation shall be paid or transferred to you as a result of your separation from service until the date which is the earlier of (i) the first day of the seventh month after your separation from service or (ii) the date of your death (the "Delay Period"). All amounts subject to the Delay Period shall be transferred to you promptly after the Delay Period.

13.3 **Severability.** The provisions of this LTIP are severable and if any one or more provisions are determined to be illegal or otherwise unenforceable, in whole or in part, the remaining provisions shall nevertheless be binding and enforceable.

13.4 **Waiver.** You acknowledge that a waiver by the Company of breach of any provision of this LTIP shall not operate or be construed as a waiver of any other provision of this LTIP, or of any subsequent breach by you or any other participant.

13.5 **Imposition of Other Requirements.** The Committee reserves the right to impose other requirements on your participation in the LTIP, on the Units and on any shares of Stock acquired under the ICP, to the extent the Committee determines it is necessary or advisable for legal or administrative reasons, and to require you to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

13.6 Amendment and Termination. The Committee may amend, alter, suspend or terminate the LTIP and any Award at any time subject to the terms of the ICP. Any such amendment shall be in writing and approved by the Committee. The UPS Salary Committee may make administrative amendments to the LTIP from time to time; provided, however, that any such amendment shall be reviewed with the Committee and kept with the records of the LTIP.

Exhibit A

Long-Term Incentive Performance Program

CLASSIFICATION	TARGET LTIP AWARD PERCENTAGE
Chief Executive Officer	750%
Chief Operating Officer	575%
Chief Financial Officer	550%
Chief Strategy and Transformation Officer	450%
Management Committee Members	350%
Region Managers	200%
District Managers	100%
Region Staff Managers	50%

Exhibit 21

SUBSIDIARIES OF UNITED PARCEL SERVICE, INC.
As of December 31, 2019

Name of Subsidiary	Jurisdiction of Organization
BT Property Holdings, Inc.	Delaware
BT Realty II, Inc.	Maryland
BT Realty, Inc.	Maryland
C.C. & E. I, L.L.C.	Delaware
Coyote Logistics, LLC	Delaware
Coyote Logistics Midco, Inc.	Delaware
Marken LLP	Delaware
UPS Asia Group Pte. Ltd.	Singapore
United Parcel Service Canada Ltd.	Canada
United Parcel Service Co.	Ohio
United Parcel Service General Services Co.	Delaware
United Parcel Service Italia SRL	Italy
UPS SCS (Nederland) B.V.	Netherlands
United Parcel Service of America, Inc.	Delaware
United Parcel Service LLC & Co. OHG	Germany
United Parcel Service, Inc.	Delaware
UPICO Corporation	Delaware
UPINSCO, Inc.	U.S. Virgin Islands
United Parcel Service Deutschland S.à r.l. & Co. OHG	Germany
UPS Expedited Mail Services, Inc.	Delaware
United Parcel Service France SAS	France
UPS Global Treasury Plc	United Kingdom
UPS Ground Freight, Inc.	Virginia
UPS Grundstucksverwaltungs GmbH	Germany
UPS Limited	United Kingdom
UPS Parcel Delivery Service Limited	Hong Kong
UPS SCS, Inc.	Canada
UPS Supply Chain Solutions, Inc.	Delaware
UPS Worldwide Forwarding, Inc.	Delaware
X4i Limited	United Kingdom

The names of particular subsidiaries are omitted pursuant to Item 601(b)(21)(ii) of Regulation S-K.

Exhibit 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-234175 and 333-112329 on Form S-3 and in Registration Statement Nos. 333-224928, 333-208151, 333-206239, 333-181436, 333-70708, and 333-61112 on Form S-8 of our reports dated February 20, 2020, relating to the consolidated financial statements of United Parcel Service, Inc. and subsidiaries (the “Company”) which report expresses an unqualified opinion (and includes an explanatory paragraph related to the Company's change in method of accounting for revenue from contracts with customers and presentation of net periodic benefit costs due to adoption of new accounting standards), and the effectiveness of the Company's internal control over financial reporting, appearing in this Annual Report on Form 10-K of United Parcel Service, Inc. for the year ended December 31, 2019.

/s/ Deloitte & Touche LLP

Atlanta, Georgia
February 20, 2020

Exhibit 31.1

CERTIFICATE OF PRINCIPAL EXECUTIVE OFFICER

I, David P. Abney, certify that:

1. I have reviewed this annual report on Form 10-K of United Parcel Service, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report)
   that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/S/ DAVID P. ABNEY

David P. Abney
Chairman and Chief Executive Officer (Principal Executive Officer)

February 20, 2020

Exhibit 31.2

CERTIFICATE OF PRINCIPAL FINANCIAL OFFICER

I, Brian Newman, certify that:

1. I have reviewed this annual report on Form 10-K of United Parcel Service, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report)
   that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/S/ BRIAN NEWMAN

Brian Newman
Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)

February 20, 2020

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and in connection with the Annual Report on Form 10-K of United Parcel Service, Inc. (the “Corporation”) for the year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned, the Chairman and Chief Executive Officer of the Corporation, certifies that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

/S/ DAVID P. ABNEY

David P. Abney
Chairman and Chief Executive Officer (Principal Executive Officer)

February 20, 2020

Exhibit 32.2

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE
SARBANES-OXLEY ACT OF 2002**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and in connection with the Annual Report on Form 10-K of United Parcel Service, Inc. (the "Corporation") for the year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, the Senior Vice President, Chief Financial Officer and Treasurer of the Corporation, certifies that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

/S/ BRIAN NEWMAN

Brian Newman
Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)

February 20, 2020