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

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders
Amazon.com, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Amazon.com, Inc. (the Company) as of December 31, 2020 and 2019, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2020 and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 2, 2021 expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matter

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

Uncertain Tax Positions

Description of the Matter	The Company is subject to income taxes in the U.S. and numerous foreign jurisdictions and, as discussed in Note 9 of the consolidated financial statements, during the ordinary course of business, there are many tax positions for which the ultimate tax determination is uncertain. As a result, significant judgment is required in evaluating the Company's tax positions and determining its provision for income taxes. The Company uses significant judgment in (1) determining whether a tax position's technical merits are more likely than not to be sustained and (2) measuring the amount of tax benefit that qualifies for recognition. As of December 31, 2020, the Company accrued liabilities of $2.8 billion for various tax contingencies. Auditing the measurement of the Company's tax contingencies was challenging because the evaluation of whether a tax position is more likely than not to be sustained and the measurement of the benefit of various tax positions can be complex, involves significant judgment, and is based on interpretations of tax laws and legal rulings.

How We Addressed the Matter in Our Audit	We tested controls over the Company’s process to assess the technical merits of its tax contingencies, including controls over the assessment as to whether a tax position is more likely than not to be sustained, management’s process to measure the benefit of its tax positions, and the development of the related disclosures. We involved our international tax, transfer pricing, and research and development tax professionals in assessing the technical merits of certain of the Company’s tax positions. Depending on the nature of the specific tax position and, as applicable, developments with the relevant tax authorities relating thereto, our procedures included obtaining and examining the Company’s analysis including the Company’s correspondence with such tax authorities and evaluating the underlying facts upon which the tax positions are based. We used our knowledge of, and experience with, international, transfer pricing, and other income tax laws by the relevant income tax authorities to evaluate the Company’s accounting for its tax contingencies. We evaluated developments in the applicable regulatory environments to assess potential effects on the Company’s positions, including recent decisions in relevant court cases. We analyzed the Company’s assumptions and data used to determine the amount of tax benefits to recognize and tested the accuracy of the Company’s calculations. We have also evaluated the Company’s income tax disclosures included in Note 9 in relation to these matters.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 1996.
Seattle, Washington
February 2, 2021

AMAZON.COM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year Ended December 31,		
	2018	**2019**	**2020**
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, BEGINNING OF PERIOD	$ 21,856	$ 32,173	$ 36,410
OPERATING ACTIVITIES:			
Net income	10,073	11,588	21,331
Adjustments to reconcile net income to net cash from operating activities:			
Depreciation and amortization of property and equipment and capitalized content costs, operating lease assets, and other	15,341	21,789	25,251
Stock-based compensation	5,418	6,864	9,208
Other operating expense (income), net	274	164	(71)
Other expense (income), net	219	(249)	(2,582)
Deferred income taxes	441	796	(554)
Changes in operating assets and liabilities:			
Inventories	(1,314)	(3,278)	(2,849)
Accounts receivable, net and other	(4,615)	(7,681)	(8,169)
Accounts payable	3,263	8,193	17,480
Accrued expenses and other	472	(1,383)	5,754
Unearned revenue	1,151	1,711	1,265
Net cash provided by (used in) operating activities	30,723	38,514	66,064
INVESTING ACTIVITIES:			
Purchases of property and equipment	(13,427)	(16,861)	(40,140)
Proceeds from property and equipment sales and incentives	2,104	4,172	5,096
Acquisitions, net of cash acquired, and other	(2,186)	(2,461)	(2,325)
Sales and maturities of marketable securities	8,240	22,681	50,237
Purchases of marketable securities	(7,100)	(31,812)	(72,479)
Net cash provided by (used in) investing activities	(12,369)	(24,281)	(59,611)
FINANCING ACTIVITIES:			
Proceeds from short-term debt, and other	886	1,402	6,796
Repayments of short-term debt, and other	(813)	(1,518)	(6,177)
Proceeds from long-term debt	182	871	10,525
Repayments of long-term debt	(155)	(1,166)	(1,553)
Principal repayments of finance leases	(7,449)	(9,628)	(10,642)
Principal repayments of financing obligations	(337)	(27)	(53)
Net cash provided by (used in) financing activities	(7,686)	(10,066)	(1,104)
Foreign currency effect on cash, cash equivalents, and restricted cash	(351)	70	618
Net increase (decrease) in cash, cash equivalents, and restricted cash	10,317	4,237	5,967
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, END OF PERIOD	$ 32,173	$ 36,410	$ 42,377

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except per share data)

	Year Ended December 31,		
	2018	2019	2020
Net product sales	$ 141,915	$ 160,408	$ 215,915
Net service sales	90,972	120,114	170,149
Total net sales	232,887	280,522	386,064
Operating expenses:			
Cost of sales	139,156	165,536	233,307
Fulfillment	34,027	40,232	58,517
Technology and content	28,837	35,931	42,740
Marketing	13,814	18,878	22,008
General and administrative	4,336	5,203	6,668
Other operating expense (income), net	296	201	(75)
Total operating expenses	220,466	265,981	363,165
Operating income	12,421	14,541	22,899
Interest income	440	832	555
Interest expense	(1,417)	(1,600)	(1,647)
Other income (expense), net	(183)	203	2,371
Total non-operating income (expense)	(1,160)	(565)	1,279
Income before income taxes	11,261	13,976	24,178
Provision for income taxes	(1,197)	(2,374)	(2,863)
Equity-method investment activity, net of tax	9	(14)	16
Net income	$ 10,073	$ 11,588	$ 21,331
Basic earnings per share	$ 20.68	$ 23.46	$ 42.64
Diluted earnings per share	$ 20.14	$ 23.01	$ 41.83
Weighted-average shares used in computation of earnings per share:			
Basic	487	494	500
Diluted	500	504	510

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	Year Ended December 31,		
	2018	2019	2020
Net income	$ 10,073	$ 11,588	$ 21,331
Other comprehensive income (loss):			
Net change in foreign currency translation adjustments:			
Foreign currency translation adjustments, net of tax of $6, $(5), and $(36)	(538)	78	561
Reclassification adjustment for foreign currency translation included in “Other operating expense (income), net,” net of tax of $0, $29, and $0	—	(108)	—
Net foreign currency translation adjustments	(538)	(30)	561
Net change in unrealized gains (losses) on available-for-sale debt securities:			
Unrealized gains (losses), net of tax of $0, $(12), and $(83)	(17)	83	273
Reclassification adjustment for losses (gains) included in “Other income (expense), net,” net of tax of $0, $0, and $8	8	(4)	(28)
Net unrealized gains (losses) on available-for-sale debt securities	(9)	79	245
Total other comprehensive income (loss)	(547)	49	806
Comprehensive income	$ 9,526	$ 11,637	$ 22,137

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.

CONSOLIDATED BALANCE SHEETS
(in millions, except per share data)

	December 31, 2019	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 36,092	$ 42,122
Marketable securities	18,929	42,274
Inventories	20,497	23,795
Accounts receivable, net and other	20,816	24,542
Total current assets	96,334	132,733
Property and equipment, net	72,705	113,114
Operating leases	25,141	37,553
Goodwill	14,754	15,017
Other assets	16,314	22,778
Total assets	$ 225,248	$ 321,195
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 47,183	$ 72,539
Accrued expenses and other	32,439	44,138
Unearned revenue	8,190	9,708
Total current liabilities	87,812	126,385
Long-term lease liabilities	39,791	52,573
Long-term debt	23,414	31,816
Other long-term liabilities	12,171	17,017
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.01 par value:		
Authorized shares — 500		
Issued and outstanding shares — none	—	—
Common stock, $0.01 par value:		
Authorized shares — 5,000		
Issued shares — 521 and 527		
Outstanding shares — 498 and 503	5	5
Treasury stock, at cost	(1,837)	(1,837)
Additional paid-in capital	33,658	42,865
Accumulated other comprehensive income (loss)	(986)	(180)
Retained earnings	31,220	52,551
Total stockholders' equity	62,060	93,404
Total liabilities and stockholders' equity	$ 225,248	$ 321,195

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in millions)

	Common Stock						
	Shares	**Amount**	**Treasury Stock**	**Additional Paid-In Capital**	**Accumulated Other Comprehensive Income (Loss)**	**Retained Earnings**	**Total Stockholders' Equity**
Balance as of January 1, 2018	484	$ 5	$ (1,837)	$ 21,389	$ (484)	$ 8,636	$ 27,709
Cumulative effect of change in accounting principles related to revenue recognition, income taxes, and financial instruments	—	—	—	—	(4)	916	912
Net income	—	—	—	—	—	10,073	10,073
Other comprehensive income (loss)	—	—	—	—	(547)	—	(547)
Exercise of common stock options	7	—	—	—	—	—	—
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	5,402	—	—	5,402
Balance as of December 31, 2018	491	5	(1,837)	26,791	(1,035)	19,625	43,549
Cumulative effect of change in accounting principle related to leases	—	—	—	—	—	7	7
Net income	—	—	—	—	—	11,588	11,588
Other comprehensive income (loss)	—	—	—	—	49	—	49
Exercise of common stock options	7	—	—	—	—	—	—
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	6,867	—	—	6,867
Balance as of December 31, 2019	498	5	(1,837)	33,658	(986)	31,220	62,060
Net income	—	—	—	—	—	21,331	21,331
Other comprehensive income (loss)	—	—	—	—	806	—	806
Exercise of common stock options	5	—	—	—	—	—	—
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	9,207	—	—	9,207
Balance as of December 31, 2020	503	$ 5	$ (1,837)	$ 42,865	$ (180)	$ 52,551	$ 93,404

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — DESCRIPTION OF BUSINESS, ACCOUNTING POLICIES, AND SUPPLEMENTAL DISCLOSURES

Description of Business

We seek to be Earth's most customer-centric company. In each of our segments, we serve our primary customer sets, consisting of consumers, sellers, developers, enterprises, and content creators. We serve consumers through our online and physical stores and focus on selection, price, and convenience. We offer programs that enable sellers to grow their businesses, sell their products in our stores, and fulfill orders through us, and programs that allow authors, musicians, filmmakers, skill and app developers, and others to publish and sell content. We serve developers and enterprises of all sizes through AWS, which offers a broad set of on-demand technology services, including compute, storage, database, analytics, and machine learning, and other services. We also manufacture and sell electronic devices. In addition, we provide services, such as advertising to sellers, vendors, publishers, authors, and others, through programs such as sponsored ads, display, and video advertising.

We have organized our operations into three segments: North America, International, and AWS. See "Note 10 — Segment Information."

Prior Period Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation. "Proceeds from short-term debt, and other" were reclassified from "Proceeds from long-term debt and other" and "Repayments of short-term debt, and other" were reclassified from "Repayments of long-term debt and other" on our consolidated statements of cash flows.

Principles of Consolidation

The consolidated financial statements include the accounts of Amazon.com, Inc. and its consolidated entities (collectively, the "Company"), consisting of its wholly-owned subsidiaries and those entities in which we have a variable interest and of which we are the primary beneficiary, including certain entities in India and certain entities that support our seller lending financing activities. Intercompany balances and transactions between consolidated entities are eliminated.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires estimates and assumptions that affect the reported amounts of assets and liabilities, revenues and expenses, and related disclosures of contingent liabilities in the consolidated financial statements and accompanying notes. Estimates are used for, but not limited to, income taxes, useful lives of equipment, commitments and contingencies, valuation of acquired intangibles and goodwill, stock-based compensation forfeiture rates, vendor funding, inventory valuation, collectability of receivables, and valuation and impairment of investments. Given the global economic climate and additional or unforeseen effects from the COVID-19 pandemic, these estimates have become more challenging, and actual results could differ materially from these estimates.

We review the useful lives of equipment on an ongoing basis, and effective January 1, 2020 we changed our estimate of the useful life for our servers from three years to four years. The longer useful life is due to continuous improvements in our hardware, software, and data center designs. The effect of this change in estimate for the year ended December 31, 2020, based on servers that were included in "Property and equipment, net" as of December 31, 2019 and those acquired during the year ended December 31, 2020, was a reduction in depreciation and amortization expense of $2.7 billion and an increase in net income of $2.0 billion, or $4.06 per basic share and $3.98 per diluted share.

Supplemental Cash Flow Information

The following table shows supplemental cash flow information (in millions):

	Year Ended December 31,		
	2018	2019	2020
SUPPLEMENTAL CASH FLOW INFORMATION:			
Cash paid for interest on debt	$ 854	$ 875	$ 916
Cash paid for operating leases	$ —	$ 3,361	$ 4,475
Cash paid for interest on finance leases	$ 381	$ 647	$ 612
Cash paid for interest on financing obligations	$ 194	$ 39	$ 102
Cash paid for income taxes, net of refunds	$ 1,184	$ 881	$ 1,713
Assets acquired under operating leases	$ —	$ 7,870	$ 16,217
Property and equipment acquired under finance leases	$ 10,615	$ 13,723	$ 11,588
Property and equipment acquired under build-to-suit arrangements	$ 3,641	$ 1,362	$ 2,267

Earnings per Share

Basic earnings per share is calculated using our weighted-average outstanding common shares. Diluted earnings per share is calculated using our weighted-average outstanding common shares including the dilutive effect of stock awards as determined under the treasury stock method. In periods when we have a net loss, stock awards are excluded from our calculation of earnings per share as their inclusion would have an antidilutive effect.

The following table shows the calculation of diluted shares (in millions):

	Year Ended December 31,		
	2018	2019	2020
Shares used in computation of basic earnings per share	487	494	500
Total dilutive effect of outstanding stock awards	13	10	10
Shares used in computation of diluted earnings per share	500	504	510

Revenue

Revenue is measured based on the amount of consideration that we expect to receive, reduced by estimates for return allowances, promotional discounts, and rebates. Revenue also excludes any amounts collected on behalf of third parties, including sales and indirect taxes. In arrangements where we have multiple performance obligations, the transaction price is allocated to each performance obligation using the relative stand-alone selling price. We generally determine stand-alone selling prices based on the prices charged to customers or using expected cost plus a margin.

A description of our principal revenue generating activities is as follows:

Retail sales - We offer consumer products through our online and physical stores. Revenue is recognized when control of the goods is transferred to the customer, which generally occurs upon our delivery to a third-party carrier or, in the case of an Amazon delivery, to the customer.

Third-party seller services - We offer programs that enable sellers to sell their products in our stores, and fulfill orders through us. We are not the seller of record in these transactions. The commissions and any related fulfillment and shipping fees we earn from these arrangements are recognized when the services are rendered, which generally occurs upon delivery of the related products to a third-party carrier or, in the case of an Amazon delivery, to the customer.

Subscription services - Our subscription sales include fees associated with Amazon Prime memberships and access to content including digital video, audiobooks, digital music, e-books, and other non-AWS subscription services. Prime memberships provide our customers with access to an evolving suite of benefits that represent a single stand-ready obligation. Subscriptions are paid for at the time of or in advance of delivering the services. Revenue from such arrangements is recognized over the subscription period.

AWS - Our AWS arrangements include global sales of compute, storage, database, and other services. Revenue is allocated to services using stand-alone selling prices and is primarily recognized when the customer uses these services, based on the quantity of services rendered, such as compute or storage capacity delivered on-demand. Certain services, including compute and database, are also offered as a fixed quantity over a specified term, for which revenue is recognized ratably. Sales commissions we pay in connection with contracts that exceed one year are capitalized and amortized over the contract term.

Other - Other revenue primarily includes sales of advertising services, which are recognized as ads are delivered based on the number of clicks or impressions.

Return Allowances

Return allowances, which reduce revenue and cost of sales, are estimated using historical experience. Liabilities for return allowances are included in “Accrued expenses and other” and were $623 million, $712 million, and $859 million as of December 31, 2018, 2019, and 2020. Additions to the allowance were $2.3 billion, $2.5 billion, and $3.5 billion and deductions from the allowance were $2.3 billion, $2.5 billion, and $3.6 billion in 2018, 2019, and 2020. Included in “Inventories” on our consolidated balance sheets are assets totaling $519 million, $629 million, and $852 million as of December 31, 2018, 2019, and 2020, for the rights to recover products from customers associated with our liabilities for return allowances.

Cost of Sales

Cost of sales primarily consists of the purchase price of consumer products, inbound and outbound shipping costs, including costs related to sortation and delivery centers and where we are the transportation service provider, and digital media content costs where we record revenue gross, including video and music. Shipping costs to receive products from our suppliers are included in our inventory, and recognized as cost of sales upon sale of products to our customers. Payment processing and related transaction costs, including those associated with seller transactions, are classified in “Fulfillment” on our consolidated statements of operations.

Vendor Agreements

We have agreements with our vendors to receive consideration primarily for cooperative marketing efforts, promotions, incentives, and volume rebates. We generally consider these amounts received from vendors to be a reduction of the prices we pay for their goods, including property and equipment, or services, and are recorded as a reduction of the cost of inventory, cost of services, or cost of property and equipment. Volume rebates typically depend on reaching minimum purchase thresholds. We evaluate the likelihood of reaching purchase thresholds using past experience and current year forecasts. When volume rebates can be reasonably estimated, we record a portion of the rebate as we make progress towards the purchase threshold.

Fulfillment

Fulfillment costs primarily consist of those costs incurred in operating and staffing our North America and International segments’ fulfillment centers, physical stores, and customer service centers, including costs attributable to buying, receiving, inspecting, and warehousing inventories; picking, packaging, and preparing customer orders for shipment; payment processing and related transaction costs, including costs associated with our guarantee for certain seller transactions; responding to inquiries from customers; and supply chain management for our manufactured electronic devices. Fulfillment costs also include amounts paid to third parties that assist us in fulfillment and customer service operations.

Technology and Content

Technology and content costs include payroll and related expenses for employees involved in the research and development of new and existing products and services, development, design, and maintenance of our stores, curation and display of products and services made available in our online stores, and infrastructure costs. Infrastructure costs include servers, networking equipment, and data center related depreciation and amortization, rent, utilities, and other expenses necessary to support AWS and other Amazon businesses. Collectively, these costs reflect the investments we make in order to offer a wide variety of products and services to our customers. Technology and content costs are generally expensed as incurred.

Marketing

Marketing costs primarily consist of advertising and payroll and related expenses for personnel engaged in marketing and selling activities, including sales commissions related to AWS. We pay commissions to third parties when their customer referrals result in sales. We also participate in cooperative advertising arrangements with certain of our vendors, and other third parties.

Advertising and other promotional costs to market our products and services are expensed as incurred and were $8.2 billion, $11.0 billion, and $10.9 billion in 2018, 2019, and 2020.

General and Administrative

General and administrative expenses primarily consist of costs for corporate functions, including payroll and related expenses; facilities and equipment expenses, such as depreciation and amortization expense and rent; and professional fees and litigation costs.

Stock-Based Compensation

Compensation cost for all equity-classified stock awards expected to vest is measured at fair value on the date of grant and recognized over the service period. The fair value of restricted stock units is determined based on the number of shares granted and the quoted price of our common stock. Such value is recognized as expense over the service period, net of estimated forfeitures, using the accelerated method. The estimated number of stock awards that will ultimately vest requires judgment, and to the extent actual results or updated estimates differ from our current estimates, such amounts will be recorded as a cumulative adjustment in the period estimates are revised. We consider many factors when estimating expected forfeitures, including historical forfeiture experience and employee level. Additionally, stock-based compensation includes stock appreciation rights that are expected to settle in cash. These liability-classified awards are remeasured to fair value at the end of each reporting period until settlement or expiration.

Other Operating Expense (Income), Net

Other operating expense (income), net, consists primarily of a benefit from accelerated vesting of warrants to acquire equity of a vendor in Q4 2020, offset by a lease impairment in Q2 2020 and the amortization of intangible assets.

Other Income (Expense), Net

Other income (expense), net, consists primarily of valuations and adjustments of equity securities of $145 million, $231 million, and $833 million in 2018, 2019, and 2020, equity warrant valuation gains (losses) of $(131) million, $11 million, and $1.5 billion in 2018, 2019, and 2020, and foreign currency gains (losses) of $(206) million, $(20) million, and $35 million in 2018, 2019, and 2020.

During the period from January 1, 2021 to February 2, 2021, we expect to record upward adjustments relating to equity investments in private companies of approximately $1.5 billion. In addition, for this same period, our equity and equity warrant investments in public companies, which are subject to volatility based on changes in market prices, have experienced gains of approximately $1.5 billion based on available trading prices.

Income Taxes

Income tax expense includes U.S. (federal and state) and foreign income taxes. Certain foreign subsidiary earnings and losses are subject to current U.S. taxation and the subsequent repatriation of those earnings is not subject to tax in the U.S. We intend to invest substantially all of our foreign subsidiary earnings, as well as our capital in our foreign subsidiaries, indefinitely outside of the U.S. in those jurisdictions in which we would incur significant, additional costs upon repatriation of such amounts.

Deferred income tax balances reflect the effects of temporary differences between the carrying amounts of assets and liabilities and their tax bases, as well as net operating loss and tax credit carryforwards, and are stated at enacted tax rates expected to be in effect when taxes are actually paid or recovered.

Deferred tax assets represent amounts available to reduce income taxes payable in future periods. Deferred tax assets are evaluated for future realization and reduced by a valuation allowance to the extent we believe they will not be realized. We consider many factors when assessing the likelihood of future realization of our deferred tax assets, including our recent cumulative loss experience and expectations of future earnings, capital gains and investment in such jurisdiction, the carry-forward periods available to us for tax reporting purposes, and other relevant factors. The effects of the COVID-19 pandemic on our business make estimates of future earnings in relevant jurisdictions more challenging.

We utilize a two-step approach to recognizing and measuring uncertain income tax positions (tax contingencies). The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not the position will be sustained on audit, including resolution of related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount which is more than 50% likely of being realized upon ultimate settlement. We consider many factors when evaluating our tax positions and estimating our tax benefits, which may require periodic adjustments and which may not accurately forecast actual outcomes. We include interest and penalties related to our tax contingencies in income tax expense.

Fair Value of Financial Instruments

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. To increase the comparability of fair value measures, the following hierarchy prioritizes the inputs to valuation methodologies used to measure fair value:

Level 1 — Valuations based on quoted prices for identical assets and liabilities in active markets.

Level 2 — Valuations based on observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data.

Level 3 — Valuations based on unobservable inputs reflecting our own assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

We measure the fair value of money market funds and certain marketable equity securities based on quoted prices in active markets for identical assets or liabilities. Other marketable securities were valued either based on recent trades of securities in inactive markets or based on quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data. We did not hold significant amounts of marketable securities categorized as Level 3 assets as of December 31, 2019 and 2020.

We hold equity warrants giving us the right to acquire stock of other companies. As of December 31, 2019 and 2020, these warrants had a fair value of $669 million and $3.0 billion, and are recorded within “Other assets” on our consolidated balance sheets with gains and losses recognized in “Other income (expense), net” on our consolidated statements of operations. These warrants are primarily classified as Level 2 assets.

Cash and Cash Equivalents

We classify all highly liquid instruments with an original maturity of three months or less as cash equivalents.

Inventories

Inventories, consisting of products available for sale, are primarily accounted for using the first-in, first-out method, and are valued at the lower of cost and net realizable value. This valuation requires us to make judgments, based on currently available information, about the likely method of disposition, such as through sales to individual customers, returns to product vendors, or liquidations, and expected recoverable values of each disposition category. The inventory valuation allowance, representing a write-down of inventory, was $1.6 billion and $2.3 billion as of December 31, 2019 and 2020.

We provide Fulfillment by Amazon services in connection with certain of our sellers’ programs. Third-party sellers maintain ownership of their inventory, regardless of whether fulfillment is provided by us or the third-party sellers, and therefore these products are not included in our inventories.

We also purchase electronic device components from a variety of suppliers and use several contract manufacturers to provide manufacturing services for our products. During the normal course of business, in order to manage manufacturing lead times and help ensure adequate supply, we enter into agreements with contract manufacturers and suppliers for certain electronic device components. A portion of our reported purchase commitments arising from these agreements consists of firm, non-cancellable commitments. These commitments are based on forecasted customer demand. If we reduce these commitments, we may incur additional costs. We also have firm, non-cancellable commitments for certain products offered in our Whole Foods Market stores.

Accounts Receivable, Net and Other

Included in “Accounts receivable, net and other” on our consolidated balance sheets are amounts primarily related to customers, vendors, and sellers. As of December 31, 2019 and 2020, customer receivables, net, were $12.6 billion and $14.8 billion, vendor receivables, net, were $4.2 billion and $4.8 billion, and seller receivables, net, were $863 million and $381 million. Seller receivables are amounts due from sellers related to our seller lending program, which provides funding to sellers primarily to procure inventory.

We estimate losses on receivables based on expected losses, including our historical experience of actual losses. Receivables are considered impaired and written-off when it is probable that all contractual payments due will not be collected in accordance with the terms of the agreement. The allowance for doubtful accounts was $495 million, $718 million, and $1.1 billion as of December 31, 2018, 2019, and 2020. Additions to the allowance were $878 million, $1.0 billion, and $1.4 billion, and deductions to the allowance were $731 million, $793 million, and $1.0 billion in 2018, 2019, and 2020.

Software Development Costs

We incur software development costs related to products to be sold, leased, or marketed to external users, internal-use software, and our websites. Software development costs capitalized were not significant for the years presented. All other costs, including those related to design or maintenance, are expensed as incurred.

Property and Equipment, Net

Property and equipment are stated at cost less accumulated depreciation and amortization. Incentives that we receive from property and equipment vendors are recorded as a reduction to our costs. Property includes buildings and land that we own, along with property we have acquired under build-to-suit lease arrangements when we have control over the building during the construction period and finance lease arrangements. Equipment includes assets such as servers and networking equipment, heavy equipment, and other fulfillment equipment. Depreciation and amortization is recorded on a straight-line basis over the estimated useful lives of the assets (generally the lesser of 40 years or the remaining life of the underlying building, three years prior to January 1, 2020 and four years subsequent to January 1, 2020 for our servers, five years for networking equipment, ten years for heavy equipment, and three to ten years for other fulfillment equipment). Depreciation and amortization expense is classified within the corresponding operating expense categories on our consolidated statements of operations.

Leases

We categorize leases with contractual terms longer than twelve months as either operating or finance. Finance leases are generally those leases that allow us to substantially utilize or pay for the entire asset over its estimated life. Assets acquired under finance leases are recorded in “Property and equipment, net.” All other leases are categorized as operating leases. Our leases generally have terms that range from one to ten years for equipment and one to twenty years for property.

Certain lease contracts include obligations to pay for other services, such as operations and maintenance. For leases of property, we account for these other services as a component of the lease. For substantially all other leases, the services are accounted for separately and we allocate payments to the lease and other services components based on estimated stand-alone prices.

Lease liabilities are recognized at the present value of the fixed lease payments, reduced by landlord incentives using a discount rate based on similarly secured borrowings available to us. Lease assets are recognized based on the initial present value of the fixed lease payments, reduced by landlord incentives, plus any direct costs from executing the leases or lease prepayments reclassified from “Other assets” upon lease commencement. Leasehold improvements are capitalized at cost and amortized over the lesser of their expected useful life or the lease term.

When we have the option to extend the lease term, terminate the lease before the contractual expiration date, or purchase the leased asset, and it is reasonably certain that we will exercise the option, we consider the option in determining the classification and measurement of the lease. Our leases may include variable payments based on measures that include changes in price indices, market interest rates, or the level of sales at a physical store, which are expensed as incurred.

Costs associated with operating lease assets are recognized on a straight-line basis within operating expenses over the term of the lease. Finance lease assets are amortized within operating expenses on a straight-line basis over the shorter of the estimated useful lives of the assets or, in the instance where title does not transfer at the end of the lease term, the lease term. The interest component of a finance lease is included in interest expense and recognized using the effective interest method over the lease term.

We establish assets and liabilities for the present value of estimated future costs to retire long-lived assets at the termination or expiration of a lease. Such assets are amortized over the lease period into operating expense, and the recorded liabilities are accreted to the future value of the estimated retirement costs.

Financing Obligations

We record assets and liabilities for estimated construction costs under build-to-suit lease arrangements when we have control over the building during the construction period. If we continue to control the building after the construction period, the arrangement is classified as a financing obligation instead of a lease. The building is depreciated over the shorter of its useful life or the term of the obligation.

If we do not control the building after the construction period ends, the assets and liabilities for construction costs are derecognized, and we classify the lease as either operating or finance.

Goodwill and Indefinite-Lived Intangible Assets

We evaluate goodwill and indefinite-lived intangible assets for impairment annually or more frequently when an event occurs or circumstances change that indicate the carrying value may not be recoverable. We may elect to utilize a qualitative assessment to evaluate whether it is more likely than not that the fair value of a reporting unit or indefinite-lived intangible asset is less than its carrying value and if so, we perform a quantitative test. We compare the carrying value of each reporting unit and indefinite-lived intangible asset to its estimated fair value and if the fair value is determined to be less than the carrying value, we recognize an impairment loss for the difference. We estimate the fair value of the reporting units using discounted cash flows. Forecasts of future cash flows are based on our best estimate of future net sales and operating expenses, based primarily on expected category expansion, pricing, market segment share, and general economic conditions.

We completed the required annual impairment test of goodwill for all reporting units and indefinite-lived intangible assets as of April 1, 2020, resulting in no impairments. The fair value of our reporting units substantially exceeded their carrying value. There were no events that caused us to update our annual impairment test. See “Note 5 — Acquisitions, Goodwill, and Acquired Intangible Assets.”

Other Assets

Included in “Other assets” on our consolidated balance sheets are amounts primarily related to video and music content, net of accumulated amortization; acquired intangible assets, net of accumulated amortization; certain equity investments; equity warrant assets; long-term deferred tax assets; and lease prepayments made prior to lease commencement.

Digital Video and Music Content

We obtain video content, inclusive of episodic television and movies, and music content for customers through licensing agreements that have a wide range of licensing provisions including both fixed and variable payment schedules. When the license fee for a specific video or music title is determinable or reasonably estimable and the content is available to us, we recognize an asset and a corresponding liability for the amounts owed. We reduce the liability as payments are made and we amortize the asset to “Cost of sales” on an accelerated basis, based on estimated usage or viewing patterns, or on a straight-line basis. If the licensing fee is not determinable or reasonably estimable, no asset or liability is recorded and licensing costs are expensed as incurred. We also develop original video content for which the production costs are capitalized and amortized to “Cost of sales” predominantly on an accelerated basis that follows the viewing patterns associated with the content. The weighted average remaining life of our capitalized video content is 2.5 years.

Our produced and licensed video content is primarily monetized together as a unit, referred to as a film group, in each major geography where we offer Amazon Prime memberships. These film groups are evaluated for impairment whenever an event occurs or circumstances change indicating the fair value is less than the carrying value. The total capitalized costs of video, which is primarily released content, and music as of December 31, 2019 and 2020 were $5.8 billion and $6.8 billion. Total video and music expense was $7.8 billion and $11.0 billion for the year ended December 31, 2019 and 2020. Total video and music expense includes licensing and production costs associated with content offered within Amazon Prime memberships, and costs associated with digital subscriptions and sold or rented content.

Investments

We generally invest our excess cash in AAA-rated money market funds and investment grade short- to intermediate-term fixed income securities. Such investments are included in “Cash and cash equivalents” or “Marketable securities” on the accompanying consolidated balance sheets.

Marketable debt securities are classified as available-for-sale and reported at fair value with unrealized gains and losses included in “Accumulated other comprehensive income (loss).” Each reporting period, we evaluate whether declines in fair value below carrying value are due to expected credit losses, as well as our ability and intent to hold the investment until a forecasted recovery occurs. Expected credit losses are recorded as an allowance through “Other income (expense), net” on our consolidated statements of operations.

Equity investments in private companies for which we do not have the ability to exercise significant influence are accounted for at cost, with adjustments for observable changes in prices or impairments, and are classified as “Other assets” on our consolidated balance sheets with adjustments recognized in “Other income (expense), net” on our consolidated statements of operations. Each reporting period, we perform a qualitative assessment to evaluate whether the investment is impaired. Our assessment includes a review of recent operating results and trends, recent sales/acquisitions of the investee securities, and other publicly available data. If the investment is impaired, we write it down to its estimated fair value. As of December 31, 2019 and 2020, these investments had a carrying value of $1.5 billion and $2.7 billion.

Equity investments are accounted for using the equity method of accounting if the investment gives us the ability to exercise significant influence, but not control, over an investee. Equity-method investments are included within “Other assets” on our consolidated balance sheets. Our share of the earnings or losses as reported by equity-method investees, amortization of basis differences, related gains or losses, and impairments, if any, are recognized in “Equity-method investment activity, net of tax” on our consolidated statements of operations. Each reporting period, we evaluate whether declines in fair value below carrying value are other-than-temporary and if so, we write down the investment to its estimated fair value.

Equity investments that have readily determinable fair values are included in “Marketable securities” on our consolidated balance sheets and measured at fair value with changes recognized in “Other income (expense), net” on our consolidated statements of operations.

Long-Lived Assets

Long-lived assets, other than goodwill and indefinite-lived intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets might not be recoverable. Conditions that would necessitate an impairment assessment include a significant decline in the observable market value of an asset, a significant change in the extent or manner in which an asset is used, or any other significant adverse change that would indicate that the carrying amount of an asset or group of assets may not be recoverable.

For long-lived assets used in operations, including lease assets, impairment losses are only recorded if the asset’s carrying amount is not recoverable through its undiscounted, probability-weighted future cash flows. We measure the impairment loss based on the difference between the carrying amount and estimated fair value. Long-lived assets are considered held for sale when certain criteria are met, including when management has committed to a plan to sell the asset, the asset is available for sale in its immediate condition, and the sale is probable within one year of the reporting date. Assets held for sale are reported at the lower of cost or fair value less costs to sell. Assets held for sale were not significant as of December 31, 2019 and 2020.

Accrued Expenses and Other

Included in “Accrued expenses and other” on our consolidated balance sheets are liabilities primarily related to leases and asset retirement obligations, payroll and related expenses, tax-related liabilities, unredeemed gift cards, customer liabilities, current debt, acquired digital media content, and other operating expenses.

As of December 31, 2019 and 2020, our liabilities for payroll related expenses were $4.3 billion and $7.6 billion and our liabilities for unredeemed gift cards were $3.3 billion and $4.7 billion. We reduce the liability for a gift card when redeemed by a customer. The portion of gift cards that we do not expect to be redeemed is recognized based on customer usage patterns.

Unearned Revenue

Unearned revenue is recorded when payments are received or due in advance of performing our service obligations and is recognized over the service period. Unearned revenue primarily relates to prepayments of AWS services and Amazon Prime memberships. Our total unearned revenue as of December 31, 2019 was $10.2 billion, of which $7.9 billion was recognized as revenue during the year ended December 31, 2020 and our total unearned revenue as of December 31, 2020 was $11.6 billion. Included in “Other long-term liabilities” on our consolidated balance sheets was $2.0 billion and $1.9 billion of unearned revenue as of December 31, 2019 and 2020.

Additionally, we have performance obligations, primarily related to AWS, associated with commitments in customer contracts for future services that have not yet been recognized in our financial statements. For contracts with original terms that exceed one year, those commitments not yet recognized were $50.0 billion as of December 31, 2020. The weighted average remaining life of our long-term contracts is 3.4 years. However, the amount and timing of revenue recognition is largely driven by customer usage, which can extend beyond the original contractual term.

Other Long-Term Liabilities

Included in “Other long-term liabilities” on our consolidated balance sheets are liabilities primarily related to financing obligations, asset retirement obligations, deferred tax liabilities, unearned revenue, tax contingencies, and digital video and music content.

Foreign Currency

We have internationally-focused stores for which the net sales generated, as well as most of the related expenses directly incurred from those operations, are denominated in local functional currencies. The functional currency of our subsidiaries that either operate or support these stores is generally the same as the local currency. Assets and liabilities of these subsidiaries are translated into U.S. Dollars at period-end foreign exchange rates, and revenues and expenses are translated at average rates prevailing throughout the period. Translation adjustments are included in "Accumulated other comprehensive income (loss)," a separate component of stockholders' equity, and in the "Foreign currency effect on cash, cash equivalents, and restricted cash," on our consolidated statements of cash flows. Transaction gains and losses including intercompany transactions denominated in a currency other than the functional currency of the entity involved are included in "Other income (expense), net" on our consolidated statements of operations. In connection with the settlement and remeasurement of intercompany balances, we recorded gains (losses) of $(186) million, $95 million, and $118 million in 2018, 2019, and 2020.

Note 2 — FINANCIAL INSTRUMENTS

Cash, Cash Equivalents, Restricted Cash, and Marketable Securities

As of December 31, 2019 and 2020, our cash, cash equivalents, restricted cash, and marketable securities primarily consisted of cash, AAA-rated money market funds, U.S. and foreign government and agency securities, and other investment grade securities. Cash equivalents and marketable securities are recorded at fair value. The following table summarizes, by major security type, our cash, cash equivalents, restricted cash, and marketable securities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy (in millions):

	December 31, 2019			
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Total Estimated Fair Value
Cash	$ 9,776	$ —	$ —	$ 9,776
Level 1 securities:				
Money market funds	18,850	—	—	18,850
Equity securities				202
Level 2 securities:				
Foreign government and agency securities	4,794	—	—	4,794
U.S. government and agency securities	7,070	11	(1)	7,080
Corporate debt securities	11,845	37	(1)	11,881
Asset-backed securities	2,355	6	(1)	2,360
Other fixed income securities	393	1	—	394
Equity securities				5
	$ 55,083	$ 55	$ (3)	$ 55,342
Less: Restricted cash, cash equivalents, and marketable securities (2)				(321)
Total cash, cash equivalents, and marketable securities				$ 55,021

	December 31, 2020			
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Total Estimated Fair Value
Cash	$ 10,063	$ —	$ —	$ 10,063
Level 1 securities:				
Money market funds	27,430	—	—	27,430
Equity securities (1)				617
Level 2 securities:				
Foreign government and agency securities	5,130	1	—	5,131
U.S. government and agency securities	7,410	30	(1)	7,439
Corporate debt securities	29,684	305	(1)	29,988
Asset-backed securities	3,206	32	(3)	3,235
Other fixed income securities	701	9	—	710
Equity securities (1)				40
	$ 83,624	$ 377	$ (5)	$ 84,653
Less: Restricted cash, cash equivalents, and marketable securities (2)				(257)
Total cash, cash equivalents, and marketable securities				$ 84,396

(1) The related unrealized gain (loss) recorded in "Other income (expense), net" was $448 million for the year ended December 31, 2020.

(2) We are required to pledge or otherwise restrict a portion of our cash, cash equivalents, and marketable securities as collateral for real estate leases, amounts due to third-party sellers in certain jurisdictions, debt, and standby and trade letters of credit. We classify cash, cash equivalents, and marketable securities with use restrictions of less than twelve months as "Accounts receivable, net and other" and of twelve months or longer as non-current "Other assets" on our consolidated balance sheets. See "Note 7 — Commitments and Contingencies."

The following table summarizes gross gains and gross losses realized on sales of available-for-sale fixed income marketable securities (in millions):

	Year Ended December 31,		
	2018	2019	2020
Realized gains	$ 2	$ 11	$ 92
Realized losses	9	7	56

The following table summarizes the remaining contractual maturities of our cash equivalents and marketable fixed income securities as of December 31, 2020 (in millions):

	Amortized Cost	Estimated Fair Value
Due within one year	$ 52,838	$ 52,850
Due after one year through five years	17,222	17,546
Due after five years through ten years	857	863
Due after ten years	2,644	2,674
Total	$ 73,561	$ 73,933

Actual maturities may differ from the contractual maturities because borrowers may have certain prepayment conditions.

Consolidated Statements of Cash Flows Reconciliation

The following table provides a reconciliation of the amount of cash, cash equivalents, and restricted cash reported within the consolidated balance sheets to the total of the same such amounts shown in the consolidated statements of cash flows (in millions):

	December 31, 2019	December 31, 2020
Cash and cash equivalents	$ 36,092	$ 42,122
Restricted cash included in accounts receivable, net and other	276	233
Restricted cash included in other assets	42	22
Total cash, cash equivalents, and restricted cash shown in the consolidated statements of cash flows	$ 36,410	$ 42,377

Note 3 — PROPERTY AND EQUIPMENT

Property and equipment, at cost, consisted of the following (in millions):

	December 31,	
	2019	2020
Gross property and equipment (1):		
Land and buildings	$ 39,223	$ 57,324
Equipment	71,310	97,224
Other assets	3,111	3,772
Construction in progress	6,036	15,228
Gross property and equipment	119,680	173,548
Total accumulated depreciation and amortization (1)	46,975	60,434
Total property and equipment, net	$ 72,705	$ 113,114

(1) Includes the original cost and accumulated depreciation of fully-depreciated assets.

Depreciation and amortization expense on property and equipment was $12.1 billion, $15.1 billion, and $16.2 billion which includes amortization of property and equipment acquired under finance leases of $7.3 billion, $10.1 billion, and $8.5 billion for 2018, 2019, and 2020.

Note 4 — LEASES

Gross assets acquired under finance leases, inclusive of those where title transfers at the end of the lease, are recorded in “Property and equipment, net” and were $57.4 billion and $68.1 billion as of December 31, 2019 and 2020. Accumulated amortization associated with finance leases was $30.0 billion and $36.5 billion as of December 31, 2019 and 2020.

Lease cost recognized in our consolidated statements of operations is summarized as follows (in millions):

	Year Ended December 31,	
	2019	2020
Operating lease cost	$ 3,669	$ 5,019
Finance lease cost:		
Amortization of lease assets	10,094	8,452
Interest on lease liabilities	695	617
Finance lease cost	10,789	9,069
Variable lease cost	966	1,238
Total lease cost	$ 15,424	$ 15,326

Other information about lease amounts recognized in our consolidated financial statements is as follows:

	December 31, 2019	December 31, 2020
Weighted-average remaining lease term – operating leases	11.5	11.3
Weighted-average remaining lease term – finance leases	5.5	6.2
Weighted-average discount rate – operating leases	3.1 %	2.5 %
Weighted-average discount rate – finance leases	2.7 %	2.1 %

Our lease liabilities were as follows (in millions):

	December 31, 2019		
	Operating Leases	Finance Leases	Total
Gross lease liabilities	$ 31,963	$ 28,875	$ 60,838
Less: imputed interest	(6,128)	(1,896)	(8,024)
Present value of lease liabilities	25,835	26,979	52,814
Less: current portion of lease liabilities	(3,139)	(9,884)	(13,023)
Total long-term lease liabilities	$ 22,696	$ 17,095	$ 39,791

	December 31, 2020		
	Operating Leases	Finance Leases	Total
Gross lease liabilities	$ 46,164	$ 30,437	$ 76,601
Less: imputed interest	(7,065)	(2,003)	(9,068)
Present value of lease liabilities	39,099	28,434	67,533
Less: current portion of lease liabilities	(4,586)	(10,374)	(14,960)
Total long-term lease liabilities	$ 34,513	$ 18,060	$ 52,573

Note 5 — ACQUISITIONS, GOODWILL, AND ACQUIRED INTANGIBLE ASSETS

2018 Acquisition Activity

On April 12, 2018, we acquired Ring Inc. for cash consideration of approximately $839 million, net of cash acquired, and on September 11, 2018, we acquired PillPack, Inc. for cash consideration of approximately $753 million, net of cash acquired, to expand our product and service offerings. During 2018, we also acquired certain other companies for an aggregate purchase price of $57 million.

2019 Acquisition Activity

During 2019, we acquired certain companies for an aggregate purchase price of $315 million, net of cash acquired.

2020 Acquisition Activity

During 2020, we acquired certain companies for an aggregate purchase price of $1.2 billion, net of cash acquired, of which $1.1 billion was capitalized to in-process research and development intangible assets (“IPR&D”).

The primary reason for all acquisitions was to acquire technologies and know-how to enable Amazon to serve customers more effectively. Acquisition-related costs were expensed as incurred.

Pro forma results of operations have not been presented because the effects of 2020 acquisitions, individually and in the aggregate, were not material to our consolidated results of operations.

Goodwill

The goodwill of the acquired companies is primarily related to expected improvements in technology performance and functionality, as well as sales growth from future product and service offerings and new customers, together with certain intangible assets that do not qualify for separate recognition. The goodwill of the acquired companies is generally not deductible for tax purposes. The following summarizes our goodwill activity in 2019 and 2020 by segment (in millions):

	North America	International	AWS	Consolidated
Goodwill - January 1, 2019	$ 12,191	$ 1,270	$ 1,087	$ 14,548
New acquisitions	71	29	89	189
Other adjustments (1)	2	1	14	17
Goodwill - December 31, 2019	12,264	1,300	1,190	14,754
New acquisitions	204	6	2	212
Other adjustments (1)	59	(18)	10	51
Goodwill - December 31, 2020	$ 12,527	$ 1,288	$ 1,202	$ 15,017

(1) Primarily includes changes in foreign exchange rates.

Intangible Assets

Acquired identifiable intangible assets are valued primarily by using discounted cash flows. These assets are included within "Other assets" on our consolidated balance sheets and consist of the following (in millions):

	December 31,						
	2019			2020			
	Acquired Intangibles, Gross (1)	Accumulated Amortization (1)	Acquired Intangibles, Net	Acquired Intangibles, Gross (1)	Accumulated Amortization (1)	Acquired Intangibles, Net	Weighted Average Life Remaining
Finite-lived intangible assets (2):							
Marketing-related	$ 2,303	$ (340)	$ 1,963	$ 2,289	$ (445)	$ 1,844	20.0
Contract-based	1,680	(302)	1,378	1,917	(418)	1,499	11.0
Technology- and content-based	1,005	(477)	528	948	(555)	393	3.3
Customer-related	282	(130)	152	179	(77)	102	4.0
Total finite-lived intangible assets	$ 5,270	$ (1,249)	$ 4,021	$ 5,333	$ (1,495)	$ 3,838	14.4
IPR&D and other (3)	$ 28		$ 28	$ 1,143		$ 1,143	
Total acquired intangibles	$ 5,298	$ (1,249)	$ 4,049	$ 6,476	$ (1,495)	$ 4,981	

(1) Excludes the original cost and accumulated amortization of fully-amortized intangibles.
(2) Finite-lived intangible assets have estimated useful lives of between one and twenty-five years, and are being amortized to operating expenses on a straight-line basis.
(3) Intangible assets acquired in a business combination that are in-process and used in research and development activities are considered indefinite-lived until the completion or abandonment of the research and development efforts. Once the research and development efforts are completed, we determine the useful life and begin amortizing the assets.

Amortization expense for acquired finite-lived intangibles was $475 million, $565 million, and $509 million in 2018, 2019, and 2020. Expected future amortization expense of acquired finite-lived intangible assets as of December 31, 2020 is as follows (in millions):

Year Ended December 31,	
2021	$ 464
2022	430
2023	368
2024	303
2025	251
Thereafter	2,022
	$ 3,838

Note 6 — DEBT

As of December 31, 2020, we had $32.2 billion of unsecured senior notes outstanding (the "Notes"), including $10.0 billion issued in June 2020 for general corporate purposes. We also have other long-term debt and borrowings under our credit facility of $1.6 billion and $924 million as of December 31, 2019 and 2020. Our total long-term debt obligations are as follows (in millions):

	Maturities (1)	Stated Interest Rates	Effective Interest Rates	December 31, 2019	December 31, 2020
2012 Notes issuance of $3.0 billion	2022	2.50%	2.66%	1,250	1,250
2014 Notes issuance of $6.0 billion	2021 - 2044	3.30% - 4.95%	3.43% - 5.11%	5,000	5,000
2017 Notes issuance of $17.0 billion	2023 - 2057	2.40% - 5.20%	2.56% - 4.33%	17,000	16,000
2020 Notes issuance of $10.0 billion	2023 - 2060	0.40% - 2.70%	0.56% - 2.77%	—	10,000
Credit Facility				740	338
Other long-term debt				830	586
Total face value of long-term debt				24,820	33,174
Unamortized discount and issuance costs, net				(101)	(203)
Less current portion of long-term debt				(1,305)	(1,155)
Long-term debt				$ 23,414	$ 31,816

(1) The weighted average remaining lives of the 2012, 2014, 2017, and 2020 Notes were 1.9, 11.8, 16.2, and 18.7 years as of December 31, 2020. The combined weighted average remaining life of the Notes was 15.8 years as of December 31, 2020.

Interest on the Notes is payable semi-annually in arrears. We may redeem the Notes at any time in whole, or from time to time, in part at specified redemption prices. We are not subject to any financial covenants under the Notes. The estimated fair value of the Notes was approximately $26.2 billion and $37.7 billion as of December 31, 2019 and 2020, which is based on quoted prices for our debt as of those dates.

In October 2016, we entered into a $500 million secured revolving credit facility with a lender that is secured by certain seller receivables, which we subsequently increased to $740 million and may from time to time increase in the future subject to lender approval (the "Credit Facility"). The Credit Facility is available until October 2022, bears interest at the London interbank offered rate ("LIBOR") plus 1.40%, and has a commitment fee of 0.50% on the undrawn portion. There were $740 million and $338 million of borrowings outstanding under the Credit Facility as of December 31, 2019 and 2020, which had a weighted-average interest rate of 3.4% and 3.0%, respectively. As of December 31, 2019 and 2020, we have pledged $852 million and $398 million of our cash and seller receivables as collateral for debt related to our Credit Facility. The estimated fair value of the Credit Facility, which is based on Level 2 inputs, approximated its carrying value as of December 31, 2019 and 2020.

Other long-term debt, including the current portion, had a weighted-average interest rate of 4.1% and 2.9% as of December 31, 2019 and 2020. We used the net proceeds from the issuance of this debt primarily to fund certain business operations. The estimated fair value of other long-term debt, which is based on Level 2 inputs, approximated its carrying value as of December 31, 2019 and 2020.

As of December 31, 2020, future principal payments for our total long-term debt were as follows (in millions):

Year Ended December 31,		
2021	$	1,156
2022		1,629
2023		2,283
2024		3,355
2025		2,251
Thereafter		22,500
	$	33,174

In April 2018, we established a commercial paper program (the "Commercial Paper Program") under which we may from time to time issue unsecured commercial paper up to a total of $7.0 billion at any time, with individual maturities that may vary but will not exceed 397 days from the date of issue. In June 2020, we increased the size of the Commercial Paper Program to $10.0 billion. There were no borrowings outstanding under the Commercial Paper Program as of December 31, 2019. There were $725 million of borrowings outstanding under the Commercial Paper Program as of December 31, 2020, which are included in "Accrued expenses and other" on our consolidated balance sheets and have a weighted average effective interest rate, including issuance costs, of 0.11%. We use the net proceeds from the issuance of commercial paper for general corporate purposes.

In April 2018, in connection with our Commercial Paper Program, we amended and restated our unsecured revolving credit facility (the "Credit Agreement") with a syndicate of lenders to increase our borrowing capacity thereunder to $7.0 billion. In June 2020, we further amended and restated the Credit Agreement to extend the term to June 2023, and it may be extended for up to three additional one-year terms if approved by the lenders. The interest rate applicable to outstanding balances under the amended and restated Credit Agreement is LIBOR plus 0.50%, with a commitment fee of 0.04% on the undrawn portion of the credit facility. There were no borrowings outstanding under the Credit Agreement as of December 31, 2019 and 2020.

We also utilize other short-term credit facilities for working capital purposes. These amounts are included in "Accrued expenses and other" on our consolidated balance sheets. In addition, we had $5.1 billion of unused letters of credit as of December 31, 2020.

Note 7 — COMMITMENTS AND CONTINGENCIES

Commitments

We have entered into non-cancellable operating and finance leases and financing obligations for equipment and office, fulfillment, sortation, delivery, data center, physical store, and renewable energy facilities.

The following summarizes our principal contractual commitments, excluding open orders for purchases that support normal operations and are generally cancellable, as of December 31, 2020 (in millions):

	Year Ended December 31,						
	2021	2022	2023	2024	2025	Thereafter	Total
Long-term debt principal and interest	$ 2,187	$ 2,622	$ 3,219	$ 4,272	$ 3,058	$ 35,680	$ 51,038
Operating lease liabilities	5,600	5,184	4,743	4,356	3,951	22,330	46,164
Finance lease liabilities, including interest	10,778	7,246	3,456	1,389	1,035	6,533	30,437
Financing obligations, including interest	227	230	233	237	240	3,751	4,918
Leases not yet commenced	1,010	1,738	1,876	1,973	1,951	20,321	28,869
Unconditional purchase obligations (1)	3,869	3,760	3,367	3,141	2,213	136	16,486
Other commitments (2)(3)	3,671	2,386	945	783	661	8,351	16,797
Total commitments	$ 27,342	$ 23,166	$ 17,839	$ 16,151	$ 13,109	$ 97,102	$ 194,709

(1) Includes unconditional purchase obligations related to certain products offered in our Whole Foods Market stores and long-term agreements to acquire and license digital media content that are not reflected on the consolidated balance sheets. For those digital media content agreements with variable terms, we do not estimate the total obligation beyond any minimum quantities and/or pricing as of the reporting date. Purchase obligations associated with renewal provisions solely at the option of the content provider are included to the extent such commitments are fixed or a minimum amount is specified.

(2) Includes the estimated timing and amounts of payments for rent and tenant improvements associated with build-to-suit lease arrangements that are under construction, asset retirement obligations, and liabilities associated with digital media content agreements with initial terms greater than one year.

(3) Excludes approximately $2.8 billion of accrued tax contingencies for which we cannot make a reasonably reliable estimate of the amount and period of payment, if any.

Pledged Assets

As of December 31, 2019 and 2020, we have pledged or otherwise restricted $994 million and $875 million of our cash, cash equivalents, and marketable securities, and certain property and equipment as collateral for real estate leases, amounts due to third-party sellers in certain jurisdictions, debt, and standby and trade letters of credit. Additionally, we have pledged our cash and seller receivables for debt related to our Credit Facility. See “Note 6 — Debt.”

Suppliers

During 2020, no vendor accounted for 10% or more of our purchases. We generally do not have long-term contracts or arrangements with our vendors to guarantee the availability of merchandise, particular payment terms, or the extension of credit limits.

Other Contingencies

We are subject to claims related to various indirect taxes (such as sales, value added, consumption, service, and similar taxes), including in jurisdictions in which we already collect and remit such taxes. If the relevant taxing authorities were successfully to pursue these claims, we could be subject to significant additional tax liabilities. For example, in June 2017, the State of South Carolina issued an assessment for uncollected sales and use taxes for the period from January 2016 to March 2016, including interest and penalties. South Carolina is alleging that we should have collected sales and use taxes on transactions by our third-party sellers. In September 2019, the South Carolina Administrative Law Court ruled in favor of the Department of Revenue and we have appealed the decision to the state Court of Appeals. We believe the assessment is without merit and intend to defend ourselves vigorously in this matter. If other tax authorities were successfully to seek additional adjustments of a similar nature, we could be subject to significant additional tax liabilities.

Legal Proceedings

The Company is involved from time to time in claims, proceedings, and litigation, including the following:

In March 2015, Zitovault, LLC filed a complaint against Amazon.com, Inc., Amazon.com, LLC, Amazon Web Services, Inc., and Amazon Web Services, LLC for patent infringement in the United States District Court for the Eastern District of Texas. The complaint alleges that Elastic Compute Cloud, Virtual Private Cloud, Elastic Load Balancing, Auto-Scaling, and Elastic Beanstalk infringe U.S. Patent No. 6,484,257, entitled “System and Method for Maintaining N Number of Simultaneous Cryptographic Sessions Using a Distributed Computing Environment.” The complaint seeks injunctive relief, an unspecified amount of damages, enhanced damages, attorneys’ fees, costs, and interest. In January 2016, the case was transferred to the United States District Court for the Western District of Washington. In June 2016, the case was stayed pending resolution of a review petition we filed with the United States Patent and Trademark Office. In January 2019, the stay of the case was lifted following resolution of the review petition. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

In November 2015, Eolas Technologies, Inc. filed a complaint against Amazon.com, Inc. in the United States District Court for the Eastern District of Texas. The complaint alleges, among other things, that the use of “interactive features” on www.amazon.com, including “search suggestions and search results,” infringes U.S. Patent No. 9,195,507, entitled “Distributed Hypermedia Method and System for Automatically Invoking External Application Providing Interaction and Display of Embedded Objects Within A Hypermedia Document.” The complaint sought a judgment of infringement together with costs and attorneys’ fees. In February 2016, Eolas filed an amended complaint seeking, among other things, an unspecified amount of damages. In February 2017, Eolas alleged in its damages report that in the event of a finding of liability Amazon could be subject to $130-$250 million in damages. In April 2017, the case was transferred to the United States District Court for the Northern District of California. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

In May 2018, Rensselaer Polytechnic Institute and CF Dynamic Advances LLC filed a complaint against Amazon.com, Inc. in the United States District Court for the Northern District of New York. The complaint alleges, among other things, that “Alexa Voice Software and Alexa enabled devices” infringe U.S. Patent No. 7,177,798, entitled “Natural Language Interface Using Constrained Intermediate Dictionary of Results.” The complaint seeks an injunction, an unspecified amount of damages, enhanced damages, an ongoing royalty, pre- and post-judgment interest, attorneys’ fees, and costs. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

In December 2018, Kove IO, Inc. filed a complaint against Amazon Web Services, Inc. in the United States District Court for the Northern District of Illinois. The complaint alleges, among other things, that Amazon S3 and DynamoDB infringe U.S. Patent Nos. 7,814,170 and 7,103,640, both entitled “Network Distributed Tracking Wire Transfer Protocol,” and 7,233,978, entitled “Method And Apparatus For Managing Location Information In A Network Separate From The Data To Which The Location Information Pertains.” The complaint seeks an unspecified amount of damages, enhanced damages, attorneys’ fees, costs, interest, and injunctive relief. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

Beginning in March 2020, a number of class-action complaints were filed alleging, among other things, price fixing arrangements between Amazon.com, Inc. and third-party sellers in Amazon’s stores, monopolization and attempted monopolization of an alleged market in online retail or other submarkets, and consumer protection and unjust enrichment claims. In March 2020, Frame-Wilson v. Amazon.com, Inc. was filed in the United States District Court for the Western District of Washington. Beginning in April 2020, class action complaints were filed in the Superior Court of Quebec – Division of Montreal, the Ontario Superior Court of Justice, and the Federal Court of Canada against Amazon.com, Inc. and related entities. The complaints allege several distinct purported classes, including consumers who purchased a product through Amazon’s stores and consumers who purchased a product offered by Amazon through another e-commerce retailer. The complaints seek billions of dollars of alleged actual damages, treble damages, punitive damages, and injunctive relief. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in these matters.

In November 2020, the European Commission issued a Statement of Objections alleging that Amazon uses data relating to our marketplace sellers in a manner that infringes EU competition rules. The Statement of Objections seeks to impose unspecified fines and remedial actions. We disagree with the preliminary assertions of the European Commission and intend to defend ourselves vigorously in this matter.

In addition, we are regularly subject to claims, litigation, and other proceedings, including potential regulatory proceedings, involving patent and other intellectual property matters, taxes, labor and employment, competition and antitrust, privacy and data protection, consumer protection, commercial disputes, goods and services offered by us and by third parties, and other matters.

The outcomes of our legal proceedings and other contingencies are inherently unpredictable, subject to significant uncertainties, and could be material to our operating results and cash flows for a particular period. We evaluate, on a regular basis, developments in our legal proceedings and other contingencies that could affect the amount of liability, including amounts in excess of any previous accruals and reasonably possible losses disclosed, and make adjustments and changes to our accruals and disclosures as appropriate. For the matters we disclose that do not include an estimate of the amount of loss or range of losses, such an estimate is not possible or is immaterial, and we may be unable to estimate the possible loss or range of losses that could potentially result from the application of non-monetary remedies. Until the final resolution of such matters, if any of our estimates and assumptions change or prove to have been incorrect, we may experience losses in excess of the amounts recorded, which could have a material effect on our business, consolidated financial position, results of operations, or cash flows.

See also "Note 9 — Income Taxes."

Note 8 — STOCKHOLDERS' EQUITY

Preferred Stock

We have authorized 500 million shares of $0.01 par value preferred stock. No preferred stock was outstanding for any year presented.

Common Stock

Common shares outstanding plus shares underlying outstanding stock awards totaled 507 million, 512 million, and 518 million, as of December 31, 2018, 2019, and 2020. These totals include all vested and unvested stock awards outstanding, including those awards we estimate will be forfeited.

Stock Repurchase Activity

In February 2016, the Board of Directors authorized a program to repurchase up to $5.0 billion of our common stock, with no fixed expiration. There were no repurchases of common stock in 2018, 2019, or 2020.

Stock Award Plans

Employees vest in restricted stock unit awards over the corresponding service term, generally between two and five years.

Stock Award Activity

Stock-based compensation expense is as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
Cost of sales	$ 73	$ 149	$ 283
Fulfillment	1,121	1,182	1,357
Technology and content	2,888	3,725	5,061
Marketing	769	1,135	1,710
General and administrative	567	673	797
Total stock-based compensation expense (1)	$ 5,418	$ 6,864	$ 9,208

(1) The related tax benefits were $1.1 billion, $1.4 billion, and $1.9 billion for 2018, 2019, and 2020.

The following table summarizes our restricted stock unit activity (in millions):

	Number of Units	Weighted Average Grant-Date Fair Value
Outstanding as of January 1, 2018	20.1	$ 725
Units granted	5.0	1,522
Units vested	(7.1)	578
Units forfeited	(2.1)	862
Outstanding as of December 31, 2018	15.9	1,024
Units granted	6.7	1,808
Units vested	(6.6)	827
Units forfeited	(1.7)	1,223
Outstanding as of December 31, 2019	14.3	1,458
Units granted	8.0	2,373
Units vested	(5.8)	1,239
Units forfeited	(1.3)	1,642
Outstanding as of December 31, 2020	15.2	2,004

Scheduled vesting for outstanding restricted stock units as of December 31, 2020, is as follows (in millions):

	Year Ended						
	2021	2022	2023	2024	2025	Thereafter	Total
Scheduled vesting — restricted stock units	5.7	5.4	2.7	1.2	0.1	0.1	15.2

As of December 31, 2020, there was $13.3 billion of net unrecognized compensation cost related to unvested stock-based compensation arrangements. This compensation is recognized on an accelerated basis with approximately half of the compensation expected to be expensed in the next twelve months, and has a remaining weighted-average recognition period of 1.2 years. The estimated forfeiture rate as of December 31, 2018, 2019, and 2020 was 27%. Changes in our estimates and assumptions relating to forfeitures may cause us to realize material changes in stock-based compensation expense in the future.

During 2018, 2019, and 2020, the fair value of restricted stock units that vested was $11.4 billion, $11.7 billion, and $15.5 billion.

Common Stock Available for Future Issuance

As of December 31, 2020, common stock available for future issuance to employees is 102 million shares.

Note 9 — INCOME TAXES

In 2018, 2019, and 2020, we recorded net tax provisions of $1.2 billion, $2.4 billion, and $2.9 billion. Tax benefits relating to excess stock-based compensation deductions and accelerated depreciation deductions are reducing our U.S. taxable income. Cash taxes paid, net of refunds, were $1.2 billion, $881 million, and $1.7 billion for 2018, 2019, and 2020.

U.S. companies are eligible for a deduction that lowers the effective tax rate on certain foreign income. This regime is referred to as the Foreign-Derived Intangible Income deduction (“FDII”). In addition, certain foreign subsidiary earnings and losses are subject to current U.S. taxation and the subsequent repatriation of those earnings is not subject to tax in the U.S. The U.S. tax rules also provide for enhanced accelerated depreciation deductions by allowing the election of full expensing of qualified property, primarily equipment, through 2022. Our federal tax provision included the election of full expensing of qualified property for 2018 and 2019 and a partial election for 2020.

The components of the provision for income taxes, net are as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
U.S. Federal:			
Current	$ (129)	$ 162	$ 1,835
Deferred	565	914	(151)
Total	436	1,076	1,684
U.S. State:			
Current	322	276	626
Deferred	5	8	(190)
Total	327	284	436
International:			
Current	563	1,140	956
Deferred	(129)	(126)	(213)
Total	434	1,014	743
Provision for income taxes, net	$ 1,197	$ 2,374	$ 2,863

U.S. and international components of income before income taxes are as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
U.S.	$ 11,157	$ 13,285	$ 20,219
International	104	691	3,959
Income before income taxes	$ 11,261	$ 13,976	$ 24,178

The items accounting for differences between income taxes computed at the federal statutory rate and the provision recorded for income taxes are as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
Income taxes computed at the federal statutory rate	$ 2,365	$ 2,935	$ 5,078
Effect of:			
Tax impact of foreign earnings and losses	162	453	(538)
State taxes, net of federal benefits	263	221	343
Tax credits	(419)	(466)	(639)
Stock-based compensation (1)	(1,086)	(850)	(1,107)
Foreign income deduction (FDII)	(43)	(72)	(372)
2017 Impact of U.S. Tax Act	(157)	—	—
Other, net	112	153	98
Total	$ 1,197	$ 2,374	$ 2,863

(1) Includes non-deductible stock-based compensation and excess tax benefits from stock-based compensation. Our tax provision includes \$1.6 billion, \$1.4 billion, and \$1.8 billion of excess tax benefits from stock-based compensation for 2018, 2019, and 2020.

Our provision for income taxes in 2019 was higher than in 2018 primarily due to an increase in U.S. pre-tax income, a decline in excess tax benefits from stock-based compensation, and the one-time provisional tax benefit of the U.S. Tax Act recognized in 2018.

Our provision for income taxes in 2020 was higher than in 2019 primarily due to an increase in pretax income. This was partially offset by the impact of developments in our ongoing global tax controversies on taxes related to our foreign earnings and losses, an increase in excess tax benefits from stock-based compensation, and an increase in our foreign income deduction under FDII. In addition, our Luxembourg operations generated earnings in 2020 and utilized deferred tax assets previously subject to valuation allowances.

We intend to invest substantially all of our foreign subsidiary earnings, as well as our capital in our foreign subsidiaries, indefinitely outside of the U.S. in those jurisdictions in which we would incur significant, additional costs upon repatriation of such amounts.

Deferred income tax assets and liabilities are as follows (in millions):

	December 31, 2019	December 31, 2020
Deferred tax assets (1):		
Loss carryforwards U.S. - Federal/States	188	245
Loss carryforwards - Foreign	3,232	3,876
Accrued liabilities, reserves, and other expenses	1,373	2,457
Stock-based compensation	1,585	2,033
Depreciation and amortization	2,385	1,886
Operating lease liabilities	6,648	10,183
Other items	728	559
Tax credits	772	207
Total gross deferred tax assets	16,911	21,446
Less valuation allowances (2)	(5,754)	(5,803)
Deferred tax assets, net of valuation allowances	11,157	15,643
Deferred tax liabilities:		
Depreciation and amortization	(5,507)	(5,508)
Operating lease assets	(6,331)	(9,539)
Other items	(640)	(1,462)
Net deferred tax assets (liabilities), net of valuation allowances	$ (1,321)	$ (866)

(1) Deferred tax assets are presented after tax effects and net of tax contingencies.
(2) Relates primarily to deferred tax assets that would only be realizable upon the generation of net income in certain foreign taxing jurisdictions.

Our valuation allowances primarily relate to foreign deferred tax assets, including substantially all of our foreign net operating loss carryforwards as of December 31, 2020. Our foreign net operating loss carryforwards for income tax purposes as of December 31, 2020 were approximately $13.4 billion before tax effects and certain of these amounts are subject to annual limitations under applicable tax law. If not utilized, a portion of these losses will begin to expire in 2021. All remaining federal tax credits, which were primarily related to the U.S. federal research and development credit, reduced our federal tax liability in 2020.

We regularly assess whether it is more likely than not that we will realize our deferred tax assets in each taxing jurisdiction in which we operate. In performing this assessment with respect to each jurisdiction, we review all available evidence, including recent cumulative loss experience and expectations of future earnings, capital gains, and investment in such jurisdiction, the carry-forward periods available to us for tax reporting purposes, and other relevant factors. The effects of the COVID-19 pandemic on our business make estimates of future earnings more challenging. Since Q2 2017, we have recorded a valuation allowance against our net deferred tax assets in Luxembourg. There is still significant uncertainty whether our earnings in Luxembourg are sustainable in the future and we will maintain the valuation allowance until sufficient positive evidence exists to support a release of the valuation allowance.

Tax Contingencies

We are subject to income taxes in the U.S. (federal and state) and numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes. During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. We establish reserves for tax-related uncertainties based on estimates of whether, and the extent to which, additional taxes will be due. These reserves are established when we believe that certain positions might be challenged despite our belief that our tax return positions are fully supportable. We adjust these reserves in light of changing facts and circumstances, such as the outcome of tax audits. The provision for income taxes includes the impact of reserve provisions and changes to reserves that are considered appropriate.

The reconciliation of our tax contingencies is as follows (in millions):

	December 31,		
	2018	2019	2020
Gross tax contingencies – January 1	$ 2,309	$ 3,414	$ 3,923
Gross increases to tax positions in prior periods	164	216	88
Gross decreases to tax positions in prior periods	(90)	(181)	(465)
Gross increases to current period tax positions	1,088	707	507
Settlements with tax authorities	(36)	(207)	(1,207)
Lapse of statute of limitations	(21)	(26)	(26)
Gross tax contingencies – December 31 (1)	$ 3,414	$ 3,923	$ 2,820

(1) As of December 31, 2020, we had approximately $2.8 billion of accrued tax contingencies of which $1.5 billion, if fully recognized, would decrease our effective tax rate. The decrease in our tax contingencies in 2020 was primarily a result of developments in our global tax controversies.

As of December 31, 2019 and 2020, we had accrued interest and penalties, net of federal income tax benefit, related to tax contingencies of $131 million and $83 million. Interest and penalties, net of federal income tax benefit, recognized for the years ended December 31, 2018, 2019, and 2020 was $20 million, $4 million, and $(48) million.

We are under examination, or may be subject to examination, by the Internal Revenue Service ("IRS") for the calendar year 2013 and thereafter. These examinations may lead to ordinary course adjustments or proposed adjustments to our taxes or our net operating losses with respect to years under examination as well as subsequent periods. During Q3 2020, we resolved the audits of tax years 2007 through 2012 with the IRS for amounts that were materially consistent with our accrual.

In October 2014, the European Commission opened a formal investigation to examine whether decisions by the tax authorities in Luxembourg with regard to the corporate income tax paid by certain of our subsidiaries comply with European Union rules on state aid. On October 4, 2017, the European Commission announced its decision that determinations by the tax authorities in Luxembourg did not comply with European Union rules on state aid. Based on that decision the European Commission announced an estimated recovery amount of approximately €250 million, plus interest, for the period May 2006 through June 2014, and ordered Luxembourg tax authorities to calculate the actual amount of additional taxes subject to recovery. Luxembourg computed an initial recovery amount, consistent with the European Commission's decision, that we deposited into escrow in March 2018, subject to adjustment pending conclusion of all appeals. In December 2017, Luxembourg appealed the European Commission's decision. In May 2018, we appealed. We believe the European Commission's decision to be without merit and will continue to defend ourselves vigorously in this matter. We are also subject to taxation in various states and other foreign jurisdictions including China, Germany, India, Japan, Luxembourg, and the United Kingdom. We are under, or may be subject to, audit or examination and additional assessments by the relevant authorities in respect of these particular jurisdictions primarily for 2009 and thereafter.

Changes in tax laws, regulations, administrative practices, principles, and interpretations may impact our tax contingencies. The timing of the resolution of income tax examinations is highly uncertain, and the amounts ultimately paid, if any, upon resolution of the issues raised by the taxing authorities may differ from the amounts accrued. It is reasonably possible that within the next twelve months we will receive additional assessments by various tax authorities or possibly reach resolution of income tax examinations in one or more jurisdictions. These assessments or settlements could result in changes to our contingencies related to positions on prior years' tax filings. The actual amount of any change could vary significantly depending on the ultimate timing and nature of any settlements. We cannot currently provide an estimate of the range of possible outcomes.

Note 10 — SEGMENT INFORMATION

We have organized our operations into three segments: North America, International, and AWS. We allocate to segment results the operating expenses "Fulfillment," "Technology and content," "Marketing," and "General and administrative" based on usage, which is generally reflected in the segment in which the costs are incurred. The majority of technology infrastructure costs are allocated to the AWS segment based on usage. The majority of the remaining non-infrastructure technology costs are incurred in the U.S. and are allocated to our North America segment. There are no internal revenue transactions between our reportable segments. These segments reflect the way our chief operating decision maker evaluates the Company's business performance and manages its operations.

North America

The North America segment primarily consists of amounts earned from retail sales of consumer products (including from sellers) and subscriptions through North America-focused online and physical stores. This segment includes export sales from these online stores.

International

The International segment primarily consists of amounts earned from retail sales of consumer products (including from sellers) and subscriptions through internationally-focused online stores. This segment includes export sales from these internationally-focused online stores (including export sales from these online stores to customers in the U.S., Mexico, and Canada), but excludes export sales from our North America-focused online stores.

AWS

The AWS segment consists of amounts earned from global sales of compute, storage, database, and other services for start-ups, enterprises, government agencies, and academic institutions.

Information on reportable segments and reconciliation to consolidated net income (loss) is as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
North America			
Net sales	$ 141,366	$ 170,773	$ 236,282
Operating expenses	134,099	163,740	227,631
Operating income	$ 7,267	$ 7,033	$ 8,651
International			
Net sales	$ 65,866	$ 74,723	$ 104,412
Operating expenses	68,008	76,416	103,695
Operating income (loss)	$ (2,142)	$ (1,693)	$ 717
AWS			
Net sales	$ 25,655	$ 35,026	$ 45,370
Operating expenses	18,359	25,825	31,839
Operating income	$ 7,296	$ 9,201	$ 13,531
Consolidated			
Net sales	$ 232,887	$ 280,522	$ 386,064
Operating expenses	220,466	265,981	363,165
Operating income	12,421	14,541	22,899
Total non-operating income (expense)	(1,160)	(565)	1,279
Provision for income taxes	(1,197)	(2,374)	(2,863)
Equity-method investment activity, net of tax	9	(14)	16
Net income	$ 10,073	$ 11,588	$ 21,331

Net sales by groups of similar products and services, which also have similar economic characteristics, is as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
Net Sales:			
Online stores (1)	$ 122,987	$ 141,247	$ 197,346
Physical stores (2)	17,224	17,192	16,227
Third-party seller services (3)	42,745	53,762	80,461
Subscription services (4)	14,168	19,210	25,207
AWS	25,655	35,026	45,370
Other (5)	10,108	14,085	21,453
Consolidated	$ 232,887	$ 280,522	$ 386,064

(1) Includes product sales and digital media content where we record revenue gross. We leverage our retail infrastructure to offer a wide selection of consumable and durable goods that includes media products available in both a physical and digital format, such as books, videos, games, music, and software. These product sales include digital products sold on a transactional basis. Digital product subscriptions that provide unlimited viewing or usage rights are included in "Subscription services."
(2) Includes product sales where our customers physically select items in a store. Sales to customers who order goods online for delivery or pickup at our physical stores are included in "Online stores."
(3) Includes commissions and any related fulfillment and shipping fees, and other third-party seller services.
(4) Includes annual and monthly fees associated with Amazon Prime memberships, as well as digital video, audiobook, digital music, e-book, and other non-AWS subscription services.
(5) Primarily includes sales of advertising services, as well as sales related to our other service offerings.

Net sales generated from our internationally-focused online stores are denominated in local functional currencies. Revenues are translated at average rates prevailing throughout the period. Net sales attributed to countries that represent a significant portion of consolidated net sales are as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
United States	$ 160,146	$ 193,636	$ 263,520
Germany	19,881	22,232	29,565
United Kingdom	14,524	17,527	26,483
Japan	13,829	16,002	20,461
Rest of world	24,507	31,125	46,035
Consolidated	$ 232,887	$ 280,522	$ 386,064

Total segment assets exclude corporate assets, such as cash and cash equivalents, marketable securities, other long-term investments, corporate facilities, goodwill and other acquired intangible assets, and tax assets. Technology infrastructure assets are allocated among the segments based on usage, with the majority allocated to the AWS segment. Total segment assets reconciled to consolidated amounts are as follows (in millions):

	December 31,		
	2018	2019	2020
North America (1)	$ 47,251	$ 72,277	$ 108,405
International (1)	19,923	30,709	42,212
AWS (2)	26,340	36,500	47,574
Corporate	69,134	85,762	123,004
Consolidated	$ 162,648	$ 225,248	$ 321,195

(1) North America and International segment assets primarily consist of property and equipment, operating leases, inventory, and accounts receivable.
(2) AWS segment assets primarily consist of property and equipment and accounts receivable.

Property and equipment, net by segment is as follows (in millions):

	December 31,		
	2018	2019	2020
North America	$ 27,052	$ 31,719	$ 54,912
International	8,552	9,566	15,375
AWS	18,851	23,481	32,151
Corporate	7,342	7,939	10,676
Consolidated	$ 61,797	$ 72,705	$ 113,114

Total net additions to property and equipment by segment are as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
North America (1)	$ 10,749	$ 11,752	$ 29,889
International (1)	2,476	3,298	8,072
AWS (2)	9,783	13,058	16,530
Corporate	2,060	1,910	3,485
Consolidated	$ 25,068	$ 30,018	$ 57,976

(1) Includes property and equipment added under finance leases of $2.0 billion, $3.8 billion, and $5.6 billion in 2018, 2019, and 2020, and under financing obligations of $3.0 billion, $1.3 billion, and $2.7 billion in 2018, 2019, and 2020.
(2) Includes property and equipment added under finance leases of $8.4 billion, $10.6 billion, and $7.7 billion in 2018, 2019, and 2020, and under financing obligations of $245 million, $0 million, and $130 million in 2018, 2019, and 2020.

U.S. property and equipment, net and operating leases were $45.1 billion, $69.8 billion, and $109.5 billion, in 2018, 2019, and 2020, and non-U.S. property and equipment, net and operating leases were $16.7 billion, $28.0 billion, and $41.2 billion in 2018, 2019, and 2020. Except for the U.S., property and equipment, net and operating leases in any single country were less than 10% of consolidated property and equipment, net and operating leases.

Depreciation and amortization expense on property and equipment, including corporate property and equipment, are allocated to all segments based on usage. Total depreciation and amortization expense, by segment, is as follows (in millions):

	Year Ended December 31,		
	2018	2019	2020
North America	$ 4,415	$ 5,106	$ 6,421
International	1,628	1,886	2,215
AWS	6,095	8,158	7,603
Consolidated	$ 12,138	$ 15,150	$ 16,239

Note 11 — QUARTERLY RESULTS (UNAUDITED)

The following tables contain selected unaudited statement of operations information for each quarter of 2019 and 2020. The following information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period. Our business is affected by seasonality, which historically has resulted in higher sales volume during our fourth quarter. Unaudited quarterly results are as follows (in millions, except per share data):

	Year Ended December 31, 2019 (1)			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net sales	$ 59,700	$ 63,404	$ 69,981	$ 87,437
Operating income	4,420	3,084	3,157	3,879
Income before income taxes	4,401	2,889	2,632	4,053
Provision for income taxes	(836)	(257)	(494)	(786)
Net income	3,561	2,625	2,134	3,268
Basic earnings per share	7.24	5.32	4.31	6.58
Diluted earnings per share	7.09	5.22	4.23	6.47
Shares used in computation of earnings per share:				
Basic	491	493	495	496
Diluted	502	503	504	505

	Year Ended December 31, 2020 (1)			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Net sales	$ 75,452	$ 88,912	$ 96,145	$ 125,555
Operating income	3,989	5,843	6,194	6,873
Income before income taxes	3,383	6,221	6,809	7,765
Provision for income taxes	(744)	(984)	(569)	(566)
Net income	2,535	5,243	6,331	7,222
Basic earnings per share	5.09	10.50	12.63	14.38
Diluted earnings per share	5.01	10.30	12.37	14.09
Shares used in computation of earnings per share:				
Basic	498	500	501	502
Diluted	506	509	512	513

(1) The sum of quarterly amounts, including per share amounts, may not equal amounts reported for year-to-date periods. This is due to the effects of rounding and changes in the number of weighted-average shares outstanding for each period.