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, 2023 and 2022, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2023, 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, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with 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, 2023, 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 1, 2024 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	As discussed in Notes 1 and 9 of the consolidated financial statements, the Company is subject to income taxes in the U.S. and numerous foreign jurisdictions and 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, 2023, the Company reported accrued liabilities of $5.2 billion for various tax contingencies. Auditing the recognition and 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 and involves significant auditor judgment. Management's evaluation of tax positions is based on interpretations of tax laws and legal rulings, and may be impacted by regulatory changes and judicial and examination activity.
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; the measurement of the benefit of its tax positions, both initially and on an ongoing basis; 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 of the relevant taxing jurisdictions 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 appropriateness of the Company's assumptions and the accuracy of the Company's calculations and data used to determine the amount of tax benefits to recognize. We evaluated the Company's income tax disclosures in relation to these matters.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1996.
Seattle, Washington
February 1, 2024

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Year Ended December 31,		
	2021	**2022**	**2023**
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, BEGINNING OF PERIOD	$ 42,377	$ 36,477	$ 54,253
OPERATING ACTIVITIES:			
Net income (loss)	33,364	(2,722)	30,425
Adjustments to reconcile net income (loss) to net cash from operating activities:			
Depreciation and amortization of property and equipment and capitalized content costs, operating lease assets, and other	34,433	41,921	48,663
Stock-based compensation	12,757	19,621	24,023
Non-operating expense (income), net	(14,306)	16,966	(748)
Deferred income taxes	(310)	(8,148)	(5,876)
Changes in operating assets and liabilities:			
Inventories	(9,487)	(2,592)	1,449
Accounts receivable, net and other	(9,145)	(8,622)	(8,348)
Other assets	(9,018)	(13,275)	(12,265)
Accounts payable	3,602	2,945	5,473
Accrued expenses and other	2,123	(1,558)	(2,428)
Unearned revenue	2,314	2,216	4,578
Net cash provided by (used in) operating activities	46,327	46,752	84,946
INVESTING ACTIVITIES:			
Purchases of property and equipment	(61,053)	(63,645)	(52,729)
Proceeds from property and equipment sales and incentives	5,657	5,324	4,596
Acquisitions, net of cash acquired, non-marketable investments, and other	(1,985)	(8,316)	(5,839)
Sales and maturities of marketable securities	59,384	31,601	5,627
Purchases of marketable securities	(60,157)	(2,565)	(1,488)
Net cash provided by (used in) investing activities	(58,154)	(37,601)	(49,833)
FINANCING ACTIVITIES:			
Common stock repurchased	—	(6,000)	—
Proceeds from short-term debt, and other	7,956	41,553	18,129
Repayments of short-term debt, and other	(7,753)	(37,554)	(25,677)
Proceeds from long-term debt	19,003	21,166	—
Repayments of long-term debt	(1,590)	(1,258)	(3,676)
Principal repayments of finance leases	(11,163)	(7,941)	(4,384)
Principal repayments of financing obligations	(162)	(248)	(271)
Net cash provided by (used in) financing activities	6,291	9,718	(15,879)
Foreign currency effect on cash, cash equivalents, and restricted cash	(364)	(1,093)	403
Net increase (decrease) in cash, cash equivalents, and restricted cash	(5,900)	17,776	19,637
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH, END OF PERIOD	$ 36,477	$ 54,253	$ 73,890

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions, except per share data)

	Year Ended December 31,		
	2021	2022	2023
Net product sales	$ 241,787	$ 242,901	$ 255,887
Net service sales	228,035	271,082	318,898
Total net sales	469,822	513,983	574,785
Operating expenses:			
Cost of sales	272,344	288,831	304,739
Fulfillment	75,111	84,299	90,619
Technology and infrastructure	56,052	73,213	85,622
Sales and marketing	32,551	42,238	44,370
General and administrative	8,823	11,891	11,816
Other operating expense (income), net	62	1,263	767
Total operating expenses	444,943	501,735	537,933
Operating income	24,879	12,248	36,852
Interest income	448	989	2,949
Interest expense	(1,809)	(2,367)	(3,182)
Other income (expense), net	14,633	(16,806)	938
Total non-operating income (expense)	13,272	(18,184)	705
Income (loss) before income taxes	38,151	(5,936)	37,557
Benefit (provision) for income taxes	(4,791)	3,217	(7,120)
Equity-method investment activity, net of tax	4	(3)	(12)
Net income (loss)	$ 33,364	$ (2,722)	$ 30,425
Basic earnings per share	$ 3.30	$ (0.27)	$ 2.95
Diluted earnings per share	$ 3.24	$ (0.27)	$ 2.90
Weighted-average shares used in computation of earnings per share:			
Basic	10,117	10,189	10,304
Diluted	10,296	10,189	10,492

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in millions)

	Year Ended December 31,		
	2021	2022	2023
Net income (loss)	$ 33,364	$ (2,722)	$ 30,425
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of tax of $47, $100, and $(55)	(819)	(2,586)	1,027
Available-for-sale debt securities:			
Change in net unrealized gains (losses), net of tax of $72, $159, and $(110)	(343)	(823)	366
Less: reclassification adjustment for losses (gains) included in “Other income (expense), net,” net of tax of $13, $0, and $(15)	(34)	298	50
Net change	(377)	(525)	416
Other, net of tax of $0, $0, and $(1)	—	—	4
Total other comprehensive income (loss)	(1,196)	(3,111)	1,447
Comprehensive income (loss)	$ 32,168	$ (5,833)	$ 31,872

See accompanying notes to consolidated financial statements.

AMAZON.COM, INC.
CONSOLIDATED BALANCE SHEETS
(in millions, except per share data)

	December 31,	
	2022	**2023**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 53,888	$ 73,387
Marketable securities	16,138	13,393
Inventories	34,405	33,318
Accounts receivable, net and other	42,360	52,253
Total current assets	146,791	172,351
Property and equipment, net	186,715	204,177
Operating leases	66,123	72,513
Goodwill	20,288	22,789
Other assets	42,758	56,024
Total assets	$ 462,675	$ 527,854
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 79,600	$ 84,981
Accrued expenses and other	62,566	64,709
Unearned revenue	13,227	15,227
Total current liabilities	155,393	164,917
Long-term lease liabilities	72,968	77,297
Long-term debt	67,150	58,314
Other long-term liabilities	21,121	25,451
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock ($0.01 par value; 500 shares authorized; no shares issued or outstanding)	—	—
Common stock ($0.01 par value; 100,000 shares authorized; 10,757 and 10,898 shares issued; 10,242 and 10,383 shares outstanding)	108	109
Treasury stock, at cost	(7,837)	(7,837)
Additional paid-in capital	75,066	99,025
Accumulated other comprehensive income (loss)	(4,487)	(3,040)
Retained earnings	83,193	113,618
Total stockholders' equity	146,043	201,875
Total liabilities and stockholders' equity	$ 462,675	$ 527,854

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, 2021	10,066	$ 105	$ (1,837)	$ 42,765	$ (180)	$ 52,551	$ 93,404
Net income	—	—	—	—	—	33,364	33,364
Other comprehensive income (loss)	—	—	—	—	(1,196)	—	(1,196)
Stock-based compensation and issuance of employee benefit plan stock	109	1	—	12,672	—	—	12,673
Balance as of December 31, 2021	10,175	106	(1,837)	55,437	(1,376)	85,915	138,245
Net loss	—	—	—	—	—	(2,722)	(2,722)
Other comprehensive income (loss)	—	—	—	—	(3,111)	—	(3,111)
Stock-based compensation and issuance of employee benefit plan stock	113	2	—	19,629	—	—	19,631
Common stock repurchased	(46)	—	(6,000)	—	—	—	(6,000)
Balance as of December 31, 2022	10,242	108	(7,837)	75,066	(4,487)	83,193	146,043
Net income	—	—	—	—	—	30,425	30,425
Other comprehensive income (loss)	—	—	—	—	1,447	—	1,447
Stock-based compensation and issuance of employee benefit plan stock	141	1	—	23,959	—	—	23,960
Balance as of December 31, 2023	10,383	$ 109	$ (7,837)	$ 99,025	$ (3,040)	$ 113,618	$ 201,875

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, content creators, advertisers, and employees. 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 using our services, and programs that allow authors, independent publishers, musicians, filmmakers, Twitch streamers, 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 advertising services 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."

Common Stock Split

On May 27, 2022, we effected a 20-for-1 stock split of our common stock and proportionately increased the number of authorized shares of common stock. All share, restricted stock unit ("RSU"), and per share or per RSU information throughout this Annual Report on Form 10-K has been retroactively adjusted to reflect the stock split. The shares of common stock retain a par value of $0.01 per share. Accordingly, an amount equal to the par value of the increased shares resulting from the stock split was reclassified from "Additional paid-in capital" to "Common stock."

Prior Period Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation. "Other assets" were reclassified out of "Accounts receivable, net 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 health care services and 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, impairment of property and equipment and operating leases, valuation and impairment of investments, self-insurance liabilities, and viewing patterns of capitalized video content. Actual results could differ materially from these estimates. For example, in Q4 2023 we completed a useful life study for our servers and are increasing the useful life from five years to six years in January 2024, which, based on servers that are included in "Property and equipment, net" as of December 31, 2023, will have an anticipated impact to our 2024 operating income of $3.1 billion. We had previously increased the useful life of our servers from four years to five years in January 2022.

For the year ended December 31, 2022, we recorded approximately $1.1 billion, of which $720 million was recorded in the fourth quarter, of impairments of property and equipment and operating leases primarily related to physical stores. These charges were recorded in "Other operating expense (income), net" on our consolidated statements of operations and primarily impacted our North America segment. For the year ended December 31, 2022, we also recorded expenses of approximately $480 million, primarily in "Fulfillment", on our consolidated statements of operations primarily relating to terminating contracts for certain leases not yet commenced as well as other purchase commitments, which primarily impacted our North America segment.

For the year ended December 31, 2022, we recorded approximately $720 million, of which $640 million was recorded in the fourth quarter, of estimated severance costs primarily related to planned role eliminations. These charges were recorded primarily in “Technology and infrastructure,” “Fulfillment,” and “General and administrative” on our consolidated statements of operations and primarily impacted our North America segment.

Charges for impairment, expenses for terminating contracts and other commitments, and severance costs were not material to our consolidated results of operations for the years ended December 31, 2021 and 2023.

Supplemental Cash Flow Information

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

	Year Ended December 31,		
	2021	2022	2023
SUPPLEMENTAL CASH FLOW INFORMATION:			
Cash paid for interest on debt, net of capitalized interest	$ 1,098	$ 1,561	$ 2,608
Cash paid for operating leases	$ 6,722	$ 8,633	$ 10,453
Cash paid for interest on finance leases	$ 521	$ 374	$ 308
Cash paid for interest on financing obligations	$ 153	$ 207	$ 196
Cash paid for income taxes, net of refunds	$ 3,688	$ 6,035	$ 11,179
Assets acquired under operating leases	$ 25,369	$ 18,800	$ 14,052
Property and equipment acquired under finance leases, net of remeasurements and modifications	$ 7,061	$ 675	$ 642
Property and equipment recognized during the construction period of build-to-suit lease arrangements	$ 5,846	$ 3,187	$ 357
Property and equipment derecognized after the construction period of build-to-suit lease arrangements, with the associated leases recognized as operating	$ 230	$ 5,158	$ 1,374

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,		
	2021	2022	2023
Shares used in computation of basic earnings per share	10,117	10,189	10,304
Total dilutive effect of outstanding stock awards	179	—	188
Shares used in computation of diluted earnings per share	10,296	10,189	10,492

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 using our services. 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.

Advertising services - We provide advertising services to sellers, vendors, publishers, authors, and others, through programs such as sponsored ads, display, and video advertising. Revenue is recognized as ads are delivered based on the number of clicks or impressions.

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 includes sales related to various other offerings, such as certain licensing and distribution of video content, health care services, and shipping services, and our co-branded credit card agreements. Revenue is recognized when content is licensed or distributed and as or when services are performed.

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 $1.0 billion, $1.3 billion, and $1.4 billion as of December 31, 2021, 2022, and 2023. Additions to the allowance were $5.1 billion, $5.5 billion, and $5.2 billion and deductions from the allowance were $4.9 billion, $5.2 billion, and $5.1 billion in 2021, 2022, and 2023. Included in “Inventories” on our consolidated balance sheets are assets totaling $882 million, $948 million, and $992 million as of December 31, 2021, 2022, and 2023, 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 facilities and equipment expenses, such as depreciation and amortization, and rent; 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 Infrastructure

Technology and infrastructure 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, including expenditures related to initiatives to build and deploy innovative and efficient software and electronic devices and the development of a satellite network for global broadband service and autonomous vehicles for ride-hailing services. Technology and infrastructure costs are generally expensed as incurred.

Sales and Marketing

Sales and marketing costs include 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 $16.9 billion, $20.6 billion, and $20.3 billion in 2021, 2022, and 2023.

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.

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. Under this method, approximately 50% of the grant date fair value is recognized as expense in the first year of grant for the majority of our stock-based compensation awards. The accelerated method also adds a higher level of sensitivity and complexity in estimating forfeitures. If an award is forfeited early in its life, the adjustment to compensation expense is much greater under an accelerated method than under a straight-line 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 by grant year 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 the amortization of intangible assets, and asset impairments for physical store closures in 2022 and for fulfillment network facilities and physical store closures in 2023.

Other Income (Expense), Net

Other income (expense), net, is as follows (in millions):

	Year Ended December 31,		
	2021	**2022**	**2023**
Marketable equity securities valuation gains (losses)	$ 11,526	$ (13,870)	$ 984
Equity warrant valuation gains (losses)	1,315	(2,132)	26
Upward adjustments relating to equity investments in private companies	1,866	76	40
Foreign currency gains (losses)	(55)	(340)	65
Other, net	(19)	(540)	(177)
Total other income (expense), net	$ 14,633	$ (16,806)	$ 938

Included in other income (expense), net in 2022 and 2023 is a marketable equity securities valuation gain (loss) of $(12.7) billion and $797 million from our equity investment in Rivian Automotive, Inc. ("Rivian"). Our investment in Rivian's preferred stock was accounted for at cost, with adjustments for observable changes in prices or impairments, prior to Rivian's initial public offering in November 2021, which resulted in the conversion of our preferred stock to Class A common stock. As of December 31, 2023, we held 158 million shares of Rivian's Class A common stock, representing an approximate 16% ownership interest, and an approximate 15% voting interest. We determined that we have the ability to exercise significant influence over Rivian through our equity investment, our commercial arrangement for the purchase of electric vehicles and jointly-owned intellectual property, and one of our employees serving on Rivian's board of directors. We elected the fair value option to account for our equity investment in Rivian, which is included in "Marketable securities" on our consolidated balance sheets, and had a fair value of $2.9 billion and $3.7 billion as of December 31, 2022 and December 31, 2023. The investment was subject to regulatory sales restrictions resulting in a discount for lack of marketability of approximately $800 million as of December 31, 2021, which expired in Q1 2022.

Required summarized financial information of Rivian as disclosed in its most recent SEC filings is as follows (in millions):

	Year Ended December 31, 2021	Year Ended December 31, 2022	Nine Months Ended September 30, 2023
Revenues	$ 55	$ 1,658	$ 3,119
Gross profit	(465)	(3,123)	(1,424)
Loss from operations	(4,220)	(6,856)	(4,158)
Net loss	(4,688)	(6,752)	(3,911)

	December 31, 2022	September 30, 2023
Total current assets	$ 13,130	$ 12,086
Total assets	17,876	16,456
Total current liabilities	2,424	2,624
Total liabilities	4,077	5,904

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 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.

We utilize a two-step approach to recognizing and measuring uncertain income tax positions (income 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 income 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, 2022 and 2023.

We hold equity warrants giving us the right to acquire stock of other companies. As of December 31, 2022 and 2023, these warrants had a fair value of $2.1 billion and $2.2 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 classified as Level 2 and 3 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 $2.8 billion and $3.0 billion as of December 31, 2022 and 2023.

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. We have certain non-cancellable purchase commitments arising from these agreements. 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 receivables primarily related to customers, vendors, and sellers, as well as prepaid expenses and other current assets. As of December 31, 2022 and 2023, customer receivables, net, were $26.6 billion and $34.1 billion, vendor receivables, net, were $6.9 billion and $8.5 billion, seller receivables, net, were $1.3 billion and $1.0 billion, and other receivables, net, were $3.1 billion and $3.3 billion. Seller receivables are amounts due from sellers related to our seller lending program, which provides funding to sellers primarily to procure inventory. Prepaid expenses and other current assets were $4.5 billion and $5.4 billion as of December 31, 2022 and December 31, 2023.

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 $1.1 billion, $1.4 billion, and $1.7 billion as of December 31, 2021, 2022, and 2023. Additions to the allowance were $1.0 billion, $1.6 billion, and $1.9 billion, and deductions to the allowance were $1.1 billion, $1.3 billion, and $1.6 billion in 2021, 2022, and 2023.

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, four years prior to January 1, 2022 and five years subsequent to January 1, 2022 for our servers, five years prior to January 1, 2022 and six years subsequent to January 1, 2022 for our 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 operating.

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, 2023, 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; long-term deferred tax assets; acquired intangible assets, net of accumulated amortization; equity warrant assets and certain equity investments; satellite network launch services deposits; and affordable housing loans. We recognize certain transactions with governments when there is reasonable assurance that incentives included in the agreements, such as cash or certain tax credits, will be received and we are able to comply with any related conditions. These incentives are recorded as reductions to the cost of related assets or expenses.

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 estimated viewing patterns associated with the content. The weighted average remaining life of our capitalized video content is 3.5 years. We review usage and viewing patterns impacting the amortization of capitalized video content on an ongoing basis and reflect any changes prospectively.

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, 2022 and 2023 were $16.7 billion and $17.4 billion. Total video and music expense was $16.6 billion and $18.9 billion for the year ended December 31, 2022 and 2023. 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 marketable debt 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.

Convertible notes classified as available for sale, equity investments in private companies for which we do not have the ability to exercise significant influence and accounted for at cost, and equity investments accounted for using the equity method of accounting are included within “Other assets” on our consolidated balance sheets.

In Q3 2023, we invested in a $1.25 billion note from Anthropic, PBC, which is convertible to equity. The note is classified as available for sale and reported at fair value with unrealized gains and losses included in “Accumulated other comprehensive income (loss).” The note is classified as a Level 3 asset. We have an agreement that expires in Q1 2024 to invest up to an additional $2.75 billion in a second convertible note. We also have a commercial arrangement primarily for the provision of AWS cloud services, which includes the use of AWS chips.

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, 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, 2022 and 2023, these investments had a carrying value of $715 million and $754 million.

Equity investments are accounted for using the equity method of accounting, or at fair value if we elect the fair value option, if the investment gives us the ability to exercise significant influence, but not control, over an investee. 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, including investments for which we have elected the fair value option, 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, 2022 and 2023.

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, tax-related liabilities, current debt, payroll and related expenses, unredeemed gift cards, self-insurance liabilities, customer liabilities, marketing liabilities, acquired digital media content, and other operating expenses.

As of December 31, 2022 and 2023, our liabilities for payroll related expenses were $7.7 billion and our liabilities for unredeemed gift cards were $5.4 billion and $5.3 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.

Self-Insurance Liabilities

Although we maintain certain high-deductible, third-party insurance coverage for catastrophic losses, we effectively self-insure for exposure primarily related to workers’ compensation, employee health care benefits, general and product liability, and automobile liability, including liability resulting from third-party transportation service providers. We estimate self-insurance liabilities by considering historical claims experience, frequency and costs of claims, projected claims development, inflation, and other actuarial assumptions. Changes in the number or costs of claims, healthcare costs, judgment and settlement amounts, associated legal expenses, and other factors could cause actual results to differ materially from these estimates. In the fourth quarter of 2022, we increased our reserves for general, product, and automobile liabilities by $1.3 billion primarily driven by changes in our estimates about the costs of asserted and unasserted claims, which was primarily recorded in “Cost of sales” on our consolidated statements of operations and impacted our North America segment. Increases to our reserves driven by changes in estimates were not material to our consolidated results of operations for the years ended December 31, 2021 and

2023. As of December 31, 2022 and 2023, our total self-insurance liabilities were $4.0 billion and $6.3 billion and are included in "Accrued expenses and other" on our consolidated balance sheets.

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, 2022 was $16.1 billion, of which $12.4 billion was recognized as revenue during the year ended December 31, 2023 and our total unearned revenue as of December 31, 2023 was $20.6 billion. Included in "Other long-term liabilities" on our consolidated balance sheets was $2.9 billion and $5.7 billion of unearned revenue as of December 31, 2022 and 2023.

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 $155.7 billion as of December 31, 2023. The weighted average remaining life of our long-term contracts is 4.0 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, unearned revenue, asset retirement obligations, tax contingencies, digital video and music content, and deferred tax liabilities.

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. 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 $19 million, $386 million, and $(329) million in 2021, 2022, and 2023.

Accounting Pronouncements Not Yet Adopted

In December 2023, the Financial Accounting Standards Board issued an Accounting Standards Update ("ASU") amending existing income tax disclosure guidance, primarily requiring more detailed disclosure for income taxes paid and the effective tax rate reconciliation. The ASU is effective for annual reporting periods beginning after December 15, 2024, with early adoption permitted and can be applied on either a prospective or retroactive basis. We are currently evaluating the ASU to determine its impact on our income tax disclosures.

Note 2 — FINANCIAL INSTRUMENTS

Cash, Cash Equivalents, Restricted Cash, and Marketable Securities

As of December 31, 2022 and 2023, 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, other investment grade securities, and marketable equity 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, 2022			
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Total Estimated Fair Value
Cash	$ 10,666	$ —	$ —	$ 10,666
Level 1 securities:				
Money market funds	27,899	—	—	27,899
Equity securities (1)				3,709
Level 2 securities:				
Foreign government and agency securities	537	—	(2)	535
U.S. government and agency securities	2,301	—	(155)	2,146
Corporate debt securities	23,111	—	(484)	22,627
Asset-backed securities	2,721	—	(149)	2,572
Other debt securities	249	—	(12)	237
	$ 67,484	$ —	$ (802)	$ 70,391
Less: Restricted cash, cash equivalents, and marketable securities (2)				(365)
Total cash, cash equivalents, and marketable securities				$ 70,026

	December 31, 2023			
	Cost or Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Total Estimated Fair Value
Cash	$ 11,706	$ —	$ —	$ 11,706
Level 1 securities:				
Money market funds	39,160	—	—	39,160
Equity securities (1)				4,658
Level 2 securities:				
Foreign government and agency securities	505	—	—	505
U.S. government and agency securities	1,789	1	(91)	1,699
Corporate debt securities	27,996	—	(191)	27,805
Asset-backed securities	1,707	—	(61)	1,646
Other debt securities	108	—	(4)	104
	$ 82,971	$ 1	$ (347)	$ 87,283
Less: Restricted cash, cash equivalents, and marketable securities (2)				(503)
Total cash, cash equivalents, and marketable securities				$ 86,780

(1) The related unrealized gain (loss) recorded in "Other income (expense), net" was $11.6 billion, $(13.6) billion, and $1.0 billion for the years ended December 31, 2021, 2022, and 2023.

(2) We are required to pledge or otherwise restrict a portion of our cash, cash equivalents, and marketable debt securities primarily as collateral for real estate, amounts due to third-party sellers in certain jurisdictions, debt, and standby and trade letters of credit. We classify cash, cash equivalents, and marketable debt 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 marketable debt securities (in millions):

	Year Ended December 31,		
	2021	2022	2023
Realized gains	$ 85	$ 43	$ 2
Realized losses	38	341	67

The following table summarizes the remaining contractual maturities of our cash equivalents and marketable debt securities as of December 31, 2023 (in millions):

	Amortized Cost	Estimated Fair Value
Due within one year	$ 65,224	$ 65,159
Due after one year through five years	4,635	4,430
Due after five years through ten years	411	394
Due after ten years	995	936
Total	$ 71,265	$ 70,919

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, 2022	December 31, 2023
Cash and cash equivalents	$ 53,888	$ 73,387
Restricted cash included in accounts receivable, net and other	358	497
Restricted cash included in other assets	7	6
Total cash, cash equivalents, and restricted cash shown in the consolidated statements of cash flows	$ 54,253	$ 73,890

Note 3 — PROPERTY AND EQUIPMENT

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

	December 31,	
	2022	2023
Gross property and equipment (1):		
Land and buildings	$ 91,650	$ 105,293
Equipment	157,458	185,039
Other assets	4,602	5,116
Construction in progress	30,020	28,840
Gross property and equipment	283,730	324,288
Total accumulated depreciation and amortization (1)	97,015	120,111
Total property and equipment, net	$ 186,715	$ 204,177

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

Depreciation and amortization expense on property and equipment was $22.9 billion, $24.9 billion, and $30.2 billion which includes amortization of property and equipment acquired under finance leases of $9.9 billion, $6.1 billion, and $5.9 billion for 2021, 2022, and 2023.

Note 4 — LEASES

We have entered into non-cancellable operating and finance leases for fulfillment network, data center, office, and physical store facilities as well as server and networking equipment, aircraft, and vehicles. Gross assets acquired under finance leases, including those where title transfers at the end of the lease, are recorded in “Property and equipment, net” and were $68.0 billion and $62.5 billion as of December 31, 2022 and 2023. Accumulated amortization associated with finance leases was $45.2 billion and $44.7 billion as of December 31, 2022 and 2023.

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

	Year Ended December 31,		
	2021	2022	2023
Operating lease cost	$ 7,199	$ 8,847	$ 10,550
Finance lease cost:			
Amortization of lease assets	9,857	6,097	5,899
Interest on lease liabilities	473	361	304
Finance lease cost	10,330	6,458	6,203
Variable lease cost	1,556	1,852	2,165
Total lease cost	$ 19,085	$ 17,157	$ 18,918

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

	December 31, 2022	December 31, 2023
Weighted-average remaining lease term – operating leases	11.6 years	11.3 years
Weighted-average remaining lease term – finance leases	10.3 years	11.9 years
Weighted-average discount rate – operating leases	2.8 %	3.3 %
Weighted-average discount rate – finance leases	2.3 %	2.7 %

Our lease liabilities were as follows (in millions):

	December 31, 2022		
	Operating Leases	Finance Leases	Total
Gross lease liabilities	$ 81,273	$ 18,019	$ 99,292
Less: imputed interest	(12,233)	(2,236)	(14,469)
Present value of lease liabilities	69,040	15,783	84,823
Less: current portion of lease liabilities	(7,458)	(4,397)	(11,855)
Total long-term lease liabilities	$ 61,582	$ 11,386	$ 72,968

	December 31, 2023		
	Operating Leases	Finance Leases	Total
Gross lease liabilities	$ 90,777	$ 14,106	$ 104,883
Less: imputed interest	(15,138)	(1,997)	(17,135)
Present value of lease liabilities	75,639	12,109	87,748
Less: current portion of lease liabilities	(8,419)	(2,032)	(10,451)
Total long-term lease liabilities	$ 67,220	$ 10,077	$ 77,297

Note 5 — ACQUISITIONS, GOODWILL, AND ACQUIRED INTANGIBLE ASSETS

2021 Acquisition Activity

During 2021, we acquired certain companies for an aggregate purchase price of $496 million, net of cash acquired.

2022 Acquisition Activity

On March 17, 2022, we acquired MGM Holdings Inc., for cash consideration of approximately $6.1 billion, net of cash acquired, to provide more digital media content options for customers. We also assumed $2.5 billion of debt, which we repaid immediately after closing. The acquired assets primarily consist of $3.4 billion of video content and $4.9 billion of goodwill.

During 2022, we also acquired certain other companies for an aggregate purchase price of $141 million, net of cash acquired.

2023 Acquisition Activity

On February 22, 2023, we acquired 1Life Healthcare, Inc. (One Medical), for cash consideration of approximately $3.5 billion, net of cash acquired, to provide health care options for customers. The acquired assets primarily consist of $1.3 billion of intangible assets and $2.5 billion of goodwill, which is allocated to our North America segment.

During 2023, we also acquired certain other companies for an immaterial aggregate purchase price, net of cash acquired.

Pro forma results of operations have not been presented because the effects of the 2023 acquisitions, individually and in the aggregate, were not material to our consolidated results of operations. Acquisition-related costs were expensed as incurred and were not significant.

In addition, in August 2022, we entered into an agreement to acquire iRobot Corporation, as amended in July 2023, for approximately $1.7 billion, including its debt, subject to customary closing conditions. In January 2024, we and iRobot agreed to terminate the transaction.

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 2022 and 2023 by segment (in millions):

	North America	International	AWS	Consolidated
Goodwill - January 1, 2022	$ 12,758	$ 1,327	$ 1,286	$ 15,371
New acquisitions	3,943	1,054	—	4,997
Other adjustments (1)	(80)	30	(30)	(80)
Goodwill - December 31, 2022	16,621	2,411	1,256	20,288
New acquisitions	2,494	—	—	2,494
Other adjustments (1)	11	1	(5)	7
Goodwill - December 31, 2023	$ 19,126	$ 2,412	$ 1,251	$ 22,789

(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,						
	2022			2023			
	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	$ 2,407	$ (601)	$ 1,806	$ 2,643	$ (738)	$ 1,905	17.5
Contract-based	3,661	(813)	2,848	4,800	(1,129)	3,671	11.7
Technology- and content-based	883	(643)	240	743	(340)	403	5.1
Customer-related	184	(128)	56	749	(188)	561	6.6
Total finite-lived intangible assets	$ 7,135	$ (2,185)	$ 4,950	$ 8,935	$ (2,395)	$ 6,540	12.5
IPR&D and other (3)	$ 1,147		$ 1,147	$ 1,147		$ 1,147	
Total acquired intangibles	$ 8,282	$ (2,185)	$ 6,097	$ 10,082	$ (2,395)	$ 7,687	

(1) Excludes the original cost and accumulated amortization of fully-amortized intangibles.
(2) Finite-lived intangible assets, excluding acquired video content, 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 $512 million, $604 million, and $706 million in 2021, 2022, and 2023. Expected future amortization expense of acquired finite-lived intangible assets as of December 31, 2023 is as follows (in millions):

Year Ended December 31,	
2024	$ 715
2025	631
2026	563
2027	552
2028	534
Thereafter	3,545
	$ 6,540

Note 6 — DEBT

As of December 31, 2023, we had $66.5 billion of unsecured senior notes outstanding (the "Notes") and $682 million of borrowings under our secured revolving credit facility. Our total long-term debt obligations are as follows (in millions):

	Maturities (1)	Stated Interest Rates	Effective Interest Rates	December 31, 2022	December 31, 2023
2014 Notes issuance of $6.0 billion	2024 - 2044	3.80% - 4.95%	3.90% - 5.12%	4,000	4,000
2017 Notes issuance of $17.0 billion	2024 - 2057	2.80% - 5.20%	2.95% - 4.33%	16,000	15,000
2020 Notes issuance of $10.0 billion	2025 - 2060	0.80% - 2.70%	0.88% - 2.77%	10,000	9,000
2021 Notes issuance of $18.5 billion	2024 - 2061	0.45% - 3.25%	0.57% - 3.31%	18,500	17,500
April 2022 Notes issuance of $12.8 billion	2024 - 2062	2.73% - 4.10%	2.83% - 4.15%	12,750	12,750
December 2022 Notes issuance of $8.3 billion	2024 - 2032	4.55% - 4.70%	4.61% - 4.83%	8,250	8,250
Credit Facility				1,042	682
Total face value of long-term debt				70,542	67,182
Unamortized discount and issuance costs, net				(393)	(374)
Less: current portion of long-term debt				(2,999)	(8,494)
Long-term debt				$ 67,150	$ 58,314

(1) The weighted-average remaining lives of the 2014, 2017, 2020, 2021, April 2022, and December 2022 Notes were 11.6, 14.1, 17.5, 13.1, 12.3, and 4.9 years as of December 31, 2023. The combined weighted-average remaining life of the Notes was 12.7 years as of December 31, 2023.

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 $61.4 billion and $60.6 billion as of December 31, 2022 and 2023, which is based on quoted prices for our debt as of those dates.

We have a $1.5 billion secured revolving credit facility with a lender that is secured by certain seller receivables, which we may from time to time increase in the future subject to lender approval (the "Credit Facility"). The Credit Facility is available until August 2025, bears interest based on the daily Secured Overnight Financing Rate plus 1.25%, and has a commitment fee of up to 0.45% on the undrawn portion. There were $1.0 billion and $682 million of borrowings outstanding under the Credit Facility as of December 31, 2022 and 2023, which had an interest rate of 5.6% and 6.6%, respectively. As of December 31, 2022 and 2023, we have pledged $1.2 billion and $806 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, 2022 and 2023.

As of December 31, 2023, future principal payments for our total long-term debt were as follows (in millions):

Year Ended December 31,	
2024	$ 8,500
2025	5,286
2026	3,146
2027	8,750
2028	2,250
Thereafter	39,250
	$ 67,182

In January 2023, we entered into an $8.0 billion unsecured 364-day term loan with a syndicate of lenders (the "Term Loan"), maturing in January 2024 and bearing interest at the Secured Overnight Financing Rate specified in the Term Loan plus 0.75%. The Term Loan was classified as short-term debt and included within "Accrued expenses and other" on our consolidated balance sheets. As of December 31, 2023, the entire amount of the Term Loan has been repaid.

We have U.S. Dollar and Euro commercial paper programs (the "Commercial Paper Programs") under which we may from time to time issue unsecured commercial paper up to a total of $20.0 billion (including up to €3.0 billion) at the date of issue, with individual maturities that may vary but will not exceed 397 days from the date of issue. There were $6.8 billion of

borrowings outstanding under the Commercial Paper Programs as of December 31, 2022, which were included in “Accrued expenses and other” on our consolidated balance sheets and had a weighted-average effective interest rate, including issuance costs, of 4.5%. There were no borrowings outstanding under the Commercial Paper Programs as of December 31, 2023. We use the net proceeds from the issuance of commercial paper for general corporate purposes.

In November 2023, we entered into a $15.0 billion unsecured revolving credit facility with a syndicate of lenders (the “Credit Agreement”), which replaced the prior amended and restated credit agreement entered into in March 2022. The Credit Agreement has a term that extends to November 2028 and may be extended for one or more additional one-year terms if approved by the lenders. The interest rate applicable to outstanding balances under the Credit Agreement is the applicable benchmark rate specified in the Credit Agreement plus 0.45%, with a commitment fee of 0.03% on the undrawn portion of the credit facility. There were no borrowings outstanding under the Credit Agreement or the prior amended and restated credit agreement as of December 31, 2022 and 2023.

In November 2023, we also entered into a $5.0 billion unsecured 364-day revolving credit facility with a syndicate of lenders (the “Short-Term Credit Agreement”), which replaced the prior 364-day revolving credit agreement entered into in November 2022. The Short-Term Credit Agreement matures in October 2024 and may be extended for one additional period of 364 days if approved by the lenders. The interest rate applicable to outstanding balances under the Short-Term Credit Agreement is the Secured Overnight Financing Rate specified in the Short-Term Credit Agreement plus 0.45%, with a commitment fee of 0.03% on the undrawn portion. There were no borrowings outstanding under the Short-Term Credit Agreement or the prior 364-day revolving credit agreement as of December 31, 2022 and 2023.

We also utilize other short-term credit facilities for working capital purposes. There were $1.2 billion and $147 million of borrowings outstanding under these facilities as of December 31, 2022 and 2023, which were included in “Accrued expenses and other” on our consolidated balance sheets. In addition, we had $6.8 billion of unused letters of credit as of December 31, 2023.

Note 7 — COMMITMENTS AND CONTINGENCIES

Commitments

The following summarizes our principal contractual commitments, excluding open orders for purchases that support normal operations and are generally cancellable, as of December 31, 2023 (in millions):

	Year Ended December 31,						
	2024	2025	2026	2027	2028	Thereafter	Total
Long-term debt principal and interest	$ 10,616	$ 7,175	$ 4,858	$ 10,404	$ 3,643	$ 60,176	$ 96,872
Operating lease liabilities	11,229	9,922	9,156	8,321	7,546	44,603	90,777
Finance lease liabilities, including interest	2,292	1,471	1,369	1,123	1,022	6,829	14,106
Financing obligations, including interest (1)	469	462	468	476	484	6,282	8,641
Leases not yet commenced	2,034	2,620	2,836	2,852	2,979	24,860	38,181
Unconditional purchase obligations (2)	9,432	7,823	5,901	4,463	1,912	5,953	35,484
Other commitments (3)	3,273	1,390	1,125	759	680	9,121	16,348
Total commitments	$ 39,345	$ 30,863	$ 25,713	$ 28,398	$ 18,266	$ 157,824	$ 300,409

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(1) Includes non-cancellable financing obligations for fulfillment network and data center facilities. Excluding interest, current financing obligations of $266 million and $271 million are recorded within “Accrued expenses and other” and $6.7 billion and $6.6 billion are recorded within “Other long-term liabilities” as of December 31, 2022 and 2023. The weighted-average remaining term of the financing obligations was 17.9 years and 17.0 years and the weighted-average imputed interest rate was 3.1% as of December 31, 2022 and 2023.

(2) Includes unconditional purchase obligations related to long-term agreements to acquire and license digital media content that are not reflected on the consolidated balance sheets, and certain products offered in our Whole Foods Market stores. 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. Renewable energy agreements based on actual generation without a fixed or minimum volume commitment are not included. These agreements also provide the right to receive renewable energy certificates for no additional consideration.

(3) Includes asset retirement obligations, liabilities associated with digital media content agreements with initial terms greater than one year, and the estimated timing and amounts of payments for rent and tenant improvements associated with build-to-suit lease arrangements that are under construction. Excludes approximately $5.2 billion of income tax contingencies for which we cannot make a reasonably reliable estimate of the amount and period of payment, if any.

Suppliers

During 2023, 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 disputing claims and denials of refunds or credits, and monitoring or evaluating potential claims, related to various non-income taxes (such as sales, value added, consumption, service, and similar taxes), including in jurisdictions in which we already collect and remit these taxes. These non-income tax controversies typically include (i) the taxability of products and services, including cross-border intercompany transactions, (ii) collection and withholding on transactions with third parties, including as a result of evolving requirements imposed on marketplaces with respect to third-party sellers, and (iii) the adequacy of compliance with reporting obligations, including evolving documentation requirements. Due to the inherent complexity and uncertainty of these matters and the judicial and regulatory processes in certain jurisdictions, the final outcome of any such controversies may be materially different from our expectations.

Legal Proceedings

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

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 million to $250 million in damages. In April 2017, the case was transferred to the United States District Court for the Northern District of California. In May 2022, the district court granted summary judgment, holding that the patent is invalid. In June 2022, Eolas filed a notice of appeal. In February 2024, the United States Court of Appeals for the Federal Circuit affirmed the district court's judgment. We dispute the allegations of wrongdoing and will continue 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, interest, attorneys' fees, and costs. In March 2023, the plaintiffs alleged in their damages report that in the event of a finding of liability Amazon could be subject to $140 million to $267 million in damages. 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, each 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. In March 2022, the case was stayed pending resolution of review petitions we filed with the United States Patent and Trademark Office. In November 2022, the stay was lifted. In July 2023, Kove alleged in its damages report that in the event of a finding of liability Amazon Web Services could be subject to $517 million to $1.03 billion in damages. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

Beginning in June 2019 with Wilcosky v. Amazon.com, Inc., now pending in the United States District Court for the Northern District of Illinois ("N.D. Ill."), private litigants have filed a number of cases in U.S. federal and state courts, including Hogan v. Amazon.com, Inc. (N.D. Ill.), alleging, among other things, that Amazon's collection, storage, use, retention, and protection of biometric identifiers violated the Illinois Biometric Information Privacy Act. The complaints allege purported classes of Illinois residents who had biometric identifiers collected through Amazon products or services, including Amazon Photos, Alexa, AWS cloud services, Ring, Amazon Connect, Amazon's Flex driver app, and Amazon's virtual try-on technology. The complaints seek certification as class actions, unspecified amounts of damages, injunctive relief, attorneys' fees, costs, and interest. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in these matters.

Beginning in March 2020 with Frame-Wilson v. Amazon.com, Inc. filed in the United States District Court for the Western District of Washington ("W.D. Wash."), private litigants have filed a number of cases in the U.S. and Canada alleging, among other things, price fixing arrangements between Amazon.com, Inc. and vendors and third-party sellers in Amazon's stores, monopolization and attempted monopolization, and consumer protection and unjust enrichment claims. Attorneys General for the District of Columbia and California brought similar suits in May 2021 and September 2022 in the Superior Court of the District of Columbia and the California Superior Court for the County of San Francisco, respectively. Some of the private cases include allegations of 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 damages, treble damages, punitive damages, injunctive relief, civil penalties, attorneys' fees, and costs. The Federal Trade Commission and a number of state Attorneys General filed a similar lawsuit in September 2023 in the W.D. Wash. alleging violations of federal antitrust and state antitrust and consumer protection laws. That complaint alleges, among other things, that Amazon has a monopoly in markets for online superstores and marketplace services, and unlawfully maintains those monopolies through anticompetitive practices relating to our pricing policies, advertising practices, the structure of Prime, and promotion of our own products on our website. The complaint seeks injunctive and structural relief, an unspecified amount of damages, and costs. Amazon's motions to dismiss were granted in part and denied in part in Frame-Wilson in March 2022 and March 2023, De Coster v. Amazon.com, Inc. (W.D. Wash.) in January 2023, and the California Attorney General's lawsuit in March 2023. All three courts dismissed claims alleging that Amazon's pricing policies are inherently illegal and denied dismissal of claims alleging that Amazon's pricing policies are an unlawful restraint of trade. In March 2022, the DC Superior Court dismissed the DC Attorney General's lawsuit in its entirety; the dismissal is under appeal. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in these matters.

In October 2020, Broadband iTV, Inc. filed a complaint against Amazon.com, Inc., Amazon.com Services LLC, and Amazon Web Services, Inc. in the United States District Court for the Western District of Texas. The complaint alleges, among other things, that certain Amazon Prime Video features and services infringe U.S. Patent Nos. 9,648,388, 10,546,750, and 10,536,751, each entitled "Video-On-Demand Content Delivery System for Providing Video-On-Demand Services to TV

Services Subscribers”; 10,028,026, entitled “System for Addressing On-Demand TV Program Content on TV Services Platform of a Digital TV Services Provider”; and 9,973,825, entitled “Dynamic Adjustment of Electronic Program Guide Displays Based on Viewer Preferences for Minimizing Navigation in VOD Program Selection.” The complaint seeks an unspecified amount of damages. In April 2022, Broadband iTV alleged in its damages report that in the event of a finding of liability Amazon could be subject to $166 million to $986 million in damages. In September 2022, the court granted summary judgment, holding that the patents are invalid. In October 2022, Broadband iTV filed a notice of appeal. We dispute the allegations of wrongdoing and will continue to defend ourselves vigorously in this matter.

In July 2021, the Luxembourg National Commission for Data Protection (the “CNPD”) issued a decision against Amazon Europe Core S.à r.l. claiming that Amazon’s processing of personal data did not comply with the EU General Data Protection Regulation. The decision imposes a fine of €746 million and corresponding practice revisions. We believe the CNPD’s decision to be without merit and intend to defend ourselves vigorously in this matter.

In December 2021, the Italian Competition Authority (the “ICA”) issued a decision against Amazon Services Europe S.à r.l., Amazon Europe Core S.à r.l., Amazon EU S.à r.l., Amazon Italia Services S.r.l., and Amazon Italia Logistica S.r.l. claiming that certain of our marketplace and logistics practices in Italy infringe EU competition rules. The decision imposes remedial actions and a fine of €1.13 billion, which we have paid and will seek to recover pending conclusion of all appeals. We believe the ICA’s decision to be without merit and intend to defend ourselves vigorously in this matter.

In July 2022, Acceleration Bay, LLC filed a complaint against Amazon Web Services, Inc. in the United States District Court for the District of Delaware. The complaint alleges, among other things, that Amazon EC2, Amazon CloudFront, AWS Lambda, Amazon Lumberyard, Luna, Amazon Prime Video, Twitch, Amazon GameLift, GridMate, Amazon EKS, AWS App Mesh, and Amazon VPC infringe U.S. Patent Nos. 6,701,344, entitled “Distributed Game Environment”; 6,714,966, entitled “Information Delivery Service”; 6,732,147, entitled “Leaving a Broadcast Channel”; 6,829,634, entitled “Broadcasting Network”; and 6,910,069, entitled “Joining a Broadcast Channel.” The complaint seeks injunctive relief, an unspecified amount of damages, enhanced damages, interest, attorneys’ fees, and costs. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

In November 2022, LightGuide, Inc. filed a complaint against Amazon.com, Inc. and Amazon.com Services LLC in the United States District Court for the Eastern District of Texas. The complaint alleges, among other things, that Amazon’s Nike Intent Detection System used in certain fulfillment centers infringes U.S. Patent Nos. 7,515,981, entitled “Light Guided Assembly System”; and 9,658,614 and 10,528,036, each entitled “Light Guided Assembly System and Method.” 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.

In May 2023, Dialect, LLC filed a complaint against Amazon.com, Inc. and Amazon Web Services, Inc. in the United States District Court for the Eastern District for Virginia. The complaint alleges, among other things, that Amazon’s Alexa-enabled products and services, such as Echo devices, Fire tablets, Fire TV sticks, Fire TVs, Alexa, and Alexa Voice Services, infringe U.S. Patent Nos. 7,693,720 and 9,031,845, each entitled “Mobile Systems and Methods for Responding to Natural Language Speech Utterance”; 8,015,006, entitled “Systems and Methods for Processing Natural Language Speech Utterances with Context-Specific Domain Agents”; 8,140,327, entitled “System and Method for Filtering and Eliminating Noise from Natural Language Utterances to Improve Speech Recognition and Parsing”; 8,195,468 and 9,495,957, each entitled “Mobile Systems and Methods of Supporting Natural Language Human-Machine Interactions”; and 9,263,039, entitled “Systems and Methods for Responding to Natural Language Speech Utterance.” The complaint seeks an unspecified amount of damages, enhanced damages, attorneys’ fees, costs, interest, and injunctive relief. In November 2023, the court granted in part Amazon’s motion to dismiss Dialect’s complaint and dismissed the ‘845 patent from the case. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in this matter.

Beginning in October 2023, Nokia Technologies Oy and related entities filed complaints alleging infringement of patents related to video-related technologies against Amazon.com, Inc. and related entities in multiple courts in the United States, India, the United Kingdom, Germany, and Brazil, the Unified Patent Court of the European Union, and the United States International Trade Commission. The complaints allege, among other things, that certain Amazon Prime Video services and features of Amazon devices carrying the Prime Video app infringe Nokia’s patents; some of the complaints additionally allege infringement by Freevee, Twitch, and Amazon voice assistants. The complaints seek, among other things, injunctive relief and, in some cases, unspecified money damages, enhanced damages, attorneys’ fees, costs, interest, and declaratory relief. These matters are at various procedural stages, with preliminary injunctions issued in certain instances. We dispute the allegations of wrongdoing and intend to defend ourselves vigorously in these matters.

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 10.5 billion, 10.6 billion, and 10.8 billion, as of December 31, 2021, 2022, and 2023. These totals include all vested and unvested stock awards outstanding, including those awards we estimate will be forfeited.

Stock Repurchase Activity

In March 2022, the Board of Directors authorized a program to repurchase up to $10.0 billion of our common stock, with no fixed expiration, which replaced the previous $5.0 billion stock repurchase authorization, approved by the Board of Directors in February 2016. We repurchased 46.2 million shares of our common stock for $6.0 billion in 2022 under these programs. There were no repurchases of common stock in 2021 or 2023. As of December 31, 2023, we have $6.1 billion remaining under the repurchase program.

Stock Award Plans

Employees vest in restricted stock unit awards over the corresponding service term, generally between two and five years. The majority of restricted stock unit awards are granted at the date of hire or in Q2 as part of the annual compensation review and primarily vest semi-annually in Q2 and Q4 of the relevant compensation year.

Stock Award Activity

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

	Year Ended December 31,		
	2021	2022	2023
Cost of sales	$ 540	$ 757	$ 836
Fulfillment	1,946	2,745	3,090
Technology and infrastructure	6,645	10,621	13,434
Sales and marketing	2,530	3,875	4,623
General and administrative	1,096	1,623	2,040
Total stock-based compensation expense (1)	$ 12,757	$ 19,621	$ 24,023

(1) The related tax benefits were $2.7 billion, $4.3 billion, and $5.4 billion for 2021, 2022, and 2023.

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, 2021	303.3	$ 100
Units granted	127.3	167
Units vested	(108.4)	85
Units forfeited	(42.3)	116
Outstanding as of December 31, 2021	279.9	134
Units granted	262.8	142
Units vested	(113.3)	114
Units forfeited	(45.0)	143
Outstanding as of December 31, 2022	384.4	144
Units granted	218.1	106
Units vested	(139.9)	143
Units forfeited	(56.8)	135
Outstanding as of December 31, 2023	405.8	125

Scheduled vesting for outstanding restricted stock units as of December 31, 2023, is as follows (in millions):

	Year Ended						
	2024	2025	2026	2027	2028	Thereafter	Total
Scheduled vesting — restricted stock units	218.3	124.6	48.7	11.2	1.3	1.7	405.8

As of December 31, 2023, there was $18.3 billion of net unrecognized compensation cost related to unvested stock-based compensation arrangements. This compensation is recognized on an accelerated basis with more than half of the compensation expected to be expensed in the next twelve months, and has a remaining weighted-average recognition period of 0.9 years. The estimated forfeiture rate as of December 31, 2021, 2022, and 2023 was 26.5%, 26.5%, and 26.1%.

During 2021, 2022, and 2023, the fair value of restricted stock units that vested was $18.2 billion, $12.8 billion, and $17.6 billion.

Common Stock Available for Future Issuance

As of December 31, 2023, common stock available for future issuance to employees is 1.6 billion shares.

Note 9 — INCOME TAXES

In 2021, 2022, and 2023, we recorded a net tax provision (benefit) of $4.8 billion, $(3.2) billion, and $7.1 billion. Our U.S. taxable income is reduced by accelerated depreciation deductions and increased by the impact of capitalized research and development expenses. Cash paid for income taxes, net of refunds, was $3.7 billion, $6.0 billion, and $11.2 billion for 2021, 2022, and 2023.

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 us to expense a portion of qualified property, primarily equipment. These enhanced deductions are scheduled to phase out annually from 2023 through 2026. Our federal tax provision included a partial accelerated depreciation deduction election for 2021, and a full election for 2022 and 2023. Effective January 1, 2022, research and development expenses are required to be capitalized and amortized for U.S. tax purposes.

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

	Year Ended December 31,		
	2021	2022	2023
U.S. Federal:			
Current	$ 2,129	$ 2,175	$ 8,652
Deferred	155	(6,686)	(5,505)
Total	2,284	(4,511)	3,147
U.S. State:			
Current	763	1,074	2,158
Deferred	(178)	(1,302)	(498)
Total	585	(228)	1,660
International:			
Current	2,209	1,682	2,186
Deferred	(287)	(160)	127
Total	1,922	1,522	2,313
Provision (benefit) for income taxes, net	$ 4,791	$ (3,217)	$ 7,120

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

	Year Ended December 31,		
	2021	2022	2023
U.S.	$ 35,879	$ (8,225)	$ 32,328
International	2,272	2,289	5,229
Income (loss) before income taxes	$ 38,151	$ (5,936)	$ 37,557

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

	Year Ended December 31,		
	2021	2022	2023
Income taxes computed at the federal statutory rate	$ 8,012	$ (1,246)	$ 7,887
Effect of:			
Tax impact of foreign earnings and losses	(1,349)	(370)	594
State taxes, net of federal benefits	465	(173)	1,307
Tax credits	(1,136)	(1,006)	(2,362)
Stock-based compensation (1)	(1,094)	612	1,047
Foreign income deduction (2)	(301)	(1,258)	(1,429)
Other, net	194	224	76
Total	$ 4,791	$ (3,217)	$ 7,120

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(1) Includes non-deductible stock-based compensation and excess tax benefits or shortfalls from stock-based compensation. Our tax provision includes $1.9 billion of excess tax benefits from stock-based compensation for 2021, and $33 million and $519 million of tax shortfalls from stock-based compensation for 2022 and 2023.

(2) 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 and is dependent on the amount of our U.S. taxable income.

We generated an income tax benefit in 2022 as compared to a provision for income taxes in 2021 primarily due to a decrease in pretax income and an increase in the foreign income deduction. This was partially offset by a reduction in excess tax benefits from stock-based compensation and a decrease in the tax impact of foreign earnings and losses driven by a decline in the favorable effects of corporate restructuring transactions. The foreign income deduction benefit recognized in 2022 reflects a change in our application of tax regulations related to the computation of qualifying foreign income and includes a tax benefit of approximately $655 million related to years prior to 2022.

We recorded a provision for income taxes in 2023 as compared to an income tax benefit in 2022 primarily due to an increase in pretax income, a decrease in the tax impact of foreign earnings and losses driven by a decline in the favorable effects of corporate restructuring transactions, and an increase in tax shortfalls from stock-based compensation. This was partially offset by an increase in federal research and development credits, which included approximately $600 million of tax benefit recorded in 2023 related to a change in the estimated qualifying expenditures associated with our 2022 U.S. federal R&D credit.

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,	
	2022	2023
Deferred tax assets (1):		
Loss carryforwards U.S. - Federal/States	386	610
Loss carryforwards - Foreign	2,831	2,796
Accrued liabilities, reserves, and other expenses	3,280	3,751
Stock-based compensation	4,295	5,279
Depreciation and amortization	1,009	1,114
Operating lease liabilities	18,285	19,922
Capitalized research and development	6,824	14,800
Other items	1,023	745
Tax credits	950	1,582
Total gross deferred tax assets	38,883	50,599
Less valuation allowances (2)	(4,374)	(4,811)
Deferred tax assets, net of valuation allowances	34,509	45,788
Deferred tax liabilities:		
Depreciation and amortization	(9,039)	(12,454)
Operating lease assets	(17,140)	(18,648)
Other items	(817)	(1,489)
Net deferred tax assets (liabilities), net of valuation allowances	$ 7,513	$ 13,197

(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 or future capital gains, as well as tax credits.

Our valuation allowances primarily relate to foreign deferred tax assets, including substantially all of our foreign net operating loss carryforwards as of December 31, 2023. Our foreign net operating loss carryforwards for income tax purposes as of December 31, 2023 were approximately $10.2 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 2024.

Income 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 income tax contingencies is as follows (in millions):

	December 31,		
	2021	2022	2023
Gross tax contingencies – January 1	$ 2,820	$ 3,242	$ 4,002
Gross increases to tax positions in prior periods	403	274	440
Gross decreases to tax positions in prior periods	(354)	(172)	(38)
Gross increases to current period tax positions	507	706	1,009
Settlements with tax authorities	(60)	(20)	(106)
Lapse of statute of limitations	(74)	(28)	(79)
Gross tax contingencies – December 31 (1)	$ 3,242	$ 4,002	$ 5,228

(1) As of December 31, 2023, we had approximately $5.2 billion of income tax contingencies of which $3.3 billion, if fully recognized, would decrease our effective tax rate.

As of December 31, 2022 and 2023, we had accrued interest and penalties, net of federal income tax benefit, related to tax contingencies of $103 million and $194 million. Interest and penalties, net of federal income tax benefit, recognized for the years ended December 31, 2021, 2022, and 2023 were $28 million, $(7) million, and $91 million.

We are under examination, or may be subject to examination, by the Internal Revenue Service for the calendar year 2016 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.

We are also subject to taxation in various states and other foreign jurisdictions including China, France, 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 2011 and thereafter. We are currently disputing tax assessments in multiple jurisdictions, including with respect to the allocation and characterization of income.

In September 2022, the Luxembourg tax authority (“LTA”) denied the tax basis of certain intangible assets that we distributed from Luxembourg to the U.S. in 2021. When we are assessed by the LTA, we will need to remit taxes related to this matter. We believe the LTA’s position is without merit, we intend to defend ourselves vigorously in this matter, and we expect to recoup taxes paid.

The Indian tax authority (“ITA”) has asserted that tax applies to cloud services fees paid to Amazon in the U.S. We will need to remit taxes related to this matter until it is resolved, which payments could be significant in the aggregate. We believe the ITA’s position is without merit, we are defending our position vigorously in the Indian courts, and we expect to recoup taxes paid. If this matter is adversely resolved, we could recognize significant additional tax expense, including for taxes previously paid.

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, which 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. On May 12, 2021, the European Union General Court annulled the European Commission’s state aid decision. In July 2021, the European Commission appealed the decision to the European Court of Justice. In December 2023, the European Court of Justice affirmed the European Union General Court’s decision.

Changes in tax laws, regulations, administrative practices, principles, and interpretations may impact our tax contingencies. Due to various factors, including the inherent complexities and uncertainties of the judicial, administrative, and regulatory processes in certain jurisdictions, the timing of the resolution of income tax controversies 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 controversies 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 infrastructure,” “Sales and 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 costs recorded in “Technology and infrastructure” are incurred in the U.S. and are included in our North America and AWS segments. The majority of infrastructure costs recorded in “Technology and infrastructure” are allocated to the AWS segment based on usage. There are no internal revenue transactions between our reportable segments. Our chief operating decision maker (“CODM”) regularly reviews consolidated net sales, consolidated operating expenses, and consolidated operating income (loss) by segment. Amounts included in consolidated operating expenses include “Cost of sales,” “Fulfillment,” “Technology and infrastructure,” “Sales and marketing,” “General and administrative,” and “Other operating expense (income), net.” Our CODM manages our business by reviewing annual forecasts and consolidated results by segment on a quarterly basis.

North America

The North America segment primarily consists of amounts earned from retail sales of consumer products (including from sellers) and advertising and subscription services 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 advertising and subscription services 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,		
	2021	2022	2023
North America			
Net sales	$ 279,833	$ 315,880	$ 352,828
Operating expenses	272,562	318,727	337,951
Operating income (loss)	$ 7,271	$ (2,847)	$ 14,877
International			
Net sales	$ 127,787	$ 118,007	$ 131,200
Operating expenses	128,711	125,753	133,856
Operating loss	$ (924)	$ (7,746)	$ (2,656)
AWS			
Net sales	$ 62,202	$ 80,096	$ 90,757
Operating expenses	43,670	57,255	66,126
Operating income	$ 18,532	$ 22,841	$ 24,631
Consolidated			
Net sales	$ 469,822	$ 513,983	$ 574,785
Operating expenses	444,943	501,735	537,933
Operating income	24,879	12,248	36,852
Total non-operating income (expense)	13,272	(18,184)	705
Benefit (provision) for income taxes	(4,791)	3,217	(7,120)
Equity-method investment activity, net of tax	4	(3)	(12)
Net income (loss)	$ 33,364	$ (2,722)	$ 30,425

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

	Year Ended December 31,		
	2021	2022	2023
Net Sales:			
Online stores (1)	$ 222,075	$ 220,004	$ 231,872
Physical stores (2)	17,075	18,963	20,030
Third-party seller services (3)	103,366	117,716	140,053
Advertising services (4)	31,160	37,739	46,906
Subscription services (5)	31,768	35,218	40,209
AWS	62,202	80,096	90,757
Other (6)	2,176	4,247	4,958
Consolidated	$ 469,822	$ 513,983	$ 574,785

(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 media content 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 sales of advertising services to sellers, vendors, publishers, authors, and others, through programs such as sponsored ads, display, and video advertising.

(5) 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.

(6) Includes sales related to various other offerings, such as certain licensing and distribution of video content, health care services, and shipping services, and our co-branded credit card agreements.

Net sales are attributed to countries primarily based on country-focused online and physical stores or, for AWS purposes, the selling entity. Net sales attributed to countries that represent a significant portion of consolidated net sales are as follows (in millions):

	Year Ended December 31,		
	2021	2022	2023
United States	$ 314,006	$ 356,113	$ 395,637
Germany	37,326	33,598	37,588
United Kingdom	31,914	30,074	33,591
Japan	23,071	24,396	26,002
Rest of world	63,505	69,802	81,967
Consolidated	$ 469,822	$ 513,983	$ 574,785

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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,		
	2021	2022	2023
North America (1)	$ 161,255	$ 185,268	$ 196,029
International (1)	57,983	64,666	69,718
AWS (2)	63,835	88,491	108,533
Corporate	137,476	124,250	153,574
Consolidated	$ 420,549	$ 462,675	$ 527,854

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

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

	December 31,		
	2021	2022	2023
North America	$ 83,640	$ 90,076	$ 93,632
International	21,718	23,347	24,357
AWS	43,245	60,324	72,701
Corporate	11,678	12,968	13,487
Consolidated	$ 160,281	$ 186,715	$ 204,177

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

	Year Ended December 31,		
	2021	2022	2023
North America (1)	$ 37,397	$ 23,682	$ 17,529
International (1)	10,259	6,711	4,144
AWS (2)	22,047	27,755	24,843
Corporate	2,622	2,688	1,828
Consolidated	$ 72,325	$ 60,836	$ 48,344

(1) Includes property and equipment added under finance leases of $3.6 billion, $422 million, and $525 million in 2021, 2022, and 2023, and under build-to-suit lease arrangements of $5.6 billion, $3.2 billion, and $356 million in 2021, 2022, and 2023.
(2) Includes property and equipment added under finance leases of $3.5 billion, $253 million, and $117 million in 2021, 2022, and 2023, and under build-to-suit lease arrangements of $51 million, $20 million, and $1 million in 2021, 2022, and 2023.

U.S. property and equipment, net and operating leases were $155.0 billion, $180.0 billion, and $196.0 billion, as of December 31, 2021, 2022, and 2023, and non-U.S. property and equipment, net and operating leases were $61.3 billion, $72.9 billion, and $80.7 billion as of December 31, 2021, 2022, and 2023. 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,		
	2021	2022	2023
North America	$ 9,234	$ 11,565	$ 13,678
International	3,022	3,483	4,016
AWS	10,653	9,876	12,531
Consolidated	$ 22,909	$ 24,924	$ 30,225