

Accounting Treatment for Online Business-A Case Study on Amazon

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INTRODUCTION

Growth of e-commerce has revolutionised the way of conducting business. The buyers and the sellers are a mere click-of-the-mouse away. In this endeavour, dot-com companies have played a dominant role. The upsurge and recent slump of such companies raised numerous questions about the viability of their business models. E-business significantly changes the way business is conducted. In particular, e-business requires changes in organizational structures, business partnerships and alliances, delivery mechanisms and methods, and the legislation and regulations under which businesses operate. E-business also introduces new risks that enterprises may need to address by implementing a technology infrastructure and controls to mitigate those risks. Furthermore, e-business alters the roles and responsibilities of employees and different levels of management, therefore affecting personnel requirements. Moreover, e-business affects not only business conduct, but also the character of business itself.

In recent years, a number of companies, popularly known as dot-com companies, carrying on electronic commerce business, have raised capital in the stock markets of the country. The markets normally value companies based on various types of information including accounting information. As the way of conducting electronic commerce transactions is considerably different from those conducted by the traditional manufacturing, trading and service enterprises, a need was being felt for an authoritative pronouncement which should address significant revenue and expense recognition issues peculiar to

electronic commerce business. This project presents certain risk management aspects of e-business relevant to accounting and financial reporting from a managerial perspective. Although it includes a short description of the major risks and opportunities associated with e-business, it focuses particularly on the management of IT risks in relation to accounting information. Furthermore, this project envisages a useful framework of concepts with which accountants and others can analyze e-business from an accounting point of view. Based on this framework of concepts, the project provides guidance to accountants on principles and criteria for accounting systems in an e-business environment. E-business affects all enterprises — including those not actively pursuing e-business — because virtually all customers, competitors and suppliers are likely to be involved in e-business in some way, and their involvement will have an impact on the marketplace, both locally and globally. E-business will generate new opportunities and risks. There will be new opportunities in terms of suppliers, customers, geographic reach, electronic marketing and vertical marketplace growth through alliances. The risks will arise in relation to technology, software, customer base, customer and transaction authentication, electronic and digital signatures, electronic project s law, product approval and product liability, and personal information privacy.

E-Business Systems and the Use of E-Business Systems in Enterprises

The use of the term *e-commerce* has already been superseded by the term *e-business*. E-commerce can be described as the

procurement and distribution of goods and services over the Internet using digital technology. The more encompassing term e-business can be defined as including all activities carried on by a business via the Internet. This definition for e-business extends beyond the definition of e-commerce by encompassing a digital approach to the whole enterprise, including other parts of the IT system and other non-transactional activities, such as recruiting employees via the Internet. Because the mere definition of e-business does not fully convey the complexity of e-business reality, it may be useful to explain e-business in terms of the phases of an evolutionary process.

The first evolutionary phase in the development of e-business is the utilization of the Internet for information purposes. Websites used for browsing — like a shop window — might contain a catalogue (or parts of a catalogue). Information is conveyed in only one direction, which means that the Internet user can read the data only on the website, but cannot interact with the site other than to move from page to page. The next phase enables the user to interact with the website. Customers can use a search engine to navigate, check the availability of goods or services or use other online information services, including information on demand. In this phase, information is exchanged in both directions, since the website both captures and displays data.

An application reaches the e-commerce phase where a website's functions allow the procurement of goods and services that lead to the conclusion of financial transactions. Customers place orders for

goods and services and pay by credit card. The next phase of the evolutionary process is the complete integration of the e-business system within an enterprise's business processes. The Internet-based purchase of goods and services leads to interactions with other parts of the enterprise's IT system. For example, a purchase order initiated by the e-business system may automatically prompt the movement of goods from the warehouse system to the delivery department and lead to data being recorded in the management information system, including the accounting system, and to transactions with suppliers. Hence, the e-business system becomes an integral part of the enterprise's IT system. This is particularly true where sales are made globally and support is required in various geographical locations.

Such integration can be expanded to include direct links to shippers, installers and other related service providers with which the business has established contractual relations, and involves process integration with selected customers and suppliers to design and deliver products. This subsequent phase has been termed "collaborative-business" (c-business), but conceptually is still a part of the integration phase. Another advance is mobile business (m-business), which may involve additional strategic opportunities and the concomitant control and security issues because of the wireless elements. Business models such as B2C and B2B have been widely referred to in the business media. Several new models have emerged; a summary of the current models is:

	Government	Business	Consumer	Employee
Government	G2G	G2B	G2C	G2E
Business	B2G	B2B	B2C	B2E
Consumer	C2G	C2B	C2C	X

The key models can be described as follows:

B2C (Business to Consumer) — typically a retailer selling directly to the consumer; at present, this is the sector that has shown the

fastest growth (lately B2B has shown the most growth potential — the B2C growth rate now appears to be decelerating).

B2B (Business to Business) — typically a business selling up, down or across the supply chain, involving business partners or business consortia.

B2E (Business to Employee) — typically a system enabling intercompany (intragroup) e-mails over the Internet to be directed to the correct department.

SCOPE OF THE STUDY

Dot-com companies engaged in transactions that are similar to transactions entered into by other businesses should follow generally accepted accounting principles for recording those transactions. Similarly, in case of companies normally carrying on other businesses, the recommendations contained in this Guidance Note should be applied for recording e-commerce transactions undertaken by them. The expression ‘dot-com companies’ includes other entities engaged in e-commerce.

E-Business Accounting Principles and Criteria

Management is responsible for the attainment of the enterprise’s objectives in accordance with the business strategy it has

ACCOUNTING TREATMENT IN AMAZON

Note 1—DESCRIPTION OF BUSINESS AND ACCOUNTING POLICIES

Properties

As of December 31, 2016, we operated the following facilities (in thousands):

Description of Use	Leased Square Footage (1)	Owned Square Footage	Location
Office space	8,454	3,693	North America
Office space	7,314	—	International
Fulfillment, data centers, and other	97,215	2,237	North America
Fulfillment, data centers, and other	59,175	1,257	International
Total	172,158	7,187	

(1) For leased properties, represents the total leased space excluding sub-leased space.

Segment	Leased Square Footage (1)	Owned Square Footage (1)
North America	93,716	586

defined. If an e-business system is used for this purpose, it is important that management makes appropriate arrangements to manage the ensuing risks. An enterprise’s e-business strategy as an integral part of the IT strategy ordinarily includes consideration of all aspects of business risks, including IT risks. Consequently, management assesses IT risks with respect to information reliability. Information reliability depends on IT system reliability and IT system reliability depends on IT controls.

It is important that management implements IT controls that operate effectively to help ensure that an IT system performs reliably. Information generated by an IT system will be reliable where that system is capable of operating without material error, fault or failure during a specified period. This also applies to accounting information. The following principles may be used to evaluate whether processed accounting information is reliable:

- Principles for accounting information security; and
- Principles for appropriate accounting information processing.



International	57,243	218
AWS	5,431	2,690
Total	156,390	3,494

Segment amounts exclude corporate facilities. Shared facilities are allocated among the segments based on usage and primarily relate to facilities that hold Amazon technology infrastructure. See Item 8 of Part II, “Financial Statements and Supplementary Data—Note 11—Segment Information.”

We own and lease Amazon corporate headquarters in Seattle, Washington. Additionally, we own and lease corporate office, fulfillment, sortation, delivery, warehouse operations, data center, customer service, and other facilities, principally in North America, Europe, and Asia.

Market for the Registrant’s Common Stock, Related Shareholder Matters, and Issuer Purchases of Equity Securities

Market Information

Amazon common stock is traded on the NASDAQ Global Select Market under the symbol “AMZN.” The following table sets forth the high and low per share sale prices for Amazon common stock for the periods indicated, as reported by the NASDAQ Global Select Market.

	High	Low
Year ended December 31, 2015		
First Quarter	\$ 389.37	\$ 285.25
Second Quarter	452.65	368.34
Third Quarter	580.57	425.57
Fourth Quarter	696.44	506.00
Year ended December 31, 2016		
First Quarter	\$ 657.72	\$ 474.00
Second Quarter	731.50	585.25
Third Quarter	839.95	716.54
Fourth Quarter	847.21	710.10

Holder

As of January 25, 2017, there were 2,448 shareholders of record of Amazon common stock, although there is a much larger number of beneficial owners.

Companies primary source of revenue is the sale of a wide range of products and services to customers. The products offered on companies consumer-facing websites primarily include merchandise and content we have purchased for resale from vendors and those offered by third-party sellers, and we also manufacture and sell electronic devices. Generally, we recognize gross revenue from items we sell from Amazon inventory as product sales and recognize Amazon net share of revenue of items sold by third-party sellers as service sales. We

also offer other services such as compute, storage, and database offerings, fulfillment, publishing, certain digital content subscriptions, advertising, and co-branded credit cards.

Companies financial focus is on long-term, sustainable growth in free cash flows. Free cash flows are driven primarily by increasing operating income and efficiently managing working capital and cash capital expenditures, including Amazon decision to purchase or lease property and equipment. Increases in operating income primarily result from increases in sales of products and services and efficiently managing Amazon operating costs, partially offset by investments we

make in longer-term strategic initiatives. To increase sales of products and services, we focus on improving all aspects of the customer experience, including lowering prices, improving availability, offering faster delivery and performance times, increasing selection, increasing product categories and service offerings, expanding product information, improving ease of use, improving reliability, and earning customer trust.

Amazon seek to reduce Amazon variable costs per unit and work to leverage Amazon fixed costs. Amazon variable costs include product and content costs, payment processing and related transaction costs, picking, packaging, and preparing orders for shipment, transportation, customer service support, costs necessary to run AWS, and a portion of Amazon marketing costs. Amazon fixed costs include the costs necessary to build and run Amazon technology infrastructure; to build, enhance, and add features to Amazon websites and web services, Amazon electronic devices, and digital offerings; and to build and optimize Amazon fulfillment centers. Variable costs generally change directly with sales volume, while fixed costs generally are dependent on the timing of capacity needs, geographic expansion, category expansion, and other factors. To decrease Amazon variable costs on a per unit basis and enable us to lower prices for customers, we seek to increase Amazon direct sourcing, increase discounts from suppliers, and reduce defects in Amazon processes. To minimize growth in fixed costs, we seek to improve process efficiencies and maintain a lean culture.

Because of Amazon model we are able to turn Amazon inventory quickly and have a cash-generating operating cycle. On average, Amazon high inventory velocity means we generally collect from consumers before Amazon payments to suppliers come due. We expect variability in inventory turnover over time since it is affected by

numerous factors, including Amazon product mix, the mix of sales by us and by third-party sellers, Amazon continuing focus on in-stock inventory availability and selection of product offerings, Amazon investment in new geographies and product lines, and the extent to which we choose to utilize third-party fulfillment providers. We also expect some variability in accounts payable days over time since they are affected by several factors, including the mix of product sales, the mix of sales by third-party sellers, the mix of suppliers, seasonality, and changes in payment terms over time, including the effect of balancing pricing and timing of payment terms with suppliers.

We expect spending in technology and content will increase over time as we add computer scientists, designers, software and hardware engineers, and merchandising employees. Amazon technology and content investment and capital spending projects often support a variety of product and service offerings due to geographic expansion and the cross-functionality of Amazon systems and operations. We seek to invest efficiently in several areas of technology and content, including AWS, and expansion of new and existing product categories and service offerings, as well as in technology infrastructure to enhance the customer experience and improve Amazon process efficiencies. We believe that advances in technology, specifically the speed and reduced cost of processing power and the advances of wireless connectivity, will continue to improve the consumer experience on the Internet and increase its ubiquity in people's lives. To best take advantage of these continued advances in technology, we are investing in initiatives to build and deploy innovative and efficient software and electronic devices. We are also investing in AWS, which offers a broad set of global compute, storage, database, and other service offerings to developers and enterprises of all sizes.

We seek to efficiently manage shareholder dilution while maintaining the flexibility to issue shares for strategic purposes, such as financings, acquisitions, and aligning employee compensation with shareholders' interests. We utilize restricted stock units as Amazon primary vehicle for equity compensation because we believe this compensation model aligns the long-term interests of Amazon shareholders and employees. In measuring shareholder dilution, we include all vested and unvested stock awards outstanding, without regard to estimated forfeitures. Total shares outstanding plus outstanding stock awards were 490 million and 497 million as of December 31, 2015 and 2016.

Amazon financial reporting currency is the U.S. Dollar and changes in foreign exchange rates significantly affect Amazon reported results and consolidated trends. For example, if the U.S. Dollar weakens year-over-year relative to currencies in Amazon international locations, Amazon consolidated net sales and operating expenses will be higher than if currencies had remained constant.

Likewise, if the U.S. Dollar strengthens year-over-year relative to currencies in Amazon international locations, Amazon consolidated net sales and operating expenses will be lower than if currencies had remained constant. We believe that Amazon increasing diversification beyond the U.S. economy through Amazon growing international businesses benefits Amazon shareholders over the long-term. We also believe it is useful to evaluate Amazon operating results and growth rates before and after the effect of currency changes.

In addition, the remeasurement of Amazon intercompany balances can result in significant gains and losses associated with the effect of movements in foreign currency exchange rates. Currency volatilities may continue, which may significantly impact (either positively or negatively) Amazon reported results and consolidated trends and comparisons. For additional information about each line item summarized above, refer to Item 8 of Part II, "Financial Statements and Supplementary Data—Note 1—Description of Business and Accounting Policies."

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

Year Ended December 31,

	2014	2015	2016
Net product sales	\$ 70,080	\$ 79,268	\$ 94,665
Net service sales	18,908	27,738	41,322
Total net sales	88,988	107,006	135,987
Operating expenses:			
Cost of sales	62,752	71,651	88,265
Fulfillment	10,766	13,410	17,619
Marketing	4,332	5,254	7,233
Technology and content	9,275	12,540	16,085
General and administrative	1,552	1,747	2,432
Other operating expense, net	133	171	167
Total operating expenses	88,810	104,773	131,801
Operating income	178	2,233	4,186



Interest income	39	50	100
Interest expense	(210)	(459)	(484)
Other income (expense), net	(118)	(256)	90
Total non-operating income (expense)	(289)	(665)	(294)
Income (loss) before income taxes	(111)	1,568	3,892
Provision for income taxes	(167)	(950)	(1,425)
Equity-method investment activity, net of tax	37	(22)	(96)
Net income (loss)	\$ (241)	\$ 596	\$ 2,371
Basic earnings per share	\$ (0.52)	\$ 1.28	\$ 5.01
Diluted earnings per share	\$ (0.52)	\$ 1.25	\$ 4.90
Weighted-average shares used in computation of earnings per share:			
Basic	462	467	474
Diluted	462	477	484

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (in millions)
Year Ended December 31,

	2014	2015	2016
Net income (loss)	\$ (241)	\$ 596	\$ 2,371
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of tax of \$(3), \$10, and \$(49)	(325)	(210)	(279)
Net change in unrealized gains (losses) on available-for-sale securities:			
Unrealized gains (losses), net of tax of \$1, \$(5), and \$(12)	2	(7)	9
Reclassification adjustment for losses (gains) included in "Other income (expense), net," net of tax of \$(1), \$0, and \$0	(3)	5	8
Net unrealized gains (losses) on available-for-sale securities	(1)	(2)	17
Total other comprehensive income (loss)	(326)	(212)	(262)
Comprehensive income (loss)	\$ (567)	\$ 384	\$ 2,109

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

December 31,

2015 2016

ASSETS

Current assets:



Cash and cash equivalents	\$	15,890	\$	19,334
Marketable securities		3,918		6,647
Inventories		10,243		11,461
Accounts receivable, net and other		5,654		8,339
		35,705		45,781
Total current assets				
Property and equipment, net		21,838		29,114
Goodwill		3,759		3,784
Other assets		3,445		4,723
		64,747		83,402
Total assets	\$		\$	
<u>LIABILITIES AND STOCKHOLDERS' EQUITY</u>				
Current liabilities:				
Accounts payable	\$	20,397	\$	25,309
Accrued expenses and other		10,372		13,739
Unearned revenue		3,118		4,768
		33,887		43,816
Total current liabilities				
Long-term debt		8,227		7,694
Other long-term liabilities		9,249		12,607
Commitments and contingencies (Note 7)				
Stockholders' equity:				
Preferred stock, \$0.01 par value:				
Authorized shares — 500				
Issued and outstanding shares — none				
Common stock, \$0.01 par value:				
Authorized shares — 5,000				
Issued shares — 494 and 500				
Outstanding shares — 471 and 477				
Treasury stock, at cost		(1,837)		(1,837)
Additional paid-in capital		13,394		17,186
Accumulated other comprehensive loss		(723)		(985)
Retained earnings		2,545		4,916
		13,384		19,285
Total stockholders' equity				
Total liabilities and stockholders' equity	\$	64,747	\$	83,402

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (in millions)

	Common Stock		Treasury Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
	Shares	Amount					
Balance as of January 1, 2014							

	459 \$	5 \$	(1,837) \$	9,573 \$	(185) \$	2,190 \$	9,746
Net loss	—	—	—	—	—	(241)	(241)
Other comprehensive income (loss)	—	—	—	—	(326)	—	(326)
Exercise of common stock options	6	—	—	2	—	—	2
Excess tax benefits from stock-based compensation	—	—	—	6	—	—	6
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	1,510	—	—	1,510
Issuance of common stock for acquisition	—	—	—	—	—	—	—
Activity	—	—	—	44	—	—	44
Balance as of December 31, 2014	465	5	(1,837)	11,135	(511)	1,949	10,741
Net income	—	—	—	—	—	596	596
Other comprehensive income (loss)	—	—	—	—	(212)	—	(212)
Exercise of common stock options	6	—	—	4	—	—	4
Excess tax benefits from stock-based compensation	—	—	—	119	—	—	119
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	2,131	—	—	2,131
Issuance of common stock for acquisition	—	—	—	—	—	—	—
Activity	—	—	—	5	—	—	5
Balance as of December 31, 2015	471	5	(1,837)	13,394	(723)	2,545	13,384
Net income	—	—	—	—	—	2,371	2,371
Other comprehensive income (loss)	—	—	—	—	(262)	—	(262)
Exercise of common stock options	6	—	—	1	—	—	1
Excess tax benefits from stock-based compensation	—	—	—	829	—	—	829
Stock-based compensation and issuance of employee benefit plan stock	—	—	—	2,962	—	—	2,962
Balance as of December 31, 2016	477 \$	5 \$	(1,837) \$	17,186 \$	(985) \$	4,916 \$	19,285

Intangible Assets

Acquired intangible assets, included within “Other assets” on Amazon consolidated balance sheets, consist of the following (in millions):

December 31,

	2015		2016		Acquired Intangibles, Gross (1)	Acquired Intangibles, Accumulated Amortization (1)	Acquired Intangibles, Net	Weighted Average Life Remaining
	Acquired Intangibles, Gross (1)	Acquired Intangibles, Accumulated Amortization (1)	Acquired Intangibles, Gross (1)	Acquired Intangibles, Accumulated Amortization (1)				
Marketing-related	\$ 502	\$ (252)	\$ 250	\$ 499	\$ (299)	\$ 200	4.6	

Contract-based Technology- and content-based Customer-related	331	(174)	157	397	(212)	185	4.3
	683	(268)	415	705	(353)	352	4.6
	331	(161)	170	299	(182)	117	2.7
Acquired intangibles (2) \$	1,847 \$	(855) \$	992 \$	1,900 \$	(1,046) \$	854	4.3

(ii) Excludes the original cost and accumulated amortization of fully-amortized intangibles.

(jj) Intangible assets have estimated useful lives of between one and twenty years.

Amortization expense for acquired intangibles was \$215 million, \$270 million, and \$287 million in 2014, 2015, and 2016. Expected future amortization expense of acquired intangible assets as of December 31, 2016 is as follows (in millions):

Year Ended December 31,	
2017	\$ 264
2018	203
2019	170
2020	103
2021	38
Thereafter	76
	\$ 854

ACCUMULATED OTHER COMPREHENSIVE LOSS

Changes in the composition of accumulated other comprehensive loss for 2014, 2015, and 2016 are as follows (in millions):

	Foreign currency translation adjustments	Unrealized gains on available-for-sale securities	Total
Balances as of January 1, 2014	\$ (187)	\$ 2	\$ (185)
Other comprehensive income (loss)	(325)	(1)	(326)
Balances as of December 31, 2014	(512)	1	(511)
Other comprehensive income (loss)	(210)	(2)	(212)
Balances as of December 31, 2015	(722)	(1)	(723)
Other comprehensive income (loss)	(279)	17	(262)
Balances as of December 31, 2016	\$ (1,001)	\$ 16	\$ (985)

Amounts included in accumulated other comprehensive loss are recorded net of their related income tax effects.

INCOME TAXES

In 2014, 2015, and 2016, we recorded net tax provisions of \$167 million, \$950 million, and \$1.4 billion. We have tax benefits relating to excess stock-based compensation deductions and accelerated depreciation deductions that are being utilized to reduce Amazon U.S. taxable income. In December 2015, U.S. legislation was enacted that extended accelerated depreciation deductions on qualifying property through 2019 and made

permanent the U.S. federal research and development credit. As such, cash taxes paid, net of refunds, were \$177 million, \$273 million, and \$412 million for 2014, 2015, and 2016.

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

	Year Ended December 31,		
	2014	2015	2016
Current taxes:			
U.S. Federal	\$ 214	\$ 215	\$ 1,136
U.S. State	65	237	208
International	204	417	327
	<u>483</u>	<u>869</u>	<u>1,671</u>
Deferred taxes:			
U.S. Federal	(125)	473	116
U.S. State	(11)	(171)	(31)
International	(180)	(221)	(331)
	<u>(316)</u>	<u>81</u>	<u>(246)</u>
Provision for income taxes, net	<u>\$ 167</u>	<u>\$ 950</u>	<u>\$ 1,425</u>

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

	Year Ended December 31,		
	2014	2015	2016
U.S.	\$ 292	\$ 2,186	\$ 4,551
International	(403)	(618)	(659)
	<u>\$ (111)</u>	<u>\$ 1,568</u>	<u>\$ 3,892</u>

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

	Year Ended December 31,		
	2014	2015	2016
Income taxes computed at the federal statutory rate	\$ (39)	\$ 549	\$ 1,362
Effect of:			
Impact of foreign tax differential	136	350	(69)
State taxes, net of federal benefits	29	37	110
Tax credits	(85)	(99)	(119)
Nondeductible compensation	117	149	189
Domestic production activities deduction	(20)	(44)	(94)
Other, net	29	8	46
	<u>\$ 167</u>	<u>\$ 950</u>	<u>\$ 1,425</u>

Amazon provision for income taxes in 2015 was higher than in 2014 primarily due to an increase in U.S. pre-tax income and increased losses in certain foreign subsidiaries for which we may not realize a tax benefit. Losses for which we may not realize a related tax benefit, primarily due to losses of foreign subsidiaries, reduce Amazon pre-tax income without a corresponding reduction in Amazon tax expense, and therefore increase Amazon effective tax rate. We have recorded valuation allowances against the deferred tax assets associated with losses for which we may not realize a related tax benefit. We also generated income in lower tax jurisdictions primarily related to Amazon European operations, which are headquartered in LuxembAmazong.

Amazon provision for income taxes in 2016 was higher than in 2015 primarily due to an increase in U.S. pre-tax income, partially offset by an increase in the proportion of foreign losses for which we may realize a tax benefit, an increase in tax amortization deductions, and a decline in the proportion of nondeductible expenses. We have recorded valuation allowances

against the deferred tax assets associated with losses for which we may not realize a related tax benefit. We generated income and losses in lower tax jurisdictions primarily related to Amazon European operations.

Except as required under U.S. tax laws, we do not provide for U.S. taxes on Amazon undistributed earnings of foreign subsidiaries that have not been previously taxed since we intend to invest such undistributed earnings indefinitely outside of the U.S. If Amazon intent changes or if these funds are needed for Amazon U.S. operations, we would be required to accrue or pay U.S. taxes on some or all of these undistributed earnings and Amazon effective tax rate would be adversely affected. Undistributed earnings of foreign subsidiaries that are indefinitely invested outside of the U.S. were \$2.8 billion as of December 31, 2016. Determination of the unrecognized deferred tax liability that would be incurred if such amounts were repatriated is not practicable.

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

	December 31,	
	2015	2016
Deferred tax assets (1):		
Loss carryforwards U.S. - Federal/States (2)	\$ 107	\$ 198
Loss carryforwards - Foreign (3)	856	1,062
Accrued liabilities, reserves, & other expenses	854	968
Stock-based compensation	727	1,073
Deferred revenue	189	330
Assets held for investment	148	66
Depreciation & amortization	222	179
Other items	268	171
Tax credits (4)	41	39
	<hr/>	<hr/>
Total gross deferred tax assets	3,412	4,086
Less valuation allowance (5)	(1,069)	(1,012)
Deferred tax assets, net of valuation allowance	<hr/> 2,343	<hr/> 3,074
Deferred tax liabilities:		
Depreciation & amortization	(1,970)	(2,332)
Acquisition related intangible assets	(203)	(226)
Other items	(88)	(62)
Net deferred tax assets, net of valuation allowance	<hr/> \$ 82	<hr/> \$ 454

• Deferred tax assets related to net operating losses and tax credits are presented net of tax contingencies.

• Excluding \$380 million and \$18 million of deferred tax assets as of December 31, 2015 and 2016, related to net operating losses that result from excess stock-based compensation and for which any

benefit realized will be recorded to stockholders' equity.

- Excluding \$2 million and \$9 million of deferred tax assets as of December 31, 2015 and 2016, related to net operating losses that result from excess stock-based compensation and for which any benefit realized will be recorded to stockholders' equity.
- Excluding \$447 million and \$659 million of deferred tax assets as of December 31, 2015 and 2016, related to tax credits that result from excess stock-based compensation and for which any benefit realized will be recorded to stockholders' equity.
- Relates primarily to deferred tax assets that would only be realizable upon the generation of net income in certain foreign taxing jurisdictions and future capital gains.

As of December 31, 2016, Amazon federal, foreign, and state net operating loss carryforwards for income tax purposes were approximately \$76 million, \$4.8 billion, and \$1.0 billion. The federal, foreign, and state net operating loss carryforwards are subject to limitations under Section 382 of the Internal Revenue Code and applicable foreign and state tax law. If not utilized, a portion of the federal, foreign, and state net operating loss carryforwards will begin to expire in 2020, 2017, and 2017, respectively. As of December 31, 2016, Amazon tax credit carryforwards for income tax purposes were approximately \$725 million. If not utilized, a portion of the tax credit carryforwards will begin to expire in 2017. As of December 31, 2016, Amazon federal capital loss carryforwards for income tax purposes was approximately \$404 million. If not utilized, a portion of the capital loss carryforwards will begin to expire in 2017.

The Company's consolidated balance sheets reflect deferred tax assets related to net operating losses and tax credit carryforwards excluding amounts resulting from excess stock-based compensation. Amounts related to excess stock-based

compensation are accounted for as an increase to additional paid-in capital if and when realized through a reduction in income taxes payable.

FINDINGS & CONCLUSION

Amazon.com opened its virtual doors on the World Wide Web in July 1995. We seek to be Earth's most customer-centric company. In each of Amazon segments, we serve Amazon primary customer sets, consisting of consumers, sellers, developers, enterprises, and content creators. We serve consumers through Amazon retail websites and focus on selection, price, and convenience. We also manufacture and sell electronic devices. We offer programs that enable sellers to sell their products on Amazon websites and their own branded websites

and to fulfill orders through us, and programs that allow authors, musicians, filmmakers, app developers, and others to publish and sell content. We serve developers and enterprises of all sizes through Amazon AWS segment, which provides access to technology infrastructure that enables virtually any type of business. In addition, we provide services, such as advertising services and co-branded credit card agreements.

We have organized Amazon operations into three segments: North America, International, and AWS. See "Note 11—Segment Information."

Prior Period Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation, including the allocation of stock-based compensation and "Other operating expense, net" to segment results within "Note 11 — Segment Information." These revised segment results reflect the way Amazon chief operating decision maker evaluates the Company's business performance and manages its operations. In Q1 2016, current deferred tax assets and current deferred tax liabilities were reclassified as non-current, and capitalized debt issuance costs were reclassified from "Other assets" to "Long-term debt" as a result of the adoption of new accounting guidance. The adoption of this guidance did not have a material impact on Amazon consolidated financial statements.

Principles of Consolidation

The consolidated financial statements include the accounts of Amazon.com, Inc., 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 China and that support Amazon seller lending financing activities (collectively, the "Company"). 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, determining the selling price of products and services in multiple element revenue arrangements and determining the amortization period of these elements, incentive discount offers, sales returns, vendor funding, stock-based compensation forfeiture rates, income taxes, valuation and impairment of investments, inventory valuation and inventory purchase commitments, collectability of receivables, valuation of acquired intangibles and goodwill, depreciable lives of property and equipment, internal-use software and

website development costs, acquisition purchase price allocations, investments in equity interests, and contingencies. Actual results could differ materially from those estimates.

Revenue

Company recognize revenue from product sales or services rendered when the following four criteria are met: persuasive evidence of an arrangement exists, delivery has occurred or service has been rendered, the selling price is fixed or determinable, and collectability is reasonably assured. Revenue arrangements with multiple deliverables are divided into separate units and revenue is allocated using estimated selling prices if we do not have vendor-specific objective evidence or third-party evidence of the selling prices of the deliverables. We allocate the arrangement price to each of the elements based on the relative selling prices of each element. Estimated selling prices are management's best estimates of the prices that we would charge Amazon customers if we were to sell the standalone elements separately and include considerations of customer demand, prices charged by us and others for similar deliverables, and the price if largely based on the cost of producing the product or service.

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