AUTODESK INC
Form 10-Q
August 31, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q
(Mark One)
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended July 31, 2017
or
¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission File Number: 0-14338

AUTODESK, INC.
(Exact name of registrant as specified in its charter)

Delaware	94-2819853
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer Identification No.)
111 McInnis Parkway, San Rafael, California	94903
(Address of principal executive offices)	(Zip Code)

(415) 507-5000
(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

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

Large accelerated filer	x	Accelerated filer	¨
Non-accelerated filer	¨	Smaller reporting company	¨
		Emerging growth company	¨

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

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

As of August 24, 2017, registrant had outstanding 219,192,248 shares of common stock.

AUTODESK, INC. FORM 10-Q
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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

AUTODESK, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In millions, except per share data)
(Unaudited)

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Net revenue:				
Maintenance	$261.8	$277.5	$525.4	$561.9
Subscription	196.1	101.8	369.5	187.3
Total maintenance and subscription revenue	457.9	379.3	894.9	749.2
License and other	43.9	171.4	92.6	313.4
Total net revenue	501.8	550.7	987.5	1,062.6
Cost of revenue:				
Cost of maintenance and subscription revenue	52.8	46.8	107.7	93.4
Cost of license and other revenue	17.8	27.6	36.4	62.5
Amortization of developed technology	4.0	10.7	8.7	21.6
Total cost of revenue	74.6	85.1	152.8	177.5
Gross profit	427.2	465.6	834.7	885.1
Operating expenses:				
Marketing and sales	257.6	243.1	513.3	483.9
Research and development	193.8	193.0	381.5	386.5
General and administrative	78.0	68.6	156.3	143.3
Amortization of purchased intangibles	4.9	7.8	10.6	15.7
Restructuring charges and other facility exit costs, net	0.5	16.0	0.2	68.3
Total operating expenses	534.8	528.5	1,061.9	1,097.7
Loss from operations	(107.6)	(62.9)	(227.2)	(212.6)
Interest and other expense, net	(18.8)	(10.1)	(20.6)	(13.7)
Loss before income taxes	(126.4)	(73.0)	(247.8)	(226.3)
Provision for income taxes	(17.6)	(25.2)	(25.8)	(39.6)
Net loss	$(144.0)	$(98.2)	$(273.6)	$(265.9)
Basic net loss per share	$(0.66)	$(0.44)	$(1.25)	$(1.19)
Diluted net loss per share	$(0.66)	$(0.44)	$(1.25)	$(1.19)
Weighted average shares used in computing basic net loss per share	219.5	223.2	219.7	223.8
Weighted average shares used in computing diluted net loss per share	219.5	223.2	219.7	223.8

See accompanying Notes to Condensed Consolidated Financial Statements.

AUTODESK, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(In millions)
(Unaudited)

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Net loss	$(144.0)	$(98.2)	$(273.6)	$(265.9)
Other comprehensive income (loss), net of reclassifications:				
Net loss on derivative instruments (net of tax effect of $0.9, $1.1, $1.4 and ($0.8), respectively)	(11.6)	(1.5)	(13.0)	(11.0)
Change in net unrealized (loss) gain on available-for-sale securities (net of tax effect of $0.4, ($0.1), $0.1, and ($0.6), respectively)	(0.5)	1.1	0.2	3.4
Change in defined benefit pension items (net of tax effect of $0.0, ($0.2), $0.0, and ($0.2), respectively)	0.3	—	(0.2)	0.3
Net change in cumulative foreign currency translation gain (loss) (net of tax effect of ($0.6), $0.0, ($0.9) and $0.0, respectively)	25.2	(7.9)	38.6	(1.4)
Total other comprehensive income (loss)	13.4	(8.3)	25.6	(8.7)
Total comprehensive loss	$(130.6)	$(106.5)	$(248.0)	$(274.6)

See accompanying Notes to Condensed Consolidated Financial Statements.

AUTODESK, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In millions)
(Unaudited)

	July 31, 2017	January 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$1,174.1	$1,213.1
Marketable securities	533.6	686.8
Accounts receivable, net	265.6	452.3
Prepaid expenses and other current assets	110.0	108.4
Total current assets	2,083.3	2,460.6
Marketable securities	236.0	306.2
Computer equipment, software, furniture and leasehold improvements, net	153.0	158.6
Developed technologies, net	34.0	45.7
Goodwill	1,588.6	1,561.1
Deferred income taxes, net	66.2	63.9
Other assets	192.9	202.0
Total assets	$4,354.0	$4,798.1
LIABILITIES AND STOCKHOLDERS’ EQUITY		
Current liabilities:		
Accounts payable	$93.0	$93.5
Accrued compensation	161.7	238.2
Accrued income taxes	21.3	50.0
Deferred revenue	1,308.5	1,270.1
Current portion of long-term notes payable, net	—	398.7
Other accrued liabilities	117.2	134.9
Total current liabilities	1,701.7	2,185.4
Long-term deferred revenue	467.5	517.9
Long-term income taxes payable	33.2	39.3
Long-term deferred income taxes	100.9	91.5
Long-term notes payable, net	1,584.9	1,092.0
Other liabilities	150.3	138.4
Stockholders’ equity:		
Common stock and additional paid-in capital	1,934.8	1,876.3
Accumulated other comprehensive loss	(152.9)	(178.5)
Accumulated deficit	(1,466.4)	(964.2)
Total stockholders’ equity	315.5	733.6
Total liabilities and stockholders' equity	$4,354.0	$4,798.1

See accompanying Notes to Condensed Consolidated Financial Statements.

AUTODESK, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)
(Unaudited)

	Six Months Ended July 31, 2017			2016		
Operating activities:						
Net loss	$	(273.6	)	$	(265.9	)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:						
Depreciation, amortization and accretion	56.8			70.4		
Stock-based compensation expense	134.4			105.9		
Deferred income taxes	5.8			(9.2		)
Restructuring charges and other facility exit costs, net	0.2			68.3		
Other operating activities	7.7			(6.2		)
Changes in operating assets and liabilities, net of acquisitions:						
Accounts receivable	185.5			346.9		
Prepaid expenses and other current assets	(2.4		)	(23.3		)
Accounts payable and accrued liabilities	(95.8		)	(44.6		)
Deferred revenue	(9.9		)	(1.4		)
Accrued income taxes	(36.0		)	(94.5		)
Net cash (used in) provided by operating activities	(27.3		)	146.4		
Investing activities:						
Purchases of marketable securities	(299.7		)	(810.9		)
Sales of marketable securities	110.8			354.7		
Maturities of marketable securities	420.3			791.3		
Capital expenditures	(26.4		)	(42.6		)
Acquisitions, net of cash acquired	—			(85.2		)
Other investing activities	(4.3		)	(6.7		)

Net cash provided by investing activities	200.7	200.6
Financing activities:		
Proceeds from issuance of common stock, net of issuance costs	55.9	54.2
Taxes paid related to net share settlement of equity awards	(49.8)	(19.9)
Repurchases of common stock	(315.2)	(270.0)
Proceeds from debt, net of discount	496.9	—
Repayment of debt	(400.0)	—
Other financing activities	(5.8)	—
Net cash used in financing activities	(218.0)	(235.7)
Effect of exchange rate changes on cash and cash equivalents	5.6	3.0
Net (decrease) increase in cash and cash equivalents	(39.0)	114.3
Cash and cash equivalents at beginning of period	1,213.1	1,353.0
Cash and cash equivalents at end of period	$ 1,174.1	$ 1,467.3

See accompanying Notes to Condensed Consolidated Financial Statements.

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AUTODESK, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Tables in millions, except share and per share data, or as otherwise noted)

1. Basis of Presentation

The accompanying unaudited Condensed Consolidated Financial Statements of Autodesk, Inc. (“Autodesk,” “we,” “us,” “our,” or the “Company”) as of July 31, 2017, and for the three and six months ended July 31, 2017 and 2016, have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information along with the instructions to Form 10-Q and Article 10 of Securities and Exchange Commission (“SEC”) Regulation S-X. Accordingly, they do not include all of the information and notes required by GAAP for annual financial statements. In management’s opinion, Autodesk made all adjustments (consisting of normal, recurring and non-recurring adjustments) during the quarter that were considered necessary for the fair statement of the financial position and operating results of the Company. The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect reported amounts in the financial statements and accompanying notes. Actual results could differ from those estimates. In addition, the results of operations for the three and six months ended July 31, 2017 are not necessarily indicative of the results for the entire fiscal year ending January 31, 2018, or for any other period. Further, the balance sheet as of January 31, 2017 has been derived from the audited balance sheet as of this date. There have been no material changes, other than what is discussed herein, to Autodesk's significant accounting policies as compared to the significant accounting policies disclosed in the Annual Report on Form 10-K for the fiscal year ended January 31, 2017. These unaudited Condensed Consolidated Financial Statements should be read in conjunction with the Consolidated Financial Statements and related notes, together with management’s discussion and analysis of financial position and results of operations contained in Autodesk’s Annual Report on Form 10-K for the fiscal year ended January 31, 2017, filed on March 21, 2017.

Change in Presentation

During the first quarter of fiscal 2018, the Company changed its historical presentation of its revenue and cost of revenue categories.

Previously, the Company presented revenue and cost of revenue on two lines: subscription, and license and other. Included within subscription was maintenance revenue for all our software products and revenue for our cloud service offerings. License and other revenue included product license revenue, standalone consulting services, and other immaterial items. Also, included within license and other revenue was an allocation of the estimated value of the software license from our term-based product subscriptions and enterprise offerings, which contain a software license, maintenance and cloud services. For these arrangements, as there is no vendor-specific-objective evidence ("VSOE") for the related maintenance, the arrangement consideration was allocated between the license and maintenance deliverables based on best estimated selling prices in our condensed consolidated statements of operations. The Company performed the allocation because it provided a meaningful presentation to investors based on the Company's then current product mix.

As part of the Company's technological and business model transition, the Company discontinued the sale of most of its perpetual licenses, transitioning away from selling a mix of perpetual licenses and term-based product subscriptions to a single subscription model involving more highly interrelated software and cloud functionalities. Fiscal 2018 marks the first full year in the Company's history that it will sell substantially term-based product subscriptions. To better reflect this shift in our business, the Company adopted a revised presentation in the first quarter of fiscal 2018, including the separation of subscription revenue and maintenance revenue on distinct line items on the Company's condensed consolidated statement of operations.

Subscription revenue now consists of our full term-based product subscriptions, cloud service offerings, and flexible enterprise business arrangements. Note that with the change in our condensed consolidated statement of operations in the first quarter of fiscal 2018, our term-based product subscriptions and flexible enterprise business arrangements are classified and presented in a single line item.

Maintenance revenue is presented as a separate line item in the new presentation and consists of revenue from our existing maintenance plan agreements and related renewals.

License and other revenue will continue to be presented as a separate line item and include any residual perpetual licenses sold, standalone consulting services, and other immaterial items.

In connection with these revisions, the Company also revised its cost of revenue classification to present cost of subscription and maintenance revenue and amortization of developed technology separately. Cost of license and other revenue will continue to be presented as a separate line item.

This change in presentation does not affect our total net revenues, total cost of net revenues or overall gross margin. The following table shows reclassified amounts to conform to the current period presentation:

	Three Months Ended July 31, 2016			Six Months Ended July 31, 2016		
	Previously Reported	Change in Presentation Reclassification	Current Presentation	Previously Reported	Change in Presentation Reclassification	Current Presentation
Net revenue:						
Maintenance (1)	N/A	$ 277.5	$ 277.5	N/A	$ 561.9	$ 561.9
Subscription	$322.0	(220.2)	101.8	$648.0	(460.7)	187.3
License and other	228.7	(57.3)	171.4	414.6	(101.2)	313.4
Total	$550.7	$ —	$ 550.7	$1,062.6	$ —	$ 1,062.6
Cost of revenue:						
Maintenance and subscription (2)	$38.2	$ 8.6	$ 46.8	$78.0	$ 15.4	$ 93.4
License and other	46.9	(19.3)	27.6	99.5	(37.0)	62.5
Amortization of developed technology (1)	N/A	10.7	10.7	N/A	21.6	21.6
Total	$85.1	$ —	$ 85.1	$177.5	$ —	$ 177.5

(1) These lines were not previously reported in the Condensed Consolidated Statement of Operations.
(2) Previously, titled "Subscription."

2. Recently Issued Accounting Standards

With the exception of those discussed below, there have been no recent changes in accounting pronouncements issued by the Financial Accounting Standards Board (“FASB”) or adopted by the Company during the six months ended July 31, 2017, that are of significance, or potential significance, to the Company.

Accounting standard adopted in the current fiscal year

Autodesk adopted FASB's Accounting Standards Update No. 2017-04 ("ASU 2017-04"), "Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" during the three months ended April 30, 2017. The ASU simplifies the accounting for goodwill impairment by removing Step 2 of the goodwill impairment test. Under current guidance, Step 2 of the goodwill impairment test requires entities to calculate the implied fair value of goodwill in the same manner as the amount of goodwill recognized in a business combination by assigning the fair value of a reporting unit to all of the assets and liabilities of the reporting unit. The carrying value in excess of the implied fair value is recognized as goodwill impairment. Under the new standard, goodwill impairment is recognized based on Step 1 of the current guidance, which calculates the carrying value in excess of the reporting unit’s fair value. The new guidance is required to be applied on a prospective basis and as such, Autodesk will use the simplified test in its annual fourth fiscal quarter testing or more often if circumstances indicate a potential impairment may exist, or if events have affected the composition of reporting units. Autodesk does not believe ASU 2017-04 will have a material impact on its consolidated financial statements.

Recently issued accounting standards but not yet adopted

In August 2017, FASB issued Accounting Standards Update No. 2017-12 ("ASU 2017-12"), "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities." The targeted amendments help simplify certain aspects of hedge accounting and result in a more accurate portrayal of the economics of an entity's risk management activities in its financial statements. For cash flow and net investment hedges as of the adoption date, the guidance requires a modified retrospective approach. The amended presentation and disclosure guidance is required only prospectively. The amendments are effective for Autodesk's fiscal year beginning February 1, 2019, with early adoption permitted. Autodesk is currently evaluating the accounting, transition, and disclosure requirements of the standard and cannot currently estimate the financial statement impact of adoption.

In February 2017, FASB issued Accounting Standards Update No. 2017-05 ("ASU 2017-05"), "Other Income– Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20): Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets." The ASU, among other things, clarifies the scope of the derecognition of nonfinancial assets, the definition of in substance financial assets, and impacts the accounting for partial sales of nonfinancial assets by requiring full gain recognition upon the sale. The amendments are effective for Autodesk's fiscal year beginning February 1, 2018. The guidance may be applied retrospectively for all periods presented or retrospectively with a cumulative-effect adjustment at the date of adoption. The effect of the implementation will depend upon the nature of the Company's future acquisitions or dispositions, if any. The adoption of the guidance would not have had a material impact on acquisitions prior to the current period and on the Company's consolidated statements of financial condition and results of operations.

In January 2017, FASB issued Accounting Standards Update No. 2017-01 ("ASU 2017-01"), "Business Combinations: Clarifying the Definition of a Business" which provides a more robust framework to use in determining when a set of assets and activities is considered a business. The amendments will be effective for Autodesk's fiscal year beginning February 1, 2018 unless Autodesk elects early adoption, which Autodesk is still evaluating. The new guidance is required to be applied on a prospective basis. The effect of the implementation will depend upon the nature of the Company's future acquisitions, if any.

In October 2016, FASB issued Accounting Standards Update No. 2016-16 ("ASU 2016-16"), “Income Taxes: Intra-Entity Transfers of Assets Other than Inventory” which requires that entities recognize the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. The amendments will be effective for Autodesk's fiscal year beginning February 1, 2018. The new guidance is required to be applied on a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings as of the beginning of the period of adoption. Autodesk is currently evaluating the accounting and disclosure requirements of the standard. Furthermore, the actual impact of implementation will largely depend on future intra-entity asset transfers, if any.

In June 2016, FASB issued Accounting Standards Update No. 2016-13 ("ASU 2016-13") regarding ASC Topic 326, "Financial Instruments - Credit Losses," which modifies the measurement of expected credit losses of certain financial instruments. Autodesk plans to adopt ASU 2016-13 as of the effective date which represents Autodesk’s fiscal year beginning February 1, 2020. Autodesk does not believe the ASU will have a material impact on its consolidated financial statements.

In February 2016, FASB issued Accounting Standards Update No. 2016-02 ("ASU 2016-02") regarding ASC Topic 842, "Leases." The amendments in this ASU require balance sheet recognition of lease assets and lease liabilities by lessees for leases classified as operating leases, with an optional policy election to not recognize lease assets and lease liabilities for leases with a term of 12 months or less. The amendments also require new disclosures, including qualitative and quantitative requirements, providing additional information about the amounts recorded in the financial statements. Autodesk plans to adopt ASU 2016-02 in Autodesk’s fiscal year beginning February 1, 2019. The amendments require a modified retrospective approach with optional practical expedients. Autodesk is currently evaluating the accounting, transition, and disclosure requirements of the standard and cannot currently estimate the financial statement impact of adoption.

In January 2016, FASB issued Accounting Standards Update No. 2016-01 ("ASU 2016-01") regarding ASC Topic 825-10, "Financial Instruments - Overall." The amendments address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments, and require equity securities to be measured at fair value with changes in fair value recognized through net income. The amendments also simplify the impairment assessment of equity investments without readily determinable fair values by requiring a qualitative assessment for impairment quarterly at each reporting period. The amendments in ASU 2016-01 will be effective for Autodesk's fiscal year beginning February 1, 2018. An entity should apply the amendments by means of a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption, with prospective adoption of the amendments related to equity securities without readily determinable fair values existing as of the date of adoption. Autodesk does not believe ASU 2016-01 will have a material impact on its consolidated financial statements.

In May 2014, FASB issued Accounting Standards Update No. 2014-09 (regarding ASC Topic 606, “Revenue from Contracts with Customers.” ASU 2014-09 provides principles for recognizing revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In August 2015, FASB issued Accounting Standards Update No. 2015-14 to defer the effective date by one year with early adoption permitted as of the original effective date. In addition, FASB issued Accounting Standards Update No. 2016-08, Accounting Standards Update No. 2016-10, Accounting Standards Update No. 2016-12, and Accounting

Standard Update No. 2016-20 in March 2016, April 2016, May 2016, and December 2016, respectively, to help provide interpretive clarifications on the new guidance in ASC Topic 606.

Autodesk currently plans to adopt ASU 2014-09 as of February 1, 2018, using the modified retrospective transition method.

In terms of Autodesk's evaluation efforts, the Company has assigned internal resources in addition to the engagement of third party service providers to assist in the evaluation. The Company's preliminary assessment is that there should be no material change in the timing and amount of the recognition of revenue for the majority of the Company's product subscription offerings and enterprise arrangements. This preliminary assessment is based on the Company's analysis that the related software and cloud services in a majority of the product subscription and enterprise arrangements are not distinct in the context of the contract as they are considered highly interrelated and represent a single combined performance obligation that should be recognized over time. Due to the complexity of certain contracts, the actual revenue recognition treatment required under the new standard for these arrangements may be dependent on contract-specific terms and vary in some instances.

A limited number of Autodesk's product subscriptions do not incorporate substantial cloud services, and under ASU 2014-09 will be recognized as distinct license and service performance obligations. Revenue allocated to the licenses in these offerings will be recognized at a point in time instead of over the contract term. While we are still evaluating, Autodesk believes the impact of the change to timing of revenue recognition for these limited offerings, and other revenue streams that Autodesk is currently evaluating, may have a material balance sheet impact on the adoption date with the application of the modified retrospective transition method. It is not expected to have a material impact to reported revenue in subsequent reporting periods.

Another significant provision under ASU 2014-09 includes the capitalization and amortization of costs associated with obtaining a contract, such as sales commission. The Company expects there to be a material balance sheet impact at the period of adoption capturing the sales commission capitalization and is currently evaluating the magnitude at implementation.

Furthermore, the Company has made and will continue to make investments in systems and processes to enable timely and accurate reporting under the new standard. The Company currently expects that necessary operational and internal control structural changes will be implemented prior to the adoption date.

3. Concentration of Credit Risk

Autodesk places its cash, cash equivalents and marketable securities in highly liquid instruments with, and in the custody of, diversified financial institutions globally with high credit ratings and limits the amounts invested with any one institution, type of security and issuer. Autodesk’s primary commercial banking relationship is with Citigroup Inc. and its global affiliates. Citibank, N.A., an affiliate of Citigroup, is one of the lead lenders and an agent in the syndicate of Autodesk’s $400.0 million line of credit facility.

Total sales to the distributor Tech Data Corporation and its global affiliates (“Tech Data”) accounted for 31% of Autodesk’s total net revenue for both the three months ended July 31, 2017 and 2016 and 30% of Autodesk’s total net revenue for both the six months ended July 31, 2017 and 2016. The majority of the net revenue from sales to Tech Data is for sales made outside of the United States. In addition, Tech Data accounted for 30% and 20% of trade accounts receivable at July 31, 2017 and January 31, 2017, respectively.

4. Financial Instruments

The following tables summarize the Company's financial instruments' amortized cost, gross unrealized gains, gross unrealized losses, and fair value by significant investment category as of July 31, 2017 and January 31, 2017:

	July 31, 2017						
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Level 1	Level 2	Level 3
Cash equivalents (1):							
Agency bonds	$7.0	$ —	$ —	$7.0	$7.0	$—	$—
Certificates of deposit	61.3	—	—	61.3	61.3	—	—
Corporate debt securities	23.0	—	—	23.0	23.0	—	—
Commercial paper	167.6	—	—	167.6	—	167.6	—
Custody cash deposit	42.8	—	—	42.8	42.8	—	—
Municipal bonds	15.0	—	—	15.0	15.0	—	—
Money market funds	348.5	—	—	348.5	—	348.5	—
Sovereign debt	5.0	—	—	5.0	—	5.0	—
U.S. government securities	100.0	—	—	100.0	100.0	—	—
Marketable securities:							
Short-term available-for-sale							
Agency bonds	7.5	—	—	7.5	7.5	—	—
Asset backed securities	30.2	—	—	30.2	—	30.2	—
Certificates of deposit	13.0	—	—	13.0	13.0	—	—
Commercial paper	98.9	—	—	98.9	—	98.9	—
Corporate debt securities	219.3	0.1	—	219.4	219.4	—	—
Municipal bonds	36.7	0.1	—	36.8	36.8	—	—
Sovereign debt	14.0	—	—	14.0	—	14.0	—
U.S. government securities	59.4	—	—	59.4	59.4	—	—
Short-term trading securities							
Mutual funds	48.7	5.7	—	54.4	54.4	—	—
Long-term available-for-sale							
Agency bonds	7.5	—	—	7.5	7.5	—	—
Asset backed securities	57.6	—	(0.1)	57.5	—	57.5	—
Corporate debt securities	126.3	0.3	—	126.6	126.6	—	—
Municipal bonds	5.0	—	—	5.0	5.0	—	—
Sovereign debt	1.6	—	—	1.6	—	1.6	—
U.S. government securities	37.8	—	—	37.8	37.8	—	—
Convertible debt securities (2)	10.7	3.4	(3.1)	11.0	—	—	11.0
Derivative contract assets (3)	3.0	10.2	(2.2)	11.0	—	9.0	2.0
Derivative contract liabilities (4)	—	—	(19.3)	(19.3)	—	(19.3)	—
Total	$1,547.4	$ 19.8	$ (24.7)	$1,542.5	$816.5	$713.0	$13.0

(1) Included in "Cash and cash equivalents" in the accompanying Condensed Consolidated Balance Sheets.
(2)

Considered "available-for-sale" and included in "Other assets" in the accompanying Condensed Consolidated Balance Sheets.

(3) Included in "Prepaid expenses and other current assets" or "Other assets" in the accompanying Condensed Consolidated Balance Sheets.

(4) Included in "Other accrued liabilities" in the accompanying Condensed Consolidated Balance Sheets.

	January 31, 2017						
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Level 1	Level 2	Level 3
Cash equivalents (1):							
Agency bonds	$6.0	$ —	$ —	$6.0	$6.0	$—	$—
Certificates of deposit	63.1	—	—	63.1	63.1	—	—
Commercial paper	207.4	—	—	207.4	—	207.4	—
Corporate debt securities	40.2	—	—	40.2	40.2	—	—
Custody cash deposit	3.2	—	—	3.2	3.2	—	—
Money Market funds	256.5	—	—	256.5	—	256.5	—
Municipal bonds	5.0	—	—	5.0	5.0	—	—
Sovereign debt	15.0	—	—	15.0	—	15.0	—
U.S. government securities	309.5	—	—	309.5	309.5	—	—
Marketable securities:							
Short-term available-for-sale							
Agency bonds	13.2	—		13.2	13.2	—	—
Asset backed securities	19.6	—	—	19.6	—	19.6	—
Certificates of deposit	157.3	—	—	157.3	157.3	—	—
Commercial paper	109.2	—	—	109.2	—	109.2	—
Corporate debt securities	234.7	—	(0.2)	234.5	234.5	—	—
Municipal bonds	43.4	—	—	43.4	43.4	—	—
Sovereign debt	30.0	—	—	30.0	—	30.0	—
U.S. government securities	32.3	—	—	32.3	32.3	—	—
Short-term trading securities							
Mutual funds	44.8	2.5	—	47.3	47.3	—	—
Long-term available-for-sale							
Agency bonds	7.1	—	—	7.1	7.1	—	—
Asset backed securities	65.8	0.1	—	65.9	—	65.9	—
Corporate debt securities	172.1	0.1	(0.1)	172.1	172.1	—	—
Municipal bonds	10.7	—	—	10.7	10.7	—	—
Sovereign debt	1.5	—	—	1.5	—	1.5	—
U.S. government securities	48.8	0.1	—	48.9	48.9	—	—
Convertible debt securities (2)	4.9	2.3	(1.6)	5.6	—	—	5.6
Derivative contract assets (3)	2.2	12.3	(1.3)	13.2	—	11.9	1.3
Derivative contract liabilities (4)	—	—	(10.4)	(10.4)	—	(10.4)	—
Total	$1,903.5	$ 17.4	$ (13.6)	$1,907.3	$1,193.8	$706.6	$6.9

(1) Included in “Cash and cash equivalents” in the accompanying Condensed Consolidated Balance Sheets.

(2) Considered “available-for-sale” and included in “Other assets” in the accompanying Condensed Consolidated Balance Sheets.

(3) Included in “Prepaid expenses and other current assets,” “Other assets,” or “Other accrued liabilities” in the accompanying Condensed Consolidated Balance Sheets.

(4) Included in “Other accrued liabilities” in the accompanying Condensed Consolidated Balance Sheets.

Autodesk classifies its marketable securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Marketable securities with remaining maturities of up to 12 months are classified as short-term and marketable securities with remaining maturities greater than 12 months are classified as long-term. Autodesk may sell certain of its marketable securities prior to their stated maturities for strategic purposes or in anticipation of credit deterioration.

Autodesk applies fair value accounting for certain financial assets and liabilities, which consist of cash equivalents, marketable securities and other financial instruments, that are recognized or disclosed at fair value in the financial statements on a recurring basis. The Company defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement: (Level 1) observable inputs such as quoted prices in active markets; (Level 2) inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and (Level 3) unobservable inputs for which there is little or no market data, which require Autodesk to develop its own assumptions. When determining fair value, Autodesk uses observable market data and relies on unobservable inputs only when observable market data is not available. There have been no transfers between fair value measurement levels during the six months ended July 31, 2017.

Autodesk's cash equivalents, marketable securities and financial instruments are primarily classified within Level 1 or Level 2 of the fair value hierarchy. Autodesk values its available-for-sale securities on pricing from pricing vendors, who may use quoted prices in active markets for identical assets (Level 1) or inputs other than quoted prices that are observable either directly or indirectly in determining fair value (Level 2). Autodesk's Level 2 securities are valued primarily using observable inputs other than quoted prices in active markets for identical assets and liabilities. Autodesk's Level 3 securities consist of investments held in convertible debt securities and derivative contracts which are valued using probability weighted discounted cash flow models as some of the inputs to the models are unobservable in the market.

A reconciliation of the change in Autodesk’s Level 3 items for the six months ended July 31, 2017 follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)		
	Derivative Contracts	Convertible Debt Securities	Total
Balances, January 31, 2017	$ 1.3	$ 5.6	$ 6.9
Purchases	1.1	5.9	7.0
Losses included in earnings	(0.4)	—	(0.4)
Losses included in OCI	—	(0.5)	(0.5)
Balances, July 31, 2017	$ 2.0	$ 11.0	$ 13.0

The following table summarizes the estimated fair value of Autodesk's “available-for-sale securities” classified by the contractual maturity date of the security:

	July 31, 2017	
	Cost	Fair Value
Due within 1 year	$475.7	$ 475.8
Due in 1 year through 5 years	243.3	244.0
Due in 5 years through 10 years	1.9	1.9
Due after 10 years	4.6	4.5
Total	$725.5	$ 726.2

As of July 31, 2017 and January 31, 2017, Autodesk had no securities, individually and in the aggregate, in a continuous unrealized loss position for greater than twelve months.

As of July 31, 2017 and January 31, 2017, Autodesk had $108.5 million and $117.2 million, respectively, in direct investments in privately held companies accounted for under the cost method, which are periodically assessed for other-than-temporary impairment. Other than the amounts disclosed in the following paragraph, Autodesk does not intend to sell these cost method investments and it is not more likely than not that Autodesk will be required to sell the investment before recovery of the amortized cost bases, which may be maturity. Therefore, Autodesk does not consider those investments to be other-than-temporarily impaired at July 31, 2017. Autodesk estimates fair value of its cost method investments considering available information such as pricing in recent rounds of financing, current cash positions, earnings and cash flow forecasts, recent operational performance and any other readily available market data.

If Autodesk determines that an other-than-temporary impairment has occurred, Autodesk writes down the investment to its fair value. During the three and six months ended July 31, 2017, Autodesk recorded $3.6 million and $4.1 million, respectively, in other-than-temporary impairments on its privately held equity investments. During each of the three and six months ended July 31, 2016, Autodesk recorded $0.3 million in other-than-temporary impairments on its privately held equity investment.

There was no loss or gain for the sales or redemptions of “available-for-sale securities” during the six months ended July 31, 2017. The sales or redemptions of “available-for-sale securities” during the six months ended July 31, 2016 resulted in a gain of $0.4 million. Gains and losses resulting from the sale or redemption of "available-for-sale securities" are recorded in “Interest and other expense, net” on the Company's Condensed Consolidated Statements of Operations.

Proceeds from the sale and maturity of marketable securities for the six months ended July 31, 2017 and 2016 were $531.1 million and $1,146.0 million, respectively.

Derivative Financial Instruments

Under its risk management strategy, Autodesk uses derivative instruments to manage its short-term exposures to fluctuations in foreign currency exchange rates which exist as part of ongoing business operations. Autodesk's general practice is to hedge a portion of transaction exposures denominated in euros, Japanese yen, Swiss francs, British pounds, Canadian dollars and Australian dollars. These instruments have maturities between one and twelve months in the future. Autodesk does not enter into derivative instrument transactions for trading or speculative purposes.

The bank counterparties to the derivative contracts potentially expose Autodesk to credit-related losses in the event of their nonperformance. However, to mitigate that risk, Autodesk only contracts with counterparties who meet the Company's minimum requirements under its counterparty risk assessment process. Autodesk monitors ratings, credit spreads and potential downgrades on at least a quarterly basis. Based on Autodesk's ongoing assessment of counterparty risk, the Company will adjust its exposure to various counterparties. Autodesk generally enters into master netting arrangements, which reduce credit risk by permitting net settlement of transactions with the same counterparty. However, Autodesk does not have any master netting arrangements in place with collateral features.

Foreign currency contracts designated as cash flow hedges

Autodesk uses foreign currency contracts to reduce the exchange rate impact on a portion of the net revenue or operating expense of certain anticipated transactions. These contracts are designated and documented as cash flow hedges. The effectiveness of the cash flow hedge contracts is assessed quarterly using regression analysis as well as other timing and probability criteria. To receive cash flow hedge accounting treatment, all hedging relationships are formally documented at the inception of the hedge and the hedges are expected to be highly effective in offsetting changes to future cash flows on hedged transactions. The gross gains and losses on these hedges are included in “Accumulated other comprehensive loss” and are reclassified into earnings at the time the forecasted revenue or expense is recognized. In the event the underlying forecasted transaction does not occur, or it becomes probable that it will not occur, Autodesk reclassifies the gain or loss on the related cash flow hedge from “Accumulated other comprehensive loss” to “Interest and other expense, net” in the Company's Condensed Consolidated Financial Statements at that time.

The net notional amounts of these contracts are presented net settled and were $441.6 million at July 31, 2017 and $369.4 million at January 31, 2017. Outstanding contracts are recognized as either assets or liabilities on the balance sheet at fair value. The majority of the net gain of $1.6 million remaining in “Accumulated other comprehensive loss” as of July 31, 2017 is expected to be recognized into earnings within the next twelve months.

Derivatives not designated as hedging instruments

Autodesk uses foreign currency contracts that are not designated as hedging instruments to reduce the exchange rate risk associated primarily with foreign currency denominated receivables and payables. These forward contracts are marked-to-market at the end of each fiscal quarter with gains and losses recognized as “Interest and other expense, net.” These derivative instruments do not subject the Company to material balance sheet risk due to exchange rate movements because gains and losses on these derivative instruments are intended to offset the gains or losses resulting from the settlement of the underlying foreign currency denominated receivables and payables. The net notional amounts of these foreign currency contracts are presented net settled and were $175.4 million at July 31, 2017 and $270.6 million at January 31, 2017.

In addition to these foreign currency contracts, Autodesk holds derivative instruments issued by privately held companies, which are not designated as hedging instruments. These derivatives consist of certain conversion options on the convertible debt securities held by Autodesk and an option to acquire a privately held company. These derivatives are recorded at fair value as of each balance sheet date and are recorded in "Other assets." Changes in the fair values of these instruments are recognized in income as "Interest and other expense, net."

Fair Value of Derivative Instruments

The fair values of derivative instruments in Autodesk's Condensed Consolidated Balance Sheets were as follows as of July 31, 2017 and January 31, 2017:

	Balance Sheet Location	Fair Value at July 31, 2017	January 31, 2017
Derivative Assets			
Foreign currency contracts designated as cash flow hedges	Prepaid expenses and other current assets	$8.1	$ 10.1
Derivatives not designated as hedging instruments	Prepaid expenses and other current assets and Other assets	2.9	3.2
Total derivative assets		$11.0	$ 13.3
Derivative Liabilities			
Foreign currency contracts designated as cash flow hedges	Other accrued liabilities	$16.2	$ 4.5
Derivatives not designated as hedging instruments	Other accrued liabilities	3.1	6.0
Total derivative liabilities		$19.3	$ 10.5

The effects of derivatives designated as hedging instruments on Autodesk's Condensed Consolidated Statements of Operations were as follows for the three and six months ended July 31, 2017 and 2016 (amounts presented include any income tax effects):

	Foreign Currency Contracts			
	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Amount of (loss) gain recognized in accumulated other comprehensive (loss) income on derivatives (effective portion)	$(9.3)	$1.5	$(11.4)	$(4.9)
Amount and location of gain (loss) reclassified from accumulated other comprehensive (loss) income into (loss) income (effective portion)				
Net revenue	$2.8	$2.5	$4.8	$7.4
Operating expenses	(0.5)	0.5	(3.2)	(1.3)
Total	$2.3	$3.0	$1.6	$6.1
Amount and location of gain (loss) recognized in (loss) income on derivatives (ineffective portion and amount excluded from effectiveness testing)				
Interest and other expense, net	$0.1	$(0.2)	$(0.1)	$(0.4)

The effects of derivatives not designated as hedging instruments on Autodesk's Condensed Consolidated Statements of Operations were as follows for the three and six months ended July 31, 2017 and 2016 (amounts presented include any income tax effects):

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Amount and location of loss recognized in (loss) income on derivatives				
Interest and other expense, net	$(6.5)	$(3.9)	$(8.3)	$(10.9)

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5. Stock-based Compensation Expense

Restricted Stock Units:

A summary of restricted stock activity for the six months ended July 31, 2017 is as follows:

	Unvested Restricted Stock Units	Weighted average grant date fair value per share
	(in thousands)	
Unvested restricted stock units at January 31, 2017	7,622.4	$ 60.13
Granted	815.8	93.97
Vested	(1,269.2)	58.17
Canceled/Forfeited	(331.4)	61.31
Performance Adjustment (1)	24.7	61.79
Unvested restricted stock units at July 31, 2017	6,862.3	$ 65.30

(1) Based on Autodesk's financial results and relative total stockholder return for the fiscal 2017 performance period. The performance stock units were attained at rates ranging from 99.7% to 114.7% of the target award.

The fair value of the shares vested during the six months ended July 31, 2017 and 2016 was $116.9 million and $93.4 million, respectively.

During the six months ended July 31, 2017, Autodesk granted 0.5 million restricted stock units. Autodesk recorded stock-based compensation expense related to restricted stock units of $52.0 million and $41.5 million during the three months ended July 31, 2017 and 2016, respectively. Autodesk recorded stock-based compensation expense related to restricted stock units of $102.0 million and $80.3 million during the six months ended July 31, 2017 and 2016, respectively. The $52.0 million and $102.0 million of stock-based compensation expense for the three and six months ended July 31, 2017, respectively, includes $5.9 million and $9.1 million, respectively, related to the acceleration of eligible restricted stock awards in conjunction with the Company's CEO transition.

During the six months ended July 31, 2017, Autodesk granted 0.3 million performance stock units for which the ultimate number of shares earned is determined based on the achievement of performance criteria at the end of the stated service and performance period. During the period, we granted two different types of performance stock units.

The performance criteria for the first type of performance stock units were based on a mix of net subscription additions, Annualized Recurring Revenue ("ARR"), non-GAAP total spend, and total subscription renewal rate goals adopted by the Compensation and Human Resource Committee, as well as total stockholder return compared against companies in the S&P Computer Software Select Index or the S&P North American Technology Software Index (“Relative TSR”). These performance stock units vest over a three-year period and have the following vesting schedule:

- Up to one third of the performance stock units may vest following year one, depending upon the achievement of the performance criteria for fiscal 2018 as well as 1-year Relative TSR (covering year one).
- Up to one third of the performance stock units may vest following year two, depending upon the achievement of the performance criteria for year two as well as 2-year Relative TSR (covering years one and two).
-

Up to one third of the performance stock units may vest following year three, depending upon the achievement of the performance criteria for year three as well as 3-year Relative TSR (covering years one, two and three).

The performance criteria for the second type of performance stock units granted to our Chief Executive Officer during the six months ended July 31, 2017 were based on fiscal 2020 free cash flow per share and ARR goals adopted by the Compensation and Human Resource Committee. These performance stock units vest in March 2020 based on the Company’s fiscal 2020 performance against the performance criteria.

Performance stock units are not considered outstanding stock at the time of grant, as the holders of these units are not entitled to any of the rights of a stockholder, including voting rights. Autodesk has determined the grant date fair value for these awards using stock price on the date of grant or if the awards are also subject to a market condition, a Monte Carlo simulation model. The fair value of the performance stock units is expensed using the accelerated attribution over the vesting period. Autodesk recorded stock-based compensation expense related to performance stock units of $9.7 million and $5.9 million for the three months ended July 31, 2017 and 2016, respectively. Autodesk recorded stock-based compensation expense related to performance stock units of $20.6 million and $12.2 million for the six months ended July 31, 2017 and 2016, respectively. The $9.7 million and $20.6 million of stock-based compensation expense for the three and six months ended July 31, 2017, respectively, includes $2.8 million and $7.5 million, respectively, related to the acceleration of eligible performance stock awards in conjunction with the Company's CEO transition.

1998 Employee Qualified Stock Purchase Plan (“ESPP”)

Under Autodesk’s ESPP, which was approved by stockholders in 1998, eligible employees may purchase shares of Autodesk’s common stock at their discretion using up to 15% of their eligible compensation, subject to certain limitations, at 85% of the lower of Autodesk's closing price (fair market value) on the offering date or the exercise date. The offering period for ESPP awards consists of four, six-month exercise periods within a 24-month offering period.

Autodesk issued 1.1 million and 1.2 million shares under the ESPP during the six months ended July 31, 2017 and 2016, respectively, with an average price of $38.34 and $36.67 per share. The weighted average grant date fair value of awards granted under the ESPP was $25.13 and $17.88 during the six months ended July 31, 2017 and 2016, respectively, calculated as of the award grant date using the Black-Scholes Merton (“BSM") option pricing model.

Stock-based Compensation Expense

The following table summarizes stock-based compensation expense for the six months ended July 31, 2017 and 2016, respectively, as follows:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Cost of maintenance and subscription revenue (1)	$2.9	$2.0	$5.7	$4.0
Cost of license and other revenue (1)	1.0	1.4	2.1	2.8
Marketing and sales	26.0	23.3	52.4	44.8
Research and development	20.4	20.2	41.6	39.1
General and administrative	17.3	7.4	32.6	15.2
Stock-based compensation expense related to stock awards and ESPP purchases	67.6	54.3	134.4	105.9
Tax benefit	(0.3)	—	(0.3)	—
Stock-based compensation expense related to stock awards and ESPP purchases, net of tax	$67.3	$54.3	$134.1	$105.9

(1) Prior periods have been adjusted to conform with the current period's presentation. See Note 1, "Basis of Presentation," for additional information.

Stock-based Compensation Expense Assumptions

Autodesk determines the grant date fair value of its share-based payment awards using a BSM option pricing model or the quoted stock price on the date of grant, unless the awards are subject to market conditions, in which case Autodesk uses a binomial-lattice model (e.g., Monte Carlo simulation model). The Monte Carlo simulation model uses multiple input variables to estimate the probability that market conditions will be achieved. Autodesk uses the following assumptions to estimate the fair value of stock-based awards:

	Three Months Ended July 31, 2017		Three Months Ended July 31, 2016	
	Performance Stock Unit	ESPP (1)	Performance Stock Unit (2)	ESPP (1)
Range of expected volatilities	31.8%	N/A	N/A	N/A
Range of expected lives (in years)	N/A	N/A	N/A	N/A
Expected dividends	—%	N/A	N/A	N/A
Range of risk-free interest rates	1.2%	N/A	N/A	N/A
	Six Months Ended July 31, 2017		Six Months Ended July 31, 2016	
	Performance Stock Unit	ESPP	Performance Stock Unit	ESPP
Range of expected volatilities	31.8%	31.4 - 33.7%	38.4 - 38.6%	35.0 - 40.2%
Range of expected lives (in years)	N/A	0.5 - 2.0	N/A	0.5 - 2.0
Expected dividends	—%	—%	—%	—%
Range of risk-free interest rates	1.0 - 1.2%	0.9 - 1.3%	0.6 - 0.7%	0.5 - 0.9%

(1) Autodesk does not issue any shares under its ESPP in the second or fourth quarter.
(2) Autodesk did not grant PSUs in the three months ended July 31, 2016 that were subject to market conditions.

Autodesk estimates expected volatility for stock-based awards based on the average of the following two measures: (1) a measure of historical volatility in the trading market for the Company's common stock, and (2) the implied volatility of traded forward call options to purchase shares of the Company's common stock. The expected volatility for performance stock units subject to market conditions includes the expected volatility of Autodesk's peer companies within the S&P Computer Software Select Index or S&P North American Technology Software Index with a market capitalization over $2.00 billion, depending on the award type.

The range of expected lives of ESPP awards are based upon the four, six-month exercise periods within a 24-month offering period.

Autodesk does not currently pay, and does not anticipate paying in the foreseeable future, any cash dividends. Consequently, an expected dividend yield of zero is used in the BSM option pricing model and the Monte Carlo simulation model.

The risk-free interest rate used in the BSM option pricing model and the Monte Carlo simulation model for stock-based awards is the historical yield on U.S. Treasury securities with equivalent remaining lives.

Autodesk recognizes expense only for the stock-based awards that ultimately vest. As permitted by ASU 2016-09, Autodesk accounts for forfeitures of our stock-based awards as those forfeitures occur.

6. Income Tax

Autodesk's income tax expense was $17.6 million and $25.2 million for the three months ended July 31, 2017 and 2016, respectively, relative to a pre-tax losses of $126.4 million and $73.0 million, respectively, for the same periods. The decrease in income tax expense was primarily due to the settlement of the China audit which occurred during the three months ended July 31, 2016. Autodesk's income tax expense was $25.8 million and $39.6 million for the six months ended July 31, 2017 and 2016, respectively, relative to a pre-tax losses of $247.8 million and $226.3 million, respectively, for the same periods. The decrease in income tax expense was primarily due to the settlement of the China audit which occurred during the six months ended July 31, 2016, and the reversal of foreign withholding tax accruals during the six months ended July 31, 2017. Income tax expense consists primarily of foreign taxes, U.S. tax expense related to indefinite-lived intangibles, and withholding taxes.

Autodesk regularly assesses the need for a valuation allowance against its deferred tax assets. In making that assessment, Autodesk considers both positive and negative evidence related to the likelihood of realization of the deferred tax assets to determine, based on the weight of available evidence, whether it is more likely than not that some or all of the deferred tax assets will not be realized. In evaluating the need for a valuation allowance, Autodesk considered cumulative losses in the United States arising from the Company's business model transition as a significant piece of negative evidence and established a valuation allowance against the Company’s U.S. deferred tax assets in fiscal 2016. Based on the positive and negative evidence as of July 31, 2017, the Company's valuation allowance position established for the U.S. deferred tax assets has not changed.

As of July 31, 2017, the Company had $267.5 million of gross unrecognized tax benefits, excluding interest, of which approximately $253.6 million represents the amount of unrecognized tax benefits that would impact the effective tax rate, if recognized. However, this rate impact would be $32.8 million to the extent that recognition of unrecognized tax benefits currently presented as a reduction of deferred tax assets would increase the valuation allowance. It is possible that the amount of unrecognized tax benefits will change in the next twelve months; however, an estimate of the range of the possible change cannot be made at this time.

The Internal Revenue Service has started an examination of the Company's U.S. consolidated federal income tax returns for fiscal years 2014 and 2015. While it is possible that the Company's tax positions may be challenged, the Company believes its positions are consistent with the tax law, and the balance sheet reflects appropriate liabilities for uncertain federal tax positions for the years being examined.

7. Acquisitions

During the six months ended July 31, 2017, Autodesk did not complete any business combinations or technology acquisitions.

For acquisitions accounted for as business combinations, Autodesk records the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values at the date of acquisition. The fair values assigned to the identifiable intangible assets acquired were based on estimates and assumptions determined by management. Autodesk records the excess of consideration transferred over the aggregate fair values as goodwill. The goodwill recorded is primarily attributable to synergies expected to arise after the acquisitions.

8. Other Intangible Assets, Net

Other intangible assets including developed technologies, customer relationships, trade names, patents, user lists and the related accumulated amortization were as follows:

	July 31, 2017	January 31, 2017
Developed technologies, at cost	$577.0	$ 583.6
Customer relationships, trade names, patents, and user lists, at cost (1)	367.1	375.9
Other intangible assets, at cost (2)	944.1	959.5
Less: Accumulated amortization	(873.7)	(862.0)
Other intangible assets, net	$70.4	$ 97.5

(1) Included in “Other assets” in the accompanying Condensed Consolidated Balance Sheets.
(2) Includes the effects of foreign currency translation.

9. Goodwill

Goodwill consists of the excess of consideration transferred over the fair value of net assets acquired in business combinations. The following table summarizes the changes in the carrying amount of goodwill for the periods ended July 31, 2017 and January 31, 2017:

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	July 31, 2017	January 31, 2017
Goodwill, beginning of the period (as of February 1, 2017 and February 1, 2016, respectively)	$1,710.3	$1,684.2
Less: accumulated impairment losses, beginning of the period (as of February 1, 2017 and February 1, 2016, respectively)	(149.2)	(149.2)
Net goodwill, beginning of the period (as of February 1, 2017 and February 1, 2016, respectively)	1,561.1	1,535.0
Additions arising from acquisitions during the period	—	62.8
Effect of foreign currency translation, purchase accounting adjustments, and other	27.5	(36.7)
Goodwill, end of the period	$1,588.6	$1,561.1

Autodesk operates as a single operating segment and single reporting unit. As such, when Autodesk tests goodwill for impairment annually in its fourth fiscal quarter, it is performed on the Company's single reporting unit. Autodesk performs impairment testing more often if circumstances indicate a potential impairment may exist, or if events have affected the composition of reporting units.

When goodwill is assessed for impairment, Autodesk has the option to perform an assessment of qualitative factors of impairment (“optional assessment”) prior to necessitating a quantitative impairment test. Should the optional assessment be used for any given fiscal year, qualitative factors to consider include cost factors; financial performance; legal, regulatory, contractual, political, business, or other factors; entity specific factors; industry and market considerations, macroeconomic conditions, and other relevant events and factors affecting the reporting unit. If, after assessing the totality of events or circumstances, it is more likely than not that the fair value of the reporting unit is greater than its carrying value, then performing the quantitative impairment test is unnecessary.

The quantitative impairment test is necessary when either Autodesk does not use the optional assessment or, as a result of the optional assessment, it is not more likely than not that the fair value of the reporting unit is greater than its carrying value.

As described in Note 2, "Recently Issued Accounting Standards," Autodesk early adopted ASU 2017-04, which simplifies the subsequent measurement of goodwill to eliminate Step 2 from the goodwill impairment test, removing the need to determine the implied fair value of goodwill and comparing it to the carrying amount of that goodwill to measure the impairment loss, if any. In situations in which an entity's reporting unit is publicly traded, the fair value of the Company may be approximated by its market capitalization, in performing the quantitative impairment test.

Goodwill impairment exists when the estimated fair value of goodwill is less than its carrying value. If impairment exists, the carrying value of the goodwill is reduced to fair value through an impairment charge recorded in our statements of operations. The process of evaluating the potential impairment of goodwill is subjective and requires significant judgment at many points during the analysis. The value of Autodesk’s goodwill could also be impacted by future adverse changes such as: (i) declines in Autodesk’s actual financial results, (ii) a sustained decline in Autodesk’s market capitalization, (iii) a significant slowdown in the worldwide economy or the industries Autodesk serves, or (iv) changes in Autodesk’s business strategy.

There was no goodwill impairment during the three and six months July 31, 2017 and 2016.

10. Deferred Compensation

At July 31, 2017, Autodesk had marketable securities totaling $769.6 million, of which $54.4 million related to investments in debt and equity securities that are held in a rabbi trust under non-qualified deferred compensation plans. The total related deferred compensation liability was $54.4 million at July 31, 2017, of which $3.0 million was classified as current and $51.4 million was classified as non-current liabilities. The total related deferred compensation liability at January 31, 2017 was $47.3 million, of which $3.1 million was classified as current and $44.2 million was classified as non-current liabilities. The securities are recorded in the Condensed Consolidated Balance Sheets under the current portion of "Marketable securities." The current and non-current portions of the liability are recorded in the Condensed Consolidated Balance Sheets under “Accrued compensation” and “Other liabilities,” respectively.

11. Computer Equipment, Software, Furniture and Leasehold Improvements, Net

Computer equipment, software, furniture, leasehold improvements and the related accumulated depreciation were as follows:

	July 31, 2017	January 31, 2017
Computer hardware, at cost	$217.0	$ 206.1
Computer software, at cost	78.7	73.5
Leasehold improvements, land and buildings, at cost	218.5	206.3
Furniture and equipment, at cost	60.5	58.2
	574.7	544.1
Less: Accumulated depreciation	(421.7)	(385.5)
Computer software, hardware, leasehold improvements, furniture and equipment, net	$153.0	$ 158.6

12. Borrowing Arrangements

In June 2017, Autodesk issued $500.0 million aggregate principal amount of 3.5% notes due June 15, 2027 (collectively, the "2017 Notes"). Net of a discount of $3.1 million and issuance costs of $4.9 million, Autodesk received net proceeds of $492.0 million from issuance of the 2017 Notes. Both the discount and issuance costs are being amortized to interest expense over the term of the 2017 Notes using the effective interest method. The proceeds of the 2017 Notes have been used for the repayment of $400.0 million of debt due December 15, 2017 and the remainder is available for general corporate purposes. Autodesk may redeem the 2017 Notes at any time, subject to a make whole premium. In addition, upon the occurrence of certain change of control triggering events, Autodesk may be required to repurchase the 2017 Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest to the date of repurchase. The 2017 Notes contain restrictive covenants that limit Autodesk's ability to create certain liens, to enter into certain sale and leaseback transactions and to consolidate or merge with, or convey, transfer or lease all or substantially all of its assets, subject to important qualifications and exceptions. Based on quoted market prices, the fair value of the 2017 Notes was approximately $498.2 million as of July 31, 2017.

In June 2015, Autodesk issued $450.0 million aggregate principal amount of 3.125% notes due June 15, 2020 and $300.0 million aggregate principal amount of 4.375% notes due June 15, 2025 (collectively, the "2015 Notes"). Net of a discount of $1.7 million and issuance costs of $6.3 million, Autodesk received net proceeds of $742.0 million from issuance of the 2015 Notes. Both the discount and issuance costs are being amortized to interest expense over the respective terms of the 2015 Notes using the effective interest method. The proceeds of the 2015 Notes are available for general corporate purposes. Autodesk may redeem the 2015 Notes at any time, subject to a make whole premium. In addition, upon the occurrence of certain change of control triggering events, Autodesk may be required to repurchase the 2015 Notes at a price equal to 101% of their principal amount, plus accrued and unpaid interest to the date of repurchase. The 2015 Notes contain restrictive covenants that limit Autodesk's ability to create certain liens, to enter into certain sale and leaseback transactions and to consolidate or merge with, or convey, transfer or lease all or substantially all of its assets, subject to important qualifications and exceptions. Based on quoted market prices, the fair value of the 2015 Notes was approximately $780.9 million as of July 31, 2017.

In December 2012, Autodesk issued $400.0 million aggregate principal amount of 1.95% notes due December 15, 2017 and $350.0 million aggregate principal amount of 3.6% notes due December 15, 2022 (collectively, the "2012 Notes"). Autodesk received net proceeds of $739.3 million from issuance of the 2012 Notes, net of a discount of $4.5 million and issuance costs of $6.1 million. Both the discount and issuance costs are being amortized to interest expense over the respective terms of the 2012 Notes using the effective interest method. The proceeds of the 2012 Notes are available for general corporate purposes. On July 27, 2017, Autodesk redeemed in full $400.0 million in aggregate principal amount of its outstanding 1.95% senior notes due December 15, 2017. The redemption was completed pursuant to the optional redemption provisions of the first supplemental indenture dated December 13, 2012. To redeem the notes, Autodesk used the proceeds of the 2017 Notes to pay a redemption price of approximately $400.9 million, plus accrued and unpaid interest. Total cash prepayment was $401.8 million. The Company did not incur any additional early termination penalties in connection with such redemption. Based on the quoted market price, the fair value of the remaining 2012 Notes was approximately $359.9 million as of July 31, 2017.

Autodesk’s line of credit facility permits unsecured short-term borrowings of up to $400.0 million, with an option to request an increase in the amount of the credit facility by up to an additional $100.0 million, and is available for working capital or other business needs. This credit agreement contains customary covenants that could restrict the imposition of liens on Autodesk’s assets, and restrict the Company’s ability to incur additional indebtedness or make dispositions of assets if Autodesk fails to maintain the financial covenants. As the result of a forecasted inability to comply with the credit agreement's minimum interest coverage ratio in the first quarter of fiscal 2018, the Company renegotiated the credit agreement's financial covenants in April 2017. The financial covenants now consist of a maximum debt to total cash ratio, a fixed charge coverage ratio through April 30, 2018, and after April 30, 2018, a minimum interest coverage ratio.

The line of credit is syndicated with various financial institutions, including Citibank, N.A., an affiliate of Citigroup, which is one of the lead lenders and an agent. The maturity date on the line of credit is May 2020. At July 31, 2017, Autodesk was in compliance with the credit facility's covenants and had no outstanding borrowings on this line of credit.

13. Restructuring charges and other facility exit costs, net

In February 2016, the Board of Directors approved a world-wide restructuring plan ("Fiscal 2017 Plan") in order to re-balance staffing levels and reduce operating expenses to better align them with the evolving needs of the business. The Company paid substantially all of the employee termination benefits and facility related liabilities under the Fiscal 2017 Plan by the end of fiscal 2017.

The following table sets forth the restructuring charges and other lease termination exit costs during the six months ended July 31, 2017:

	Balances, January 31, 2017	Additions	Payments	Adjustments (1)	Balances, July 31, 2017
Fiscal 2017 Plan					
Employee termination costs	$ 1.1	$ 0.1	$ (1.4)	$ 0.2	$ —
Lease termination and other exit costs	1.9	0.1	(1.1)	(0.3)	0.6
Other Lease Termination Costs					
Lease termination costs	4.5	0.3	(1.4)	—	3.4
Total	$ 7.5	$ 0.5	$ (3.9)	$ (0.1)	$ 4.0
Current portion (2)	$ 5.9				$ 3.6
Non-current portion (2)	1.6				0.4
Total	$ 7.5				$ 4.0

(1) Adjustments primarily include the impact from a change in sublease assumptions related to certain lease terminations.

(2) The current and non-current portions of the reserve are recorded in the Condensed Consolidated Balance Sheets under "Other accrued liabilities" and "Other liabilities," respectively.

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14. Commitments and Contingencies

Guarantees and Indemnifications

In the normal course of business, Autodesk provides indemnifications of varying scopes, including limited product warranties and indemnification of customers against claims of intellectual property infringement made by third parties arising from the use of its products or services. Autodesk accrues for known indemnification issues if a loss is probable and can be reasonably estimated. Historically, costs related to these indemnifications have not been significant, and because potential future costs are highly variable, Autodesk is unable to estimate the maximum potential impact of these indemnifications on its future results of operations.

In connection with the purchase, sale or license of assets or businesses with third parties, Autodesk has entered into or assumed customary indemnification agreements related to the assets or businesses purchased, sold or licensed. Historically, costs related to these indemnifications have not been significant, and because potential future costs are highly variable, Autodesk is unable to estimate the maximum potential impact of these indemnifications on its future results of operations.

As permitted under Delaware law, Autodesk has agreements whereby it indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was, serving at Autodesk’s request in such capacity. The maximum potential amount of future payments Autodesk could be required to make under these indemnification agreements is unlimited; however, Autodesk has directors’ and officers’ liability insurance coverage that is intended to reduce its financial exposure and may enable Autodesk to recover a portion of any future amounts paid. Autodesk believes the estimated fair value of these indemnification agreements in excess of applicable insurance coverage is minimal.

Legal Proceedings

Autodesk is involved in a variety of claims, suits, investigations, and proceedings in the normal course of business activities including claims of alleged infringement of intellectual property rights, commercial, employment, piracy prosecution, business practices, and other matters. Autodesk routinely reviews the status of each significant matter and assesses its potential financial exposure. If the potential loss from any matter is considered probable and the amount can be reasonably estimated, Autodesk records a liability for the estimated loss. Because of inherent uncertainties related to these legal matters, Autodesk bases its loss accruals on the best information available at the time. As additional information becomes available, Autodesk reassesses its potential liability and may revise its estimates. In the Company's opinion, resolution of pending matters is not expected to have a material adverse impact on its consolidated results of operations, cash flows, or its financial position. Given the unpredictable nature of legal proceedings, there is a reasonable possibility that an unfavorable resolution of one or more such proceedings could in the future materially affect the Company's results of operations, cash flows, or financial position in a particular period, however, based on the information known by the Company as of the date of this filing and the rules and regulations applicable to the preparation of the Company's financial statements, any such amount is either immaterial or it is not possible to provide an estimated amount of any such potential loss.

15. Common Stock Repurchase Program

Autodesk has a stock repurchase program that is used to offset dilution from the issuance of stock under the Company’s employee stock plans and for such other purposes as may be in the interests of Autodesk and its stockholders. Stock repurchases have the effect of returning excess cash generated from the Company’s business to stockholders. During the three and six months ended July 31, 2017, Autodesk repurchased and retired 1.2 million and 3.4 million shares at an average repurchase price of $102.71 and $91.33 per share, respectively. Common stock and additional paid-in capital and accumulated deficit were reduced by $20.8 million and $97.8 million, respectively, during the three months ended July 31, 2017. Common stock and additional paid-in capital and accumulated deficit were reduced by $82.0 million and $228.6 million, respectively, during the six months ended July 31, 2017.

At July 31, 2017, 23.2 million shares remained available for repurchase under the repurchase program approved by the Board of Directors. During the six months ended July 31, 2017, Autodesk repurchased its common stock through open market purchases. The number of shares acquired and the timing of the purchases are based on several factors, including general market and economic conditions, the number of employee stock option exercises and stock issuances, the trading price of Autodesk common stock, cash on hand and available in the United States, cash requirements for acquisitions, and Company defined trading windows.

16. Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss, net of taxes, consisted of the following at July 31, 2017:

	Net Unrealized Gains (Losses) on Derivative Instruments	Net Unrealized Gains (Losses) on Available-for-Sale Securities	Defined Benefit Pension Components	Foreign Currency Translation Adjustments	Total
Balances, January 31, 2017	$ 14.6	$ 1.5	$ (33.8)	$ (160.8)	$(178.5)
Other comprehensive (loss) income before reclassifications	(12.8)	0.1	(0.1)	39.4	26.6
Pre-tax (gains) losses reclassified from accumulated other comprehensive loss	(1.6)	—	(0.1)	0.1	(1.6)
Tax effects	1.4	0.1	—	(0.9)	0.6
Net current period other comprehensive (loss) income	(13.0)	0.2	(0.2)	38.6	25.6
Balances, July 31, 2017	$ 1.6	$ 1.7	$ (34.0)	$ (122.2)	$(152.9)

Reclassifications related to gains and losses on available-for-sale securities are included in "Interest and other expense, net." Refer to Note 4, "Financial Instruments," for the amount and location of reclassifications related to derivative instruments. Reclassifications of the defined benefit pension components are included in the computation of net periodic benefit cost. For further information, see the "Retirement Benefit Plans" note in Part II, Item 8 of our Annual Report on Form 10-K for the fiscal year ended January 31, 2017.

17. Net Loss Per Share

Basic net loss per share is computed using the weighted average number of shares of common stock outstanding for the period, excluding stock options and restricted stock units. Diluted net loss per share is based upon the weighted average number of shares of common stock outstanding for the period and potentially dilutive common shares, including the effect of stock options and restricted stock units under the treasury stock method. The following table sets forth the computation of the numerators and denominators used in the basic and diluted net loss per share amounts:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Numerator:				
Net loss	$(144.0)	$(98.2)	$(273.6)	$(265.9)
Denominator:				
Denominator for basic net loss per share—weighted average shares	219.5	223.2	219.7	223.8
Effect of dilutive securities (1)	—	—	—	—
Denominator for dilutive net loss per share	219.5	223.2	219.7	223.8
Basic net loss per share	$(0.66)	$(0.44)	$(1.25)	$(1.19)
Diluted net loss per share	$(0.66)	$(0.44)	$(1.25)	$(1.19)

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(1) The effect of dilutive securities of 4.8 million and 4.2 million shares in the three months ended July 31, 2017 and 2016, respectively, have been excluded from the calculation of diluted net loss per share as those shares would

have been anti-dilutive due to the net loss incurred during those periods. The effect of dilutive securities of 4.7 million and 4.0 million shares in the six months ended July 31, 2017 and 2016, respectively, have been excluded from the calculation of diluted net loss per share as those shares would have been anti-dilutive due to the net loss incurred during those periods.

The computation of diluted net loss per share does not include shares that are anti-dilutive under the treasury stock method because their exercise prices are higher than the average market value of Autodesk’s stock during the period. For both the three months ended July 31, 2017 and 2016, zero potentially anti-dilutive shares were excluded from the computation of diluted net loss per share. For both the six months ended July 31, 2017 and 2016, 0.1 million potentially anti-dilutive shares were excluded from the computation of diluted net loss per share.

18. Segment, Geographic and Product Family Information

Autodesk reports segment information based on the “management” approach. The management approach designates the internal reporting used by management for making decisions, allocating resources and assessing performance as the source of the Company’s reportable segments. The Company's chief operating decision maker ("CODM") allocates resources and assesses the operating performance of the Company as a whole. As such, Autodesk has one segment manager (the CODM), and one operating segment.

Information regarding Autodesk’s revenue by geographic area and product family is as follows:

	Three Months Ended July 31,		Six Months Ended July 31,	
	2017	2016	2017	2016
Net revenue by geographic area:				
Americas				
U.S.	$184.6	$195.2	$364.4	$379.9
Other Americas	29.4	34.9	59.7	67.9
Total Americas	214.0	230.1	424.1	447.8
Europe, Middle East and Africa	199.3	220.5	389.0	423.1
Asia Pacific	88.5	100.1	174.4	191.7
Total net revenue	$501.8	$550.7	$987.5	$1,062.6
Net revenue by product family:				
Architecture, Engineering and Construction	$208.8	$253.2	$413.3	$472.1
Manufacturing	147.0	176.9	289.1	334.9
AutoCAD and AutoCAD LT	96.5	73.1	188.0	159.0
Media and Entertainment	37.9	34.4	74.4	69.4
Other	11.6	13.1	22.7	27.2
	$501.8	$550.7	$987.5	$1,062.6

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The discussion in our MD&A and elsewhere in this Form 10-Q contains trend analyses and other forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are any statements that look to future events and consist of, among other things, our business strategies, including those discussed in “Strategy” and “Overview of the Three and Six Months Ended July 31, 2017 and 2016” below, future net revenue, operating expenses, recurring revenue, annualized recurring revenue, annualized revenue per subscription, other future financial results (by product type and geography) and subscriptions, the effectiveness of our efforts to successfully manage transitions to new business models and markets, our expectations regarding the continued transition of our business model, expectations for our maintenance plan and subscription plan subscriptions, our ability to increase our subscription base, expected market trends, including the growth of cloud and mobile computing, the effect of unemployment, the availability of credit, our expectations for our restructuring, the effects of mixed global economic conditions, the effects of revenue recognition, expected trends in certain financial metrics, including expenses, the impact of acquisitions and investment activities, expectations regarding our cash needs, the effects of fluctuations in exchange rates and our hedging activities on our financial results, our ability to successfully expand adoption of our products, our ability to gain market acceptance of new businesses and sales initiatives, the impact of economic volatility and geopolitical activities in certain countries, particularly emerging economy countries, the timing and amount of purchases under our stock buy-back plan, and the effects of potential non-cash charges on our financial results and the resulting effect on our financial results. In addition, forward-looking statements also consist of statements involving expectations regarding product capability and acceptance, remediation to our controls environment, statements regarding our liquidity and short-term and long-term cash requirements, as well as statements involving trend analyses and statements including such words as “may,” “believe,” “could,” “anticipate,” “would,” “might,” “plan,” “expect,” and similar expressions or the negative of these te other comparable terminology. These forward-looking statements speak only as of the date of this Quarterly Report on Form 10-Q and are subject to business and economic risks. As such, our actual results could differ materially from those set forth in the forward-looking statements as a result of a number of factors, including those set forth below in Part II, Item 1A, “Risk Factors,” and in our other reports filed with the U.S. Securities and Exchange Commission. We assume no obligation to update the forward-looking statements to reflect events that occur or circumstances that exist after the date on which they were made, except as required by law.

Note: A glossary of terms used in this Form 10-Q appears at the end of this Item 2.

Strategy

Autodesk makes software for people who make things. If you've ever driven a high-performance car, admired a towering skyscraper, used a smartphone, or watched a great film, chances are you've experienced what millions of Autodesk customers are doing with our software. Autodesk gives you the power to make anything.

Autodesk was founded during the platform transition from mainframe computers and engineering workstations to personal computers. We developed and sustained a compelling value proposition based upon desktop software for the personal computer. Just as the transition from mainframes to personal computers transformed the industry over 30 years ago, we believe our industry is undergoing a similar transition from the personal computer to cloud, mobile, and social computing. To address this transition we have accelerated our move to the cloud and mobile devices and are offering more flexible licensing. Our product subscriptions currently represent a hybrid of desktop software and cloud-based functionality, which provides a device-independent, collaborative design workflow for designers, makers, and their stakeholders. Our cloud service offerings, for example, BIM 360, Shotgun, Fusion, and AutoCAD 360 Pro, provide tools, including mobile and social capabilities, to streamline design, collaboration, building and manufacturing, and data management processes. We believe that customer adoption of these new offerings will continue to grow as customers across a range of industries begin to take advantage of the scalable computing power and flexibility provided through these new services.

Our strategy is to lead the industries we serve to cloud-based technologies and business models. This entails both a technological shift and a business model shift. As part of the transition, we discontinued selling new perpetual licenses of most individual software products effective February 1, 2016, and discontinued selling new perpetual licenses of suites while introducing industry collections effective August 1, 2016. Industry collections allow access to a broad set of products and services that exceeds those previously available in suites - simplifying the customer ability to get access to a complete set of tools for their industry. We now offer subscriptions for individual products and industry collections, cloud service offerings, and flexible enterprise business agreements (collectively referred to as "subscription plan" and previously called "new model subscription offerings"). These offerings are designed to give our customers more flexibility with how they use our products and service offerings and to attract a broader range of customers, such as project-based users and small businesses.

With the discontinuation of the sale of most perpetual licenses, we have transitioned away from selling a mix of perpetual licenses and term-based product subscriptions toward a single subscription model. On June 15, 2017, we commenced a program to incentivize maintenance plan customers to move to subscription plan offerings. Through this program we offer discounts to those maintenance customers that move to a subscription plan, while at the same time will increase maintenance plan pricing over time for customers that remain on maintenance.

To provide more meaningful information as to the performance of different categories of product and services, we have changed our presentation of revenue and cost of revenue on our Condensed Consolidated Statements of Operations effective the first quarter of fiscal 2018. See Note 1, "Basis of Presentation," for additional information.

During the transition, revenue, margins, EPS, deferred revenue and cash flow from operations have been and will continue to be impacted as more revenue is recognized ratably rather than upfront and as new product subscription offerings generally have a lower initial purchase price.

As we progress through the business model transition, reported revenue is less relevant to measure the success of the business as perpetual license sales have been discontinued in favor of subscription offerings, which have considerably lower upfront prices. Annualized recurring revenue ("ARR") and growth of total subscriptions better reflect business momentum and provide additional transparency into the transition. To further analyze progress, we disaggregate our growth in these metrics between the original maintenance model ("maintenance plan") and the subscription plan. Maintenance plan subscriptions peaked in the fourth quarter of our fiscal 2016 as we discontinued selling new maintenance plan subscriptions in fiscal 2017, and we expect them to decline slowly over time as maintenance plan customers continue to convert to our subscription plan.

We sell our products and services globally, through a combination of indirect and direct channels. Our indirect channels include value added resellers, direct market resellers, distributors, computer manufacturers, and other software developers. Our direct channels include internal sales resources dedicated to selling in our largest accounts, our highly specialized products, and business transacted through our online Autodesk branded store. The following chart shows our split between indirect and direct channels for the three and six months ended July 31, 2017 and 2016:

We anticipate that our channel mix will continue to change as we scale our online Autodesk branded store business and our largest accounts shift towards direct-only business models. However, we expect our indirect channel will continue to transact and support the majority of our customers and revenue as we move beyond the business model transition. We employ a variety of incentive programs and promotions to align our direct and indirect channels with our business strategies. In addition, we have a worldwide user group organization and we have created online user communities dedicated to the exchange of information related to the use of our products.

One of our key strategies is to maintain an open-architecture design of our software products to facilitate third-party development of complementary products and industry-specific software solutions. This approach enables customers and third parties to customize solutions for a wide variety of highly specific uses. We offer several programs that provide strategic investment funding, technological platforms, user communities, technical support, forums, and events to developers who develop add-on applications for our products. For example, we have established the Autodesk Forge program to support innovators that build solutions to facilitate the development of a single connected ecosystem for the future of how things are designed, made, and used as well as support ideas that push the boundaries of 3D printing.

In addition to the competitive advantages afforded by our technology, our large global network of distributors, resellers, third-party developers, customers, educational institutions, educators, and students is a key competitive advantage which has been cultivated over an extensive period of time. This network of partners and relationships provides us with a broad and deep reach into volume markets around the world. Our distributor and reseller network is extensive and provides our customers with the resources to purchase, deploy, learn, and support our products quickly and easily. We have a significant number of registered third-party developers who create products that work well with our products and extend them for a variety of specialized applications.

Autodesk is committed to helping fuel a lifelong passion for design in students of all ages. We offer free educational subscriptions of Autodesk software worldwide to students, educators, and educational institutions. Through Autodesk Design Academy, we provide secondary and postsecondary school markets hundreds of standards-aligned class projects to support design-based disciplines in Science, Technology, Engineering, Digital Arts, and Math (STEAM) while using Autodesk's professional-grade 3D design, engineering and entertainment software used in industry. We also have made Autodesk Design Academy curricula available on iTunes U. Our intention is to make Autodesk software ubiquitous and the design software of choice for those poised to become the next generation of professional users.

Our strategy includes improving our product functionality and expanding our product offerings through internal development as well as through the acquisition of products, technology, and businesses. Acquisitions often increase the speed at which we can deliver product functionality to our customers; however, they entail cost and integration challenges and may, in certain instances, negatively impact our operating margins. We continually review these trade-offs in making decisions regarding acquisitions. We currently anticipate that we will continue to acquire products, technology, and businesses as compelling opportunities become available.

Our strategy depends upon a number of assumptions to successfully make the transition toward new cloud and mobile platforms, including: the related technology and business model shifts; making our technology available to mainstream markets; leveraging our large global network of distributors, resellers, third-party developers, customers, educational institutions, and students; improving the performance and functionality of our products; and adequately protecting our intellectual property. If the outcome of any of these assumptions differs from our expectations, we may not be able to implement our strategy, which could potentially adversely affect our business. For further discussion regarding these and related risks, see Part II, Item 1A, “Risk Factors.”

Critical Accounting Policies and Estimates

Our Condensed Consolidated Financial Statements are prepared in conformity with U.S. generally accepted accounting principles ("GAAP"). In preparing our Condensed Consolidated Financial Statements, we make assumptions, judgments and estimates that can have a significant impact on amounts reported in our Condensed

Consolidated Financial Statements. We base our assumptions, judgments and estimates on historical experience and various other factors that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates under different assumptions or conditions. We regularly reevaluate our assumptions, judgments and estimates. Our significant accounting policies are described in Note 1, “Business and Summary of Significant Accounting Policies,” in the Notes to Consolidated Financial Statements in our Form 10-K for the fiscal year ended January 31, 2017. In addition, we highlighted those policies that involve a higher degree of judgment and complexity with further discussion in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in our Form 10-K. There have been no material changes to our critical accounting policies and estimates during the three months ended July 31, 2017 as compared to the those disclosed in our Form 10-K for the fiscal year ended January 31, 2017. We believe these policies are the most critical to aid in fully understanding and evaluating our financial condition and results of operations.

Overview of the Three and Six Months Ended July 31, 2017 and 2016

(in millions)	Three Months Ended July 31, 2017	As a % of Net Revenue	Change compared to prior fiscal year $	%	Three Months Ended July 31, 2016	As a % of Net Revenue
Net Revenue	$501.8	100 %	$ (48.9)	(9)%	$550.7	100 %
Cost of revenue	74.6	15 %	(10.5)	(12)%	85.1	15 %
Gross Profit	427.2	85 %	(38.4)	(8)%	465.6	85 %
Operating expenses	534.8	107 %	6.3	1 %	528.5	96 %
Loss from operations	$(107.6)	(21)%	$ (44.7)	71 %	$(62.9)	(11)%

	Six Months Ended July 31, 2017	As a % of Net Revenue	Change compared to prior fiscal year $	%	Six Months Ended July 31, 2016	As a % of Net Revenue
Net Revenue	$987.5	100 %	$ (75.1)	(7)%	$1,062.6	100 %
Cost of revenue	152.8	15 %	(24.7)	(14)%	177.5	17 %
Gross Profit	834.7	85 %	(50.4)	(6)%	885.1	83 %
Operating expenses	1,061.9	108 %	(35.8)	(3)%	1,097.7	103 %
Loss from operations	$(227.2)	(23)%	$ (14.6)	7 %	$(212.6)	(20)%

We are undergoing a business model transition in which we have discontinued selling new perpetual licenses for most of our products in favor of subscriptions. During the transition, revenue, margins, EPS, deferred revenue and cash flow from operations have been and will continue to be impacted as more revenue is recognized ratably rather than upfront and as new product subscription offerings generally have a lower initial purchase price.

Revenue Analysis

Net revenue decreased during the three months ended July 31, 2017, as compared to the same period in the prior fiscal year, primarily due to a 74% decrease in license and other revenue, partially offset by a 93% increase in subscription revenue. Net revenue decreased during the six months ended July 31, 2017, as compared to the same period in the prior fiscal year, primarily due to a 70% decrease in license and other revenue, partially offset by a 97% increase in subscription revenue.

The decreases in license and other revenue in the respective three and six months ended July 31, 2017 were primarily a result of the discontinuation of new perpetual licenses of suites effective August 1, 2016 and the sales of most individual perpetual products as of February 1, 2016. The increases in the respective three and six months ended July 31, 2017 within subscription revenue were driven by increases in the number of subscriptions across all subscription plan types, primarily led by product subscription.

Further discussion of the drivers of these results are discussed below under the heading “Results of Operations.”

We rely significantly upon major distributors and resellers in both the U.S. and international regions, including Tech Data Corporation and its global affiliates (collectively, “Tech Data”). Total sales to Tech Data accounted for 31% and 30% of Autodesk’s total net revenue for both the three and six months ended July 31, 2017 and 2016. Our customers through Tech Data are the resellers and end users who purchase our software licenses and services. Should any of our agreements with Tech Data be terminated for any reason, we believe the resellers and end users who currently purchase our products through Tech Data would be able to continue to do so under substantially the same terms from one of our many other distributors without substantial disruption to our revenue. Consequently, we believe our business is not substantially dependent on Tech Data.

Operating Margin Analysis

Our operating margin decreased to (21)% for the three months ended July 31, 2017 from (11)% for the three months ended July 31, 2016. Our operating margin decreased to (23)% for the six months ended July 31, 2017 from (20)% for the six months ended July 31, 2016. The decreases in operating margin were primarily driven by decreases in revenue partially offset by decreases in spend during the three and six months months ended July 31, 2017. Further discussion regarding the spend drivers are discussed below under the heading “Results of Operations.”

Business Model Transition Metrics

In order to help better understand our financial performance during and after the transition, we use several metrics including recurring revenue, total subscriptions, ARR, and annualized revenue per subscription ("ARPS"). ARR, ARPS, and recurring revenue are performance metrics and should be viewed independently of revenue and deferred revenue as ARR and ARPS are not intended to be combined with those items. Our presentation may differ from that of other companies. Please refer to the Glossary of Terms for the definitions of these metrics.

The following table outlines our recurring revenue metric for the three and six months ended July 31, 2017 and 2016:

(In millions, except percentage data)	Three Months Ended July 31, 2017	Change compared to prior fiscal year end $	%	Three Months Ended July 31, 2016 (1)
Recurring Revenue (2)	$457.4	$ 79.9	21 %	$377.5
As a percentage of net revenue	91 %	N/A	N/A	69 %

	Six Months Ended July 31, 2017	Change compared to prior fiscal year end $	%	Six Months Ended July 31, 2016 (1)
Recurring Revenue (2)	$893.3	$ 146.9	20 %	$746.4
As a percentage of net revenue	90 %	N/A	N/A	70 %

(1) Prior periods have been adjusted to conform with the current period's presentation.
(2) The acquisition of a business may cause variability in the comparison of recurring revenue in this table above and recurring revenue derived from the revenue reported in the Condensed Consolidated Statement of Operations.

The following table outlines our total subscriptions, ARR and ARPS metrics as of July 31, 2017 and January 31, 2017:

	Balances, July 31, 2017	Change compared to prior quarter end $	%	Balances, April 30, 2017	Balances, July 31, 2017	Change compared to prior fiscal year end $	%	Balances, January 31, 2017 (1)
Subscriptions (in thousands)								
Maintenance plan	1,854.0	(117.2)	(6)%	1,971.2	1,854.0	(164.0)	(8)%	2,018.0
Subscription plan	1,589.2	269.7	20 %	1,319.5	1,589.2	502.1	46 %	1,087.1
Total subscriptions	3,443.2	152.5	5 %	3,290.7	3,443.2	338.1	11 %	3,105.1
ARR (in millions)								
Maintenance plan ARR	$1,046.0	$(5.7)	(1)%	$1,051.7	$1,046.0	$ (22.0)	(2)%	$1,068.0
Subscription plan ARR	783.7	91.8	13 %	691.9	783.7	212.3	37 %	571.4
Total ARR (2)	$1,829.7	$86.1	5 %	$1,743.6	$1,829.7	$ 190.3	12 %	$1,639.4

ARPS (ARR divided by number of Subscriptions)								
Maintenance plan ARPS	$564	$30	6 %	$534	$564	$35	7 %	$529
Subscription plan ARPS	493	(31)	(6)%	524	493	(33)	(6)%	526
Total ARPS (3)	$531	$1	— %	$530	$531	$3	1 %	$528

(1) Prior periods have been adjusted to conform with the current period's presentation.

(2) The acquisition of a business may cause variability in the comparison of ARR reported in this table above and ARR derived from the revenue reported in the Condensed Consolidated Statement of Operations.

(3) There are small variances between ARR and total subscriptions due in part to the inherent limitation with collecting all subscriptions information. For example, Buzzsaw and Constructware are included with ARR but not in total subscriptions due to these inherent limitations. We do not view these variances as meaningful to amounts or quarterly comparisons presented here for ARPS.

Maintenance plan subscriptions decreased 6% or approximately 117.2 thousand from the previous quarter and 8% or approximately 164.0 thousand from the end of fiscal 2017, primarily as a result of the discontinuation of new maintenance agreement sales as well as the maintenance-to-subscription program in which 63.0 thousand maintenance plan subscriptions converted to product subscription. The net decrease was expected and we expect to see ongoing declines in maintenance plan subscriptions going forward. The rate of decline will vary based on the number of subscriptions subject to renewal, the renewal rate, and our ability to incentivize customers to switch over to enterprise business agreements ("EBAs") or product subscriptions.

Subscription plan subscriptions increased 20% or approximately 269.7 thousand as compared to the previous quarter and 46% or approximately 502.1 thousand as compared to the end of fiscal 2017, primarily driven by product subscriptions, followed by cloud subscriptions led by our BIM360 cloud offerings. Subscription plan subscriptions benefited from 63.0 thousand maintenance subscribers that were converted to product subscription under the maintenance-to-subscription program.

Total ARR increased 5%, as of July 31, 2017 as compared to the three months ended April 30, 2017, and 12%, as compared to the end of fiscal 2017, primarily due to a 13% and 37% increase, in the respective periods, in subscription plan ARR driven by growth in all subscription plan types, led by product subscription. The increase was partially offset by a 1% and 2% decrease, in the respective periods, in maintenance plan ARR.

ARPS as of July 31, 2017 was $531, a slight increase compared to the previous quarter primarily driven by growth in maintenance plan ARPS related to the maintenance-to-subscription program and other changes to pricing. It was primarily offset by decreases in all subscription plan ARPS.

ARPS had a slight increase compared to the end of fiscal 2017 due to an increase in maintenance plan ARPS primarily driven by the maintenance-to-subscription program and other changes to pricing. ARPS was also impacted by an increase in product subscription ARPS, partially offset by decreases in both EBAs and cloud service offerings ARPS.

When adjusted for the impact of the maintenance-to-subscription program, subscription plan ARPS would have been $509 with product subscription ARPS growing 3% sequentially and 11% from the end of fiscal 2017.

Our ARPS is affected by various factors including subscription term-length, migration from maintenance plan subscriptions, geography and product mix, sales linearity within a quarter pricing changes, and foreign currency. Going forward the ARPS calculation will continue to be extremely sensitive to subscription term-length, geography mix and price changes. We expect to see ARPS fluctuate up or down on a quarterly basis and we do not expect it will increase evenly throughout the year. As we complete our business model transition, we expect all of these impacts to start to stabilize.

Foreign Currency Analysis

We generate a significant amount of our revenue in the United States, Germany, Japan, the United Kingdom, and Canada.

The following table shows the impact of foreign exchanges rate changes on our net revenue and total spend:

Three Months Ended July 31, 2017			Six Months Ended July 31, 2017		
Percent change compared to prior fiscal year	Constant currency percent change compared to	Positive/Negative/Neutral impact from foreign exchange rate changes	Percent change compared to prior fiscal year	Constant currency percent change compared to	Positive/Negative/Neutral impact from foreign exchange rate changes

		prior fiscal year (2)			prior fiscal year (2)	
Revenue	(9)%	(8)%	Negative	(7)%	(6)%	Negative
Spend (1)	(1)%	—%	Positive	(5)%	(4)%	Positive

(1) Our total spend is defined as cost of revenue plus operating expenses.
(2) Please refer to the Glossary of Terms for the definitions of our constant currency growth rates.

Changes in the value of the U.S. dollar may have a significant effect on net revenue, total spend, and income (loss) from operations in future periods. We use foreign currency contracts to reduce the exchange rate effect on a portion of the net revenue of certain anticipated transactions but do not attempt to completely mitigate the impact of fluctuations of such foreign currency against the U.S. dollar.

Deferred Revenue and Unbilled Deferred Revenue

Our deferred revenue balance at July 31, 2017 was $1.78 billion and primarily relates to software agreements invoiced for which the revenue has not yet been recognized but will be recognized as revenue ratably over the life of the contracts. The term of our subscription contracts is typically between one and three years.

We define unbilled deferred revenue as contractually stated or committed orders under multi-year billing plans for subscription, services, license and maintenance for which the associated revenue has not been recognized and the customer has not been invoiced. Unbilled deferred revenue is not included on our Condensed Consolidated Balance Sheet until invoiced to the customer.

(in millions)	Six Months Ended July 31, 2017
Deferred revenue	$1,776.0
Unbilled deferred revenue (1)	62.6
Total	$1,838.6

(1) This is our first year presenting this metric and we are not able to provide historical information at this time. Comparative information will not be available until our first quarter of fiscal 2019.

We expect that the amount of unbilled deferred revenue and deferred revenue will change from quarter to quarter for several reasons, including the specific timing, duration and size of large customer subscription and support agreements, varying billing cycles of such agreements, the specific timing of customer renewals, foreign currency fluctuations and the timing of when unbilled deferred revenue is recognized as revenue.

Balance Sheet and Cash Flow Items

At July 31, 2017, we had $1.94 billion in cash, cash equivalents and marketable securities. This amount includes the aggregate net proceeds of $492.0 million, after deducting the underwriting discounts and related offering expenses, from our June 2017 registered underwritten public offering of $500.0 million aggregate principal amount of 3.5% notes due June 15, 2027. On July 27, 2017, we redeemed in full $400.0 million in aggregate principal amount of outstanding 1.95% senior notes due December 15, 2017. To redeem the notes, we used the proceeds of the 2017 notes to pay a redemption price of approximately $400.9 million, plus accrued and unpaid interest from June 15, 2017 to, but excluding, the redemption date. Total cash prepayment was $401.8 million.

We completed the six months ended July 31, 2017 with lower accounts receivable and slightly lower deferred revenue balances as compared to the fiscal year ended January 31, 2017.

Our cash flow used in operations was $27.3 million, a decrease of 119% for the six months ended July 31, 2017 compared to $146.4 million of cash flow provided by operations in the six months ended July 31, 2016.

Further discussion regarding the balance sheet and cash flow activities are discussed below under the heading "Liquidity and Capital Resources."

Results of Operations

Net Revenue

(in millions)	Three Months Ended July 31, 2017	Change compared to prior fiscal year $	%	Three Months Ended July 31, 2016	Six Months Ended July 31, 2017	Change compared to prior fiscal year $	%	Six Months Ended July 31, 2016
Net Revenue:								
Maintenance (1)	$ 261.8	$ (15.7)	(6)%	$ 277.5	$ 525.4	$ (36.5)	(6)%	$ 561.9
Subscription (1)	$ 196.1	$ 94.3	93 %	$ 101.8	369.5	182.2	97 %	187.3
Total maintenance and subscription revenue	457.9	78.6	21 %	379.3	894.9	145.7	19 %	749.2
License and other (1)	43.9	(127.5)	(74)%	171.4	92.6	(220.8)	(70)%	313.4
	$ 501.8	$ (48.9)	(9)%	$ 550.7	$ 987.5	$ (75.1)	(7)%	$ 1,062.6

(1) Prior periods have been adjusted to conform with current period's presentation. See Note 1, "Basis of Presentation", of our condensed consolidated financial statements for additional information.

Maintenance and Subscription Revenue

Maintenance revenue consists of renewal fees for existing maintenance plan agreements that were initially purchased with a perpetual software license. Our maintenance plans provide our customers with a cost effective and predictable budgetary option to obtain the productivity benefits of our new releases and enhancements when and if released during the term of their contracts. Under our maintenance plan, customers are eligible to receive unspecified upgrades, when and if available, and technical support. We recognize maintenance revenue over the term of the agreements, generally between one and three years. Subscription revenue consists of our term-based product subscriptions, cloud service offerings, and flexible enterprise business arrangements. Note that with the change in our condensed consolidated statement of operations in the first quarter of fiscal 2018, our term-based product subscriptions and flexible enterprise business arrangements are classified and presented in a single line item. Revenue from these arrangements is recognized ratably over the contract term. Revenue for our cloud service offerings is recognized ratably over the contract term commencing with the date our service is made available to customers.

The 6% decrease in maintenance revenue during both the three and six months ended July 31, 2017, as compared to the same periods in the prior fiscal year, was primarily attributable to the discontinuation of new maintenance agreements. We expect maintenance revenue will slowly decline; however, the rate of decline will vary based on the number of renewals, the renewal rate, and our ability to incentivize maintenance plan customers to switch over to subscription plan offerings.

Subscription revenue increased 93% during the three months ended July 31, 2017, as compared to the three months ended July 31, 2016, primarily driven by a 164% increase in product subscription revenue and a 33% increase in revenue from enterprise business agreements.

Subscription revenue increased 97% during the six months ended July 31, 2017, as compared to the six months ended July 31, 2016, primarily driven by a 189% increase in product subscription revenue and a 32% increase in revenue from enterprise business agreements.

License and Other Revenue

License and other revenue consists of (1) perpetual license revenue and (2) other revenue. Perpetual license revenue includes software license revenue from the sale of perpetual licenses and Creative Finishing. Other revenue includes revenue such as consulting and training, and is recognized over time as the services are performed.

License and other revenue decreased 74% and 70% during the three and six months ended July 31, 2017, respectively, as compared to the same periods in the prior fiscal year primarily due to a decrease in license revenue. The decrease in license revenue is a result of the business model transition, resulting in a respective 85% and 83% decrease in revenue from perpetual licenses as we have discontinued selling perpetual seats for most of our product offerings.

Within license and other revenue, there was a 21% decrease in other revenue during the three and six months ended July 31, 2017, as compared to the same periods in the prior fiscal year. Other revenue represented 5% of total net revenue for both the three and six months ended July 31, 2017 as compared to 5% and 6% for the three and six months ended July 31, 2016, respectively.

Net Revenue by Product Family

(in millions)	Three Months Ended July 31, 2017	Change compared to prior fiscal year $	%	Three Months Ended July 31, 2016	Six Months Ended July 31, 2017	Change compared to prior fiscal year $	%	Six Months Ended July 31, 2016
Net Revenue by Product Family:								
Architecture, Engineering and Construction ("AEC")	$208.8	$(44.4)	(18)%	$253.2	$413.3	$(58.8)	(12)%	$472.1
Manufacturing ("MFG")	147.0	(29.9)	(17)%	176.9	289.1	(45.8)	(14)%	334.9
AutoCAD and AutoCAD LT ("ACAD") (1)	96.5	23.4	32 %	73.1	188.0	29.0	18 %	159.0
Media and Entertainment ("M&E")	37.9	3.5	10 %	34.4	74.4	5.0	7 %	69.4
Other (1)	11.6	(1.5)	(11)%	13.1	22.7	(4.5)	(17)%	27.2
	$501.8	$(48.9)	(9)%	$550.7	$987.5	$(75.1)	(7)%	$1,062.6

(1) Prior periods have been adjusted to conform with current period's presentation.

Our product offerings are focused in four primary product families: AEC, MFG, ACAD, and M&E. During the business model transition, revenue has been and will be negatively impacted as more revenue is recognized ratably rather than upfront and as new product offerings generally have a lower initial purchase price. As noted in the discussion under the heading "Strategy," we discontinued selling new perpetual licenses of most individual software products in fiscal 2017 and we discontinued selling new perpetual licenses of suites as of August 1, 2016 with the introduction of industry collections. These broad impacts are reflected in the drivers below.

During the three months ended July 31, 2017, net revenue for the AEC product family decreased 18% as compared to the same period in the prior fiscal year primarily due to a 48% decrease in revenue from AEC suites, partially offset by a 35% increase from AEC EBAs.

During the six months ended July 31, 2017, net revenue for the AEC product family decreased 12% as compared to the same period in the prior fiscal year primarily due to a 40% decrease in revenue from our AEC suites, partially offset by a 36% increase from AEC EBAs.

During the three and six months ended July 31, 2017, net revenue for the MFG product family decreased 17% and 14% as compared to the same periods in the prior fiscal year, respectively, primarily due to a respective 39% and 33% decrease in our MFG suites.

During the three and six months ended July 31, 2017, net revenue for the ACAD product family increased 32% and 18%, as compared to the same periods in the prior fiscal year, respectively, primarily due to a respective 64% and 46% increase in AutoCAD LT as well as a respective 18% and 6% increase in AutoCAD.

During the three and six months ended July 31, 2017, net revenue for the M&E product family increased 10% and 7% as compared to the same periods in the prior fiscal year, respectively, primarily due to a respective 14% and 13% increase in Animation, partially offset by a respective 19% and 30% decrease in Creative Finishing.

Net Revenue by Geographic Area

(in millions)	Three Months Ended July 31, 2017	As a % of Net Revenue		Three Months Ended July 31, 2016	As a % of Net Revenue	
Net Revenue:						
Americas	$ 214.0	43	%	$ 230.1	42	%
Europe, Middle East and Africa ("EMEA")	199.3	40	%	220.5	40	%
Asia Pacific ("APAC")	88.5	18	%	100.1	18	%
Total Net Revenue (1)	$ 501.8	100	%	$ 550.7	100	%

(in millions)	Six Months Ended July 31, 2017	As a % of Net Revenue		Six Months Ended July 31, 2016	As a % of Net Revenue	
Net Revenue:						
Americas	$ 424.1	43	%	$ 447.8	42	%
EMEA	389.0	39	%	423.1	40	%
APAC	174.4	18	%	191.7	18	%
Total Net Revenue	$ 987.5	100	%	$ 1,062.6	100	%

(1) Totals may not sum due to rounding.

Net revenue in the Americas geography decreased by 7% both on an as reported basis and on a constant currency basis during the three months ended July 31, 2017, as compared to the same period in the prior fiscal year. Net revenue in the Americas attributable to the United States was approximately 86% and 85% for the three months ended July 31, 2017 and 2016, respectively.

Net revenue in the Americas geography decreased by 5% both on an as reported basis and on a constant currency basis during the six months ended July 31, 2017, as compared to the same period in the prior fiscal year. Net revenue in the Americas attributable to the United States was approximately 86% and 85% for the six months ended July 31, 2017 and 2016, respectively.

International net revenue represented 63% and 65% of our net revenue for the three months ended July 31, 2017 and 2016, respectively. Net revenue in the EMEA geography decreased by 10% on an as reported basis and 7% on a constant currency basis during the three months ended July 31, 2017 as compared to the same period in the prior fiscal year. Net revenue in the APAC geography decreased by 12% both on an as reported basis and on a constant currency basis during the three months ended July 31, 2017 as compared to the same period in the prior fiscal year.

International net revenue represented 63% and 64% of our net revenue for the six months ended July 31, 2017 and 2016, respectively. Net revenue in the EMEA geography decreased by 8% on an as reported basis and 5% on a constant currency basis during the six months ended July 31, 2017 as compared to the same period in the prior fiscal year. Net revenue in the APAC geography decreased by 9% on an as reported basis and 10% on a constant currency basis during the six months ended July 31, 2017 as compared to the same period in the prior fiscal year.

We believe that international revenue will continue to comprise a majority of our net revenue. Unfavorable economic conditions in the countries that contribute a significant portion of our net revenue, including in emerging economies such as Brazil, Russia, India, and China, may have an adverse effect on our business in those countries and our overall financial performance. Changes in the value of the U.S. dollar relative to other currencies have significantly affected, and could continue to significantly affect, our financial results for a given period even though we hedge a portion of our current and projected revenue. Weak global economic conditions that have been characterized by restructuring of sovereign debt, high unemployment, and volatility in the financial markets may impact our future financial results. Additionally, during the business model transition, revenue has been and will be negatively impacted as more revenue is recognized ratably rather than upfront and as new product offerings generally have a lower initial purchase price. This transition has a particular impact to emerging economies as sales of perpetual licenses have historically comprised a greater percentage of total emerging economy sales in comparison to mature markets.

Net revenue in emerging economies decreased by 14% on an as reported basis and 13% on a constant currency basis during the three months ended July 31, 2017, as compared to the same period in the prior fiscal year. Revenue from emerging economies represented 11% of net revenue for both the three months ended July 31, 2017 and 2016.

Net revenue in emerging economies decreased by 11% both on an as reported basis and on a constant currency basis during the six months ended July 31, 2017, as compared to the same period in the prior fiscal year. Revenue from emerging economies represented 11% of net revenue for both the six months ended July 31, 2017 and 2016.

Cost of Revenue and Operating Expenses

Cost of maintenance and subscription revenue includes the labor costs of providing product support to our maintenance and subscription customers, including allocated IT and facilities costs, shipping and handling costs, professional services fees related to operating our network and cloud infrastructure, royalties, depreciation expense and operating lease payments associated with computer equipment, data center costs, salaries, related expenses of network operations, and stock-based compensation expense.

Cost of license and other revenue includes labor costs associated with product setup and fulfillment for perpetual licenses and costs of consulting and training services contracts and collaborative project management services contracts. Cost of license and other revenue also includes stock-based compensation expense, direct material and overhead charges, allocated IT and facilities costs, professional services fees and royalties. Direct material and overhead charges include the cost associated with electronic and physical fulfillment.

Cost of revenue, at least over the near term, is affected by the volume and mix of product sales, mix of physical versus electronic fulfillment, fluctuations in consulting costs, amortization of developed technology, new customer support offerings, royalty rates for licensed technology embedded in our products and employee stock-based compensation expense.

Marketing and sales expenses include salaries, bonuses, benefits and stock-based compensation expense for our marketing and sales employees, the expense of travel, entertainment and training for such personnel, the costs of programs aimed at increasing revenue, such as advertising, trade shows and expositions, and various sales and promotional programs. Marketing and sales expenses also include labor costs associated with sales and order management, sales and dealer commissions, payment processing fees, the cost of supplies and equipment, gains and losses on our operating expense cash flow hedges, and allocated IT and facilities costs.

Research and development expenses, which are expensed as incurred, consist primarily of salaries, bonuses, benefits and stock-based compensation expense for research and development employees, and the expense of travel, entertainment and training for such personnel, professional services such as fees paid to software development firms and independent contractors, gains and losses on our operating expense cash flow hedges, and allocated IT and facilities costs.

General and administrative expenses include salaries, bonuses, transition costs, benefits and stock-based compensation expense for our CEO, finance, human resources and legal employees, as well as professional fees for legal and accounting services, certain foreign business taxes, gains and losses on our operating expense cash flow hedges, expense of travel, entertainment and training, net IT and facilities costs, and the cost of supplies and equipment.

	Three Months Ended	Change compared to prior fiscal year		Three Months Ended	Management comments
(in millions)	July 31, 2017	$	%	July 31, 2016	
Cost of revenue:					
	$ 52.8	$ 6.0	13 %	$ 46.8	Driven by increases in employee-related costs

Maintenance and subscription (1)					
License and other (1)	17.8	(9.8)	(36)%	27.6	Down due to lower employee-related costs from reduced headcount associated with license and other revenue products and services, and decreases in direct material costs as a result of the business model transition
Amortization of developed technology (1)	4.0	(6.7)	(63)%	10.7	Down as previously acquired developed technologies continue to become fully amortized and there were no acquisitions in the current period
Total cost of revenue	$ 74.6	$ (10.5)	(12)%	$ 85.1	
Operating expenses:					
Marketing and sales	$ 257.6	$ 14.5	6 %	$ 243.1	Driven by employee-related costs and stock-based compensation expense on increased headcount

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Research and development	193.8	0.8	— %	193.0	Driven by higher professional fees
General and administrative	78.0	9.4	14 %	68.6	Driven by costs associated with the CEO transition
Amortization of purchased intangibles	4.9	(2.9)	(37)%	7.8	Down as previously acquired intangible assets continue to become fully amortized and there were no acquisitions in the current period
Restructuring charges and other facility exit costs, net (2)	0.5	(15.5)	(97)%	16.0	Down as the majority of the Fiscal 2017 Plan was recognized during the first half of fiscal 2017
Total operating expenses	$534.8	$			