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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2019

OR

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

Commission File Number: 0-20853

ANSYS, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**04-3219960**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
2600 ANSYS Drive, Canonsburg, PA	**15317**
(Address of Principal Executive Offices)	(Zip Code)

844-462-6797
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Common Stock, $0.01 par value per share	**ANSS**	**The Nasdaq Global Select Market**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See 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	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

The number of shares of the Registrant’s Common Stock, par value $.01 per share, outstanding as of October 31, 2019 was 84,189,728 shares.

ANSYS, INC. AND SUBSIDIARIES

INDEX

PART I – UNAUDITED FINANCIAL INFORMATION

Item 1. Financial Statements:

ANSYS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)	September 30, 2019 (Unaudited)	December 31, 2018 (Audited)
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 732,684**	$ 777,139
Short-term investments	**218**	225
Accounts receivable, less allowance for doubtful accounts of $8,700 and $8,000, respectively	**295,590**	317,700
Other receivables and current assets	**177,734**	216,113
Total current assets	**1,206,226**	1,311,177
Long-term assets:		
Property and equipment, net	**70,295**	61,655
Operating lease right-of-use assets	**104,160**	—
Goodwill	**1,771,862**	1,572,455
Other intangible assets, net	**267,378**	211,272
Other long-term assets	**134,757**	82,775
Deferred income taxes	**27,334**	26,630
Total long-term assets	**2,375,786**	1,954,787
Total assets	**$ 3,582,012**	$ 3,265,964
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	**$ 8,172**	$ 7,953
Accrued bonuses and commissions	**55,362**	79,945
Accrued income taxes	**7,278**	8,726
Other accrued expenses and liabilities	**111,633**	99,559
Deferred revenue	**291,385**	328,584
Total current liabilities	**473,830**	524,767
Long-term liabilities:		
Deferred income taxes	**31,201**	30,077
Long-term operating lease liabilities	**91,173**	—
Other long-term liabilities	**62,484**	61,573
Total long-term liabilities	**184,858**	91,650
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $.01 par value; 2,000,000 shares authorized; zero shares issued or outstanding	**—**	—
Common stock, $.01 par value; 300,000,000 shares authorized; 93,236,023 shares issued	**932**	932
Additional paid-in capital	**865,634**	867,462
Retained earnings	**3,204,854**	2,919,411
Treasury stock, at cost: 9,072,210 and 9,601,670 shares, respectively	**(1,057,955)**	(1,075,879)
Accumulated other comprehensive loss	**(90,141)**	(62,379)
Total stockholders' equity	**2,923,324**	2,649,547
Total liabilities and stockholders' equity	**$ 3,582,012**	$ 3,265,964

The accompanying notes are an integral part of the condensed consolidated financial statements.

ANSYS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(Unaudited)

(in thousands, except per share data)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Revenue:				
Software licenses	**$ 137,144**	$ 109,103	**$ 430,687**	$ 350,296
Maintenance and service	**206,755**	180,315	**598,977**	527,908
Total revenue	**343,899**	289,418	**1,029,664**	878,204
Cost of sales:				
Software licenses	**5,708**	4,291	**16,620**	12,301
Amortization	**4,762**	5,530	**14,064**	23,403
Maintenance and service	**30,895**	26,487	**85,993**	80,092
Total cost of sales	**41,365**	36,308	**116,677**	115,796
Gross profit	**302,534**	253,110	**912,987**	762,408
Operating expenses:				
Selling, general and administrative	**120,682**	97,576	**353,263**	280,443
Research and development	**73,018**	59,019	**219,058**	174,906
Amortization	**3,787**	3,491	**11,342**	10,421
Total operating expenses	**197,487**	160,086	**583,663**	465,770
Operating income	**105,047**	93,024	**329,324**	296,638
Interest income	**3,188**	3,213	**9,610**	7,674
Other income (expense), net	**594**	(974)	**(1,498)**	(2,289)
Income before income tax provision	**108,829**	95,263	**337,436**	302,023
Income tax provision	**19,366**	5,927	**51,993**	35,811
Net income	**$ 89,463**	$ 89,336	**$ 285,443**	$ 266,212
Earnings per share – basic:				
Earnings per share	**$ 1.06**	$ 1.06	**$ 3.40**	$ 3.17
Weighted average shares	**84,109**	84,158	**83,951**	84,065
Earnings per share – diluted:				
Earnings per share	**$ 1.04**	$ 1.04	**$ 3.34**	$ 3.09
Weighted average shares	**85,733**	86,043	**85,570**	86,060

The accompanying notes are an integral part of the condensed consolidated financial statements.

ANSYS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Unaudited)

(in thousands)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Net income	**$ 89,463**	$ 89,336	**$ 285,443**	$ 266,212
Other comprehensive loss:				
Foreign currency translation adjustments	**(20,762)**	(5,102)	**(27,762)**	(23,047)
Comprehensive income	**$ 68,701**	$ 84,234	**$ 257,681**	$ 243,165

The accompanying notes are an integral part of the condensed consolidated financial statements.

ANSYS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(in thousands)	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Cash flows from operating activities:		
Net income	$ 285,443	$ 266,212
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and intangible assets amortization	42,216	47,341
Operating lease right-of-use assets amortization	13,912	—
Deferred income tax benefit	(13,221)	(28,175)
Provision for bad debts	2,559	1,389
Stock-based compensation expense	84,784	58,887
Other	2,560	2,039
Changes in operating assets and liabilities:		
Accounts receivable	(12,610)	32,356
Other receivables and current assets	37,773	23,207
Other long-term assets	(2,288)	2,458
Accounts payable, accrued expenses and current liabilities	(37,289)	(31,243)
Accrued income taxes	(2,547)	(2,581)
Deferred revenue	(35,807)	1,175
Other long-term liabilities	(5,000)	(19,562)
Net cash provided by operating activities	360,485	353,503
Cash flows from investing activities:		
Acquisitions, net of cash acquired	(294,987)	(283,026)
Capital expenditures	(25,781)	(13,077)
Other investing activities	(12,680)	(5,510)
Net cash used in investing activities	(333,448)	(301,613)
Cash flows from financing activities:		
Purchase of treasury stock	(59,116)	(192,787)
Restricted stock withholding taxes paid in lieu of issued shares	(37,936)	(26,955)
Proceeds from shares issued for stock-based compensation	28,633	37,398
Other financing activities	(1,617)	(4,939)
Net cash used in financing activities	(70,036)	(187,283)
Effect of exchange rate fluctuations on cash and cash equivalents	(1,456)	(16,928)
Net decrease in cash and cash equivalents	(44,455)	(152,321)
Cash and cash equivalents, beginning of period	777,139	881,501
Cash and cash equivalents, end of period	$ 732,684	$ 729,180
Supplemental disclosure of cash flow information:		
Income taxes paid	$ 73,561	$ 74,086

The accompanying notes are an integral part of the condensed consolidated financial statements.

ANSYS, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)

	Common Stock			Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive (Loss)/Income	Total Stockholders' Equity
(in thousands)	**Shares**	**Amount**				**Shares**	**Amount**		
Balance, January 1, 2019	**93,236**	**$ 932**		**$ 867,462**	**$ 2,919,411**	**9,602**	**$ (1,075,879)**	**$ (62,379)**	**$ 2,649,547**
Treasury shares acquired						**250**	**(44,856)**		**(44,856)**
Stock-based compensation activity				**(42,465)**		**(494)**	**43,483**		**1,018**
Other comprehensive loss								**(7,558)**	**(7,558)**
Net income					**86,230**				**86,230**
Balance, March 31, 2019	**93,236**	**932**		**824,997**	**3,005,641**	**9,358**	**(1,077,252)**	**(69,937)**	**2,684,381**
Treasury shares acquired						**80**	**(14,260)**		**(14,260)**
Stock-based compensation activity				**14,699**		**(241)**	**22,158**		**36,857**
Other comprehensive income								**558**	**558**
Net income					**109,750**				**109,750**
Balance, June 30, 2019	**93,236**	**932**		**839,696**	**3,115,391**	**9,197**	**(1,069,354)**	**(69,379)**	**2,817,286**
Stock-based compensation activity				**25,938**		**(125)**	**11,399**		**37,337**
Other comprehensive loss								**(20,762)**	**(20,762)**
Net income					**89,463**				**89,463**
Balance, September 30, 2019	**93,236**	**$ 932**		**$ 865,634**	**$ 3,204,854**	**9,072**	**$ (1,057,955)**	**$ (90,141)**	**$ 2,923,324**

	Common Stock			Additional Paid-In Capital	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive (Loss)/Income	Total Stockholders' Equity
(in thousands)	**Shares**	**Amount**				**Shares**	**Amount**		
Balance, January 1, 2018	93,236	$ 932		$ 873,357	$ 2,316,916	9,044	$ (907,530)	$ (37,844)	$ 2,245,831
Cumulative effect of the ASC 606 adoption					183,132				183,132
Treasury shares acquired						750	(117,831)		(117,831)
Stock-based compensation activity				(39,943)		(492)	43,648		3,705
Other comprehensive income								8,243	8,243
Net income					84,280				84,280
Balance, March 31, 2018	93,236	932		833,414	2,584,328	9,302	(981,713)	(29,601)	2,407,360
Stock-based compensation activity				3,910		(313)	29,801		33,711
Other comprehensive loss								(26,188)	(26,188)
Net income					92,596				92,596
Balance, June 30, 2018	93,236	932		837,324	2,676,924	8,989	(951,912)	(55,789)	2,507,479
Cumulative effect of the ASC 606 adoption					(1)				(1)
Treasury shares acquired						424	(74,956)		(74,956)
Stock-based compensation activity				13,292		(199)	18,498		31,790
Other comprehensive loss								(5,102)	(5,102)
Net income					89,336				89,336
Balance, September 30, 2018	93,236	$ 932		$ 850,616	$ 2,766,259	9,214	$ (1,008,370)	$ (60,891)	$ 2,548,546

The accompanying notes are an integral part of the condensed consolidated financial statements.

ANSYS, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2019
(Unaudited)

1. Organization

ANSYS, Inc. (hereafter the Company or ANSYS) develops and globally markets engineering simulation software and services widely used by engineers, designers, researchers and students across a broad spectrum of industries and academia, including aerospace and defense, automotive, electronics, semiconductors, energy, materials and chemical processing, turbomachinery, consumer products, healthcare, and sports.

As defined by the accounting guidance for segment reporting, the Company operates as one segment.

Given the integrated approach to the multi-discipline problem-solving needs of the Company's customers, a single sale of software may contain components from multiple product areas and include combined technologies. The Company also has a multi-year product and integration strategy that will result in new, combined products or changes to the historical product offerings. As a result, it is impracticable for the Company to provide accurate historical or current reporting among its various product lines.

2. Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared by ANSYS in accordance with accounting principles generally accepted in the United States for interim financial information for commercial and industrial companies, the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, the accompanying unaudited condensed consolidated financial statements do not include all of the information and footnotes required by accounting principles generally accepted in the United States for complete financial statements. The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements (and notes thereto) included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 (2018 Form 10-K). The condensed consolidated December 31, 2018 balance sheet presented is derived from the audited December 31, 2018 balance sheet included in the 2018 Form 10-K. In the opinion of management, all adjustments considered necessary for a fair presentation of the financial statements have been included, and all adjustments are of a normal and recurring nature. Operating results for the three and nine months ended September 30, 2019 are not necessarily indicative of the results that may be expected for any future period.

Changes in Accounting Policies

The Company’s accounting policies are described in Note 2, “Accounting Policies,” in the 2018 Form 10-K. Summarized below is the accounting guidance adopted subsequent to December 31, 2018.

Leases: In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842)* (ASU 2016-02). The Company adopted ASU 2016-02 and its related amendments (collectively known as Accounting Standards Codification (ASC) 842) on January 1, 2019 using the modified retrospective approach. Results for reporting periods beginning after January 1, 2019 are presented under ASC 842, while prior period amounts are not adjusted and continue to be reported in accordance with ASC 840, *Leases*. ASC 842 requires virtually all leases, other than leases of intangible assets, to be recorded on the balance sheet with a right-of-use (ROU) asset and a corresponding lease liability.

The Company elected the package of practical expedients permitted under the transition guidance within the new standard, which allowed the Company to carry forward its historical assessments of whether a contract contains a lease, lease classification and initial direct costs. In addition, the Company elected the accounting policy to combine the lease and nonlease components as a single component for all asset classes.

The Company determines if an arrangement is a lease at inception. Leases are classified as either operating or finance leases based on certain criteria. This classification determines the timing and presentation of expenses on the income statement, as well as the presentation of the related cash flows and balance sheet. Operating leases are recorded on the balance sheet as operating lease right-of-use assets, other accrued expenses and liabilities, and long-term operating lease liabilities. The Company currently has no finance leases.

ROU assets and related liabilities are recorded at lease commencement based on the present value of the lease payments over the expected lease term. Lease payments include future increases unless the increases are based on changes in an index or rate. As the Company's leases do not usually provide an implicit rate, the Company's incremental borrowing rate is used to calculate ROU assets and related liabilities. The incremental borrowing rate is determined based on the Company's estimated credit rating, the term of the lease, the economic environment where the asset resides and full collateralization. The ROU assets and related lease liabilities include optional renewals for which the Company is reasonably certain to exercise; whereas, optional terminations are included unless it is reasonably certain not to be elected.

The adoption of the new standard resulted in the recognition of ROU assets of $90.9 million and lease liabilities of $92.5 million, and corresponding deferred tax assets and liabilities, on the Company's condensed consolidated balance sheet as of January 1, 2019. The adoption had no impact on the Company's condensed consolidated statements of income or cash flows.

Accounting Guidance Issued and Not Yet Adopted

Credit losses: In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU 2016-13). The current guidance requires the allowance for doubtful accounts to be estimated based on an incurred loss model, which considers past and current conditions. ASU 2016-13 requires companies to use an expected loss model that also considers reasonable and supportable forecasts of future conditions. ASU 2016-13 is effective for annual periods beginning after December 15, 2019, including interim periods within that reporting period. Early adoption is permitted for annual periods beginning after December 15, 2018, including interim periods within that reporting period. The standard requires a cumulative-effect adjustment to the balance sheet as of the beginning of the first reporting period in which the guidance is effective. The Company is currently in the data gathering phase of the implementation. The Company will adopt the standard effective January 1, 2020 and continues to evaluate the effect that this update will have on its financial results upon adoption.

Implementation cost accounting for cloud computing arrangements: In August 2018, the FASB issued ASU No. 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (ASU 2018-15). The standard aligns the accounting for costs incurred to implement a cloud computing arrangement (CCA) that is a service arrangement with the guidance on capitalizing costs associated with developing or obtaining internal-use software. Under ASU 2018-15, an entity would apply Subtopic 350-40 to determine which implementation costs related to a CCA that is a service contract should be capitalized. The standard does not change the accounting for the service component of a CCA. The associated cash flows will be reflected within operating activities. ASU 2018-15 is effective for annual periods beginning after December 15, 2019, including interim periods within that reporting period. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued. Entities can choose to adopt the new guidance (1) prospectively to eligible costs incurred on or after the date the guidance is first applied or (2) retrospectively. The Company continues to evaluate the effect that this update will have on its financial results upon adoption.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of highly liquid investments such as deposits held at major banks and money market funds. Cash equivalents are carried at cost, which approximates fair value. The Company's cash and cash equivalent balances comprise the following:

	September 30, 2019		December 31, 2018	
(in thousands, except percentages)	Amount	% of Total	Amount	% of Total
Cash accounts	**$ 431,624**	**58.9**	$ 331,084	42.6
Money market funds	**301,060**	**41.1**	446,055	57.4
Total	**$ 732,684**		$ 777,139	

The Company's money market fund balances are held in various funds of a single issuer.

3. Revenue from Contracts with Customers

Disaggregation of Revenue

The following table summarizes revenue:

(in thousands, except percentages)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Revenue:				
Lease licenses	**$ 70,693**	$ 43,202	**$ 239,953**	$ 148,795
Perpetual licenses	**66,451**	65,901	**190,734**	201,501
Software licenses	**137,144**	109,103	**430,687**	350,296
Maintenance	**193,189**	171,463	**559,768**	500,962
Service	**13,566**	8,852	**39,209**	26,946
Maintenance and service	**206,755**	180,315	**598,977**	527,908
Total revenue	**$ 343,899**	$ 289,418	**$ 1,029,664**	$ 878,204
Direct revenue, as a percentage of total revenue	**76.8%**	75.5%	**75.9%**	76.1%
Indirect revenue, as a percentage of total revenue	**23.2%**	24.5%	**24.1%**	23.9%

The Company’s software licenses revenue is recognized up front, while maintenance and service revenue is generally recognized over the term of the contract.

Deferred Revenue

Deferred revenue consists of billings made or payments received in advance of revenue recognition from customer agreements. The timing of revenue recognition may differ from the timing of billings to customers. Payment terms vary by the type and location of customer and the products or services offered. The time between invoicing and when payment is due is not significant.

The changes in deferred revenue, inclusive of both current and long-term deferred revenue, during the nine months ended September 30, 2019 and 2018 were as follows:

(in thousands)	2019	2018
Beginning balance – January 1	**$ 343,174**	$ 299,730
Acquired deferred revenue	**3,266**	2,470
Deferral of revenue	**991,524**	868,522
Recognition of revenue	**(1,029,664)**	(878,204)
Currency translation	**(4,985)**	(6,065)
Ending balance – September 30	**$ 303,315**	$ 286,453

Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, and includes both deferred revenue and backlog. The Company's backlog represents installment billings for periods beyond the current quarterly billing cycle. Revenue recognized during the nine months ended September 30, 2019 and 2018 included amounts in deferred revenue and backlog at the beginning of the period of $409.1 million and $334.4 million, respectively.

Total revenue allocated to remaining performance obligations as of September 30, 2019 will be recognized as revenue as follows:

(in thousands)		
Next 12 months	$	**445,934**
Months 13-24		**122,932**
Months 25-36		**52,090**
Thereafter		**29,431**
Total revenue allocated to remaining performance obligations	$	**650,387**

4. Acquisitions

On February 1, 2019, the Company completed the acquisition of 100% of the shares of Granta Design Limited (Granta Design) for a purchase price of $208.7 million, paid in cash and inclusive of final net working capital adjustments. The acquisition of Granta Design, the premier provider of materials information technology, expands ANSYS' portfolio into this important area, giving customers access to materials intelligence, including data that is critical to successful simulations.

Additionally, during the nine months ended September 30, 2019, the Company acquired Helic, Inc. and certain assets and liabilities of DfR Solutions to combine the acquired technologies with the Company's existing comprehensive multiphysics portfolio. The acquisitions were not individually significant. The combined purchase price of these other acquisitions was $102.7 million, paid in cash and inclusive of final net working capital adjustments.

The assets and liabilities of the acquisitions have been recorded based upon management's estimates of their fair market values as of each respective date of acquisition. The following tables summarize the fair values of consideration transferred and the fair values of identified assets acquired and liabilities assumed at each respective date of acquisition:

Fair Value of Consideration Transferred:

(in thousands)		**Granta Design**		**Other Acquisitions**		**Total**
Cash	$	**208,736**	$	**102,737**	$	**311,473**

Recognized Amounts of Identifiable Assets Acquired and Liabilities Assumed:

(in thousands)						
Cash	$	13,644	$	2,842	$	16,486
Accounts receivable and other tangible assets		7,023		8,653		15,676
Developed software and core technologies (12-year weighted-average life)		32,445		17,761		50,206
Customer lists (13-year weighted-average life)		20,016		14,180		34,196
Trade names (10-year weighted-average life)		4,579		1,381		5,960
Accounts payable and other liabilities		(6,403)		(4,704)		(11,107)
Deferred revenue		(1,426)		(1,840)		(3,266)
Net deferred tax liabilities		(9,822)		(5,049)		(14,871)
Total identifiable net assets	**$**	**60,056**	**$**	**33,224**	**$**	**93,280**
Goodwill	**$**	**148,680**	**$**	**69,513**	**$**	**218,193**

The goodwill, which is generally not tax-deductible, is attributed to intangible assets that do not qualify for separate recognition, including the assembled workforce of the acquired business and the synergies expected to arise as a result of the acquisitions.

The fair values of the assets acquired and liabilities assumed are based on preliminary calculations. The estimates and assumptions for these items are subject to change as additional information about what was known and knowable at the acquisition date is obtained during the measurement period (up to one year from the acquisition date).

On May 2, 2018, the Company completed the acquisition of 100% of the shares of OPTIS, a premier provider of software for scientific simulation of light, human vision and physics-based visualization, for a purchase price of $291.0 million, paid in cash. The acquisition extends the Company's portfolio into the area of optical simulation to provide comprehensive sensor solutions, covering visible and infrared light, electromagnetics and acoustics for camera, radar and lidar.

The operating results of each acquisition have been included in the Company's condensed consolidated financial statements since each respective date of acquisition. The effects of the business combinations were not material to the Company's consolidated results of operations individually or in the aggregate.

5. Other Receivables and Current Assets and Other Long-Term Liabilities

The Company's other receivables and current assets, and other long-term liabilities, comprise the following balances:

(in thousands)	September 30, 2019	December 31, 2018
Receivables related to unrecognized revenue	**$ 101,939**	$ 167,144
Income taxes receivable, including overpayments and refunds	**32,921**	13,709
Prepaid expenses and other current assets	**42,874**	35,260
Total other receivables and current assets	**$ 177,734**	$ 216,113
Uncertain tax positions	**$ 33,105**	$ 29,279
Other long-term liabilities	**29,379**	32,294
Total other long-term liabilities	**$ 62,484**	$ 61,573

Receivables related to unrecognized revenue represent the current portion of billings made for customer contracts that have not yet been recognized as revenue.

6. Earnings Per Share

Basic earnings per share (EPS) amounts are computed by dividing earnings by the weighted average number of common shares outstanding during the period. Diluted EPS amounts assume the issuance of common stock for all potentially dilutive equivalents outstanding using the treasury stock method. To the extent stock awards are anti-dilutive, they are excluded from the calculation of diluted EPS.

The details of basic and diluted EPS are as follows:

	Three Months Ended		Nine Months Ended	
(in thousands, except per share data)	September 30, 2019	September 30, 2018	September 30, 2019	September 30, 2018
Net income	**$ 89,463**	$ 89,336	**$ 285,443**	$ 266,212
Weighted average shares outstanding – basic	**84,109**	84,158	**83,951**	84,065
Dilutive effect of stock plans	**1,624**	1,885	**1,619**	1,995
Weighted average shares outstanding – diluted	**85,733**	86,043	**85,570**	86,060
Basic earnings per share	**$ 1.06**	$ 1.06	**$ 3.40**	$ 3.17
Diluted earnings per share	**$ 1.04**	$ 1.04	**$ 3.34**	$ 3.09
Anti-dilutive shares	**25**	—	**8**	—

7. Goodwill and Intangible Assets

The Company's intangible assets are classified as follows:

	September 30, 2019		December 31, 2018	
(in thousands)	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Finite-lived intangible assets:				
Developed software and core technologies	**$ 455,998**	**$ (325,583)**	$ 410,680	$ (314,730)
Customer lists and contract backlog	**238,373**	**(127,770)**	209,031	(117,614)
Trade names	**142,224**	**(116,221)**	137,225	(113,677)
Total	**$ 836,595**	**$ (569,574)**	$ 756,936	$ (546,021)
Indefinite-lived intangible asset:				
Trade name	**$ 357**		$ 357	

Amortization expense for the intangible assets reflected above was $8.5 million and $9.0 million for the three months ended September 30, 2019 and 2018, respectively. Amortization expense for the intangible assets reflected above was $25.4 million and $33.8 million for the nine months ended September 30, 2019 and 2018, respectively.

As of September 30, 2019, estimated future amortization expense for the intangible assets reflected above is as follows:

(in thousands)	
Remainder of 2019	**$ 8,499**
2020	**36,101**
2021	**34,100**
2022	**32,780**
2023	**31,122**
2024	**28,728**
Thereafter	**95,691**
Total intangible assets subject to amortization	**267,021**
Indefinite-lived trade name	**357**
Other intangible assets, net	**$ 267,378**

The changes in goodwill during the nine months ended September 30, 2019 and 2018 were as follows:

(in thousands)	2019	2018
Beginning balance – January 1	**$ 1,572,455**	$ 1,378,553
Acquisitions and adjustments[1]	**219,009**	204,271
Currency translation	**(19,602)**	(7,257)
Ending balance – September 30	**$ 1,771,862**	$ 1,575,567

[1] In accordance with the accounting for business combinations, the Company recorded adjustments to goodwill for the effect of changes in the provisional fair values of the assets acquired and liabilities assumed during the measurement period (up to one year from the acquisition date) as the Company obtained new information about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date.

During the first quarter of 2019, the Company completed the annual impairment test for goodwill and the indefinite-lived intangible asset and determined that these assets had not been impaired as of the test date, January 1, 2019. No other events or circumstances changed during the nine months ended September 30, 2019 that would indicate that the fair values of the Company's reporting unit and indefinite-lived intangible asset are below their carrying amounts.

8. Fair Value Measurement

The valuation hierarchy for disclosure of assets and liabilities reported at fair value prioritizes the inputs for such valuations into three broad levels:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument; or
- Level 3: unobservable inputs based on the Company's own assumptions used to measure assets and liabilities at fair value.

The classification of a financial asset or liability within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

The following tables provide the assets carried at fair value and measured on a recurring basis:

		Fair Value Measurements at Reporting Date Using:		
(in thousands)	**September 30, 2019**	**Quoted Prices in Active Markets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Assets				
Cash equivalents	**$ 301,060**	**$ 301,060**	**$ —**	**$ —**
Short-term investments	**$ 218**	**$ —**	**$ 218**	**$ —**
Deferred compensation plan investments	**$ 4,193**	**$ 4,193**	**$ —**	**$ —**

		Fair Value Measurements at Reporting Date Using:		
(in thousands)	**December 31, 2018**	**Quoted Prices in Active Markets (Level 1)**	**Significant Other Observable Inputs (Level 2)**	**Significant Unobservable Inputs (Level 3)**
Assets				
Cash equivalents	$ 446,055	$ 446,055	$ —	$ —
Short-term investments	$ 225	$ —	$ 225	$ —
Deferred compensation plan investments	$ 1,646	$ 1,646	$ —	$ —

The cash equivalents in the preceding tables represent money market funds, valued at net asset value, with carrying values which approximate their fair values because of their short-term nature.

The short-term investments in the preceding tables represent deposits held by certain foreign subsidiaries of the Company. The deposits have fixed interest rates with original maturities ranging from three months to one year.

The deferred compensation plan investments in the preceding tables represent trading securities held in a rabbi trust for the benefit of the non-employee Directors. These securities consist of mutual funds traded in an active market with quoted prices. As a result, the plan assets are classified as Level 1 in the fair value hierarchy. The plan assets are recorded within other long-term assets on the Company's condensed consolidated balance sheets.

9. Leases

The Company primarily has operating leases for office space and leased cars included in its ROU assets and lease liabilities. The Company's executive offices and those related to certain domestic product development, marketing, production and administration are located in a 186,000 square foot office facility in Canonsburg, Pennsylvania. The term of the lease is 183 months, which began on October 1, 2014 and expires on December 31, 2029. The lease agreement includes options to renew the contract through August 2044, an option to lease additional space in January 2025 and an option to terminate the lease in December 2025. No options are included in the lease liability as renewal is not reasonably certain. In addition, the Company is reasonably certain it will not terminate the lease agreement. Absent the exercise of options in the lease, the Company's base rent (inclusive of property taxes and certain operating costs) is $4.3 million per annum for the first five years of the lease term, $4.5 million per annum for years six through ten and $4.7 million per annum for years eleven through fifteen.

The components of the Company's global lease cost reflected in the condensed consolidated statements of income are as follows:

(in thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Lease liability cost	$ 5,684	$ 16,579
Variable lease cost not included in the lease liability[1]	1,126	2,847
Total lease cost	$ 6,810	$ 19,426

[1] Variable lease cost includes common area maintenance, property taxes, utilities and fluctuations in rent due to a change in an index or rate.

For the three and nine months ended September 30, 2018, lease cost totaled $6.1 million and $16.3 million, respectively.

Other information related to operating leases is as follows:

(in thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Cash paid for amounts included in the measurement of the lease liability:		
Operating cash flows from operating leases	$ (5,242)	$ (14,551)
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 6,155	$ 29,262

As of September 30, 2019, the weighted-average remaining lease term of operating leases was 7.8 years, and the weighted-average discount rate of operating leases was 3.7%.

The maturity schedule of the operating lease liabilities as of September 30, 2019 is as follows:

(in thousands)	
Remainder of 2019	$ 6,335
2020	20,192
2021	18,178
2022	15,472
2023	11,748
Thereafter	54,966
Total future lease payments	126,891
Less: Present value adjustment	(19,059)
Present value of future lease payments[1]	$ 107,832

[1]Includes the current portion of operating lease liabilities of $16.7 million, which is reflected in other accrued expenses and liabilities in the condensed consolidated balance sheets.

There were no material leases that have been signed but not yet commenced as of September 30, 2019.

The future minimum lease payments under ASC 840, including termination fees, under noncancellable operating leases for office space in effect at December 31, 2018 were as follows:

(in thousands)	
2019	$ 16,354
2020	12,469
2021	10,177
2022	8,523
2023	6,809
Thereafter	14,267
Total	$ 68,599

10. Debt

In February 2019, the Company entered into a credit agreement for a $500 million unsecured revolving credit facility, which includes a $50 million sublimit for the issuance of letters of credit, with Bank of America, N.A. as the Administrative Agent. The revolving credit facility is available for general corporate purposes, including, among others, to finance acquisitions and capital expenditures and becomes payable in full on February 22, 2024.

Borrowings under the revolving credit facility will accrue interest at the Eurodollar rate plus an applicable margin or at the base rate. The base rate is the applicable margin plus the highest of (i) the federal funds rate plus 0.500%, (ii) the Bank of America prime rate and (iii) the Eurodollar rate plus 1.000%. The applicable margin for these borrowings is a percentage per annum based on the lower of (1) a pricing level determined by the Company’s then-current consolidated leverage ratio and (2) a pricing level determined by the Company’s debt ratings (if such debt ratings exist). This results in a margin ranging from 1.125% to 1.750% and 0.125% to 0.750% for the Eurodollar rate and base rate, respectively.

The credit agreement contains customary representations and warranties, affirmative and negative covenants and events of default. The credit agreement also contains a financial covenant requiring the Company and its subsidiaries to maintain a consolidated leverage ratio of indebtedness to earnings before interest, taxes, depreciation and amortization of 3.50 to 1.00 as of the end of any fiscal quarter (for the four-quarter period ending on such date) with an opportunity for a temporary increase in such consolidated leverage ratio to 4.00 to 1.00 upon the consummation of certain qualified acquisitions for which the aggregate consideration is at least $250 million.

The credit agreement will terminate and all amounts owing thereunder will be due and payable on February 22, 2024 unless (i) the commitments are terminated earlier upon the occurrence of certain events, including an event of default, or (ii) the maturity date is further extended upon the Company's request, subject to the agreement of the lenders.

As of September 30, 2019, there were no outstanding borrowings under the credit agreement, and the Company was in compliance with all covenants.

See Note 15 Subsequent Events for information on the October 16, 2019 amendment to this credit agreement.

11. Stock Repurchase Program

Under the Company's stock repurchase program, the Company repurchased shares as follows:

	Nine Months Ended	
(in thousands, except per share data)	**September 30, 2019**	**September 30, 2018**
Number of shares repurchased	**330**	1,174
Average price paid per share	**$ 179.41**	$ 164.14
Total cost	**$ 59,116**	$ 192,787

In February 2018, the Company's Board of Directors increased the number of shares authorized for repurchase to a total of 5.0 million shares under the stock repurchase program. As of September 30, 2019, 3.5 million shares remained available for repurchase under the program. During the three months ended September 30, 2019, the Company did not repurchase any shares of common stock.

12. Stock-Based Compensation

Total stock-based compensation expense and its net impact on basic and diluted earnings per share are as follows:

(in thousands, except per share data)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Cost of sales:				
Maintenance and service	**$ 2,422**	$ 1,438	**$ 6,024**	$ 3,880
Operating expenses:				
Selling, general and administrative	**16,774**	13,484	**44,408**	33,288
Research and development	**12,666**	8,061	**34,352**	21,719
Stock-based compensation expense before taxes	**31,862**	22,983	**84,784**	58,887
Related income tax benefits	**(9,847)**	(8,611)	**(30,075)**	(30,311)
Stock-based compensation expense, net of taxes	**$ 22,015**	$ 14,372	**$ 54,709**	$ 28,576
Net impact on earnings per share:				
Basic earnings per share	**$ (0.26)**	$ (0.17)	**$ (0.65)**	$ (0.34)
Diluted earnings per share	**$ (0.26)**	$ (0.17)	**$ (0.64)**	$ (0.33)

13. Geographic Information

Revenue to external customers is attributed to individual countries based upon the location of the customer. Revenue by geographic area is as follows:

(in thousands)	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
United States	**$ 146,761**	$ 106,229	**$ 425,212**	$ 327,784
Japan	**35,749**	36,309	**116,364**	109,050
Germany	**37,541**	27,831	**93,847**	97,262
South Korea	**16,902**	12,943	**72,833**	45,468
France	**17,226**	14,035	**46,825**	44,638
China	**18,057**	14,568	**43,904**	38,616
Other Europe, Middle East and Africa (EMEA)	**44,860**	45,602	**142,337**	136,719
Other international	**26,803**	31,901	**88,342**	78,667
Total revenue	**$ 343,899**	$ 289,418	**$ 1,029,664**	$ 878,204

Property and equipment by geographic area is as follows:

(in thousands)	September 30, 2019	December 31, 2018
United States	**$ 48,886**	$ 46,605
India	**5,641**	4,176
United Kingdom	**3,696**	1,238
Other EMEA	**7,694**	5,882
Other international	**4,378**	3,754
Total property and equipment, net	**$ 70,295**	$ 61,655

14. Contingencies and Commitments

The Company is subject to various investigations, claims and legal proceedings that arise in the ordinary course of business, including commercial disputes, labor and employment matters, tax audits, alleged infringement of intellectual property rights and other matters. In the opinion of the Company, the resolution of pending matters is not expected to have a material adverse effect on the Company's consolidated results of operations, cash flows or financial position. However, each of these matters is subject to various uncertainties and it is possible that an unfavorable resolution of one or more of these proceedings could materially affect the Company's results of operations, cash flows or financial position.

An Indian subsidiary of the Company has several service tax audits pending that have resulted in formal inquiries being received on transactions through mid-2012. The Company could incur tax charges and related liabilities of approximately $7.2 million. The service tax issues raised in the Company’s notices and inquiries are very similar to the case, M/s Microsoft Corporation (I) (P) Ltd. Vs. Commissioner of Service Tax, New Delhi, wherein the Delhi Customs, Excise and Service Tax Appellate Tribunal (CESTAT) passed a favorable ruling to Microsoft. The Microsoft case ruling was subsequently challenged in the Supreme Court by the Indian tax authority. The Company can provide no assurances on the impact that the present Microsoft case’s decision will have on the Company’s cases. The Company is uncertain as to when these service tax matters will be concluded.

The Company sells software licenses and services to its customers under contractual agreements. Such agreements generally include certain provisions indemnifying the customer against claims of intellectual property infringement by third parties arising from such customer’s usage of the Company's products or services. To date, payments related to these indemnification provisions have been immaterial. For several reasons, including the lack of prior material indemnification claims, the Company cannot determine the maximum amount of potential future payments, if any, related to such indemnification provisions.

15. Subsequent Events

On November 1, 2019, the Company completed the acquisition of 100% of the shares of Livermore Software Technology Corporation (LSTC), the premier provider of explicit dynamics and other advanced finite element analysis technology. The acquisition will empower ANSYS customers to solve a new class of engineering challenges, including developing safer automobiles, aircraft and trains while reducing or even eliminating the need for costly physical testing. The transaction closed with a purchase price of $779.9 million, which included $472.7 million in cash and the issuance of 1.4 million shares of ANSYS common stock in an unregistered offering to the prior owners of LSTC. The fair value of the common stock issued as consideration was based on the volume-weighted average price of ANSYS common stock on November 1, 2019 of $220.74, resulting in a fair value of $307.2 million.

In connection with the acquisition of LSTC, the Company entered into an amendment to its existing credit agreement dated October 16, 2019. The amendment provides for a new $500.0 million unsecured term loan facility to finance the acquisition. The term loan was funded on November 1, 2019 and matures on November 1, 2024. Principal on the term loan will be payable on the last business day of each fiscal quarter commencing with the ninth full fiscal quarter after the funding date at a rate of 5% per annum, increasing to 10% per annum after the next four fiscal quarters. All other terms, including financial covenants and the applicable interest rate on all loans under the credit agreement, including the new term loan, remain the same.

On November 1, 2019, the Company completed the acquisition of 100% of the shares of Dynardo, a leading provider of multidisciplinary analysis and optimization technology, for a purchase price of approximately €30.0 million. The acquisition gives ANSYS customers access to a full suite of process integration and robust design tools — empowering users to identify optimal product designs faster and more economically.

Due to the limited time since the respective acquisition dates, the initial accounting for the business combinations is incomplete. As a result, the Company is unable to provide the amounts recognized as of the acquisition date for the major classes of assets acquired and liabilities assumed. For LSTC, this information will be included in an amendment expected to be filed in January 2020 to the Company's Current Report on Form 8-K that was initially filed on November 6, 2019. For Dynardo, this information will be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of ANSYS, Inc.

Results of Review of Interim Financial Information

We have reviewed the accompanying condensed consolidated balance sheet of ANSYS, Inc. and subsidiaries (the "Company") as of September 30, 2019, the related condensed consolidated statements of income, comprehensive income, and stockholders' equity for the three-month and nine-month periods ended September 30, 2019 and 2018, and of cash flows for the nine-month periods ended September 30, 2019 and 2018, and the related notes (collectively referred to as the "interim financial information"). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying interim financial information for it to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheet of the Company as of December 31, 2018, and the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for the year then ended (not presented herein); and in our report dated February 28, 2019, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated balance sheet as of December 31, 2018, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

Basis for Review Results

This interim financial information is the responsibility of the Company's management. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our reviews in accordance with standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ Deloitte & Touche LLP
Pittsburgh, Pennsylvania
November 7, 2019

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the accompanying unaudited condensed consolidated financial statements and notes thereto for the nine months ended September 30, 2019, and with the Company’s audited consolidated financial statements and notes thereto for the year ended December 31, 2018 included in the 2018 Form 10-K filed with the Securities and Exchange Commission. The Company’s discussion and analysis of its financial condition and results of operations are based upon the Company’s condensed consolidated financial statements, which have been prepared in accordance with GAAP.

Overview:

Overall GAAP and Non-GAAP Results

The Company's growth rates of GAAP and non-GAAP results for the three and nine months ended September 30, 2019 as compared to the three and nine months ended September 30, 2018 were as follows:

	Three Months Ended September 30, 2019		Nine Months Ended September 30, 2019	
	GAAP	Non-GAAP	GAAP	Non-GAAP
Revenue	**18.8%**	17.9%	**17.2%**	17.0%
Operating income	**12.9%**	16.1%	**11.0%**	13.3%
Diluted earnings per share	**0.0%**	8.4%	**8.1%**	12.2%

The Company experienced higher revenue during the three and nine months ended September 30, 2019 from growth in lease licenses, maintenance and service, and additional revenue related to acquisitions. The Company also experienced increased operating expenses primarily due to increased personnel costs, higher stock-based compensation and additional operating expenses related to acquisitions, partially offset by a reduction in expenses due to a stronger U.S. Dollar.

The non-GAAP results exclude the income statement effects of the acquisition accounting adjustments to deferred revenue, stock-based compensation, amortization of acquired intangible assets, transaction costs related to business combinations, and adjustments related to the transition tax associated with the Tax Cuts and Jobs Act. For further disclosure regarding non-GAAP results, see the section titled "Non-GAAP Results" immediately preceding the section titled "Liquidity and Capital Resources."

Constant currency amounts exclude the effects of foreign currency fluctuations on the reported results. To present this information, the 2019 results for entities whose functional currency is a currency other than the U.S. Dollar were converted to U.S. Dollars at rates that were in effect for the 2018 comparable period, rather than the actual exchange rates in effect for 2019. Constant currency growth rates are calculated by adjusting the 2019 reported revenue and operating income amounts by the 2019 currency fluctuation impacts and comparing to the 2018 comparable period reported revenue and operating income amounts.

Impact of Foreign Currency

The Company's comparative financial results were impacted by fluctuations in the U.S. Dollar during the three and nine months ended September 30, 2019 as compared to the three and nine months ended September 30, 2018. The impacts on the Company's revenue and operating income due to currency fluctuations are reflected in the table below. Amounts in brackets indicate a net adverse impact from currency fluctuations.

	Three Months Ended September 30, 2019		Nine Months Ended September 30, 2019	
(in thousands)	GAAP	Non-GAAP	GAAP	Non-GAAP
Revenue	**$ (4,481)**	$ (4,543)	**$ (21,842)**	$ (22,110)
Operating income	**$ (2,051)**	$ (2,246)	**$ (9,210)**	$ (10,039)

In constant currency, the Company's growth rates were as follows:

	Three Months Ended September 30, 2019		Nine Months Ended September 30, 2019	
	GAAP	Non-GAAP	GAAP	Non-GAAP
Revenue	**20.4%**	19.5%	**19.7%**	19.5%
Operating income	**15.1%**	17.9%	**14.1%**	15.8%

Other Financial Information

The Company’s financial position includes $732.9 million in cash and short-term investments, and working capital of $732.4 million as of September 30, 2019.

During the nine months ended September 30, 2019, the Company repurchased 0.3 million shares for $59.1 million at an average price of $179.41 per share. No shares were repurchased during the three months ended September 30, 2019.

During the fourth quarter of 2019, the Company completed the acquisitions of LSTC for $779.9 million and Dynardo for €30.0 million. In conjunction with the LSTC transaction, ANSYS amended its existing credit agreement and obtained $500.0 million of term debt financing to fund the cash component of the purchase price.

Business:

ANSYS develops and globally markets engineering simulation software and services widely used by engineers, designers, researchers and students across a broad spectrum of industries and academia, including aerospace and defense, automotive, electronics, semiconductors, energy, materials and chemical processing, turbomachinery, consumer products, healthcare, and sports. Headquartered south of Pittsburgh, Pennsylvania, the Company employed approximately 3,900 people as of September 30, 2019. ANSYS focuses on the development of open and flexible solutions that enable users to analyze designs directly on the desktop, providing a common platform for fast, efficient and cost-conscious product development, from design concept to final-stage testing and validation. The Company distributes its suite of simulation technologies through a global network of independent channel partners and direct sales offices in strategic, global locations. It is the Company’s intention to continue to maintain this hybrid sales and distribution model.

The Company licenses its technology to businesses, educational institutions and governmental agencies. Growth in the Company’s revenue is affected by the strength of global economies, general business conditions, currency exchange rate fluctuations, customer budgetary constraints and the competitive position of the Company’s products. The Company believes that the features, functionality and integrated multiphysics capabilities of its software products are as strong as they have ever been. However, the software business is generally characterized by long sales cycles. These long sales cycles increase the difficulty of predicting sales for any particular quarter. The Company makes many operational and strategic decisions based upon short- and long-term sales forecasts that are impacted not only by these long sales cycles but also by current global economic conditions. As a result, the Company believes that its overall performance is best measured by fiscal-year results rather than by quarterly results.

The Company’s management considers the competition and price pressure that it faces in the short- and long-term by focusing on expanding the breadth, depth, ease of use and quality of the technologies, features, functionality and integrated multiphysics capabilities of its software products as compared to its competitors; investing in research and development to develop new and innovative products and increase the capabilities of its existing products; supplying new products and services; focusing on customer needs, training, consulting and support; and enhancing its distribution channels. The Company also uses acquisitions to supplement its global engineering talent, product offerings and distribution channels.

Geographic Trends:

The following table presents the Company's geographic constant currency revenue growth during the three and nine months ended September 30, 2019 as compared to the three and nine months ended September 30, 2018:

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Americas	**34.8%**	**28.6%**
EMEA	**19.0%**	**7.1%**
Asia-Pacific	**3.4%**	**21.5%**
Total	**20.4%**	**19.7%**

The Company continues to focus on a number of sales improvement activities across the geographic regions, including sales hiring, pipeline building, productivity initiatives and customer engagement activities.

As trade tensions between the U.S. and China continue, the Company's ability to sell and ship the Company's products to certain customers may be further restricted and could have an adverse effect on the Company's business, results of operations or financial condition. Refer to additional details within Part II, Item 1A of this Quarterly Report on Form 10-Q.

Industry Commentary:

The Company experienced industry trends consistent with those of the first half of 2019. The high-tech industry was positively impacted by companies' investments in 5G and other applications. The automotive industry continued its momentum due to continued investments in autonomous vehicles and electrification. Defense spending continued to support growth in the aerospace and defense industry.

Use of Estimates:

The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates, including those related to the fair values of stock awards, bad debts, contract revenue, acquired deferred revenue, the standalone selling prices of its products and services, the valuation of goodwill and other intangible assets, deferred compensation, income taxes, uncertain tax positions, tax valuation reserves, operating lease assets and liabilities, useful lives for depreciation and amortization, and contingencies and litigation. The Company bases its estimates on historical experience, market experience, estimated future cash flows and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily available from other sources. Actual results may differ from these estimates.

Note About Forward-Looking Statements

This Quarterly Report on Form 10-Q contains 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, including, but not limited to, the following statements, as well as statements that contain such words as "anticipates," "intends," "believes," "plans" and other similar expressions:

- The Company's expectations regarding the impacts of new accounting guidance.
- The Company's expectations regarding the outcome of its service tax audit cases.
- The Company's assessment of the ultimate liabilities arising from various investigations, claims and legal proceedings.
- The Company's expectations regarding future claims related to indemnification obligations.
- The Company's intentions regarding its hybrid sales and distribution model.
- The Company's statement regarding the strength of the features, functionality and integrated multiphysics capabilities of its software products.
- The Company's belief that its overall performance is best measured by fiscal-year results rather than by quarterly results.
- The Company's expectations regarding increased lease license volatility due to an increased customer preference for time-based licenses.
- The Company's estimates regarding the expected impact on reported revenue related to the acquisition accounting treatment of deferred revenue.
- The Company's expectation that it will continue to make targeted investments in its global sales and marketing organizations and its global business infrastructure to enhance and support its revenue-generating activities.
- The Company's intentions related to investments in research and development, particularly as it relates to expanding the ease of use and capabilities of its broad portfolio of simulation software products.
- The Company's intention to repatriate previously taxed earnings in excess of working capital needs and to reinvest all other earnings of its non-U.S. subsidiaries.
- The Company's plans related to future capital spending.
- The sufficiency of existing cash and cash equivalent balances to meet future working capital and capital expenditure requirements.
- The Company's belief that the best uses of its excess cash are to invest in the business and to repurchase stock in order to both offset dilution and return capital to stockholders, in excess of its requirements, with the goal of increasing stockholder value.
- The Company's intentions related to investments in complementary companies, products, services and technologies.
- The Company's expectation that changes in currency exchange rates will affect the Company's financial position, results of operations and cash flows.

- The Company’s expectations regarding acquisitions and integrating such acquired companies to realize the benefits of cost reductions and other synergies relating thereto.

Forward-looking statements should not be unduly relied upon because they involve known and unknown risks, uncertainties and other factors, some of which are beyond the Company’s control. The Company’s actual results could differ materially from those set forth in forward-looking statements. Certain factors, among others, that might cause such a difference include risks and uncertainties disclosed in the Company’s 2018 Form 10-K, Part I, Item 1A. "Risk Factors." Information regarding any new risk factors or material changes to these risk factors has been included within Part II, Item 1A of this Quarterly Report on Form 10-Q.

Results of Operations

Three Months Ended September 30, 2019 Compared to Three Months Ended September 30, 2018

Revenue:

	Three Months Ended September 30,		Change		
(in thousands, except percentages)	2019	2018	Amount	%	Constant Currency %
Revenue:					
Lease licenses	**$ 70,693**	$ 43,202	$ 27,491	63.6	66.4
Perpetual licenses	**66,451**	65,901	550	0.8	2.1
Software licenses	**137,144**	109,103	28,041	25.7	27.5
Maintenance	**193,189**	171,463	21,726	12.7	14.0
Service	**13,566**	8,852	4,714	53.3	54.7
Maintenance and service	**206,755**	180,315	26,440	14.7	16.0
Total revenue	**$ 343,899**	$ 289,418	$ 54,481	18.8	20.4

The Company’s revenue in the quarter ended September 30, 2019 increased 18.8% as compared to the quarter ended September 30, 2018, while revenue grew 20.4% in constant currency. The growth rate was favorably impacted by the Company’s continued investment in its global sales, support and marketing organizations, as well as its acquisitions. Lease license revenue increased 63.6%, or 66.4% in constant currency, as compared to the prior-year quarter, driven primarily by an increase in multi-year lease contracts. Annual maintenance contracts that were sold with new perpetual licenses, maintenance contracts for new perpetual licenses sold in previous quarters and the maintenance portion of lease license contracts each contributed to maintenance revenue growth of 12.7%, or 14.0% in constant currency. Service revenue, driven primarily by a focus on service offerings that provide on-site mentorship on simulation best practices, training and expanding simulation adoption, increased 53.3%, or 54.7% in constant currency, as compared to the prior-year quarter.

The Company continues to experience increased interest by some of its larger customers in enterprise agreements that often include longer-term, time-based licenses involving a larger number of the Company's software products. While these arrangements typically involve a higher overall transaction price, the upfront recognition of license revenue related to these larger, multi-year transactions can result in significantly higher lease license revenue and corresponding revenue growth volatility. As software products, across a large variety of applications and industries, become increasingly distributed in software-as-a-service, cloud and other subscription environments in which the licensing approach is time-based rather than perpetual, the Company is also experiencing a shifting preference from perpetual licenses to time-based licenses across a broader spectrum of its customers.

With respect to revenue, on average for the quarter ended September 30, 2019, the U.S. Dollar was approximately 2.7% stronger, when measured against the Company’s primary foreign currencies, than for the quarter ended September 30, 2018. The table below presents the impacts of currency fluctuations on revenue for the quarter ended September 30, 2019. Amounts in brackets indicate an adverse impact from currency fluctuations.

(in thousands)	Three Months Ended September 30, 2019
Euro	**$ (4,123)**
South Korean Won	**(972)**
British Pound	**(611)**
Taiwan Dollar	**(87)**
Indian Rupee	**(23)**
Japanese Yen	**1,336**
Other	**(1)**
Total	**$ (4,481)**

The net overall stronger U.S. Dollar also resulted in decreased operating income of $2.1 million for the quarter ended September 30, 2019 as compared to the quarter ended September 30, 2018.

As a percentage of revenue, the Company's international and domestic revenues, and the Company's direct and indirect revenues, were as follows:

	Three Months Ended September 30,	
	2019	**2018**
International	**57.3%**	63.3%
Domestic	**42.7%**	36.7%
Direct	**76.8%**	75.5%
Indirect	**23.2%**	24.5%

In valuing deferred revenue on the balance sheets of the Company's recent acquisitions, as of their respective acquisition dates, the Company applied the fair value provisions applicable to the accounting for business combinations, resulting in a reduction of deferred revenue as compared to its historical carrying amount. As a result, the Company's post-acquisition revenue will be less than the sum of what would have otherwise been reported by ANSYS and each acquiree absent the acquisitions. The impacts on reported revenue were $1.6 million and $3.5 million for the quarters ended September 30, 2019 and 2018, respectively. The expected impacts on reported revenue, including an estimate for the Company's fourth quarter acquisitions, range from $3.9 million to $4.5 million and $10.1 million to $10.7 million for the quarter and the year ending December 31, 2019, respectively. The Company has not yet performed a valuation of the acquired deferred revenue for its fourth quarter acquisitions. Until such valuation is completed, the expected impacts on revenue will remain preliminary estimates that are likely to change.

Deferred Revenue and Backlog:

Deferred revenue consists of billings made or payments received in advance of revenue recognition. The deferred revenue on the Company's condensed consolidated balance sheets does not represent the total value of annual or multi-year, noncancellable agreements. The Company's backlog represents installment billings for periods beyond the current quarterly billing cycle. The Company's deferred revenue and backlog as of September 30, 2019 and December 31, 2018 consisted of the following:

	Balance at September 30, 2019		
(in thousands)	**Total**	**Current**	**Long-Term**
Deferred revenue	**$ 303,315**	**$ 291,385**	**$ 11,930**
Backlog	**347,072**	**154,549**	**192,523**
Total	**$ 650,387**	**$ 445,934**	**$ 204,453**

	Balance at December 31, 2018		
(in thousands)	**Total**	**Current**	**Long-Term**
Deferred revenue	$ 343,174	$ 328,584	$ 14,590
Backlog	315,998	147,299	168,699
Total	$ 659,172	$ 475,883	$ 183,289

Revenue associated with deferred revenue and backlog that will be recognized in the subsequent twelve months is classified as current in the tables above.

Cost of Sales and Operating Expenses:

The tables below reflect the Company's operating results as presented on the condensed consolidated statements of income, which are inclusive of foreign currency translation impacts. Amounts included in the discussions that follow each table are provided in constant currency and are inclusive of costs related to the Company's acquisitions. The impact of foreign exchange translation is discussed separately, where material. Granta Design contributed $4.4 million to the overall increase in operating expenses.

	Three Months Ended September 30,					
	2019		2018		Change	
(in thousands, except percentages)	Amount	% of Revenue	Amount	% of Revenue	Amount	%
Cost of sales:						
Software licenses	**$ 5,708**	**1.7**	$ 4,291	1.5	$ 1,417	33.0
Amortization	**4,762**	**1.4**	5,530	1.9	(768)	(13.9)
Maintenance and service	**30,895**	**9.0**	26,487	9.2	4,408	16.6
Total cost of sales	**41,365**	**12.0**	36,308	12.5	5,057	13.9
Gross profit	**$ 302,534**	**88.0**	$ 253,110	87.5	$ 49,424	19.5

Software Licenses: The increase in the cost of software licenses was primarily due to increased third-party royalties of $1.2 million.

Maintenance and Service: The increase in maintenance and service costs was primarily due to the following:

- Increased stock-based compensation of $1.0 million.
- Increased salaries of $0.9 million.
- Increased IT maintenance and software hosting costs of $0.7 million.
- Increased consulting costs of $0.6 million.
- Increased third-party technical support of $0.5 million.
- Increased severance costs of $0.5 million.

The improvement in gross profit was a result of the increase in revenue, partially offset by the increase in the related cost of sales.

	Three Months Ended September 30,					
	2019		2018		Change	
(in thousands, except percentages)	Amount	% of Revenue	Amount	% of Revenue	Amount	%
Operating expenses:						
Selling, general and administrative	**$ 120,682**	**35.1**	$ 97,576	33.7	$ 23,106	23.7
Research and development	**73,018**	**21.2**	59,019	20.4	13,999	23.7
Amortization	**3,787**	**1.1**	3,491	1.2	296	8.5
Total operating expenses	**$ 197,487**	**57.4**	$ 160,086	55.3	$ 37,401	23.4

Selling, General and Administrative: The increase in selling, general and administrative costs was primarily due to the following:

- Increased salaries, incentive compensation and other headcount-related costs of $12.8 million.
- Increased stock-based compensation of $3.3 million.
- Increased professional services of $2.8 million.
- Increased business travel of $1.4 million.
- Increased third-party commissions of $1.2 million.

The Company anticipates that it will continue to make targeted investments in its global sales and marketing organizations and its global business infrastructure to enhance and support its revenue-generating activities.

Research and Development: The increase in research and development costs was primarily due to the following:

- Increased salaries, incentive compensation and other headcount-related costs of $7.5 million.
- Increased stock-based compensation of $4.6 million.

The Company has traditionally invested significant resources in research and development activities and intends to continue to make investments in expanding the ease of use and capabilities of its broad portfolio of simulation software products.

Interest Income: Interest income was $3.2 million for the quarters ended September 30, 2019 and 2018. Interest income remained consistent as a higher average rate of return on invested cash balances was offset by the Company's lower average invested cash balances.

Other Income (Expense), net: The Company's other income (expense) consisted of the following:

	Three Months Ended	
(in thousands)	**September 30, 2019**	**September 30, 2018**
Foreign currency gains (losses), net	**$ 826**	$ (1,023)
Other	**(232)**	49
Total other income (expense), net	**$ 594**	$ (974)

Income Tax Provision: The Company's income before income tax provision, income tax provision and effective tax rate were as follows:

	Three Months Ended	
(in thousands, except percentages)	**September 30, 2019**	**September 30, 2018**
Income before income tax provision	**$ 108,829**	$ 95,263
Income tax provision	**$ 19,366**	$ 5,927
Effective tax rate	**17.8%**	6.2%

The increase in the effective tax rate from the prior year was primarily due to benefits of $6.8 million recorded in 2018 related to global legal entity restructuring activities that did not recur in 2019 and decreased benefits related to stock-based compensation.

When compared to the federal and state combined statutory rate for each respective period, the effective tax rates for the quarters ended September 30, 2019 and 2018 were favorably impacted by tax benefits from stock-based compensation, the foreign-derived intangible income (FDII) deduction, and research and development credits.

Net Income: The Company's net income, diluted earnings per share and weighted average shares used in computing diluted earnings per share were as follows:

	Three Months Ended	
(in thousands, except per share data)	**September 30, 2019**	**September 30, 2018**
Net income	**$ 89,463**	$ 89,336
Diluted earnings per share	**$ 1.04**	$ 1.04
Weighted average shares outstanding - diluted	**85,733**	86,043

Nine Months Ended September 30, 2019 Compared to Nine Months Ended September 30, 2018

Revenue:

(in thousands, except percentages)	Nine Months Ended September 30, 2019	2018	Change Amount	%	Constant Currency %
Revenue:					
Lease licenses	**$ 239,953**	$ 148,795	$ 91,158	61.3	64.7
Perpetual licenses	**190,734**	201,501	(10,767)	(5.3)	(3.5)
Software licenses	**430,687**	350,296	80,391	22.9	25.5
Maintenance	**559,768**	500,962	58,806	11.7	14.1
Service	**39,209**	26,946	12,263	45.5	48.8
Maintenance and service	**598,977**	527,908	71,069	13.5	15.9
Total revenue	**$ 1,029,664**	$ 878,204	$ 151,460	17.2	19.7

The Company’s revenue in the nine months ended September 30, 2019 increased 17.2% as compared to the nine months ended September 30, 2018, while revenue grew 19.7% in constant currency. The growth rate was favorably impacted by the Company’s continued investment in its global sales, support and marketing organizations, as well as its acquisitions. Lease license revenue increased 61.3%, or 64.7% in constant currency, as compared to the nine months ended September 30, 2018, driven primarily by an increase in multi-year lease contracts. Annual maintenance contracts that were sold with new perpetual licenses, maintenance contracts for new perpetual licenses sold in previous quarters and the maintenance portion of lease license contracts each contributed to maintenance revenue growth of 11.7%, or 14.1% in constant currency. Service revenue, driven primarily by a focus on service offerings that provide on-site mentorship on simulation best practices, training and expanding simulation adoption, increased 45.5%, or 48.8% in constant currency, as compared to the nine months ended September 30, 2018. Perpetual license revenue, which is derived primarily from new sales during the nine months ended September 30, 2019, decreased 5.3%, or 3.5% in constant currency, as compared to the nine months ended September 30, 2018. The decline in perpetual license revenue was driven by a shifting preference from perpetual to lease licenses across a broad spectrum of the Company's customers.

With respect to revenue, on average for the nine months ended September 30, 2019, the U.S. Dollar was approximately 4.3% stronger, when measured against the Company’s primary foreign currencies, than for the nine months ended September 30, 2018. The table below presents the impacts of currency fluctuations on revenue for the nine months ended September 30, 2019. Amounts in brackets indicate an adverse impact from currency fluctuations.

(in thousands)	Nine Months Ended September 30, 2019
Euro	**$ (13,919)**
South Korean Won	**(4,425)**
British Pound	**(1,958)**
Indian Rupee	**(833)**
Taiwan Dollar	**(626)**
Japanese Yen	**314**
Other	**(395)**
Total	**$ (21,842)**

The net overall stronger U.S. Dollar also resulted in decreased operating income of $9.2 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018.

As a percentage of revenue, the Company's international and domestic revenues, and the Company's direct and indirect revenues, were as follows:

	Nine Months Ended September 30,	
	2019	2018
International	**58.7%**	62.7%
Domestic	**41.3%**	37.3%
Direct	**75.9%**	76.1%
Indirect	**24.1%**	23.9%

In valuing deferred revenue on the balance sheets of the Company's recent acquisitions as of their respective acquisition dates, the Company applied the fair value provisions applicable to the accounting for business combinations, resulting in a reduction of deferred revenue as compared to its historical carrying amount. As a result, the Company's post-acquisition revenue will be less than the sum of what would have otherwise been reported by ANSYS and each acquiree absent the acquisitions. The impacts on reported revenue were $6.2 million and $6.9 million for the nine months ended September 30, 2019 and 2018, respectively.

Cost of Sales and Operating Expenses:

The tables below reflect the Company's operating results as presented on the condensed consolidated statements of income, which are inclusive of foreign currency translation impacts. Amounts included in the discussions that follow each table are provided in constant currency and are inclusive of costs related to the Company's acquisitions. The impact of foreign exchange translation is discussed separately, where material. The OPTIS and Granta Design acquisitions contributed $11.6 million and $11.7 million, respectively, to the overall increase in operating expenses.

	Nine Months Ended September 30,					
	2019		2018		Change	
(in thousands, except percentages)	Amount	% of Revenue	Amount	% of Revenue	Amount	%
Cost of sales:						
Software licenses	**$ 16,620**	**1.6**	$ 12,301	1.4	$ 4,319	35.1
Amortization	**14,064**	**1.4**	23,403	2.7	(9,339)	(39.9)
Maintenance and service	**85,993**	**8.4**	80,092	9.1	5,901	7.4
Total cost of sales	**116,677**	**11.3**	115,796	13.2	881	0.8
Gross profit	**$ 912,987**	**88.7**	$ 762,408	86.8	$ 150,579	19.8

Software Licenses: The increase in the cost of software licenses was primarily due to increased third-party royalties of $4.4 million.

Amortization: The net decrease in amortization expense was primarily due to a decrease in the amortization of trade names and acquired technology due to assets that became fully amortized, which was partially offset by the amortization of newly acquired intangible assets.

Maintenance and Service: The net increase in maintenance and service costs was primarily due to the following:

- Increased stock-based compensation of $2.1 million.
- Increased salaries of $2.1 million.
- Increased third-party technical support of $1.1 million.
- Increased consulting costs of $1.1 million.
- Decreased costs related to foreign exchange translation of $1.9 million due to a stronger U.S. Dollar.

The improvement in gross profit was a result of the increase in revenue, partially offset by the increase in the related cost of sales.

(in thousands, except percentages)	Nine Months Ended September 30, 2019 Amount	% of Revenue	2018 Amount	% of Revenue	Change Amount	%
Operating expenses:						
Selling, general and administrative	**$ 353,263**	**34.3**	$ 280,443	31.9	$ 72,820	26.0
Research and development	**219,058**	**21.3**	174,906	19.9	44,152	25.2
Amortization	**11,342**	**1.1**	10,421	1.2	921	8.8
Total operating expenses	**$ 583,663**	**56.7**	$ 465,770	53.0	$ 117,893	25.3

Selling, General and Administrative: The net increase in selling, general and administrative costs was primarily due to the following:

- Increased salaries, incentive compensation and other headcount-related costs of $44.7 million.
- Increased stock-based compensation of $11.1 million.
- Increased business travel of $5.2 million.
- Increased professional fees of $4.0 million.
- Increased consulting costs of $3.0 million.
- Increased marketing expenses of $2.9 million.
- Decreased costs related to foreign exchange translation of $6.5 million due to a stronger U.S. Dollar.

Research and Development: The net increase in research and development costs was primarily due to the following:

- Increased salaries, incentive compensation and other headcount-related costs of $27.4 million.
- Increased stock-based compensation of $12.6 million.
- Decreased costs related to foreign exchange translation of $3.5 million due to a stronger U.S. Dollar.

Interest Income: Interest income for the nine months ended September 30, 2019 was $9.6 million as compared to $7.7 million for the nine months ended September 30, 2018. Interest income increased as a result of an increase in the average rate of return on invested cash balances.

Other Expense, net: The Company's other expense consisted of the following:

(in thousands)	Nine Months Ended September 30, 2019	September 30, 2018
Foreign currency losses, net	**$ (1,556)**	$ (2,346)
Other	**58**	57
Total other expense, net	**$ (1,498)**	$ (2,289)

Income Tax Provision: The Company's income before income tax provision, income tax provision and effective tax rate were as follows:

	Nine Months Ended	
(in thousands, except percentages)	September 30, 2019	September 30, 2018
Income before income tax provision	**$ 337,436**	$ 302,023
Income tax provision	**$ 51,993**	$ 35,811
Effective tax rate	**15.4%**	11.9%

In February 2019, the U.S. government published final regulations relating to the transition tax, enacted as part of the Tax Cuts and Jobs Act. In accordance with the final regulations, the Company adjusted its provisional transition tax calculations and recorded a tax benefit of $1.8 million during the nine months ended September 30, 2019.

The increase in the effective tax rate from the prior year was primarily due to benefits of $6.8 million recorded in 2018 related to global legal entity restructuring activities that did not recur in 2019 and decreased benefits related to stock-based compensation.

When compared to the federal and state combined statutory rate for each respective period, the effective tax rates for the nine months ended September 30, 2019 and 2018 were favorably impacted by tax benefits from stock-based compensation, the FDII deduction, and research and development credits.

Net Income: The Company's net income, diluted earnings per share and weighted average shares used in computing diluted earnings per share were as follows:

	Nine Months Ended	
(in thousands, except per share data)	September 30, 2019	September 30, 2018
Net income	**$ 285,443**	$ 266,212
Diluted earnings per share	**$ 3.34**	$ 3.09
Weighted average shares outstanding - diluted	**85,570**	86,060

Non-GAAP Results

The Company provides non-GAAP revenue, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share as supplemental measures to GAAP regarding the Company's operational performance. These financial measures exclude the impact of certain items and, therefore, have not been calculated in accordance with GAAP. A detailed explanation and a reconciliation of each non-GAAP financial measure to its most comparable GAAP financial measure are described below.

	Three Months Ended					
	September 30, 2019			September 30, 2018		
(in thousands, except percentages and per share data)	**GAAP Results**	**Adjustments**	**Non-GAAP Results**	**GAAP Results**	**Adjustments**	**Non-GAAP Results**
Total revenue	**$ 343,899**	**$ 1,596 (1)**	**$ 345,495**	$ 289,418	$ 3,548 (4)	$ 292,966
Operating income	**105,047**	**44,675 (2)**	**149,722**	93,024	35,889 (5)	128,913
Operating profit margin	**30.5%**		**43.3%**	32.1%		44.0%
Net income	**$ 89,463**	**$ 32,245 (3)**	**$ 121,708**	$ 89,336	$ 23,557 (6)	$ 112,893
Earnings per share – diluted:						
Earnings per share	**$ 1.04**		**$ 1.42**	$ 1.04		$ 1.31
Weighted average shares	**85,733**		**85,733**	86,043		86,043

(1) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(2) Amount represents $31.9 million of stock-based compensation expense, $0.1 million of excess payroll taxes related to stock-based awards, $8.5 million of amortization expense associated with intangible assets acquired in business combinations, $2.5 million of transaction expenses related to business combinations and the $1.6 million adjustment to revenue as reflected in (1) above.

(3) Amount represents the impact of the adjustments to operating income referred to in (2) above, decreased for the related income tax impact of $12.4 million.

(4) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(5) Amount represents $23.0 million of stock-based compensation expense, $0.3 million of excess payroll taxes related to stock-based awards, $9.0 million of amortization expense associated with intangible assets acquired in business combinations and the $3.5 million adjustment to revenue as reflected in (4) above.

(6) Amount represents the impact of the adjustments to operating income referred to in (5) above, decreased for the related income tax impact of $11.7 million, adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of $0.5 million, and rabbi trust income of $0.1 million.

(in thousands, except percentages and per share data)	Nine Months Ended September 30, 2019 GAAP Results	Adjustments		Non-GAAP Results	September 30, 2018 GAAP Results	Adjustments		Non-GAAP Results
Total revenue	**$1,029,664**	**$ 6,249**	**(1)**	**$1,035,913**	$ 878,204	$ 6,897	(4)	$ 885,101
Operating income	**329,324**	**126,597**	**(2)**	**455,921**	296,638	105,796	(5)	402,434
Operating profit margin	**32.0%**			**44.0%**	33.8%			45.5%
Net income	**$ 285,443**	**$ 84,841**	**(3)**	**$ 370,284**	$ 266,212	$ 65,591	(6)	$ 331,803
Earnings per share – diluted:								
Earnings per share	**$ 3.34**			**$ 4.33**	$ 3.09			$ 3.86
Weighted average shares	**85,570**			**85,570**	86,060			86,060

(1) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(2) Amount represents $84.8 million of stock-based compensation expense, $4.5 million of excess payroll taxes related to stock-based awards, $25.4 million of amortization expense associated with intangible assets acquired in business combinations, $5.6 million of transaction expenses related to business combinations and the $6.2 million adjustment to revenue as reflected in (1) above.

(3) Amount represents the impact of the adjustments to operating income referred to in (2) above, decreased for the related income tax impact of $39.7 million, adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of $1.8 million, and rabbi trust income of $0.3 million.

(4) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(5) Amount represents $58.9 million of stock-based compensation expense, $3.8 million of excess payroll taxes related to stock-based awards, $33.8 million of amortization expense associated with intangible assets acquired in business combinations, $2.4 million of transaction expenses related to business combinations and the $6.9 million adjustment to revenue as reflected in (4) above.

(6) Amount represents the impact of the adjustments to operating income referred to in (5) above, decreased for the related income tax impact of $41.0 million and rabbi trust income of $0.1 million, and increased for adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of $0.9 million.

Non-GAAP Measures

Management uses non-GAAP financial measures (a) to evaluate the Company's historical and prospective financial performance as well as its performance relative to its competitors, (b) to set internal sales targets and spending budgets, (c) to allocate resources, (d) to measure operational profitability and the accuracy of forecasting, (e) to assess financial discipline over operational expenditures and (f) as an important factor in determining variable compensation for management and its employees. In addition, many financial analysts that follow the Company focus on and publish both historical results and future projections based on non-GAAP financial measures. The Company believes that it is in the best interest of its investors to provide this information to analysts so that they accurately report the non-GAAP financial information. Moreover, investors have historically requested, and the Company has historically reported, these non-GAAP financial measures as a means of providing consistent and comparable information with past reports of financial results.

While management believes that these non-GAAP financial measures provide useful supplemental information to investors, there are limitations associated with the use of these non-GAAP financial measures. These non-GAAP financial measures are not prepared in accordance with GAAP, are not reported by all the Company's competitors and may not be directly comparable to similarly titled measures of the Company's competitors due to potential differences in the exact method of calculation. The Company compensates for these limitations by using these non-GAAP financial measures as supplements to GAAP financial measures and by reviewing the reconciliations of the non-GAAP financial measures to their most comparable GAAP financial measures.

The adjustments to these non-GAAP financial measures, and the basis for such adjustments, are outlined below:

Acquisition accounting for deferred revenue and its related tax impact. Historically, the Company has consummated acquisitions in order to support its strategic and other business objectives. In accordance with the fair value provisions applicable to the accounting for business combinations, acquired deferred revenue is often recorded on the opening balance sheet at an amount that is lower than the historical carrying value. Although this acquisition accounting requirement has no impact on the Company's business or cash flow, it adversely impacts the Company's reported GAAP revenue in the reporting periods following an acquisition. In order to provide investors with financial information that facilitates comparison of both historical and future results, the Company provides non-GAAP financial measures which exclude the impact of the acquisition accounting adjustment. The Company believes that this non-GAAP financial adjustment is useful to investors because it allows investors to (a) evaluate the effectiveness of the methodology and information used by management in its financial and operational decision-making, and (b) compare past and future reports of financial results of the Company as the revenue reduction related to acquired deferred revenue will not recur when related annual lease licenses and software maintenance contracts are renewed in future periods.

Amortization of intangible assets from acquisitions and its related tax impact. The Company incurs amortization of intangible assets, included in its GAAP presentation of amortization expense, related to various acquisitions it has made. Management excludes these expenses and their related tax impact for the purpose of calculating non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when it evaluates the continuing operational performance of the Company because these costs are fixed at the time of an acquisition, are then amortized over a period of several years after the acquisition and generally cannot be changed or influenced by management after the acquisition. Accordingly, management does not consider these expenses for purposes of evaluating the performance of the Company during the applicable time period after the acquisition, and it excludes such expenses when making decisions to allocate resources. The Company believes that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate the effectiveness of the methodology and information used by management in its financial and operational decision-making, and (b) compare past reports of financial results of the Company as the Company has historically reported these non-GAAP financial measures.

Stock-based compensation expense and its related tax impact. The Company incurs expense related to stock-based compensation included in its GAAP presentation of cost of software licenses; cost of maintenance and service; research and development expense; and selling, general and administrative expense. This non-GAAP adjustment also includes excess payroll tax expense related to stock-based compensation. Stock-based compensation expense (benefit) incurred in connection with the Company's deferred compensation plan held in a rabbi trust includes an offsetting benefit (charge) recorded in other income (expense). Although stock-based compensation is an expense of the Company and viewed as a form of compensation, management excludes these expenses for the purpose of calculating non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when it evaluates the continuing operational performance of the Company. Management similarly excludes income (expense) related to assets held in a rabbi trust in connection with the Company's deferred compensation plan. Specifically, the Company excludes stock-based compensation and income (expense) related to assets held in the deferred compensation plan rabbi trust during its annual budgeting process and its quarterly and annual assessments of the Company's and management's performance. The annual budgeting process is the primary mechanism whereby the Company allocates resources to various initiatives and operational requirements. Additionally, the annual review by the board of directors during which it compares the Company's historical business model and profitability to the planned business model and profitability for the forthcoming year excludes the impact of stock-based compensation. In evaluating the performance of senior management and department managers, charges related to stock-based compensation are excluded from expenditure and profitability results. In fact, the Company records stock-based compensation expense into a stand-alone cost center for which no single operational manager is responsible or accountable. In this way, management can review, on a period-to-period basis, each manager's performance and assess financial discipline over operational expenditures without the effect of stock-based compensation. The Company believes that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate the Company's operating results and the effectiveness of the methodology used by management to review the Company's operating results, and (b) review historical comparability in the Company's financial reporting as well as comparability with competitors' operating results.

Restructuring charges and the related tax impact. The Company occasionally incurs expenses for restructuring its workforce included in its GAAP presentation of cost of software licenses; cost of maintenance and service; research and development expense; and selling, general and administrative expense. Management excludes these expenses for the purpose of calculating non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when it evaluates the continuing operational performance of the Company, as it generally does not incur these expenses as a part of its operations. The Company believes that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate the Company's operating results and the effectiveness of the methodology used by management to review the Company's operating results, and (b) review historical comparability in the Company's financial reporting as well as comparability with competitors' operating results.

Transaction costs related to business combinations. The Company incurs expenses for professional services rendered in connection with business combinations, which are included in its GAAP presentation of selling, general and administrative expense. These expenses are generally not tax-deductible. Management excludes these acquisition-related transaction expenses, derived from announced acquisitions, for the purpose of calculating non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when it evaluates the continuing operational performance of the Company, as it generally would not have otherwise incurred these expenses in the periods presented as a part of its operations. The Company believes that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate the Company's operating results and the effectiveness of the methodology used by management to review the Company's operating results, and (b) review historical comparability in the Company's financial reporting as well as comparability with competitors' operating results.

Tax Cuts and Jobs Act. The Company recorded impacts to its income tax provision related to the enactment of the Tax Cuts and Jobs Act, specifically for the transition tax related to unrepatriated cash and the impacts of the tax rate change on net deferred tax assets. Management excludes these impacts for the purpose of calculating non-GAAP net income and non-GAAP diluted earnings per share when it evaluates the continuing operational performance of the Company, as (i) the charges are not expected to recur as part of its normal operations and (ii) the charges resulted from the extremely infrequent event of major U.S. tax reform, the last such reform having occurred in 1986. The Company believes that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate the Company's operating results and the effectiveness of the methodology used by management to review the Company's operating results, and (b) review historical comparability in the Company's financial reporting.

Non-GAAP financial measures are not in accordance with, or an alternative for, GAAP. The Company's non-GAAP financial measures are not meant to be considered in isolation or as a substitute for comparable GAAP financial measures and should be read only in conjunction with the Company's consolidated financial statements prepared in accordance with GAAP.

The Company has provided a reconciliation of the non-GAAP financial measures to the most directly comparable GAAP financial measures as listed below:

GAAP Reporting Measure	Non-GAAP Reporting Measure
Revenue	Non-GAAP Revenue
Operating Income	Non-GAAP Operating Income
Operating Profit Margin	Non-GAAP Operating Profit Margin
Net Income	Non-GAAP Net Income
Diluted Earnings Per Share	Non-GAAP Diluted Earnings Per Share

Liquidity and Capital Resources

(in thousands)	September 30, 2019	December 31, 2018	Change
Cash, cash equivalents and short-term investments	**$ 732,902**	$ 777,364	$ (44,462)
Working capital	**$ 732,396**	$ 786,410	$ (54,014)

Cash, Cash Equivalents and Short-Term Investments

Cash and cash equivalents consist primarily of highly liquid investments such as money market funds and deposits held at major banks. Short-term investments consist primarily of deposits held by certain foreign subsidiaries of the Company with original maturities of three months to one year. The following table presents the Company's foreign and domestic holdings of cash, cash equivalents and short-term investments as of September 30, 2019 and December 31, 2018:

(in thousands, except percentages)	September 30, 2019	% of Total	December 31, 2018	% of Total
Domestic	**$ 502,706**	**68.6**	$ 616,249	79.3
Foreign	**230,196**	**31.4**	161,115	20.7
Total	**$ 732,902**		$ 777,364	

In general, it is the practice and intention of the Company to repatriate previously taxed earnings in excess of working capital needs and to reinvest all other earnings of its non-U.S. subsidiaries. As part of the Tax Cuts and Jobs Act, the Company incurred U.S. tax on substantially all of the earnings of its non-U.S. subsidiaries as part of the transition tax. This tax increased the Company’s previously taxed earnings and allows for the repatriation of the majority of its foreign earnings without any residual U.S. federal tax. The Company does not believe that there is an excess of the financial reporting basis over the tax basis of investments in foreign subsidiaries. Accordingly, any repatriation in excess of previously taxed earnings will be a non-taxable return of basis.

The amount of cash, cash equivalents and short-term investments held by foreign subsidiaries is subject to translation adjustments caused by changes in foreign currency exchange rates as of the end of each respective reporting period, the offset to which is recorded in accumulated other comprehensive loss on the Company's condensed consolidated balance sheet.

Cash Flows from Operating Activities

	Nine Months Ended September 30,		
(in thousands)	2019	2018	Change
Net cash provided by operating activities	**$ 360,485**	$ 353,503	$ 6,982

Net cash provided by operating activities increased during the current fiscal year due to increased net income (net of non-cash operating adjustments) of $70.6 million, partially offset by decreased net cash flows from operating assets and liabilities of $63.6 million.

Cash Flows from Investing Activities

	Nine Months Ended September 30,		
(in thousands)	2019	2018	Change
Net cash used in investing activities	**$ (333,448)**	$ (301,613)	$ (31,835)

Net cash used in investing activities increased during the current fiscal year due primarily to increased capital expenditures of $12.7 million and increased acquisition-related net cash outlays of $12.0 million. The Company currently plans capital spending of $44 million to $50 million for the 2019 fiscal year as compared to the $21.8 million that was spent in 2018. The capital spending plan in 2019 includes $9.5 million to acquire the corporate headquarters building in connection with the acquisition of LSTC in the fourth quarter. The level of spending will depend on various factors, including the growth of the business and general economic conditions.

Cash Flows from Financing Activities

	Nine Months Ended September 30,		
(in thousands)	2019	2018	Change
Net cash used in financing activities	**$ (70,036)**	$ (187,283)	$ 117,247

Net cash used in financing activities decreased during the current fiscal year due primarily to decreased stock repurchases of $133.7 million, partially offset by increased restricted stock withholding taxes paid in lieu of issued shares of $11.0 million and decreased proceeds from shares issued for stock-based compensation of $8.8 million.

Other Cash Flow Information

The Company believes that existing cash and cash equivalent balances of $732.7 million, together with cash generated from operations and access to the $500 million revolving credit facility, will be sufficient to meet the Company’s working capital and capital expenditure requirements through the next twelve months. The Company’s cash requirements in the future may also be financed through additional equity or debt financings. There can be no assurance that such financings can be obtained on favorable terms, if at all.

On November 1, 2019, the Company completed the acquisition of 100% of the shares of LSTC, the premier provider of explicit dynamics and other advanced finite element analysis technology. The transaction closed with a purchase price of $779.9 million, which included $472.7 million in cash and the issuance of 1.4 million shares of ANSYS common stock in an unregistered offering to the prior owners of LSTC. The fair value of the common stock issued as consideration was based on the volume-weighted average price of ANSYS common stock on November 1, 2019 of $220.74, resulting in a fair value of $307.2 million. In conjunction with the transaction, ANSYS obtained $500.0 million of term debt financing to fund the cash component of the purchase price.

On November 1, 2019, the Company completed the acquisition of 100% of the shares of Dynardo, a leading provider of multidisciplinary analysis and optimization technology, for a purchase price of approximately €30.0 million.

Under the Company's stock repurchase program, the Company repurchased shares during the nine months ended September 30, 2019 and 2018, as follows:

	Nine Months Ended	
(in thousands, except per share data)	September 30, 2019	September 30, 2018
Number of shares repurchased	**330**	1,174
Average price paid per share	**$ 179.41**	$ 164.14
Total cost	**$ 59,116**	$ 192,787

In February 2018, the Company's Board of Directors increased the number of shares authorized for repurchase to a total of 5.0 million shares under the stock repurchase program. As of September 30, 2019, 3.5 million shares remained available for repurchase under the program.

The Company's authorized repurchase program does not have an expiration date, and the pace of the repurchase activity will depend on factors such as working capital needs, cash requirements for acquisitions, the Company's stock price, and economic and market conditions. The Company's stock repurchases may be effected from time to time through open market purchases or pursuant to a Rule 10b5-1 plan.

The Company continues to generate positive cash flows from operating activities and believes that the best uses of its excess cash are to invest in the business and acquire or make investments in complementary companies, products, services and technologies. Any future acquisitions may be funded by available cash and investments, cash generated from operations, debt financing, or the issuance of additional securities. Additionally, the Company has in the past, and expects in the future, to repurchase stock in order to both offset dilution and return capital, in excess of its requirements, to stockholders with the goal of increasing stockholder value.

Off-Balance-Sheet Arrangements

The Company does not have any special-purpose entities or off-balance-sheet financing.

Contractual Obligations

During the nine months ended September 30, 2019, the Company entered into an office lease amendment that resulted in an additional $12.6 million obligation and expires in December 2028. The Company's base rent escalates over the lease term and will range from approximately $1.2 million - $1.6 million per annum.

There were no other material changes to the Company’s contractual obligations during the nine months ended September 30, 2019 as compared to those previously reported in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” within the Company’s 2018 Form 10-K.

Critical Accounting Policies and Estimates

During the first quarter of 2019, the Company completed the annual impairment test for goodwill and the indefinite-lived intangible asset and determined that these assets had not been impaired as of the test date, January 1, 2019. No other events or circumstances changed during the nine months ended September 30, 2019 that would indicate that the fair values of the Company's reporting unit and indefinite-lived intangible asset are below their carrying amounts.

No significant changes have occurred to the Company’s critical accounting policies and estimates as previously reported within “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Company’s 2018 Form 10-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Interest Income Rate Risk. Changes in the overall level of interest rates affect the interest income that is generated from the Company's cash, cash equivalents and short-term investments. For the three and nine months ended September 30, 2019, total interest income was $3.2 million and $9.6 million, respectively. Cash and cash equivalents consist primarily of highly liquid investments such as money market funds and deposits held at major banks. Short-term investments consist primarily of deposits held by certain foreign subsidiaries of the Company with original maturities of three months to one year.

Foreign Currency Transaction Risk. As the Company operates in international regions, a portion of its revenue, expenses, cash, accounts receivable and payment obligations are denominated in foreign currencies. As a result, changes in currency exchange rates will affect the Company's financial position, results of operations and cash flows. The Company is most impacted by movements in and among the British Pound, Euro, Japanese Yen, South Korean Won, and U.S. Dollar.

With respect to revenue, on average for the quarter ended September 30, 2019, the U.S. Dollar was approximately 2.7% stronger, when measured against the Company's primary foreign currencies, than for the quarter ended September 30, 2018. With respect to revenue, on average for the nine months ended September 30, 2019, the U.S. Dollar was approximately 4.3% stronger, when measured against the Company's primary foreign currencies, than for the nine months ended September 30, 2018. The table below presents the impacts of currency fluctuations on revenue for the three and nine months ended September 30, 2019. Amounts in brackets indicate a net adverse impact from currency fluctuations.

(in thousands)	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Euro	$ (4,123)	$ (13,919)
South Korean Won	(972)	(4,425)
British Pound	(611)	(1,958)
Indian Rupee	(23)	(833)
Taiwan Dollar	(87)	(626)
Japanese Yen	1,336	314
Other	(1)	(395)
Total	$ (4,481)	$ (21,842)

The net overall stronger U.S. Dollar also resulted in decreased operating income of $2.1 million and $9.2 million for the three and nine months ended September 30, 2019, respectively, as compared to the three and nine months ended September 30, 2018.

The most significant currency impacts on revenue and operating income are typically attributable to U.S. Dollar exchange rate changes against the British Pound, Euro, Japanese Yen and South Korean Won. The relevant exchange rates for these currencies are as reflected in the charts below:

	Period-End Exchange Rates			
As of	**GBP/USD**	**EUR/USD**	**USD/JPY**	**USD/KRW**
September 30, 2018	1.303	1.161	113.714	1,110.371
December 31, 2018	1.276	1.147	109.589	1,115.325
September 30, 2019	**1.229**	**1.090**	**108.085**	**1,200.048**

	Average Exchange Rates			
Three Months Ended	**GBP/USD**	**EUR/USD**	**USD/JPY**	**USD/KRW**
September 30, 2018	1.303	1.163	111.532	1,121.957
September 30, 2019	**1.232**	**1.111**	**107.335**	**1,195.362**

	Average Exchange Rates			
Nine Months Ended	**GBP/USD**	**EUR/USD**	**USD/JPY**	**USD/KRW**
September 30, 2018	1.352	1.195	109.636	1,091.862
September 30, 2019	**1.273**	**1.123**	**109.131**	**1,162.070**

No other material change has occurred in the Company's market risk subsequent to December 31, 2018.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures. As required by Rules 13a-15 and 15d-15 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Company has evaluated, with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, the effectiveness of the design and operation of its disclosure controls and procedures as of the end of the period covered by this report. Based on such evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that such disclosure controls and procedures are effective, as defined in Rule 13a-15(e) of the Exchange Act.

The Company believes, based on its knowledge, that the financial statements and other financial information included in this report fairly present, in all material respects, the financial condition, results of operations and cash flows of the Company as of and for the periods presented in this report. The Company is committed to both a sound internal control environment and to good corporate governance.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate.

From time to time, the Company reviews the disclosure controls and procedures and may make changes to enhance their effectiveness and to ensure that the Company’s systems evolve with its business.

Changes in Internal Control. There were no changes in the Company’s internal control over financial reporting that occurred during the three months ended September 30, 2019 that materially affected, or were reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

The Company is subject to various investigations, claims and legal proceedings that arise in the ordinary course of business, including commercial disputes, labor and employment matters, tax audits, alleged infringement of intellectual property rights and other matters. In the opinion of the Company, the resolution of pending matters is not expected to have a material adverse effect on the Company's consolidated results of operations, cash flows or financial position. However, each of these matters is subject to various uncertainties and it is possible that an unfavorable resolution of one or more of these proceedings could materially affect the Company's results of operations, cash flows or financial position.

Item 1A. Risk Factors

The Company cautions investors that its performance (and, therefore, any forward-looking statement) is subject to risks and uncertainties. Various important factors may cause the Company’s future results to differ materially from those projected in any forward-looking statement. These factors were disclosed in, but are not limited to, the items within the Company’s 2018 Form 10-K, Part I, Item 1A. "Risk Factors." The risk factor set forth below is an addition to those included in the Company's 2018 Form 10-K.

Additional Risks Associated with International Activities

Due to the global nature of the Company’s business, it is subject to import and export restrictions and regulations including the Export Administration Regulations administered by the U.S. Bureau of Industry and Security (BIS). During the second quarter of 2019, the BIS placed certain entities on the Entity List. Among the entities included on the list are existing or prospective customers of the Company, including Huawei. The restrictions limit the Company’s ability to deliver products and services to these existing or prospective customers and, in the absence of a license from the BIS, there may be a negative effect on the Company’s ability to sell products and services to these customers in the future. The inclusion of companies on the restricted Entity List may also encourage customers to seek substitute products from the Company’s competitors that are not subject to these restrictions or to develop their own products. In addition, although customers are not prohibited from paying accounts receivable for products or services the Company previously provided, the credit risks associated with these accounts may have increased as a result of these limitations. The Company cannot predict whether or when any changes will be made that eliminate or decrease these limitations on the Company’s ability to sell products and provide services to these customers. Based on current restrictions, the Company does not believe there will be a material impact to its financial results for the remainder of 2019. However, other customers have been and may continue to be added to the Entity List and/or subject to trade restrictions. The Company is unable to predict the duration of the export restrictions imposed with respect to any particular customer or the long-term effects on the Company. In addition, there may be indirect impacts to the Company’s business that cannot be reasonably quantified, including that the Company’s business may also be impacted by other trade restrictions that may be imposed by the U.S., China, or other countries. Restrictions on the Company’s ability to sell and ship the Company’s products to customers on the Entity List could have an adverse effect on the Company's business, results of operations or financial condition.

Violators of these export controls may be subject to significant penalties, which may include significant monetary fines, criminal proceedings against them and their officers and employees, a denial of export privileges, and suspension or debarment from selling products or services to the federal government. Any such penalties could have an adverse effect on the Company’s business, financial condition, operating results and cash flows. In addition, the political and media scrutiny surrounding any governmental investigation of the Company could cause significant expense and reputational harm and distract senior executives from managing normal day-to-day operations.

The Company’s products could also be shipped to denied parties by third parties, including the Company’s channel partners. Even though the Company takes precautions to ensure that its channel partners comply with all relevant import and export regulations, any failure by channel partners to comply with such regulations could have negative consequences for the Company, including reputational harm, government investigations and penalties.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Table of Contents

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit No.	Exhibit
10.1	First Amendment to Credit Agreement dated October 16, 2019, by and among ANSYS, Inc., the lenders party thereto and Bank of America, N.A. (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed October 21, 2019, and incorporated herein by reference).
10.2	Non-Employee Director Deferred Compensation Plan, attached hereto as Exhibit 10.2*.
15	Independent Registered Public Accountant’s Letter Regarding Unaudited Financial Information.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Indicates management contract or compensatory plan, contract or arrangement.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ANSYS, Inc.

Date:	November 7, 2019	By:	/s/ *Ajei S. Gopal*
			Ajei S. Gopal
			President and Chief Executive Officer
Date:	November 7, 2019	By:	/s/ *Maria T. Shields*
			Maria T. Shields
			Chief Financial Officer

EXHIBIT 10.2

ANSYS, INC.

NON-EMPLOYEE DIRECTOR DEFERRED COMPENSATION PLAN

Effective November 1, 2016

WHEREAS, certain Non-Employee Directors (defined below) have previously been granted DSUs (defined below) as part of their Non-Employee Director compensation from the Company (defined below); and

WHEREAS, the Board (defined below) has determined to provide Non-Employee Directors who currently hold DSUs with the opportunity to diversify a portion of such DSUs; and

WHEREAS, the Board may in the future provide Non-Employee Directors with the ability to defer other items of Compensation (defined below);

NOW, THEREFORE, this Plan is adopted effective as of the date written above.

ARTICLE I - PURPOSE OF PLAN

The Plan is a nonqualified deferred compensation plan which is unfunded and is maintained primarily for the purpose of providing deferred compensation for Non-Employee Directors. The Plan enables Non-Employee Directors to diversify their outstanding DSUs by choosing different investment alternatives upon which the future value of DSUs shall be based. The Plan does not allow Non-Employee Directors to change the time or form of payment with respect to DSUs. The Plan also enables Non-Employee Directors to defer certain items of Compensation in the future, should the Board choose to allow such a deferral arrangement. The Plan is not intended to meet the qualification requirements of Section 401(a) of the Code (defined below), but it is intended to meet the requirements of Section 409A of the Code, and it shall be operated and interpreted consistent with that intent.

ARTICLE II - DEFINITIONS

For purposes of this Plan, the following terms shall have the meanings indicated, unless the context clearly indicates otherwise:

2.1 <u>Account</u>

"Account" means the bookkeeping accounts maintained by the Company or its designated third party administrator in accordance with Article VI of the Plan to track DSUs subject to a Diversification Election, Deferral Election and, in either case, Investment Balance thereon. A Participant's Account shall be utilized solely as a device for the determination and measurement of the amounts to be paid to the Participant pursuant to the Plan. A Participant's Account shall not constitute or be treated as a trust fund of any kind.

2.2 <u>Beneficiary</u>

"Beneficiary" means the person, persons or entity entitled under Article VIII to receive any Plan benefits payable after a Participant's death.

2.3 <u>Board</u>

"Board" means the Board of Directors of the Company.

2.4 Change in Control Event

A "Change in Control Event" means a change in the ownership of the Company, a change in the effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company, each within the meaning of Section 409A of the Code and the regulations promulgated thereunder.

2.5 Code

"Code" means the Internal Revenue Code of 1986, as amended.

2.6 Cash Compensation

"Cash Compensation" means cash fees paid by the Company to a Non-Employee Director for service on the Board.

2.7 Common Stock

"Common Stock" means the Company's common stock, par value $0.01 per share.

2.8 Company

"Company" means ANSYS, Inc.

2.9 Compensation

"Compensation" means Cash Compensation and Equity Compensation, before reduction for amounts deferred under this Plan. Compensation does not include retention bonus, severance, expense reimbursements, any form of benefits, or any amount that has been previously deferred under the Plan or any other arrangement subject to Section 409A of the Code.

2.10 Deferral Election

"Deferral Election" means one or more written or electronic elections (including by on-line procedures established by the Plan Administrator) submitted by a Participant to the Plan Administrator pursuant to Article IV in which a Participant made an election to defer Cash Compensation and/or Equity Compensation and for which a Participation Agreement has been submitted by the Participant to the Plan Administrator in accordance with the terms of the Plan.

2.11 Diversification Election

"Diversification Election" means a written or electronic election (including by on-line procedures established by the Plan Administrator) submitted by a Participant to the Plan Administrator pursuant to Article V in which a Participant made an election to diversify all or a portion of such Participant's DSUs by choosing a different investment alternative and for which a Participation Agreement has been submitted by the Participant to the Plan Administrator in accordance with the terms of the Plan.

2.12 DSU

"DSU" means a deferred stock unit award representing phantom stock units to be settled upon the recipient's cessation of service on the Board and that were issued to a Participant under the Equity Plan (including a prior version of the Equity Plan) for service as a Non-Employee Director of the Board.

2.13 Elective Deferred Compensation

"Elective Deferred Compensation" means the amount of Compensation that a Participant elects to defer pursuant to a Deferral Election.

2.14 Equity Compensation

"Equity Compensation" means restricted stock units granted by the Company to a Non-Employee Director for service on the Board.

2.15 Equity Plan

"Equity Plan" means the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan as may be amended or superseded from time to time.

2.16 Holding Requirement

"Holding Requirement" means the minimum stock ownership guidelines applicable to Non-Employee Directors under the Company's Corporate Governance Guidelines as amended from time to time.

2.17 Investment Balance

"Investment Balance" means the appreciation or depreciation in the net asset value, and the reinvestment of cash distributions, of the investment alternatives selected by the Participant in accordance with Section 6.4.

2.18 Newly Eligible Participant

"Newly Eligible Participant" means a Non-Employee Director who is not previously eligible to make any deferral elections under any nonqualified deferred compensation plan that would be aggregated with this Plan under Section 409A of the Code and the regulations promulgated thereunder.

2.19 Non-Employee Director

"Non-Employee Director" means a member of the Board who is not also an employee of the Company.

2.20 Participant

"Participant" means any Non-Employee Director who is participating or has participated in this Plan.

2.21 Participation Agreement

"Participation Agreement" means a written or electronic agreement (including by on-line procedures established by the Plan Administrator) submitted by a Participant to the Plan Administrator in which a Participant made a Deferral Election or Diversification Election. There may be a separate Participation Agreement for each Deferral Election; however, the Deferral Election of a Participant shall continue in effect for subsequent years until modified by the Participant as permitted by the Plan. There may be a separate Participation Agreement for each Diversification Election.

2.22 Plan

“Plan” means this Non-Employee Director Deferred Compensation Plan, as amended from time to time.

2.23 Plan Administrator

“Plan Administrator” means the Board or its delegate(s).

2.24 Plan Year

“Plan Year” means a calendar year.

2.25 Separation from Service or Separates from Service

“Separation from Service” or “Separates from Service” means, with respect to a Participant, the date on which the Participant ceases to provide services to the Company (i.e., when a Non-Employee Director ceases to be a member of the Board for any reason including without limitation by reason of retirement, resignation, removal or death) as determined by the Plan Administrator in accordance with Section 409A of the Code and the regulations promulgated thereunder.

2.26 Shares

“Shares” means shares of Common Stock of the Company. On and after a Change in Control Event in which the Company’s Common Stock is no longer outstanding, Shares shall mean the cash, shares or other consideration paid with respect to shares of Common Stock of the Company in connection with such Change in Control Event.

ARTICLE III - PARTICIPATION GENERALLY; VESTING

3.1 Eligibility.

Participants are limited to Non-Employee Directors who are designated as eligible from time to time by the Plan Administrator. Non-Employee Directors who have previously been awarded DSUs are eligible to make a Diversification Election in accordance with Article V hereof. If the Board determines in the future to permit Deferral Elections, then Non-Employee Directors who are designated by the Plan Administrator are eligible to enter into a Deferral Election in accordance with Article IV hereof. If the Board determines in the future to permit Diversification Elections with respect to Equity Compensation that is subject to a Deferral Election, then Non-Employee Directors who are designated by the Plan Administrator are eligible to enter into a Diversification Election in accordance with Article V hereof.

3.2 Participation.

An individually eligible Non-Employee Director shall be a Participant in the Plan in a Plan Year by either submitting a Participation Agreement that contains a Diversification Election to the Plan Administrator in accordance with the rules set forth in Section V hereof or submitting a Participation Agreement that contains a Deferral Election to the Plan Administrator prior to the beginning of the Plan Year in accordance with the rules set forth in Section IV hereof.

3.3 Vesting

A Participant shall be fully vested in such Participant's Account including all amounts attributable to Elective Deferred Compensation, any Diversification Election and any Investment Balance thereon.

ARTICLE IV - DEFERRAL ELECTIONS

4.1 Form of Deferral; Minimum Deferral; Time and Form of Distribution

Deferral Elections shall be available with respect to a Plan Year if the Board determines to make such elections available. The Board may determine to allow Deferral Elections for all Compensation, Cash Compensation only or Equity Compensation only. Once the Board determines to make Deferral Elections available, such elections shall continue to be available for future Plan Years unless otherwise determined by the Plan Administrator. A Participant may elect any of the following Deferral Elections in the Participation Agreement:

(a) Cash Compensation Deferral Election. If permitted by the Plan Administrator, a Participant may voluntarily elect to defer 100 percent of such Participant's Cash Compensation. The Deferral Election for Cash Compensation shall be delivered to the Plan Administrator prior to the beginning of the Plan Year in which such Cash Compensation would otherwise be earned and shall apply to Cash Compensation payable for services to be performed in succeeding Plan Years until the election is revoked by the Participant as permitted by the Plan. A Participant may not elect to defer less than 100% of Cash Compensation.

(b) Equity Compensation Deferral Election.

If permitted by the Plan Administrator, a Participant may voluntarily elect to defer 100 percent of such Participant's Equity Compensation. The Deferral Election for Equity Compensation shall be delivered to the Plan Administrator prior to the beginning of the Plan Year in which such Equity Compensation would otherwise be earned and shall apply to Equity Compensation payable for services to be performed in succeeding Plan Years until the election is revoked by the Participant as permitted by the Plan. A Participant may not elect to defer less than 100% of Equity Compensation.

(c) Deferral Election by a Newly Eligible Participant

The initial Deferral Election of a Newly Eligible Participant shall be made by the Participant delivering such Deferral Election to the Plan Administrator not later than 30 days after the Newly Eligible Participant is first eligible to participate in the Plan; provided that such Deferral Election shall apply only to Compensation earned and paid for services to be performed subsequent to the election.

4.2 Revocation and Modification of Deferral Election

A Deferral Election for any Plan Year shall be irrevocable with respect to Compensation payable for such Plan Year. A Deferral Election may only be modified or revoked for subsequent Plan Years. In order to modify or revoke a Deferral Election, a Participant must submit a new Participation Agreement to the Plan Administrator. Such modification or revocation shall be applicable to Compensation to be earned in the Plan Year commencing after the Plan Administrator receives such new Participation Agreement. A Deferral Election becomes irrevocable on the last day of the Plan Year prior to the Plan Year pertaining to such Deferral Election.

4.3 Time and Form of Distribution

A Participant who makes a Deferral Election may specify the time of payment from among the following choices:

(a) Participant's Separation from Service;

(b) Change in Control Event;

(c) Specified Date; or

(d) The earliest of any of (a)-(c).

If a Participant does not make an election as to the time of Payment, such Participant shall be deemed to have elected to receive the distribution of such Participant's Account upon the first to occur of a Change in Control Event or the Participant's Separation from Service. All Cash Compensation that is subject to a Deferral Election and any Investment Balance thereon shall be paid to the Participant in a single lump sum in cash as soon as reasonably practicable after (but no more than 30 days after) the date on which such amount first becomes payable. All Equity Compensation that is subject to a Deferral Election and any Investment Balance thereon shall be paid to the Participant in a single lump sum in Shares, unless the Participant has made a Diversification Election with respect thereto, and in such case, shall be paid to the Participant in a single lump sum in cash, in each case, as soon as reasonably practicable after (but no more than 30 days after) the date on which such amount first becomes payable.

A Participant who makes a Deferral Election may not specify a form of payment as all payments under the Plan shall be made in a single lump sum.

ARTICLE V - DIVERSIFICATION ELECTIONS

5.1 Timing of Diversification Election - DSUs

After establishment of the Plan, and in accordance with the Company's insider trading policies and procedures, the Plan Administrator shall provide each Non-Employee Director who has previously been granted DSUs the ability to make a one-time Diversification Election with respect to such DSUs underlying common stock. No Diversification Election will be permitted with respect to any DSUs that have vested within the six month period prior to the date on which a Non-Employee Director intends to make a Diversification Election. In addition, a Diversification Election may not be made with respect to more than the lesser of (a) 5000 DSUs or (b) 15% of the Director's total number of Shares. Each eligible Non-Employee Director shall have a period of 14 days (or such other period of time as specified by the Plan Administrator) in which to affirmatively make such a Diversification Election. Once a Diversification Election has been made, the Participant may subsequently choose new investment alternatives with respect to such diversified amounts in accordance with rules established by the Plan Administrator from time to time. No Diversification Election may change the time or form of payment with respect to the underlying common stock affiliated with the DSUs. Such time and form of payment shall continue to be governed by the agreement applicable to such DSUs between the Participant and the Company pursuant to the Equity Plan.

5.2 Timing of Diversification Election – Equity Compensation Subject to Deferral Election

If permitted by the Board, the Plan Administrator may provide each Non-Employee Director who has made a Deferral Election with respect to Equity Compensation with the ability to make a Diversification Election with respect thereto at such time or times as determined by the Plan Administrator. A Diversification Election may not be made with respect to more than the lesser of (a) 5000 Shares or (b) 15% of the Director's total number of Shares. Each eligible Non-Employee Director shall have a period of 14 days (or such other period of time as specified by the Plan Administrator) in which to affirmatively make such a Diversification Election. Once a Diversification Election has been made, the Participant may subsequently choose new investment alternatives with respect to such diversified amounts in accordance with rules established by the Plan Administrator from time to time. No Diversification Election may change the time or form of payment with respect to such Elective Deferred Compensation. Such time and form of payment shall continue to be governed by the Deferral Election applicable to such Elective Deferred Compensation. The Diversification Election shall apply to an Account prospectively after such election is made.

5.3 Holding Requirements

Notwithstanding Sections 5.1 and 5.2 (above), a Non-Employee Director shall not be permitted to make a Diversification Election unless and until such Non-Employee Director has satisfied the Holding Requirement, as determined by the Board in its sole discretion. If a Non-Employee Director has satisfied the Holding Requirement, he or she shall only be permitted to make a Diversification Election with respect to a number of DSUs or other Equity Compensation subject to a Deferral Election in excess of such Holding Requirement. Any Diversification Election that would cause a Director to no longer satisfy the Holding Requirement shall not be accepted by the Plan Administrator.

5.4 No Diversification Back Into Shares

Participants may not elect Shares as an investment alternative with respect to such Participant's Account. A Participant who has made a Diversification Election will not be permitted to re-elect or to designate Shares as the investment alternative with respect to such Participant's Account.

ARTICLE VI - ACCOUNTS

6.1 Accounts

For recordkeeping purposes only, Accounts shall be maintained for each Participant. In the case of a Participant who makes both a Deferral Election and a Diversification Election, there shall be both a Deferral Account and a Diversification Account. The Plan Administrator may maintain multiple sub-accounts within the Deferral Account and Diversification Account, if necessary, to reflect different years in which Compensation is deferred, and different investment alternatives.

6.2 Investment Balance

Each Participant's Accounts shall be adjusted to reflect the investment appreciation or depreciation as specified in Section 6.4.

6.3 Valuation of Accounts

Each Participant's Accounts as of each business date shall consist of the balance of the Participant's Accounts as of the immediately preceding business date, plus the Participant's Elective Deferred Compensation credited since the last business date plus or minus the appropriate Investment Balance.

6.4 Participant Selection of Investment Indices

Each Participant shall specify, in the manner prescribed by the Plan Administrator, the allocation of such Participant's Account among investment alternatives available under the Plan. The Participant's selection of an investment alternative will have no bearing on the actual investment or segregation of Company assets, but will be used as the basis for making adjustments to the Participant's Accounts as described in Section 6.3. A Participant can change such Participant's investment alternatives at such time, and in such manner, as determined by the Plan Administrator. The Plan Administrator may change the investment alternatives available to Participants at any time in the Plan Administrator's absolute discretion. If a Participant does not select any investment alternative, such Participant's Account will be allocated to a default investment alternative selected by the Plan Administrator from time to time. If a Participant makes a Deferral Election with respect to Equity Compensation, the investment alternative applicable thereto shall be based on Shares unless and until the Participant makes a Diversification Election with respect thereto.

ARTICLE VII - DISTRIBUTION OF BENEFITS

7.1 When Benefits Become Payable

The Participant (or such Participant's Beneficiary in the case of the Participant's death) shall be entitled to receive distributions from the Plan with respect to any Shares and Shares subject to a Diversification Election upon the Participant's Separation from Service. The Participant (or such Participant's Beneficiary in the case of the Participant's death) shall be entitled to receive distributions from the Plan with respect to any Elective Deferrals as specified in the Participant's Participation Agreement. All benefits shall be paid in a single lump sum in cash unless a Participant has made a Deferral Election with respect to Equity Compensation and has not made a Diversification Election with respect thereto; in such case the Account in respect of Equity Compensation and any Investment Balance with respect thereto shall be paid in a single lump sum in Shares.

7.2 Form of Benefit Payment

Payment of a Participant's Account shall be made in a single lump sum as soon as reasonably practicable after (but no more than 30 days after) the date on which such benefits first become payable as specified in Section 7.1 above.

7.3 Withholding Taxes

The Company or the trustee of any trust established pursuant to Section 10.8 shall withhold from payments made hereunder any taxes required to be withheld from such payments under federal or state law.

ARTICLE VIII - BENEFICIARY DESIGNATION

8.1 Beneficiary Designation

Each Participant shall have the right, at any time, to designate one or more persons or an entity as Beneficiary (both primary as well as secondary) to whom benefits under this Plan shall be paid in the event of Participant's death prior to complete distribution of the Participant's Account. Each Beneficiary designation shall be in a written form prescribed by the Plan Administrator and shall be effective only when filed with the Plan Administrator during the Participant's lifetime.

8.2 Changing Beneficiary

Any Beneficiary designation may be changed by a Participant without the consent of the previously named Beneficiary by the filing of a new designation with the Plan Administrator. The filing of a new designation shall cancel all designations previously filed.

8.3 No Beneficiary Designation

In the absence of an effective Beneficiary designation, or if all designated Beneficiaries predecease the Participant or die prior to complete distribution of the Participant's benefits, then the Participant's designated Beneficiary shall be deemed to be the person in the first of the following classes in which there is a survivor:

(a) the surviving spouse;

(b) the Participant's children in equal amounts, except that if any of the children predeceases the Participant but leaves issue surviving, then such issue shall take by right of representation the share the parent would have taken if living;

(c) the Participant's estate.

8.4 Effect of Payment

The payment to the deemed Beneficiary shall completely discharge the Company's obligations under this Plan.

ARTICLE IX - AMENDMENT AND TERMINATION OF PLAN

The Plan may be amended or terminated when in the sole discretion of the Company such amendment or termination is advisable. The Plan can be amended retroactively at any time, except that such amendment cannot materially adversely affect the rights of a Participant as to amounts deferred or diversified prior to such amendment. Any amendment or termination shall be made by a written instrument signed by the Company and consented to by the Board. Any distribution made on account of the termination of the Plan shall be made in accordance with Section 409A of the Code and the regulations promulgated thereunder.

ARTICLE X - MISCELLANEOUS PROVISIONS

10.1 Information to be Furnished

Participants shall provide the Company with such information and evidence, and shall sign such documents, as may reasonably be requested from time to time for the purpose of administration of the plan.

10.2 Spendthrift Clause

No Participant or Beneficiary shall have the right to transfer, assign, alienate, anticipate, pledge or encumber any part of the benefits provided by this Plan, nor shall such benefits be subject to seizure by legal process by any creditor of such Participant or Beneficiary. Any attempt to effect such a diversion or seizure shall be deemed null and void for all purposes hereunder to the extent permitted by ERISA and the Code.

10.3 Insider Trading Policy

All Diversification Elections with respect to DSUs or other items of Equity Compensation shall be subject to the Company's insider trading policy and procedures in effect from time to time, including those procedures applicable to "insiders" under Section 16 of the Securities Exchange Act. Unless otherwise allowed by the Plan Administrator, no Participant shall be permitted to make a Diversification Election within six months of such Participant's purchase of any Shares.

10.4 Plan not Employment Contract

The Plan shall not be deemed to be a contract between the Company and any Participant, or to be consideration or an inducement for the employment or service of any Participant. No Participant in the Plan shall acquire any right to be retained in the employment or service of the Company by virtue of the Plan, nor upon such Participant's dismissal or upon such Participant's voluntary termination of service shall such Participants have any right or interest in the Plan other than as specifically provided herein.

10.5 Governing Law

This Plan shall be construed, administered and enforced according to the laws of Delaware.

10.6 Construction

A pronoun or adjective in the masculine gender includes the feminine gender, and the singular includes the plural, unless the context clearly indicates otherwise.

10.7 Construction Consistent with Section 409A of the Code

The provisions of this Plan are intended to be construed and applied in a manner consistent with compliance with Section 409A of the Code, where applicable, and shall be construed and applied consistent with such intent. However, the Company shall bear no responsibility for any determination by any other person or persons that the arrangement or the administration thereof is subject to the tax provisions of Section 409A of the Code.

10.8 Trust Fund

The Company shall be responsible for the payment of all benefits provided under the Plan. At its discretion, the Company may establish one or more trusts, with such trustees as the Company may approve, for the purpose of providing for the payment of such benefits. Such trust or trusts may be irrevocable, but the assets thereof shall be subject to the claims of the Company's creditors. To the extent any benefits provided under the Plan are actually paid from any such trust, the Company shall have no further obligation with respect thereto, but to the extent not so paid, such benefits shall remain the obligation of, and shall be paid by, the Company.

10.9 Overpayments

Any overpayments made under the Plan must be promptly returned to the Company. The Plan Administrator and its agents are authorized to (a) recoup any overpayments plus earnings or interest, and (b) offset any overpayments that are not returned against other payment or benefits to which the recipient is or becomes entitled.

ARTICLE XI - CLAIMS PROCEDURE

11.1 Filing of a Claim for Benefits

If a Participant or Beneficiary (the "Claimant") believes that he or she is entitled to benefits under the Plan that are not being paid, he or she shall file a written claim therefore with the Plan Administrator.

11.2 Notification to Claimant of Decision

Within 90 days after receipt of a claim by the Plan Administrator (or within 180 days if special circumstances require an extension of time), the Plan Administrator shall notify the Claimant in writing of the decision with regard to the claim.

11.3 Extension of Time

In the event of such special circumstances requiring an extension of time, there shall be furnished to the Claimant (prior to expiration of the initial 90-day period) written notice of the extension, which notice shall set forth the special circumstances and the date by which the decision shall be furnished. If such claim shall be wholly or partially denied, notice thereof shall be in writing and worded in a manner calculated to be understood by the Claimant, and shall set forth: (i) the specific reason or reasons for the denial; (ii) specific reference to pertinent provisions of the Plan on which the denial is based; (iii) a description of any additional material or information necessary for the Claimant to perfect the claim and an explanation of why such material or information is necessary; and (iv) an explanation of the procedure for review of the denial and the time limits applicable to such procedures, including a statement of the Claimant's right to bring a civil action following an adverse benefit determination on review.

11.4 Procedure for Appeal

Within 60 days following receipt by the Claimant of notice denying a claim, in whole or in part, or, if such notice shall not be given, within 60 days following the latest date on which such notice could have been timely given, the Claimant may appeal denial of the claim by filing a written application for review with the Plan Administrator. Following such request for review, the Plan Administrator shall fully and fairly review the decision denying the claim. Prior to the decision of the Plan Administrator, the Claimant shall be given an opportunity to review pertinent documents and to submit issues and comments in writing.

11.5 Decision on Appeal

The decision on appeal of a claim denied in whole or in part by the Plan Administrator shall be made in the following manner:

(a) Within 60 days following receipt by the Plan Administrator of the request for appeal (or within 120 days if special circumstances require an extension of time), the Plan Administrator shall notify the Claimant in writing of its decision with regard to the claim. In the event of such special circumstances requiring an extension of time, written notice of the extension shall be furnished to the Claimant prior to the commencement of the extension.

(b) With respect to a claim that is denied in whole or in part, the decision on review shall set forth specific reasons for the decision, and shall be written in a manner calculated to be understood by the Claimant. The decision of the Plan Administrator shall be final and conclusive.

11.6 Action by Authorized Representative of Claimant

All actions set forth in this Section to be taken by the Claimant may likewise be taken by a representative of the Claimant duly authorized by the Claimant to act in his or her behalf on such matters. The Plan Administrator may require such evidence as either may reasonably deem necessary or advisable of the authority to act of any such representative.

11.7 Exclusive Remedy

A Claimant must exhaust all procedures and remedies under this Section before seeking any judicial review of any claim under the Plan. Following the exhaustion of all administrative remedies hereunder, if a Claimant desires to bring legal action, he or she must do so within one year after the final adjudication by the Plan Administrator in accordance with this Section. A Claimant is prohibited from presenting any evidence in a legal action concerning the Plan that was not timely presented to the Plan Administrator as part of the Plan's administrative review process. Any such legal action shall further be subject to the terms and conditions of the Equity Plan.

EXHIBIT 15

November 7, 2019

ANSYS, Inc.
2600 ANSYS Drive
Canonsburg, PA 15317

We have reviewed, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the unaudited interim financial information of ANSYS, Inc. and subsidiaries for the periods ended September 30, 2019, and 2018, as indicated in our report dated November 7, 2019; because we did not perform an audit, we expressed no opinion on that information.

We are aware that our report referred to above, which is included in your Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, is incorporated by reference in Registration Statement Nos. 333-08613, 333-69506, 333-110728, 333-137274, 333-152765, 333-174670, 333-177030, 333-196393, 333-206111, and 333-212412 on Form S-8.

We also are aware that the aforementioned report, pursuant to Rule 436(c) under the Securities Act of 1933, is not considered a part of the Registration Statement prepared or certified by an accountant or a report prepared or certified by an accountant within the meaning of Sections 7 and 11 of that Act.

/s/ Deloitte & Touche LLP
Pittsburgh, Pennsylvania

EXHIBIT 31.1

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, Ajei S. Gopal, certify that:

1. I have reviewed this quarterly report on Form 10-Q of ANSYS, Inc. (“ANSYS”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of ANSYS as of, and for, the periods presented in this report;

4. ANSYS’ other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for ANSYS and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to ANSYS, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of ANSYS’ disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in ANSYS’ internal control over financial reporting that occurred during ANSYS’ most recent fiscal quarter (ANSYS’ fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, ANSYS’ internal control over financial reporting; and

5. ANSYS’ other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to ANSYS’ auditors and the audit committee of ANSYS’ board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect ANSYS’ ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in ANSYS’ internal control over financial reporting.

Date: November 7, 2019

/s/ Ajei S. Gopal

Ajei S. Gopal

President and Chief Executive Officer

EXHIBIT 31.2

CHIEF FINANCIAL OFFICER CERTIFICATION

I, Maria T. Shields, certify that:

1. I have reviewed this quarterly report on Form 10-Q of ANSYS, Inc. (“ANSYS”);

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of ANSYS as of, and for, the periods presented in this report;

4. ANSYS’ other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for ANSYS and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to ANSYS, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of ANSYS’ disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in ANSYS’ internal control over financial reporting that occurred during ANSYS’ most recent fiscal quarter (ANSYS’ fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, ANSYS’ internal control over financial reporting; and

5. ANSYS’ other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to ANSYS’ auditors and the audit committee of ANSYS’ board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect ANSYS’ ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in ANSYS’ internal control over financial reporting.

Date: November 7, 2019

/s/ Maria T. Shields

Maria T. Shields
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of ANSYS, Inc. (the “Company”) on Form 10-Q for the quarter ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Ajei S. Gopal, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is provided solely pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be part of the Report or filed for any purpose whatsoever.

/s/ *Ajei S. Gopal*

Ajei S. Gopal
President and Chief Executive Officer
November 7, 2019

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of ANSYS, Inc. (the “Company”) on Form 10-Q for the quarter ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Maria T. Shields, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is provided solely pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be part of the Report or filed for any purpose whatsoever.

/s/ *Maria T. Shields*

Maria T. Shields
Chief Financial Officer
November 7, 2019