

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

FORM 8-K

CURRENT REPORT

**Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): February 24, 2021

ANSYS INC

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation)

0-20853

(Commission File Number)

04-3219960

(I.R.S. Employer Identification No.)

2600 ANSYS Drive

Canonsburg, Pennsylvania 15317

(Address of Principal Executive Offices) (Zip Code)

(844) 462-6797

(Registrant's telephone number, including area code)

Not applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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.

Item 2.02. Results of Operations and Financial Condition.

(a) On February 24, 2021, ANSYS, Inc. ("Ansys") issued a press release announcing financial results for the fourth quarter and fiscal year 2020 ended December 31, 2020. Ansys also posted a copy of its prepared remarks about the completed quarter on the Investor Relations portion of its website. Copies of the press release and prepared remarks are furnished herewith as Exhibits 99.1 and 99.2, respectively.

(b) On February 24, 2021, Ansys posted on its website <https://investors.ansys.com/> an investor presentation titled "Q4 and FY 2020 Investor Presentation," that will be complementary to the press release described above, as part of its earnings conference call to be held on February 25, 2021 at 8:30 a.m. Eastern Time.

Item 9.01. Financial Statements and Exhibits.

Exhibit 99.1 [Press release dated February 24, 2021](#)

Exhibit 99.2 [Prepared remarks dated February 24, 2021](#)

Exhibit 104 Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURE

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 hereunto duly authorized.

ANSYS INC

Date: February 24, 2021

By: /s/ Ajei S. Gopal
Ajei S. Gopal
President and Chief Executive Officer

Ansys Announces Financial Results With Record Q4 and FY 2020 Revenue, ACV and Operating Cash Flow

Initiates Q1 and Fiscal Year (FY) 2021 Outlook

Details related to our financial guidance, including assumptions and economic impacts of COVID-19, are detailed in our prepared remarks document.

Key Highlights - Q4 2020

- GAAP revenue of \$623.7 million and non-GAAP revenue of \$627.8 million
- GAAP diluted earnings per share of \$2.46 and non-GAAP diluted earnings per share of \$2.96
- GAAP operating profit margin of 41.6% and non-GAAP operating profit margin of 51.6%
- Operating cash flows of \$173.8 million
- Annual contract value (ACV) of \$665.5 million, growth of 23% in reported currency and 20% in constant currency

Key Highlights - FY 2020

- GAAP revenue of \$1,681.3 million and non-GAAP revenue of \$1,695.5 million
- GAAP diluted earnings per share of \$4.97 and non-GAAP diluted earnings per share of \$6.70
- GAAP operating profit margin of 29.5% and non-GAAP operating profit margin of 43.0%
- Operating cash flows of \$547.3 million
- ACV of \$1,616.3 million, growth of 11% in reported currency and 9% in constant currency
- Deferred revenue and backlog of \$967.1 million at December 31, 2020

PITTSBURGH, Feb. 24, 2021 (GLOBE NEWSWIRE) -- ANSYS, Inc. (NASDAQ: ANSS), today reported fourth quarter 2020 GAAP and non-GAAP revenue growth of 28% and 27% in reported currency, respectively, or 25% and 24% in constant currency, respectively, when compared to the fourth quarter of 2019. For FY 2020, GAAP and non-GAAP revenue growth was 11% in reported currency, or 10% in constant currency, when compared to FY 2019. For the fourth quarter of 2020, the Company reported diluted earnings per share of \$2.46 and \$2.96 on a GAAP and non-GAAP basis, respectively, compared to \$1.91 and \$2.24 on a GAAP and non-GAAP basis, respectively, for the fourth quarter of 2019. For FY 2020, the Company reported diluted earnings per share of \$4.97 and \$6.70 on a GAAP and non-GAAP basis, respectively, compared to \$5.25 and \$6.58 on a GAAP and non-GAAP basis, respectively, for FY 2019.

“Q4 was an outstanding quarter, concluding an excellent finish to fiscal year 2020. We delivered double-digit revenue growth, while maintaining industry-leading margins, despite the global disruptions caused by the COVID-19 pandemic,” said Ajei Gopal, Ansys president and CEO. “I am proud of our many accomplishments in 2020, in particular, maintaining our focus on customer success. That focus throughout the year resulted in our closing of the three largest license deals in our company history. We added to our market-leading portfolio with the acquisitions of two industry pioneers, Lumerical Inc. and Analytical Graphics, Inc. (AGI). And we recently released the latest version of our product portfolio, Ansys 2021 R1, making it faster and easier than ever for our customers to innovate.”

Gopal further stated, “The pandemic has reinforced Ansys’ core value proposition of cost savings and improved time to market. It has fast-tracked product roadmaps requiring more simulation, and it has accelerated corporate digital transformations as more engineers work from home for the long term. As we look ahead, these represent tailwinds to our total addressable market. I remain confident in our ability to drive strong and profitable growth.”

Maria Shields, Ansys CFO, stated, “We closed out 2020 with the strongest quarterly and annual financial results in the Company’s history, with our fourth quarter results exceeding the high end of guidance across all key metrics. Highlights include record quarterly and annual revenue, with the operating leverage of our business model driving strong margins and earnings. ACV, which grew 20% and 9% in constant currency for the quarter and the year, reached record levels of recurring sources at 83% for the quarter and 82% for the year. Additional notable highlights include both record operating cash flow of \$547 million and deferred revenue and backlog of \$967 million. These results reflect the resiliency of our business model and the incredible efforts and dedication of the Ansys employees during unprecedented times. Given the prolonged state of the global pandemic, while we remain cautiously optimistic as we look into the first half of 2021, we remain confident in our ability to continue to execute on our strategy and continue to create long-term value for all of our key stakeholders.”

Financial Results

Ansys' fourth quarter and FY 2020 and 2019 financial results are presented below. The 2020 and 2019 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 expenses related to business combinations, and adjustments related to the transition tax associated with the Tax Cuts and Jobs Act.

GAAP and non-GAAP results are as follows:

GAAP	Non-GAAP
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<i>(in millions, except percentages and per share data)</i>	Q4 QTD 2020	Q4 QTD 2019	% Change	Q4 QTD 2020	Q4 QTD 2019	% Change
Revenue	\$ 623.7	\$ 486.2	28 %	\$ 627.8	\$ 492.5	27 %
Net income	\$ 215.6	\$ 165.9	30 %	\$ 259.7	\$ 194.7	33 %
Diluted earnings per share	\$ 2.46	\$ 1.91	29 %	\$ 2.96	\$ 2.24	32 %
Operating profit margin	41.6 %	38.2 %		51.6 %	48.0 %	

<i>(in millions, except percentages and per share data)</i>	GAAP			Non-GAAP		
	FY 2020	FY 2019	% Change	FY 2020	FY 2019	% Change
Revenue	\$ 1,681.3	\$ 1,515.9	11 %	\$ 1,695.5	\$ 1,528.4	11 %
Net income	\$ 433.9	\$ 451.3	(4) %	\$ 584.6	\$ 565.0	3 %
Diluted earnings per share	\$ 4.97	\$ 5.25	(5) %	\$ 6.70	\$ 6.58	2 %
Operating profit margin	29.5 %	34.0 %		43.0 %	45.3 %	

The non-GAAP financial results highlighted above, and the non-GAAP financial outlook for 2021 discussed below, represent non-GAAP financial measures. Reconciliations of these measures to the appropriate GAAP measures, for the three and twelve months ended December 31, 2020 and 2019, and for the 2021 financial outlook, can be found in the condensed financial information included in this release.

Other Performance Metrics

<i>(in millions, except percentages)</i>	Q4 QTD 2020	Q4 QTD 2019	% Change	% Change in Constant Currency
Annual Contract Value (ACV)	\$ 665.5	\$ 541.3	23 %	20 %
Operating cash flows	\$ 173.8	\$ 139.5	25 %	

<i>(in millions, except percentages)</i>	FY 2020	FY 2019	% Change	% Change in Constant Currency
ACV	\$ 1,616.3	\$ 1,461.8	11 %	9 %
Operating cash flows	\$ 547.3	\$ 499.9	9 %	

ACV is a metric the Company uses to better understand the business. There is no GAAP measure comparable to ACV. ACV is composed of the following:

- the annualized value of maintenance and lease contracts with start dates or anniversary dates during the period, plus
- the value of perpetual license contracts with start dates during the period, plus
- the annualized value of fixed-term services contracts with start dates or anniversary dates during the period, plus
- the value of work performed during the period on fixed-deliverable services contracts.

Management's 2021 Financial Outlook

The Company's first quarter and fiscal year 2021 revenue and diluted earnings per share guidance is provided below. The Company is also providing its fiscal year 2021 guidance for ACV and operating cash flows. The revenue and diluted earnings per share guidance is provided on both a GAAP and non-GAAP basis. Non-GAAP financial measures exclude the income statement effects of acquisition adjustments to deferred revenue, stock-based compensation, amortization of acquired intangible assets and acquisition-related transaction expenses.

The financial guidance below reflects the Company's current estimates of the adverse impacts of the global pandemic and trade restrictions. This guidance is based on the Company's evaluation of factual information it has determined to be relevant and the application of certain assumptions made by the Company. Please refer to the Company's prepared remarks document for essential additional information regarding the Company's financial guidance, including its assumptions regarding overall business dynamics and the economic impacts of COVID-19 and trade restrictions.

First Quarter 2021 Guidance

The Company currently expects the following for the quarter ending March 31, 2021:

<i>(in millions, except per share data)</i>	GAAP	Non-GAAP
Revenue	\$326.0 - \$351.0	\$335.0 - \$360.0
Diluted earnings per share	\$0.41 - \$0.57	\$0.73 - \$0.90

Fiscal Year 2021 Guidance

The Company currently expects the following for the fiscal year ending December 31, 2021:

<i>(in millions, except per share data)</i>	GAAP	Non-GAAP
Revenue	\$1,770.5 - \$1,855.5	\$1,790.0 - \$1,875.0
Diluted earnings per share	\$4.33 - \$4.86	\$6.44 - \$6.92

The difference between the GAAP and non-GAAP revenue guidance presented above is a result of the expected impact of the application of the fair value provisions applicable to the accounting for business combinations in the amount of \$9.0 million for the first quarter and \$19.5 million for FY 2021.

<i>(in millions)</i>	Other Financial Metrics
ACV	\$1,750.0 - \$1,825.0
Operating cash flows	\$475.0 - \$515.0

Note: As compared to the Company's expectations when it most recently provided financial guidance in November 2020, certain activities shifted operating cash flow from 2021 to the fourth quarter of 2020. These activities are more fully described in the prepared remarks document.

Conference Call Information

Ansys will hold a conference call at **8:30 a.m. Eastern Time** on February 25, 2021 to discuss fourth quarter and fiscal year results. The Company will provide its prepared remarks on the Company's investor relations homepage and as an exhibit in its Form 8-K in advance of the call to provide stockholders and analysts with additional time and detail for analyzing its results in preparation for the conference call. The prepared remarks will not be read on the call, and only brief remarks will be made prior to the Q&A session. The Company will also post a complementary investor presentation titled "Q4 2020 Investor Presentation" that can be accessed by clicking Events & Presentations, then Presentations at <https://investors.ansys.com>.

To participate in the live conference call, dial 855-239-2942 (US) or 412-542-4124 (Canada & Int'l). The call will be recorded and a replay will be available within two hours after the call. The replay will be available by dialing (877) 344-7529 (US), (855) 669-9658 (Canada) or (412) 317-0088 (Int'l) and entering the passcode 10151940. The archived webcast can be accessed, along with other financial information, on Ansys' website at <https://investors.ansys.com/events-and-presentations/events-calendar>.

GAAP Financial Statements

ANSYS, INC. AND SUBSIDIARIES Condensed Consolidated Balance Sheets (Unaudited)

<i>(in thousands)</i>	December 31, 2020	December 31, 2019
ASSETS:		
Cash & short-term investments	\$ 913,151	\$ 872,382
Accounts receivable, net	537,564	433,479
Goodwill	3,038,306	2,413,280
Other intangibles, net	694,865	476,711
Other assets	756,704	643,035
Total assets	\$ 5,940,590	\$ 4,838,887
LIABILITIES & STOCKHOLDERS' EQUITY:		
Current deferred revenue	\$ 372,061	\$ 351,353
Long-term debt	798,118	423,531
Other liabilities	672,539	610,624
Stockholders' equity	4,097,872	3,453,379
Total liabilities & stockholders' equity	\$ 5,940,590	\$ 4,838,887

ANSYS, INC. AND SUBSIDIARIES Condensed Consolidated Statements of Income (Unaudited)

<i>(in thousands, except per share data)</i>	Three Months Ended		Twelve Months Ended	
	December 31, 2020	December 31, 2019	December 31, 2020	December 31, 2019
Revenue:				
Software licenses	\$ 382,057	\$ 268,943	\$ 780,850	\$ 699,630
Maintenance and service	241,629	217,285	900,447	816,262

Total revenue	623,686	486,228	1,681,297	1,515,892
Cost of sales:				
Software licenses	9,930	7,324	30,618	23,944
Amortization	11,415	7,646	40,642	21,710
Maintenance and service	46,558	34,626	154,004	120,619
Total cost of sales	67,903	49,596	225,264	166,273
Gross profit	555,783	436,632	1,456,033	1,349,619
Operating expenses:				
Selling, general and administrative	195,845	167,937	587,707	521,200
Research and development	96,510	79,152	355,371	298,210
Amortization	4,037	3,827	16,599	15,169
Total operating expenses	296,392	250,916	959,677	834,579
Operating income	259,391	185,716	496,356	515,040
Interest income	610	3,186	5,073	12,796
Interest expense	(2,444)	(2,900)	(10,988)	(3,461)
Other income (expense), net	315	(855)	3,484	(1,792)
Income before income tax provision	257,872	185,147	493,925	522,583
Income tax provision	42,240	19,295	60,038	71,288
Net income	\$ 215,632	\$ 165,852	\$ 433,887	\$ 451,295
Earnings per share – basic:				
Earnings per share	\$ 2.50	\$ 1.95	\$ 5.05	\$ 5.36
Weighted average shares	86,115	85,183	85,840	84,259
Earnings per share – diluted:				
Earnings per share	\$ 2.46	\$ 1.91	\$ 4.97	\$ 5.25
Weighted average shares	87,626	86,992	87,288	85,925

Reconciliations of GAAP to Non-GAAP Measures (Unaudited)

<i>(in thousands, except percentages and per share data)</i>	Three Months Ended December 31, 2020						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
	Total GAAP	\$ 623,686	\$ 555,783	89.1 %	\$ 259,391	41.6 %	\$ 215,632
Acquisition accounting for deferred revenue	4,085	4,085	0.1 %	4,085	0.4 %	4,085	0.05
Stock-based compensation expense	—	3,670	0.6 %	42,359	6.7 %	42,359	0.47
Excess payroll taxes related to stock-based awards	—	39	— %	520	0.1 %	520	0.01
Amortization of intangible assets from acquisitions	—	11,415	1.8 %	15,452	2.4 %	15,452	0.18
Transaction expenses related to business combinations	—	—	— %	2,321	0.4 %	2,321	0.03
Rabbi trust (income) / expense	—	—	— %	—	— %	(1)	—
Adjustment for income tax effect	—	—	— %	—	— %	(20,668)	(0.24)
Total non-GAAP	\$ 627,771	\$ 574,992	91.6 %	\$ 324,128	51.6 %	\$ 259,700	\$ 2.96

¹ Diluted weighted average shares were 87,626.

<i>(in thousands, except percentages and per share data)</i>	Three Months Ended December 31, 2019						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
	Total GAAP	\$ 486,228	\$ 436,632	89.8 %	\$ 185,716	38.2 %	\$ 165,852
Acquisition accounting for deferred revenue	6,265	6,265	0.1 %	6,265	0.8 %	6,265	0.07
Stock-based compensation expense	—	2,470	0.5 %	31,406	6.4 %	31,406	0.37
Excess payroll taxes related to stock-based awards	—	42	— %	404	0.1 %	404	—
Amortization of intangible assets from acquisitions	—	7,646	1.6 %	11,473	2.3 %	11,473	0.13
Transaction expenses related to	—	—	— %	948	0.2 %	948	0.01

business combinations							
Rabbi trust (income) / expense	—	—	—%	—	—%	(101)	—
Adjustment for income tax effect	—	—	—%	—	—%	(21,534)	(0.25)
Total non-GAAP	\$ 492,493	\$ 453,055	92.0%	\$ 236,212	48.0%	\$ 194,713	\$ 2.24

¹ Diluted weighted average shares were 86,992.

<i>(in thousands, except percentages and per share data)</i>	Twelve Months Ended December 31, 2020						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
Total GAAP	\$ 1,681,297	\$ 1,456,033	86.6%	\$ 496,356	29.5%	\$ 433,887	\$ 4.97
Acquisition accounting for deferred revenue	14,201	14,201	0.1%	14,201	0.6%	14,201	0.16
Stock-based compensation expense	—	13,626	0.8%	145,615	8.6%	145,615	1.66
Excess payroll taxes related to stock-based awards	—	813	0.1%	10,111	0.6%	10,111	0.12
Amortization of intangible assets from acquisitions	—	40,642	2.4%	57,241	3.4%	57,241	0.66
Transaction expenses related to business combinations	—	—	—%	5,129	0.3%	5,129	0.06
Rabbi trust (income) / expense	—	—	—%	—	—%	(6)	—
Adjustment for income tax effect	—	—	—%	—	—%	(81,574)	(0.93)
Total non-GAAP	\$ 1,695,498	\$ 1,525,315	90.0%	\$ 728,653	43.0%	\$ 584,604	\$ 6.70

¹ Diluted weighted average shares were 87,288.

<i>(in thousands, except percentages and per share data)</i>	Twelve Months Ended December 31, 2019						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
Total GAAP	\$ 1,515,892	\$ 1,349,619	89.0%	\$ 515,040	34.0%	\$ 451,295	\$ 5.25
Acquisition accounting for deferred revenue	12,514	12,514	0.1%	12,514	0.5%	12,514	0.15
Stock-based compensation expense	—	8,494	0.5%	116,190	7.7%	116,190	1.34
Excess payroll taxes related to stock-based awards	—	518	0.1%	4,920	0.3%	4,920	0.06
Amortization of intangible assets from acquisitions	—	21,710	1.4%	36,879	2.4%	36,879	0.43
Transaction expenses related to business combinations	—	—	—%	6,590	0.4%	6,590	0.08
Rabbi trust (income) / expense	—	—	—%	—	—%	(369)	—
Adjustment related to the Tax Cuts and Jobs Act	—	—	—%	—	—%	(1,834)	(0.02)
Adjustment for income tax effect	—	—	—%	—	—%	(61,188)	(0.71)
Total non-GAAP	\$ 1,528,406	\$ 1,392,855	91.1%	\$ 692,133	45.3%	\$ 564,997	\$ 6.58

¹ Diluted weighted average shares were 85,925.

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Quarter Ending March 31, 2021

	Earnings Per Share - Diluted
U.S. GAAP expectation	\$0.41 - \$0.57
Exclusions before tax:	
Acquisition adjustments to deferred revenue	\$0.10
Acquisition-related amortization	\$0.22
Stock-based compensation and related excess payroll tax	\$0.46 - \$0.52
Adjustment for income tax effect	(\$0.45) - (\$0.52)
Non-GAAP expectation	\$0.73 - \$0.90

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Year Ending December 31, 2021

	Earnings Per Share - Diluted
U.S. GAAP expectation	\$4.33 - \$4.86
Exclusions before tax:	
Acquisition adjustments to deferred revenue	\$0.22
Acquisition-related amortization	\$0.83 - \$0.86
Stock-based compensation and related excess payroll tax	\$1.80 - \$1.96
Adjustment for income tax effect	(\$0.79) - (\$0.93)
Non-GAAP expectation	\$6.44 - \$6.92

Use of Non-GAAP Measures

We provide non-GAAP revenue, non-GAAP gross profit, non-GAAP gross profit margin, 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 our operational performance. These financial measures exclude the impact of certain items and, therefore, have not been calculated in accordance with GAAP. A detailed explanation of each of the adjustments to such financial measures is described below. This press release also contains a reconciliation of each of these non-GAAP financial measures to its most comparable GAAP financial measure.

We use non-GAAP financial measures (a) to evaluate our historical and prospective financial performance as well as our performance relative to our 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 employees. In addition, many financial analysts that follow us focus on and publish both historical results and future projections based on non-GAAP financial measures. We believe that it is in the best interest of our investors to provide this information to analysts so that they accurately report the non-GAAP financial information. Moreover, investors have historically requested, and we have historically reported, these non-GAAP financial measures as a means of providing consistent and comparable information with past reports of financial results.

While we believe 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 our competitors and may not be directly comparable to similarly titled measures of our competitors due to potential differences in the exact method of calculation. We compensate 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. Historically, we have consummated acquisitions in order to support our 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 our business or cash flow, it adversely impacts our 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, we provide non-GAAP financial measures which exclude the impact of the acquisition accounting adjustment. We believe 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 us in our financial and operational decision-making, and (b) compare our past and future reports of financial results as the revenue reduction related to acquired deferred revenue will not recur when related lease licenses and software maintenance contracts are renewed in future periods.

Amortization of intangible assets from acquisitions. We incur amortization of intangible assets, included in our GAAP presentation of amortization expense, related to various acquisitions we have made. We exclude these expenses for the purpose of calculating non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance 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 us after the acquisition. Accordingly, we do not consider these expenses for purposes of evaluating our performance during the applicable time period after the acquisition, and we exclude such expenses when making decisions to allocate resources. We believe 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 us in our financial and operational decision-making, and (b) compare our past reports of financial results as we have historically reported these non-GAAP financial measures.

Stock-based compensation expense. We incur expense related to stock-based compensation included in our GAAP presentation of 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 our 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 and viewed as a form of compensation, we exclude these expenses for the purpose of calculating non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance. We similarly exclude income (expense) related to assets held in a rabbi trust in connection with our deferred compensation plan. Specifically, we exclude stock-based compensation and income (expense) related to assets held in the deferred compensation plan rabbi trust during our annual budgeting process and our quarterly and annual assessments of our performance. The annual budgeting process is the primary mechanism whereby we allocate resources to various initiatives and operational requirements. Additionally, the annual review by our board of directors during which it compares our 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 our senior management and department managers, charges related to stock-based compensation are excluded from expenditure and profitability results. In fact, we record stock-based compensation expense into a stand-alone cost center for which no single operational manager is responsible or accountable. In this way, we 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. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting as well as comparability with competitors' operating results.

Transaction expenses related to business combinations. We incur expenses for professional services rendered in connection with business combinations, which are included in our GAAP presentation of selling, general and administrative expense. These expenses are generally not tax-deductible. We exclude 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 we evaluate our continuing operational performance, as we generally would not have otherwise incurred these expenses in the periods presented as a part of our operations. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting as well as comparability with competitors' operating results.

Tax Cuts and Jobs Act. We recorded impacts to our income tax provision related to the enactment of the Tax Cuts and Jobs Act of 2017, specifically for the transition tax related to unrepatriated cash. We exclude these impacts for the purpose of calculating non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance, as (i) the charges are not expected to recur as part of our 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. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting.

Non-GAAP tax provision. We utilize a normalized non-GAAP annual effective tax rate (AETR) to calculate non-GAAP measures. This methodology provides better consistency across interim reporting periods by eliminating the effects of non-recurring items and aligning the non-GAAP tax rate with our expected geographic earnings mix. To project this rate, we analyzed our historic and projected non-GAAP earnings mix by geography along with other factors such as our current tax structure, recurring tax credits and incentives, and expected tax positions. On an annual basis we will re-evaluate this rate for significant items that may materially affect our projections.

Non-GAAP financial measures are not in accordance with, or an alternative for, GAAP. Our 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 our consolidated financial statements prepared in accordance with GAAP.

We have provided a reconciliation of the non-GAAP financial measures to the most directly comparable GAAP financial measures as listed below:

<u>GAAP Reporting Measure</u>	<u>Non-GAAP Reporting Measure</u>
Revenue	Non-GAAP Revenue
Gross Profit	Non-GAAP Gross Profit
Gross Profit Margin	Non-GAAP Gross Profit Margin
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

About Ansys

If you've ever seen a rocket launch, flown on an airplane, driven a car, used a computer, touched a mobile device, crossed a bridge or put on wearable technology, chances are you've used a product where Ansys software played a critical role in its creation. Ansys is the global leader in engineering simulation. Through our strategy of Pervasive Engineering Simulation, we help the world's most innovative companies deliver radically better products to their customers. By offering the best and broadest portfolio of engineering simulation software, we help them solve the most complex design challenges and create products limited

only by imagination. Founded in 1970, Ansys is headquartered south of Pittsburgh, Pennsylvania, U.S.A. Visit <https://www.ansys.com> for more information.

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Forward-Looking Information

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that provide current expectations or forecasts of future events based on certain assumptions. Forward-looking statements are subject to risks, uncertainties, and factors relating to our business which could cause our actual results to differ materially from the expectations expressed in or implied by such forward-looking statements. Many of these risks, uncertainties, and factors are currently amplified by, and may continue to be amplified by, the COVID-19 pandemic.

Forward-looking statements use words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “intend,” “likely,” “may,” “outlook,” “plan,” “predict,” “project,” “should,” “target,” or other words of similar meaning. Forward-looking statements include those about market opportunity, including our total addressable market. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date they are made. We undertake no obligation to update forward-looking statements, whether as a result of new information, future events or otherwise.

The following risks, among others, could cause actual results to differ materially from those described in any forward-looking statements:

- current and potential future impacts of the COVID-19 pandemic on the global economy and our business, and consolidated financial statements; adverse changes in global economic and/or political conditions; and political, economic, regulatory and public health and safety risks and uncertainties in the countries and regions in which we operate;
- declines in our customers’ businesses resulting in adverse changes in procurement patterns; disruptions in accounts receivable and cash flow due to customers’ liquidity challenges and commercial deterioration; uncertainties regarding demand for our products and services in the future and our customers’ acceptance of new products; and delays or declines in anticipated sales due to reduced or altered sales and marketing interactions with customers;
- impacts from tariffs, trade sanctions, export license requirements or other trade barriers; disruptions in the global economy and financial markets that may limit or delay availability of credit under existing or new credit facilities, or that may limit our ability to obtain credit or financing on acceptable terms or at all; and the effect of changes in currency exchange rates or interest rates;
- our ability to protect our proprietary technology; cybersecurity threats or other security breaches, including in relation to an increased level of our activity that is occurring from remote global off-site locations; and disclosure and misuse of employee or customer data whether as a result of a cybersecurity incident or otherwise;
- the quality of our products, including the strength of features, functionality and integrated multi-physics capabilities; our ability to develop and market new products to address the industry’s rapidly changing technology; the failures or errors in our products and services; and increased pricing pressure as a result of the competitive environment in which we operate;
- plans for future capital spending; the extent of corporate benefits from such spending including with respect to customer relationship management; and higher than anticipated costs for research and development or slowdown in our research and development activities;
- investments in complementary companies, products, services and technologies; our ability to complete and successfully integrate our acquisitions and realize the financial and business benefits of the transactions; and the impact indebtedness incurred in connection with any acquisition could have on our operations;
- investments in global sales and marketing organizations and global business infrastructure; and dependence on our channel partners for the distribution of our products;
- our ability to recruit and retain key personnel including any delays in recruitment caused by restrictions on travel and in person interactions; and the absence of key personnel or teams due to illness or recuperation;

- increased volatility in our revenue due to the timing, duration and value of multi-year lease contracts; our reliance on high renewal rates for annual lease and maintenance contracts; the volatility of our stock price; the potential variations in our sales forecasts compared to actual sales; and the uncertainty of estimates associated with the acquisition accounting treatment of deferred revenue;
- operational disruptions generally or specifically in connection with transitions to and from remote work environments; and the failure of our technological infrastructure or those of the service providers upon whom we rely including for infrastructure and cloud services;
- our and our channel partners' ability to comply with laws and regulations in relevant jurisdictions; the outcome of contingencies, including legal proceedings, government or regulatory investigations and service tax audit cases;
- uncertainty regarding income tax estimates in the jurisdictions in which we operate; and the effect of changes in tax laws and regulations in the jurisdictions in which we operate; and
- other risks and uncertainties described in our reports filed from time to time with the Securities and Exchange Commission.

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Fourth Quarter and Fiscal Year 2020 Earnings Prepared Remarks

We are providing a copy of our prepared remarks in connection with our earnings announcement. These remarks are offered to provide additional detail for analyzing our Q4 and fiscal year (FY) 2020 results in advance of our quarterly conference call. These prepared remarks will not be read on the call.

Conference call details:

February 25, 2021

8:30 a.m. Eastern Time

- To access the live broadcast, please visit the Investor Relations section of our website at <https://investors.ansys.com> and click on Events & Presentations, then Events Calendar.
- The call can also be heard by dialing (855) 239-2942 (US) or (412) 542-4124 (CAN & INT'L) at least five minutes prior to the call and asking the operator to connect you to our conference call.
- A replay will be available within two hours of the call's completion by dialing (877) 344-7529 (US), (855) 669-9658 (CAN) or (412) 317-0088 (INT'L) and referencing the access code 10151940 or at <https://investors.ansys.com/events-and-presentations/events-calendar>.

/ Supplemental Information

In addition to our GAAP information, we have historically provided non-GAAP supplemental information. Our reasons for providing this information are described later in this document, as well as in our Q4 and FY 2020 earnings press release, which can be found on our website in the "About Ansys - News Center" section. Reconciliations of GAAP to non-GAAP information are also provided below.

Constant currency amounts exclude the effects of foreign currency fluctuations on the reported results. To present this information, the 2020 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 2019, rather than the actual exchange rates in effect for 2020. The constant currency growth rates are calculated by adjusting the 2020 reported results to exclude the 2020 currency fluctuation impacts and comparing them to the 2019 reported results. We have provided this non-GAAP financial information to aid investors in better understanding our performance.

/ Fourth Quarter and Fiscal Year 2020 Overview and COVID-19 Update

We reported fourth quarter consolidated GAAP revenue of \$623.7 million, an increase of 28% and 25% in reported and constant currency, respectively, when compared to the prior year quarter. We reported FY 2020 consolidated GAAP revenue of \$1,681.3 million, an increase of 11% and 10% in reported and constant currency, respectively, when compared to FY 2019. We reported GAAP diluted EPS of \$2.46 and \$4.97 in the fourth quarter and FY 2020, respectively, compared to \$1.91 and \$5.25 for the fourth quarter and FY 2019, respectively. Our financial results included operating cash flows of \$173.8 million for the fourth quarter and \$547.3 million for FY 2020, an increase of 25% and 9% when compared to the prior year quarter and FY 2019, respectively.

We reported fourth quarter consolidated non-GAAP revenue of \$627.8 million, an increase of 27% and 24% in reported and constant currency, respectively, when compared to the prior year quarter. We reported FY 2020 consolidated non-GAAP revenue of \$1,695.5 million, an increase of 11% and 10% in reported and constant currency, respectively, when compared to FY 2019. We reported non-GAAP diluted EPS of \$2.96 and \$6.70 in the fourth quarter and FY 2020, respectively, compared to \$2.24 and \$6.58 for the fourth quarter and FY 2019, respectively.

We reported fourth quarter ACV of \$665.5 million, an increase of 23% and 20% in reported and constant currency, respectively, when compared to the prior year quarter. We reported FY 2020 ACV of \$1,616.3 million, an increase of 11% and 9% in reported and constant currency, respectively, when compared to FY 2019.

Update on the Impact of COVID-19:

We are continuing to closely monitor the spread of COVID-19 and working to mitigate its effects on our business. The COVID-19 pandemic has had, and is expected to continue to have, an adverse impact on our business and our employees. See below for the operational, financial and liquidity impacts of the COVID-19 pandemic:

Operational Impacts

- The health and safety of our employees and their families, our partners and our broad Ansys community around the world continue to be a high priority. At the onset of the crisis, we closed our offices, transitioned to a remote work environment, and implemented certain travel restrictions, each of which has disrupted how we operate our business. We are continuing to monitor the situation, but as of now remote access remains the primary means of work for the majority of our workforce.
- Our direct and indirect sales and support teams are using collaboration technology to access both Ansys' data centers and the public cloud, and to meet virtually with customers to help ensure their needs are being met while working to mitigate disruptions to our sales pipeline. Our sales teams continue to close contracts, despite the purchasing process being slowed and particularly impacted at those customers with lower levels of remote working sophistication. In January, we hosted our annual sales conference virtually, a three-day event with over 2,000 attendees. Our R&D teams have also continued to be productive, and we continue to meet our product release targets, as evidenced by the recent release of Ansys 2021 R1. We have been able to maintain our financial operations, including our financial systems, internal controls over financial reporting and disclosure controls and procedures. We expect to continue to maintain effective financial operations, systems and internal controls as we work remotely during the pandemic.
- We continued to hire during the fourth quarter using our remote on-boarding process. Our 2020 hiring was slightly below the level that we originally planned due to our decision to slow our hiring pace for some positions due to COVID-19.

Financial Impact

- Despite the continued effects of COVID-19 on the business environment, the resilience of our business contributed to the delivery of ACV, revenue, operating margin, earnings and cash flow that exceeded the high end of our financial guidance. Due to our diverse customer base, both from an industry vertical and geographic perspective, as well as the close relationships with customers that enabled us to close a large amount of business remotely, we successfully mitigated additional adverse impacts in Q4 as compared to the assumptions made in our financial guidance, most notably our ongoing inability to meet with customers in person during the quarter. The Q1 and full year 2021 guidance, and the related assumptions, are detailed later in this document.

Liquidity Impact

- We saw an increase in our cash and cash equivalents during the fourth quarter with a balance of \$912.7 million as of December 31, 2020 compared to \$844.7 million as of September 30, 2020. We believe that this balance, together with cash generated from operations and access to our \$500.0 million revolving credit facility, are in excess of the cash required for our ongoing operations over the next twelve months.
- We have two unsecured term loans with an aggregate outstanding principal balance of \$800.0 million as of December 31, 2020, and we are compliant with our debt covenants. Our debt agreements require no principal payments until 2022. Accordingly, our only debt service requirements are interest payments in the current low-rate environment. We believe we will have adequate liquidity to service this debt over the next twelve months.
- Our cash flows from operations in the fourth quarter and FY 2020 totaled \$173.8 million and \$547.3 million, respectively. The FY cash flow significantly exceeded our guidance range and was driven by strong customer receipts in the fourth quarter, including both the recovery of payments delayed from earlier in the year due to COVID-19, as well as the receipt of payments that were scheduled to be received in 2021. The growth was further aided by our ability to delay certain income, employment and indirect tax payments to 2021. While benefiting the FY 2020 results, the early receipt of customer payments and the deferral of tax payments into 2021 will adversely impact operating cash flow in 2021. Further details are reflected in the *Outlook* section later in these remarks. Despite the strong quarter of cash flow, as the COVID-19 crisis lengthens, we continue to experience longer-term payment requests, particularly related to larger contract commitments.
- We continued to delay our spending on certain facilities and infrastructure projects; however, we did not reduce our spending on critical digital transformation projects, such as customer relationship management (CRM) and our human resources information system (HRIS), for which we went live with additional modules in the fourth quarter, including remote on-boarding.

Other Recent Highlights

- Recently launched Ansys 2021 R1 products deliver improvements in simulation technology along with the immense compute power of high-performance computing to reimagine what is now possible for global engineering teams. Our simulation solutions offer new levels of collaboration, providing insight into product safety, reliability and performance. The simplified workflows and unique product enhancements in Ansys 2021 R1 create opportunities for engineers to accomplish design and product development goals that were previously thought unattainable.
- FORTUNE named us to its fourth annual Future 50 list, recognizing companies best positioned for long-term growth based on a robust methodology jointly developed by FORTUNE and Boston Consulting Group (BCG), a management consulting firm. To select the 2020 Future 50, FORTUNE and BCG evaluated more than 1,000 publicly traded companies on market potential and ability to deliver against market potential. Our clear strategy, commitment to sustainability, investment in research and development, strong leadership and company structure played a significant role in our selection.

- We are teaming with Microsoft to advance state-of-the-art in engineering simulation across industries, including industrial manufacturing and automotive. Integrated with Microsoft Azure cloud, high-performance computing, digital twin and IoT services, our solutions will help empower customers to swiftly solve some of the most challenging engineering problems — substantially increasing productivity, cutting development costs and expediting time to market.
- Honeywell is leveraging our technology to help kick-start digital transformation initiatives that will benefit customers by lowering development costs and cutting down the time it takes to bring products to market. Through a multi-year agreement, we are providing Honeywell with solutions that span the engineering design chain and help optimize the testing and simulation processes that are critical to taking products from the concept phase through to completion. Honeywell customers will see products come to market faster than before as cycle times shorten.
- LG Electronics (LGE) is reimagining how engineering teams learn simulation to expedite the design of improved products, using an on-demand virtual learning portal we created. As LGE restricted in-person contact to slow the spread of COVID-19, its engineering teams shifted from hands-on, in-person simulation training to online learning. Leveraging the Ansys Learning Hub, LGE engineers shorten their learning curve and expand their simulation skill sets to help drive continuous innovation, create complex product designs and satisfy challenging development schedules — all while working remotely. From new engineers entering the workforce to professionals sharpening their skills, the Ansys Learning Hub empowers users to learn powerful features and advanced capabilities across the Ansys suite of simulation solutions.
- Through a new strategic agreement, Navantia and Ansys are reducing the development time and increasing the performance of next-generation navy vessels, such as F-110 frigates and S-80 submarines. Navantia engineers will leverage our solutions as part of the Shipyard 4.0 Integrated Business Management System — Navantia's technology platform that includes digital technologies across the operational lifecycle of navy ships.
- We are collaborating with Keysight Technologies, Inc. (Keysight) to integrate component-level designs into mission modeling environments with an enhanced, automated digital mission engineering workflow. This enables joint customers to reduce the time-consuming bottleneck of manually coupling design tools for rapidly innovating aerospace and defense applications and soon for 5G communications, autonomous vehicles and electrification. Our collaboration with Keysight continues a longstanding relationship that began with Analytical Graphics, Inc., before the company was acquired by us last year.
- NASCAR racing teams are leveraging a state-of-the-art automated simulation workflow created by our collaboration with D2H Advanced Technologies to improve high-performance stock cars that are engineered with speed, efficiency and affordability. This collaboration will help streamline the development and improve the aerodynamics of race cars by enabling teams to nearly eliminate wind tunnel testing.
- Total headcount on December 31, 2020 was approximately 4,800 employees.

DEFERRED REVENUE AND BACKLOG

<i>(in thousands)</i>	December 31, 2020	September 30, 2020	December 31, 2019	September 30, 2019
Current Deferred Revenue	\$ 372,061	\$ 326,491	\$ 351,353	\$ 291,385
Current Backlog	234,719	243,745	218,398	154,549
Total Current Deferred Revenue and Backlog	606,780	570,236	569,751	445,934
Long-Term Deferred Revenue	16,749	11,941	13,921	11,930
Long-Term Backlog	343,598	297,735	287,071	192,523
Total Long-Term Deferred Revenue and Backlog	360,347	309,676	300,992	204,453
Total Deferred Revenue and Backlog	\$ 967,127	\$ 879,912	\$ 870,743	\$ 650,387

The table above represents GAAP deferred revenue and backlog. As a result of the fair value provisions applicable to the accounting for business combinations, we typically record acquired deferred revenue at an amount that is lower than the historical carrying value. This results in expected reductions in reported revenue of \$9.0 million and \$19.5 million for the quarter ending March 31, 2021 and the year ending December 31, 2021, respectively.

ACV

<i>(in thousands, except percentages)</i>	Q4 QTD 2020	Q4 QTD 2019	% Change	% Change in Constant Currency
ACV	\$ 665,511	\$ 541,268	23.0 %	19.6 %
Recurring ACV as a percentage of ACV	83.2 %	78.4 %		

<i>(in thousands, except percentages)</i>	FY 2020	FY 2019	% Change	% Change in Constant Currency
ACV	\$ 1,616,301	\$ 1,461,759	10.6 %	9.3 %
Recurring ACV as a percentage of ACV	82.0 %	77.4 %		

Recurring ACV is comprised of both lease licenses and maintenance contracts. The increase in recurring ACV reflected for the fourth quarter and FY 2020 has been driven by an increased preference for lease licenses, due in part to the impacts of COVID-19.

REVENUE BY LICENSE TYPE

GAAP

<i>(in thousands, except percentages)</i>	Q4 QTD 2020	% of Total	Q4 QTD 2019	% of Total	% Change	% Change in Constant Currency
Lease	\$ 263,105	42.2 %	\$ 166,090	34.2 %	58.4 %	54.5 %
Perpetual	118,952	19.1 %	102,853	21.2 %	15.7 %	12.9 %
Maintenance	224,988	36.1 %	200,806	41.3 %	12.0 %	9.1 %
Service	16,641	2.7 %	16,479	3.4 %	1.0 %	(1.3)%
Total	\$ 623,686		\$ 486,228		28.3 %	25.1 %

<i>(in thousands, except percentages)</i>	FY 2020	% of Total	FY 2019	% of Total	% Change	% Change in Constant Currency
Lease	\$ 500,105	29.7 %	\$ 406,043	26.8 %	23.2 %	21.3 %
Perpetual	280,745	16.7 %	293,587	19.4 %	(4.4)%	(5.4)%
Maintenance	840,597	50.0 %	760,574	50.2 %	10.5 %	9.8 %
Service	59,850	3.6 %	55,688	3.7 %	7.5 %	6.8 %
Total	\$ 1,681,297		\$ 1,515,892		10.9 %	9.8 %

Non-GAAP

<i>(in thousands, except percentages)</i>	Q4 QTD 2020	% of Total	Q4 QTD 2019	% of Total	% Change	% Change in Constant Currency
Lease	\$ 263,328	41.9 %	\$ 166,286	33.8 %	58.4 %	54.5 %
Perpetual	118,958	18.9 %	104,520	21.2 %	13.8 %	11.1 %
Maintenance	228,842	36.5 %	205,205	41.7 %	11.5 %	8.7 %
Service	16,643	2.7 %	16,482	3.3 %	1.0 %	(1.3)%
Total	\$ 627,771		\$ 492,493		27.5 %	24.3 %

<i>(in thousands, except percentages)</i>	FY 2020	% of Total	FY 2019	% of Total	% Change	% Change in Constant Currency
Lease	\$ 501,180	29.6 %	\$ 406,621	26.6 %	23.3 %	21.4 %
Perpetual	280,791	16.6 %	295,480	19.3 %	(5.0)%	(6.0)%
Maintenance	853,666	50.3 %	770,606	50.4 %	10.8 %	10.0 %
Service	59,861	3.5 %	55,699	3.6 %	7.5 %	6.8 %
Total	\$ 1,695,498		\$ 1,528,406		10.9 %	9.8 %

The difference between the GAAP and non-GAAP revenue values presented above is a result of the application of the fair value provisions applicable to the accounting for business combinations.

We continue to experience increased interest by some of our larger customers in enterprise agreements that often include longer-term, time-based licenses involving a larger number of our 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 volatility. Software products, across a large variety of applications and industries, are increasingly distributed in software-as-a-service, cloud and other subscription environments in which the licensing approach is time-based rather than perpetual, resulting in shifting preferences from perpetual licenses to time-based licenses across a broader spectrum of our customers. This dynamic was elevated in 2020 as a result of the economic impacts of COVID-19, and we expect it to continue into the foreseeable future.

The value and duration of multi-year lease contracts entered into during the period significantly impact the recognition of revenue. As a result, revenue may fluctuate significantly, particularly on a quarterly basis, due to the timing of such contracts. Large swings in revenue growth rates are not necessarily indicative of customers' software usage changes or cash flows during the periods presented.

REVENUE BY GEOGRAPHY

GAAP

<i>(in thousands, except percentages)</i>	Q4 QTD 2020	% of Total	Q4 QTD 2019	% of Total	% Change	% Change in Constant Currency
Americas	\$ 318,573	51.1 %	\$ 219,906	45.2 %	44.9 %	44.8 %
Germany	75,723	12.1 %	64,962	13.4 %	16.6 %	7.8 %
United Kingdom	15,770	2.5 %	12,072	2.5 %	30.6 %	27.2 %
Other EMEA	93,931	15.1 %	78,510	16.1 %	19.6 %	12.0 %
EMEA	185,424	29.7 %	155,544	32.0 %	19.2 %	11.4 %
Japan	49,344	7.9 %	45,790	9.4 %	7.8 %	3.5 %
Other Asia-Pacific	70,345	11.3 %	64,988	13.4 %	8.2 %	6.2 %
Asia-Pacific	119,689	19.2 %	110,778	22.8 %	8.0 %	5.0 %
Total	\$ 623,686		\$ 486,228		28.3 %	25.1 %

<i>(in thousands, except percentages)</i>	FY 2020	% of Total	FY 2019	% of Total	% Change	% Change in Constant Currency
Americas	\$ 803,071	47.8 %	\$ 662,906	43.7 %	21.1 %	21.2 %
Germany	160,771	9.6 %	158,809	10.5 %	1.2 %	(2.3)%
United Kingdom	62,104	3.7 %	44,079	2.9 %	40.9 %	38.3 %
Other EMEA	245,829	14.6 %	235,665	15.5 %	4.3 %	1.6 %
EMEA	468,704	27.9 %	438,553	28.9 %	6.9 %	3.8 %
Japan	183,117	10.9 %	162,154	10.7 %	12.9 %	10.4 %
Other Asia-Pacific	226,405	13.5 %	252,279	16.6 %	(10.3)%	(10.1)%
Asia-Pacific	409,522	24.4 %	414,433	27.3 %	(1.2)%	(2.1)%
Total	\$ 1,681,297		\$ 1,515,892		10.9 %	9.8 %

Non-GAAP

<i>(in thousands, except percentages)</i>	Q4 QTD 2020	% of Total	Q4 QTD 2019	% of Total	% Change	% Change in Constant Currency
Americas	\$ 321,700	51.2 %	\$ 223,259	45.3 %	44.1 %	44.1 %
Germany	75,826	12.1 %	65,416	13.3 %	15.9 %	7.2 %
United Kingdom	15,834	2.5 %	12,347	2.5 %	28.2 %	24.8 %
Other EMEA	94,149	15.0 %	79,004	16.0 %	19.2 %	11.6 %
EMEA	185,809	29.6 %	156,767	31.8 %	18.5 %	10.8 %
Japan	49,510	7.9 %	46,644	9.5 %	6.1 %	1.9 %
Other Asia-Pacific	70,752	11.3 %	65,823	13.4 %	7.5 %	5.4 %
Asia-Pacific	120,262	19.2 %	112,467	22.8 %	6.9 %	4.0 %
Total	\$ 627,771		\$ 492,493		27.5 %	24.3 %

<i>(in thousands, except percentages)</i>	FY 2020	% of Total	FY 2019	% of Total	% Change	% Change in Constant Currency
Americas	\$ 810,553	47.8 %	\$ 669,203	43.8 %	21.1 %	21.1 %
Germany	161,517	9.5 %	159,820	10.5 %	1.1 %	(2.5)%
United Kingdom	62,500	3.7 %	44,958	2.9 %	39.0 %	36.5 %
Other EMEA	246,814	14.6 %	237,274	15.5 %	4.0 %	1.3 %
EMEA	470,831	27.8 %	442,052	28.9 %	6.5 %	3.5 %
Japan	185,011	10.9 %	163,416	10.7 %	13.2 %	10.7 %
Other Asia-Pacific	229,103	13.5 %	253,735	16.6 %	(9.7)%	(9.5)%
Asia-Pacific	414,114	24.4 %	417,151	27.3 %	(0.7)%	(1.6)%
Total	\$ 1,695,498		\$ 1,528,406		10.9 %	9.8 %

Regional and Industry Commentary

As explained under Revenue by License Type, the value and duration of multi-year leases entered into during the period significantly impact revenue recognition. As a result, regional revenues may fluctuate significantly on a quarterly basis and are not necessarily indicative of customer usage changes or our cash flows for such regions during the periods presented.

During the fourth quarter, we continued to see evidence of the acceleration of our customers' digital transformation initiatives, and the critical role of simulation, as companies across industries sought to shorten time-to-market, establish more efficient and cost-effective engineering processes, and deliver increased innovation in areas that will shape the future: 5G connectivity, autonomy, electrification, the fourth industrial revolution and the new energy balance. This was particularly evident in our largest industry sectors.

In the high-tech and semiconductor industry, particularly in North America, we saw numerous examples of multi-year, multi-million dollar investments focused on engineering process efficiency and workflow automation. Of particular note in the quarter was an eight-figure, multi-year deal with a North American semiconductor company. A consistent key differentiator in these deals is the multiphysics capability of our solutions that integrate from the chip level, to the package, and to the system, delivering the accuracy the industry and our customers demand.

Our performance in the defense industry continues to be strong, particularly in North America and EMEA. Several multi-million dollar deals reflect our ongoing transition from vendor to critical supplier and partner at leading global defense contractors. In addition, a leading European state-owned naval ship builder selected our solutions, from simulation process and data management to digital twins, to spur the development of highly advanced frigates and submarines. While the commercial aviation sector continues to be challenged by the reduction in air travel, we continue to work with our customers across the supply chain to enable them to reduce costs and rebuild traveler confidence.

Despite the impact of the pandemic, we continued to see strong performance across the automotive ecosystem, including significant sales to a leading North American OEM, a European tier-1 supplier and leading motorsports companies. Our simulation solutions continue to play a key role in the industry's progress towards autonomy and electrification with notable deals related to these initiatives at a European OEM and a growing North American new entrant.

More broadly in the quarter, we also saw seven-figure deals at companies delivering the future of the energy industry, the fourth industrial revolution and next-generation consumer products. In APAC, overall performance was muted by a combination of sanctions and the pandemic, though the regional high-tech and semiconductor and automotive industries continued to show growth.

REVENUE BY CHANNEL

GAAP

	Q4 QTD 2020	Q4 QTD 2019	FY 2020	FY 2019
Direct revenue, as a percentage of total revenue	81.4 %	79.7 %	77.8 %	77.1 %
Indirect revenue, as a percentage of total revenue	18.6 %	20.3 %	22.2 %	22.9 %

Non-GAAP

	Q4 QTD 2020	Q4 QTD 2019	FY 2020	FY 2019
Direct revenue, as a percentage of total revenue	81.4 %	79.5 %	77.7 %	77.2 %
Indirect revenue, as a percentage of total revenue	18.6 %	20.5 %	22.3 %	22.8 %

INCOME STATEMENT HIGHLIGHTS

GAAP

	Q4 QTD 2020	Q4 QTD 2019	FY 2020	FY 2019
Gross margin	89.1 %	89.8 %	86.6 %	89.0 %
Operating margin	41.6 %	38.2 %	29.5 %	34.0 %
Effective tax rate	16.4 %	10.4 %	12.2 %	13.6 %

Non-GAAP

	Q4 QTD 2020	Q4 QTD 2019	FY 2020	FY 2019
Gross margin	91.6 %	92.0 %	90.0 %	91.1 %
Operating margin	51.6 %	48.0 %	43.0 %	45.3 %
Effective tax rate	19.5 %	17.3 %	19.5 %	19.2 %

BALANCE SHEET AND CASH FLOW HIGHLIGHTS

- Cash and short-term investments totaled \$913.2 million as of December 31, 2020, of which 64% was held domestically.
- Deferred revenue and backlog was \$967.1 million at December 31, 2020, an increase of 11% over December 31, 2019.
- Operating cash flows were \$173.8 million for the fourth quarter of 2020 as compared to \$139.5 million for the fourth quarter of 2019. Operating cash flows were \$547.3 million for FY 2020 as compared to \$499.9 million for FY 2019. The FY cash flow growth was driven by strong customer receipts in the fourth quarter, including the recovery of payments delayed from earlier in the year due to COVID-19. The growth was further aided by our ability to delay certain income, employment and indirect tax payments.
- Cash paid for acquisitions, net of cash acquired, totaled \$572.3 million for FY 2020 as compared to \$787.2 million for FY 2019. Related to the acquisitions, we had proceeds from term loans, net of principal payments, of \$300.0 million for FY 2020 as compared to \$500.0 million for FY 2019.
- Capital expenditures totaled \$11.2 million and \$35.4 million for the fourth quarter and FY 2020, respectively. We are currently planning capital expenditures in the range of \$30.0 - \$40.0 million for FY 2021.

SHARE COUNT AND SHARE REPURCHASES

We had 87.6 million and 87.3 million fully diluted weighted average shares outstanding in Q4 and FY 2020, respectively. We repurchased 0.7 million shares during the first quarter of 2020 at an average price of \$233.48 per share. There were no additional repurchases during FY 2020. As of December 31, 2020, we had 2.8 million shares remaining available for repurchase under our authorized share repurchase program. Our authorized repurchase program does not have an expiration date, and the pace of the purchase activity will depend on factors such as working capital needs, cash requirements for acquisitions, our stock price, and economic and market conditions.

STOCK-BASED COMPENSATION EXPENSE

<i>(in thousands, except per share data)</i>	Q4 QTD 2020	Q4 QTD 2019	FY 2020	FY 2019
Cost of sales:				
Maintenance and service	\$ 3,670	\$ 2,470	\$ 13,626	\$ 8,494
Operating expenses:				
Selling, general and administrative	23,074	16,231	73,491	60,639
Research and development	15,615	12,705	58,498	47,057
Stock-based compensation expense before taxes	42,359	31,406	145,615	116,190
Related income tax benefits	(9,636)	(17,379)	(56,485)	(47,454)
Stock-based compensation expense, net of taxes	\$ 32,723	\$ 14,027	\$ 89,130	\$ 68,736
Net impact on earnings per share:				
Diluted earnings per share	\$ (0.37)	\$ (0.16)	\$ (1.02)	\$ (0.80)

CURRENCY

The fourth quarter and FY 2020 revenue and operating income, as compared to the fourth quarter and FY 2019, were impacted by fluctuations in the exchange rates of foreign currencies against the U.S. Dollar. The net favorable impacts on GAAP and non-GAAP revenue and operating income as a result of the weakened U.S. Dollar when measured against our primary foreign currencies are reflected in the table below.

GAAP

<i>(in thousands)</i>	Q4 QTD 2020	FY 2020
Revenue	\$ 15,495	\$ 16,841
Operating income	\$ 9,050	\$ 11,986

Non-GAAP

<i>(in thousands)</i>	Q4 QTD 2020	FY 2020
Revenue	\$ 15,508	\$ 16,775
Operating income	\$ 9,340	\$ 12,211

The net favorable foreign exchange impacts on deferred revenue and backlog were \$12.5 million and \$20.2 million for the fourth quarter and FY 2020, respectively.

Commentary on COVID-19 Pandemic and China Trade Restrictions:

The economic impacts of the COVID-19 pandemic have disrupted the business of our customers and partners, and are expected to affect our future business and consolidated results of operations. The guidance provided below is subject to significant uncertainty and dependent upon the duration and severity of the prolonged pandemic, the geographic markets affected, the actions taken by governmental authorities including those to curb the spread of the virus, and the widespread availability and reliability of vaccines, among other factors. Continued spreading of the virus or economic deterioration caused by the direct and indirect impacts of the virus could have a material adverse impact on our business, employees, liquidity, financial condition, results of operations and cash flows, as well as on our ability to achieve our financial guidance.

Starting in 2019 and throughout 2020, trade discussions between the U.S. and China led to certain entities being placed on a restricted entity list. These restrictions limited our ability to deliver products and services to these customers. The guidance provided below assumes that the existing trade restrictions related to these entities will remain throughout 2021. Additional restrictions or a further deterioration in the trade environment could have a material adverse impact on our business, as well as on our ability to achieve our financial guidance.

Q1 2021 and Full Year 2021 Guidance

Our first quarter and full year financial guidance estimates are provided below. Because of the very significant market and economic uncertainty associated with the COVID-19 pandemic, these ranges are wider than those that we have historically provided. They are also based on significant assumptions that may or may not be realized as we progress through 2021.

Those assumptions, and certain related management actions, include the following, among others:

- Businesses have not fully resumed operations to pre-pandemic levels and many employees continue to work from home globally as COVID-19 cases persist. As a result, we expect a similar business environment in the first quarter of 2021 to that of the second half of 2020. We expect a recovery in the business environment during the second half of the year as vaccines become more readily available and a larger percentage of the population is inoculated. Additional waves or mutated variants of COVID-19 could result in renewed shutdowns that stop or regress economic recovery.
- We continue to expect a disproportionate reduction in sales of our perpetual licenses, as customers continue to find the flexibility of lease licensing and operating on the cloud more appealing. The reduced capital outlay associated with the leasing model is also more appealing to certain customers during a time of economic uncertainty.
- The up-front recognition of revenue on multi-year lease contracts has a significant impact on our operating results. Our 2021 guidance reflects that we will be able to continue to expand our ability to drive more multi-year lease deals across a broader set of customers.
- As we saw in 2020, we continue to expect that our larger customer accounts will perform more strongly than the small- and medium-sized businesses. The R&D cycles of our larger customers remain largely unaffected, and their stronger liquidity and capital positions allow them to maintain normal procurement patterns or return to those patterns more quickly.
- Our blended renewal rates have historically been approximately 90%, with the renewal rates on maintenance agreements being even higher. Our renewal rates have remained high, with only a slight reduction as compared to our historical experience, and our assumptions are that they will continue to remain so for the majority of our business.

- While we successfully held our annual sales conference virtually in January, a number of our demand generation events and those of our channel partners have been cancelled due to social distancing requirements. We continue to adjust to a stronger digital focus for demand generation. However, we expect the absence of certain demand generation activities to have an adverse impact on our 2021 results, particularly for certain channel partners and disproportionately for small- and medium-sized customers.
- Government stimulus programs continue to evolve as the United States has a change in political leadership and the global economy continues its recovery. Our guidance continues to assume that such stimulus is not targeted to a single segment of our customer base, but is more broad and supportive in helping countries to avoid prolonged recessions. However, the timing of government stimulus loans and other stimulus activities could adversely impact our customers' ability to remit timely payment or commit to purchase orders.
- We continue to adjust our spending to reflect our expectations for the pace at which economic recovery will occur, while balancing the need to invest for the long-term opportunity. We have also maintained and intend to maintain our commitment to invest in our acquisitions, R&D and certain digital transformation projects, in particular CRM and HRIS, as those projects are critical to our ability to operate efficiently and scale the business for future growth.

We are currently forecasting the following:

Q1 2021 OUTLOOK

<i>(in millions, except percentages and per share data)</i>	GAAP	non-GAAP
Revenue	\$326.0 - \$351.0	\$335.0 - \$360.0
Operating margin	1.9% - 8.7%	24.0% - 27.5%
Effective tax rate	(1)	19.0%
Diluted earnings per share	\$0.41 - \$0.57	\$0.73 - \$0.90

(1) The expected GAAP effective tax rate is not meaningful in the first quarter of 2021 as a result of significant anticipated excess tax benefits associated with stock awards.

FY 2021 OUTLOOK

<i>(in millions, except percentages and per share data)</i>	GAAP	non-GAAP
Revenue	\$1,770.5 - \$1,855.5	\$1,790.0 - \$1,875.0
Operating margin	25.1% - 27.8%	40.0% - 41.0%
Effective tax rate	12.0% - 14.5%	19.0%
Diluted earnings per share	\$4.33 - \$4.86	\$6.44 - \$6.92

We are currently expecting approximately 88.5 million and 89.0 million fully diluted shares outstanding for Q1 2021 and FY 2021, respectively.

Commentary on 2021 Non-GAAP Operating Margin Guidance

The FY 2021 non-GAAP operating margin guidance includes a dilutive impact of approximately 1.0% related to our recent acquisition of AGI. Consistent with the historical experience related to our acquisitions, we expect this dilutive impact to be the most pronounced in the first year post-acquisition.

In addition, we are currently forecasting the following for FY 2021:

<i>(in millions)</i>	Other Financial Metrics
ACV	\$1,750.0 - \$1,825.0
Operating cash flows	\$475.0 - \$515.0

Commentary on 2021 Operating Cash Flow Guidance

Our Q4 and FY 2020 operating cash flow benefited from cash receipts from customer payments originally scheduled to be paid in FY 2021, as well as customer receipts from December transactions that would have traditionally been paid in the following fiscal year. These activities collectively increased our FY 2020 operating cash flow and will decrease our FY 2021 operating cash flow by approximately \$25.0 million. Additionally, FY 2020 operating cash flow benefited from \$31.0 million related to the timing of various tax payments, \$14.0 million of which will be due in 2021, resulting in a further shifting of operating cash flow between these two periods.

CURRENCY OUTLOOK

Our results have been, and will continue to be, impacted by currency fluctuations, particularly by rate movements in the Euro and Japanese Yen. Our currency rate assumptions are as follows:

	Euro	Japanese Yen
Q1 2021 and FY 2021	1.21 - 1.24	102 - 105

The outlook presented above factors in actual and planned increases in sales and channel capacity, our current visibility around major account activity, sales pipelines and forecasts. However, as we have said in the past, and will continue to reiterate, there are many factors over which we have no control, including the macro-economic environment, customer procurement patterns, government and tax policies, and currency rate volatility. We do, however, have the benefit of a solid, repeatable business base; a diversified geographic and industry footprint; and a world-class customer base that have helped us to succeed and to deliver on our commitments.

Please see the section entitled “Forward-Looking Statements and Risk Factors” for a discussion of risks, uncertainties and factors that could cause actual results to differ materially from those implied by forward-looking statements.

/ Glossary of Terms

Annual Contract Value (ACV): ACV is a metric we use to better understand the business. There is no GAAP measure comparable to ACV. ACV is composed of the following:

- the annualized value of maintenance and lease contracts with start dates or anniversary dates during the period, plus
- the value of perpetual license contracts with start dates during the period, plus
- the annualized value of fixed-term services contracts with start dates or anniversary dates during the period, plus
- the value of work performed during the period on fixed-deliverable services contracts.

Example 1: A \$300,000 lease or maintenance contract with a term of January 1, 2020 - December 31, 2022 would contribute \$100,000 to ACV in each of fiscal years 2020, 2021 and 2022.

Example 2: A perpetual license valued at \$200,000 with a contract start date of March 1, 2020 sold in connection with three years of annual maintenance valued at a total of \$120,000 would contribute to ACV as follows: fiscal year 2020: \$240,000 (\$200,000 + \$40,000); fiscal years 2021 and 2022: \$40,000 in each year.

Backlog: Installment billings for periods beyond the current quarterly billing cycle.

Deferred Revenue: Billings made or payments received in advance of revenue recognition.

Lease or Time-Based License: A license of a stated product of our software that is granted to a customer for use over a specified time period, which can be months or years in length. In addition to the use of the software, the customer is provided with access to maintenance (unspecified version upgrades and technical support) without additional charge. The revenue related to these contracts is recognized ratably over the contract period for the maintenance portion and up front for the license portion.

Perpetual / Paid-Up License: A license of a stated product and version of our software that is granted to a customer for use in perpetuity. The revenue related to this type of license is typically recognized up front.

Maintenance: A contract, typically one year in duration, that is purchased by the owner of a perpetual license and that provides access to unspecified version upgrades and technical support during the duration of the contract. The revenue from these contracts is recognized ratably over the contract period.

/ Forward-Looking Statements and Risk Factors

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that provide current expectations or forecasts of future events based on certain assumptions. Forward-looking statements are subject to risks, uncertainties, and factors relating to our business which could cause our actual results to differ materially from the expectations expressed in or implied by such forward-looking statements. Many of these risks, uncertainties, and factors are currently amplified by, and may continue to be amplified by, the COVID-19 pandemic.

Forward-looking statements use words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “intend,” “likely,” “may,” “outlook,” “plan,” “predict,” “project,” “should,” “target,” or other words of similar meaning. Forward-looking statements include those about market opportunity, including our total addressable market. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date they are made. We undertake no obligation to update forward-looking statements, whether as a result of new information, future events or otherwise.

The following risks, among others, could cause actual results to differ materially from those described in any forward-looking statements:

- current and potential future impacts of the COVID-19 pandemic on the global economy and our business, and consolidated financial statements; adverse changes in global economic and/or political conditions; and political, economic, regulatory and public health and safety risks and uncertainties in the countries and regions in which we operate;
- declines in our customers' businesses resulting in adverse changes in procurement patterns; disruptions in accounts receivable and cash flow due to customers' liquidity challenges and commercial deterioration; uncertainties regarding demand for our products and services in the future and our customers' acceptance of new products; and delays or declines in anticipated sales due to reduced or altered sales and marketing interactions with customers;
- impacts from tariffs, trade sanctions, export license requirements or other trade barriers; disruptions in the global economy and financial markets that may limit or delay availability of credit under existing or new credit facilities, or that may limit our ability to obtain credit or financing on acceptable terms or at all; and the effect of changes in currency exchange rates or interest rates;
- our ability to protect our proprietary technology; cybersecurity threats or other security breaches, including in relation to an increased level of our activity that is occurring from remote global off-site locations; and disclosure and misuse of employee or customer data whether as a result of a cybersecurity incident or otherwise;
- the quality of our products, including the strength of features, functionality and integrated multi-physics capabilities; our ability to develop and market new products to address the industry's rapidly changing technology; the failures or errors in our products and services; and increased pricing pressure as a result of the competitive environment in which we operate;
- plans for future capital spending; the extent of corporate benefits from such spending including with respect to customer relationship management; and higher than anticipated costs for research and development or slowdown in our research and development activities;
- investments in complementary companies, products, services and technologies; our ability to complete and successfully integrate our acquisitions and realize the financial and business benefits of the transactions; and the impact indebtedness incurred in connection with any acquisition could have on our operations;
- investments in global sales and marketing organizations and global business infrastructure; and dependence on our channel partners for the distribution of our products;
- our ability to recruit and retain key personnel including any delays in recruitment caused by restrictions on travel and in person interactions; and the absence of key personnel or teams due to illness or recuperation;
- increased volatility in our revenue due to the timing, duration and value of multi-year lease contracts; our reliance on high renewal rates for annual lease and maintenance contracts; the volatility of our stock price; the potential variations in our sales forecasts compared to actual sales; and the uncertainty of estimates associated with the acquisition accounting treatment of deferred revenue;
- operational disruptions generally or specifically in connection with transitions to and from remote work environments; and the failure of our technological infrastructure or those of the service providers upon whom we rely including for infrastructure and cloud services;

- our and our channel partners' ability to comply with laws and regulations in relevant jurisdictions; the outcome of contingencies, including legal proceedings, government or regulatory investigations and service tax audit cases;
- uncertainty regarding income tax estimates in the jurisdictions in which we operate; and the effect of changes in tax laws and regulations in the jurisdictions in which we operate; and
- other risks and uncertainties described in our reports filed from time to time with the Securities and Exchange Commission.

/ Reconciliations of GAAP to Non-GAAP Measures (Unaudited)

<i>(in thousands, except percentages and per share data)</i>	Three Months Ended December 31, 2020						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
Total GAAP	\$ 623,686	\$ 555,783	89.1 %	\$ 259,391	41.6 %	\$ 215,632	\$ 2.46
Acquisition accounting for deferred revenue	4,085	4,085	0.1 %	4,085	0.4 %	4,085	0.05
Stock-based compensation expense	—	3,670	0.6 %	42,359	6.7 %	42,359	0.47
Excess payroll taxes related to stock-based awards	—	39	— %	520	0.1 %	520	0.01
Amortization of intangible assets from acquisitions	—	11,415	1.8 %	15,452	2.4 %	15,452	0.18
Transaction expenses related to business combinations	—	—	— %	2,321	0.4 %	2,321	0.03
Rabbi trust (income) / expense	—	—	— %	—	— %	(1)	—
Adjustment for income tax effect	—	—	— %	—	— %	(20,668)	(0.24)
Total non-GAAP	\$ 627,771	\$ 574,992	91.6 %	\$ 324,128	51.6 %	\$ 259,700	\$ 2.96

¹ Diluted weighted average shares were 87,626.

<i>(in thousands, except percentages and per share data)</i>	Three Months Ended December 31, 2019						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
Total GAAP	\$ 486,228	\$ 436,632	89.8 %	\$ 185,716	38.2 %	\$ 165,852	\$ 1.91
Acquisition accounting for deferred revenue	6,265	6,265	0.1 %	6,265	0.8 %	6,265	0.07
Stock-based compensation expense	—	2,470	0.5 %	31,406	6.4 %	31,406	0.37
Excess payroll taxes related to stock-based awards	—	42	— %	404	0.1 %	404	—
Amortization of intangible assets from acquisitions	—	7,646	1.6 %	11,473	2.3 %	11,473	0.13
Transaction expenses related to business combinations	—	—	— %	948	0.2 %	948	0.01
Rabbi trust (income) / expense	—	—	— %	—	— %	(101)	—
Adjustment for income tax effect	—	—	— %	—	— %	(21,534)	(0.25)
Total non-GAAP	\$ 492,493	\$ 453,055	92.0 %	\$ 236,212	48.0 %	\$ 194,713	\$ 2.24

¹ Diluted weighted average shares were 86,992.

<i>(in thousands, except percentages and per share data)</i>	Twelve Months Ended December 31, 2020						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
Total GAAP	\$ 1,681,297	\$ 1,456,033	86.6 %	\$ 496,356	29.5 %	\$ 433,887	\$ 4.97
Acquisition accounting for deferred revenue	14,201	14,201	0.1 %	14,201	0.6 %	14,201	0.16
Stock-based compensation expense	—	13,626	0.8 %	145,615	8.6 %	145,615	1.66
Excess payroll taxes related to stock-based awards	—	813	0.1 %	10,111	0.6 %	10,111	0.12
Amortization of intangible assets from acquisitions	—	40,642	2.4 %	57,241	3.4 %	57,241	0.66
Transaction expenses related to business combinations	—	—	— %	5,129	0.3 %	5,129	0.06
Rabbi trust (income) / expense	—	—	— %	—	— %	(6)	—
Adjustment for income tax effect	—	—	— %	—	— %	(81,574)	(0.93)
Total non-GAAP	\$ 1,695,498	\$ 1,525,315	90.0 %	\$ 728,653	43.0 %	\$ 584,604	\$ 6.70

¹ Diluted weighted average shares were 87,288.

<i>(in thousands, except percentages and per share data)</i>	Twelve Months Ended December 31, 2019						
	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted ¹
Total GAAP	\$ 1,515,892	\$ 1,349,619	89.0 %	\$ 515,040	34.0 %	\$ 451,295	\$ 5.25
Acquisition accounting for deferred revenue	12,514	12,514	0.1 %	12,514	0.5 %	12,514	0.15
Stock-based compensation expense	—	8,494	0.5 %	116,190	7.7 %	116,190	1.34
Excess payroll taxes related to stock-based awards	—	518	0.1 %	4,920	0.3 %	4,920	0.06
Amortization of intangible assets from acquisitions	—	21,710	1.4 %	36,879	2.4 %	36,879	0.43
Transaction expenses related to business combinations	—	—	— %	6,590	0.4 %	6,590	0.08
Rabbi trust (income) / expense	—	—	— %	—	— %	(369)	—
Adjustment related to the Tax Cuts and Jobs Act	—	—	— %	—	— %	(1,834)	(0.02)
Adjustment for income tax effect	—	—	— %	—	— %	(61,188)	(0.71)
Total non-GAAP	\$ 1,528,406	\$ 1,392,855	91.1 %	\$ 692,133	45.3 %	\$ 564,997	\$ 6.58

¹ Diluted weighted average shares were 85,925.

In the first quarter and fiscal year 2021 guidance, the expected impacts of non-GAAP adjustments to revenue associated with the acquisition accounting for deferred revenue are \$9.0 million and \$19.5 million, respectively. Over the same periods, the impacts of non-GAAP adjustments associated with stock-based compensation result in a higher non-GAAP normalized effective tax rate than the comparable GAAP annualized effective tax rate. See below for a reconciliation of GAAP to non-GAAP operating margins and diluted earnings per share:

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Quarter Ending March 31, 2021

	Operating Margin	Earnings Per Share - Diluted
U.S. GAAP expectation	1.9% - 8.7%	\$0.41 - \$0.57
Exclusions before tax:		
Acquisition adjustments to deferred revenue	2.3% - 2.6%	\$0.10
Acquisition-related amortization	5.5% - 6.0%	\$0.22
Stock-based compensation and related excess payroll tax	11.0% - 13.5%	\$0.46 - \$0.52
Adjustment for income tax effect	N/A	(\$0.45) - (\$0.52)
Non-GAAP expectation	24.0% - 27.5%	\$0.73 - \$0.90

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Year Ending December 31, 2021

	Operating Margin	Earnings Per Share - Diluted
U.S. GAAP expectation	25.1% - 27.8%	\$4.33 - \$4.86
Exclusions before tax:		
Acquisition adjustments to deferred revenue	0.7% - 0.8%	\$0.22
Acquisition-related amortization	3.9% - 4.3%	\$0.83 - \$0.86
Stock-based compensation and related excess payroll tax	8.6% - 9.8%	\$1.80 - \$1.96
Adjustment for income tax effect	N/A	(\$0.79) - (\$0.93)
Non-GAAP expectation	40.0% - 41.0%	\$6.44 - \$6.92

/ Non-GAAP Measures

We provide non-GAAP revenue, non-GAAP gross profit, non-GAAP gross profit margin, 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 our operational performance. These financial measures exclude the impact of certain items and, therefore, have not been calculated in accordance with GAAP. A detailed explanation of each of the adjustments to such financial measures is described below. These prepared remarks also contain a reconciliation of each of these non-GAAP financial measures to its most comparable GAAP financial measure.

We use non-GAAP financial measures (a) to evaluate our historical and prospective financial performance as well as our performance relative to our 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 employees. In addition, many financial analysts that follow us focus on and publish both historical results and future projections based on non-GAAP financial measures. We believe that it is in the best interest of our investors to provide this information to analysts so that they accurately report the non-GAAP financial information. Moreover, investors have historically requested, and we have historically reported, these non-GAAP financial measures as a means of providing consistent and comparable information with past reports of financial results.

While we believe 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 our competitors and may not be directly comparable to similarly titled measures of our competitors due to potential differences in the exact method of calculation. We compensate 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. Historically, we have consummated acquisitions in order to support our 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 our business or cash flow, it adversely impacts our 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, we provide non-GAAP financial measures which exclude the impact of the acquisition accounting adjustment. We believe 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 us in our financial and operational decision-making, and (b) compare our past and future reports of financial results as the revenue reduction related to acquired deferred revenue will not recur when related lease licenses and software maintenance contracts are renewed in future periods.

Amortization of intangible assets from acquisitions. We incur amortization of intangible assets, included in our GAAP presentation of amortization expense, related to various acquisitions we have made. We exclude these expenses for the purpose of calculating non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance 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 us after the acquisition. Accordingly, we do not consider these expenses for purposes of evaluating our performance during the applicable time period after the acquisition, and we exclude such expenses when making decisions to allocate resources. We believe 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 us in our financial and operational decision-making, and (b) compare our past reports of financial results as we have historically reported these non-GAAP financial measures.

Stock-based compensation expense. We incur expense related to stock-based compensation included in our GAAP presentation of 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 our 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 and viewed as a form of compensation, we exclude these expenses for the purpose of calculating non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance. We similarly exclude income (expense) related to assets held in a rabbi trust in connection with our deferred compensation plan. Specifically, we exclude stock-based compensation and income (expense) related to assets held in the deferred compensation plan rabbi trust during our annual budgeting process and our quarterly and annual assessments of our performance. The annual budgeting process is the primary mechanism whereby we allocate resources to various initiatives and operational requirements. Additionally, the annual review by our board of directors during which it compares our 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 our senior management and department managers, charges related to stock-based compensation are excluded from expenditure and profitability results. In fact, we record stock-based compensation expense into a stand-alone cost center for which no single operational manager is responsible or accountable. In this way, we 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. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting as well as comparability with competitors' operating results.

Transaction expenses related to business combinations. We incur expenses for professional services rendered in connection with business combinations, which are included in our GAAP presentation of selling, general and administrative expense. These expenses are generally not tax-deductible. We exclude 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 we evaluate our continuing operational performance, as we generally would not have otherwise incurred these expenses in the periods presented as a part of our operations. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting as well as comparability with competitors' operating results.

Tax Cuts and Jobs Act. We recorded impacts to our income tax provision related to the enactment of the Tax Cuts and Jobs Act of 2017, specifically for the transition tax related to unrepatriated cash. We exclude these impacts for the purpose of calculating non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance, as (i) the charges are not expected to recur as part of our 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. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting.

Non-GAAP tax provision. We utilize a normalized non-GAAP annual effective tax rate (AETR) to calculate non-GAAP measures. This methodology provides better consistency across interim reporting periods by eliminating the effects of non-recurring items and aligning the non-GAAP tax rate with our expected geographic earnings mix. To project this rate, we analyzed our historic and projected non-GAAP earnings mix by geography along with other factors such as our current tax structure, recurring tax credits and incentives, and expected tax positions. On an annual basis we will re-evaluate this rate for significant items that may materially affect our projections.

Non-GAAP financial measures are not in accordance with, or an alternative for, GAAP. Our 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 our consolidated financial statements prepared in accordance with GAAP.

We have provided a reconciliation of the non-GAAP financial measures to the most directly comparable GAAP financial measures as listed below:

GAAP Reporting Measure

Revenue
Gross Profit
Gross Profit Margin
Operating Income
Operating Profit Margin
Net Income
Diluted Earnings Per Share

Non-GAAP Reporting Measure

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

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