



**ANSYS, INC. FIRST QUARTER 2020
EARNINGS ANNOUNCEMENT
PREPARED REMARKS
May 6, 2020**

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 Q1 2020 results in advance of our quarterly conference call. These prepared remarks will not be read on the call.

**Conference call details:
May 7, 2020
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 at <https://investors.ansys.com/events-and-presentations/events-calendar> or by dialing (877) 344-7529 (US), (855) 669-9658 (CAN) or (412) 317-0088 (INT'L) and referencing the access code 10142248.

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 Q1 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. In line with our historical practice, the financial information below is presented on a supplemental, non-GAAP basis unless otherwise indicated.

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 to the 2019 reported results.

FIRST QUARTER 2020 OVERVIEW AND COVID-19 UPDATE

The financial guidance provided in February 2020 was largely based on an expected adverse impact related to COVID-19 in China, as well as a moderate impact in other parts of Asia. The expectation at the time was that there would be an impact in the first and second quarters, with much of that business returning in the second half of the year. The virus has become significantly more widespread since that time. Economies throughout the world have been far more adversely impacted than was expected in February. And there is increased uncertainty as to when people will return to work, or as to when economic activity will more fully resume. Companies, including Ansys and our customers, are reducing or delaying certain investments in 2020 as a result of this uncertainty. As a result, we are updating our financial guidance based on new assumptions. That guidance and related assumptions are detailed later in this document.

Despite challenges brought on by the global pandemic caused by COVID-19, we delivered revenue, operating margin and earnings near the midpoint of our guidance ranges. We reported first quarter consolidated non-GAAP revenue of \$308.9 million, a decrease of 3% in both reported and constant currency as compared to the first quarter of 2019. We also achieved non-GAAP EPS of \$0.83, which represented a 36% reduction compared to the prior comparable period. These reductions were expected and were reflected in our guidance, due largely to the impacts in China of COVID-19 and trade restrictions, as well as expectations for a reduction in multi-year lease contracts during the first quarter. Our financial results included operating cash flows of \$147.4 million for the first quarter of 2020.

Update on the Impact of COVID-19:

- In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic, which continues to spread throughout the U.S. and the world. While the full impact of this outbreak is not yet known, we are closely monitoring the spread of COVID-19 and continually assessing its potential effects on our business. The COVID-19 pandemic has had, and is expected to continue to have, an adverse impact on our business, employees, liquidity, financial condition, results of operations and cash flows. See below for the operational, financial and liquidity impacts of the COVID-19 outbreak:

Operational Impacts

- Our first responsibility during these unprecedented times is the health and safety of our employees and their families, our partners and our broad Ansys community around the world. At the onset of the crisis, we took action to enable our employees to work from home. We have temporarily closed our global Ansys offices in North America, Asia and Europe, including our corporate headquarters in the United States, and implemented certain travel restrictions, both of which have disrupted how we operate our business. We have subsequently reopened all of our offices in China and South Korea using a phased approach, as the situation has improved.
- Our recent investments in technologies and updated infrastructure have been meaningful contributors to our ability to work effectively even while working remotely. Accordingly, we continue to pay all of our salaried and hourly workers. 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 have been effective at closing contracts, despite the purchasing process being slowed and particularly impacted at those customers with lower levels of remote working sophistication. Our R&D teams have also continued to be productive and we are on track to meet our product release targets. We have also 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.

Financial Impact

- A large portion of our quarterly sales activity occurs during the last two weeks of the quarter. During this most critical time at the end of the first quarter, we were unable to hold physical meetings with customers. However, we were still able to secure a significant portion of the business that was in our forecast and, in some regions, an even larger amount. As a result, our revenue was near the midpoint of our guidance range for the first quarter of 2020.
- The COVID-19 pandemic did not have a material, adverse impact on our first quarter financial results as compared to the financial guidance that we provided in February 2020. In fact, the pandemic helped to demonstrate the resilience of our business. Due to our diverse customer base, both from a vertical and geographic perspective, as well as the close relationships with customers that enabled us to close a large amount of business remotely, we were successful at mitigating additional significant impacts in Q1 as compared to the assumptions made in our financial guidance.

Liquidity Impact

- As of March 31, 2020, we had \$717.7 million of cash and cash equivalent balances. While the acquisition of Lumerical Inc. (Lumerical) utilized \$107.5 million of that cash balance in early April, we continue to hold approximately \$600 million of cash at April 30, 2020. We believe that this balance, together with cash generated from operations and access to our \$500 million revolving credit facility, are well in excess of the cash required for our operations over the next twelve months.
- We have an unsecured term loan with an outstanding principal balance of \$425.0 million as of March 31, 2020. We are compliant with our debt covenants. Our debt agreement currently requires no principal payments through the next twelve months. Accordingly, our only debt service requirements are the interest payments in a low-rate environment. We expect that we will have adequate liquidity to service this debt over the next twelve months.
- Our cash flows from operations were strong in the first quarter and totaled \$147.4 million. These cash flows were only minimally impacted by COVID-19, primarily by requests for payment delays from China. However, as the virus has become more widespread, we have seen an increase in customer and channel partner requests for extended payment terms on new contracts and delayed payments on existing contracts. Thus far, those requests outside of China have been disproportionately related to the automotive industry. These requests have increased the uncertainty of cash collections and resulted in a 26% increase in our reserves for bad debt during the first quarter of 2020. They also have affected our outlook for cash flows from operations in 2020, which is provided later in this document.

The following are other notable comments related to Q1 2020 (non-GAAP):

- Lease license revenue declined 35% in constant currency for the first quarter of 2020 compared to the first quarter of 2019, primarily due to an expected and significant reduction in multi-year lease contracts. Under current accounting guidance, the value and duration of multi-year lease contracts entered into during the period significantly impact the recognition of revenue. As a result, revenue can fluctuate significantly due to the timing of such contracts. Large swings in revenue growth rates are not necessarily indicative of customers' software usage changes or payments during the period.
- Maintenance revenue and service revenue grew 12% and 33%, respectively, both in constant currency, for the first quarter of 2020 compared to the first quarter of 2019. Service revenue growth was strongly influenced by projects to assist our customers with broader adoption of our simulation tools, as well as the contributions from recent acquisitions.
- Our direct and indirect channels contributed 73% and 27%, respectively, of first quarter 2020 revenue.
- Annual contract value (ACV) for the first quarter of 2020 remained consistent with that of the first quarter of 2019, in constant currency. Both lease licenses and maintenance contracts, as well as a meaningful reduction in perpetual licenses, due partially to the impacts of COVID-19, contributed to a strong recurring ACV base at 82% of ACV for the first quarter of 2020.
- Deferred revenue and backlog was \$835.0 million at March 31, 2020, an increase of 24% over March 31, 2019.
- We repurchased 0.7 million shares at an average price of \$233.48 per share.
- Total headcount on March 31, 2020 was approximately 4,200 employees.

Update on Our Non-GAAP Effective Tax Rate

- We have elected to utilize a normalized non-GAAP annualized effective tax rate (AETR) to calculate non-GAAP measures. This methodology is expected to provide better consistency across interim reporting periods by eliminating the effects of non-recurring items and align 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. For 2020, our normalized non-GAAP AETR is 19.5%. This rate will be used for our non-GAAP results each quarter and for the full year.

Other Recent Highlights

- On April 1, 2020, we acquired Lumerical, a leading developer of photonic design and simulation tools, for a purchase price of approximately \$107.5 million, paid in cash. The acquisition adds photonic products to our multiphysics portfolio, providing our customers with a full set of solutions to solve their next-generation product challenges. We expect Lumerical to contribute \$7 - \$10 million to our non-GAAP revenue during 2020.
- Through a collaboration with us, the EDF Group (EDF) is digitally transforming the development of safer and more dependable and affordable low-carbon power generation technologies. Using our multiphysics solutions, EDF will develop advanced plant instrumentation and controls faster and more affordably than traditional physical prototyping and testing approaches. With a new multi-year agreement, EDF will use our solutions to design state-of-the-art nuclear power plants and deliver improved nuclear energy efficiency.
- We are advancing the performance and affordability of next generation aviation and missile system applications through a collaboration with the U.S. Army and L3Harris Technologies. The U.S. Army Combat Capabilities Development Command Aviation & Missile Center evaluated commercially available solutions to seamlessly support rapid integration of software aligned to the FACE Technical Standard through a joint Cooperative Research and Development Agreement.

DEFERRED REVENUE AND BACKLOG

<i>(in thousands)</i>	March 31, 2020	December 31, 2019	March 31, 2019
Current Deferred Revenue	\$ 352,964	\$ 351,353	\$ 330,890
Current Backlog	211,842	218,398	146,202
Total Current Deferred Revenue and Backlog	564,806	569,751	477,092
Long-Term Deferred Revenue	12,787	13,921	13,386
Long-Term Backlog	257,433	287,071	182,170
Total Long-Term Deferred Revenue and Backlog	270,220	300,992	195,556
Total Deferred Revenue and Backlog	\$ 835,026	\$ 870,743	\$ 672,648

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 \$4.1 million and \$11.4 million for the quarter ending June 30, 2020 and the year ending December 31, 2020, respectively, which are inclusive of an estimate for the Lumerical acquisition. We have not yet performed a valuation of the acquired deferred revenue for the Lumerical acquisition. Until such valuation is completed, the expected reductions in reported revenue will remain preliminary estimates that are likely to change.

ACV

<i>(in thousands, except percentages)</i>	Q1 2020	Q1 2019	% Change	% Change in Constant Currency
ACV	\$ 301,050	\$ 303,490	(0.8)%	0.4%
Recurring ACV as a percentage of ACV	82.2%	79.9%		

NON-GAAP REVENUE HIGHLIGHTS

<i>(in thousands, except percentages)</i>	Q1 2020	% of Total	Q1 2019	% of Total	% Change	% Change in Constant Currency
Lease	\$ 44,932	14.5%	\$ 69,397	21.7%	(35.3)%	(35.0)%
Perpetual	42,992	13.9%	54,013	16.9%	(20.4)%	(19.7)%
Maintenance	204,302	66.1%	183,873	57.5%	11.1 %	12.2 %
Service	16,671	5.4%	12,627	3.9%	32.0 %	33.0 %
Total	<u>\$ 308,897</u>		<u>\$ 319,910</u>		(3.4)%	(2.6)%

The impact of our application of the fair value provisions applicable to the accounting for business combinations reduced GAAP revenue by \$3.9 million and \$2.8 million for the first quarter of 2020 and the first quarter of 2019, respectively.

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. As software products, across a large variety of applications and industries, become increasingly distributed in software-as-a-service, cloud and other subscription environments in which the licensing approach is time-based rather than perpetual, we are also experiencing a shifting preference from perpetual licenses to time-based licenses across a broader spectrum of our customers. This shifting preference was elevated in the first quarter of 2020 as a result of the economic impacts of COVID-19. We expect this shifting preference to continue through at least the second and third quarters of 2020.

GEOGRAPHIC NON-GAAP REVENUE HIGHLIGHTS

<i>(in thousands, except percentages)</i>	Q1 2020	% of Total	Q1 2019	% of Total	% Change	% Change in Constant Currency
Americas	\$ 133,124	43.1%	\$ 147,553	46.1%	(9.8)%	(9.7)%
Germany	30,328	9.8%	30,684	9.6%	(1.2)%	1.4 %
United Kingdom	10,017	3.2%	9,623	3.0%	4.1 %	5.9 %
Other EMEA	49,749	16.1%	50,902	15.9%	(2.3)%	(0.1)%
EMEA	90,094	29.2%	91,209	28.5%	(1.2)%	1.1 %
Japan	38,289	12.4%	33,944	10.6%	12.8 %	11.2 %
Other Asia-Pacific	47,390	15.3%	47,204	14.8%	0.4 %	2.5 %
Asia-Pacific	85,679	27.7%	81,148	25.4%	5.6 %	6.2 %
Total	<u>\$ 308,897</u>		<u>\$ 319,910</u>		(3.4)%	(2.6)%

Regional and Industry Commentary

Under the current accounting for revenue, the value and duration of multi-year lease contracts entered into during the period significantly impact the recognition of revenue. As a result, regional 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 payments in the regions during the periods presented.

From a regional perspective, the Asia-Pacific region led the first quarter with 6.2% constant currency revenue growth as compared to the first quarter of 2019. The automotive and high-tech verticals performed well in the region

with solid new business growth. EMEA reflected 1.1% constant currency growth in the first quarter as compared to the same period in 2019, with the United Kingdom delivering 5.9% growth. The automotive sector in EMEA, particularly within Germany, continues to focus on autonomy and electrification projects over legacy programs. Additionally, with the availability of cost-effective 3D printing solutions coming to market, the additive manufacturing marketplace is beginning to show signs of making its way into the automotive supply chain. In the Americas, we were against a difficult comparable of 41.8% constant currently growth in Q1 of 2019. Although we did see strength in automotive, high-tech, and energy, the Americas came in at a 9.7% year-over-year constant currency revenue contraction, which was expected as a result of significant multi-year lease contracts booked in 2019.

Globally, the automotive and high-tech industries were highlights in the quarter. In these verticals, our solutions that support key initiatives of autonomy, electrification and 5G continue to resonate with our customers. For example, with our comprehensive solution for autonomous vehicle simulation, we saw deals across the ecosystem ranging from detailed ADAS sensor design at a leading Asian automotive OEM to a large North American cloud-based high-performance computing provider that enables our solutions to scale to the millions of virtual test miles for vehicle validation. Within the 5G marketplace, the complexity and cost associated with developing and certifying 5G technology continues to drive investments in simulation from the high-tech and semiconductor technology providers. In the quarter, an industry regulator invested in our simulation solutions to help address the complexity, cost and time of the certification process for these new technologies. In addition, our go-to-market strategy and enterprise account focus were key to securing multi-million-dollar deals at both a globally renowned high-tech company and at an international defense contractor.

The energy industry, particularly oil and gas, suffered from the combined effects of a substantial oil price contraction and the impact of COVID-19. Already in a low growth cycle, this is a substantial challenge for the industry overall. However, the oil and gas industry has been in a relatively low growth cycle for some time now, and in this period we have continued to focus on strategic initiatives and work with our energy customers on their digital transformation journeys, additive manufacturing, design optimization, and materials, resulting in relatively strong quarter-over-quarter performance. As the overall energy industry continues its journey to lower carbon sources, we completed a multi-million-dollar sale in the quarter to a small modular nuclear reactor company.

NON-GAAP INCOME STATEMENT HIGHLIGHTS

	Three Months Ended	
	March 31, 2020	March 31, 2019
Gross margin	88.0%	91.1%
Operating margin	29.3%	42.9%
Effective tax rate	19.5%	21.0%

A significant portion of our operating costs are fixed. As a result, when our revenue fluctuates due to the timing of multi-year lease contracts or macro-economic factors such as those associated with COVID-19, there is a corresponding and direct impact on our gross and operating margins. Given the reduction in our Q1 2020 revenue, we experienced a decline in margins, as shown above.

BALANCE SHEET AND CASH FLOW HIGHLIGHTS

- Cash and short-term investments totaled \$718.0 million as of March 31, 2020, of which 60% was held domestically.
- Operating cash flows were \$147.4 million for the first quarter of 2020 as compared to \$151.6 million for the first quarter of 2019.
- Capital expenditures totaled \$7.0 million for the first quarter of 2020. We are currently planning total 2020 capital expenditures in the range of \$40.0 - \$50.0 million.

SHARE COUNT AND SHARE REPURCHASES

We had 87.4 million fully diluted weighted average shares outstanding in Q1. We repurchased 0.7 million shares in Q1 at an average price of \$233.48 per share. As of March 31, 2020, we had 2.8 million shares remaining available for repurchase under our authorized share repurchase program.

STOCK-BASED COMPENSATION EXPENSE

<i>(in thousands, except per share data)</i>	Three Months Ended	
	March 31, 2020	March 31, 2019
Cost of sales:		
Maintenance and service	\$ 2,866	\$ 1,228
Operating expenses:		
Selling, general and administrative	15,144	13,131
Research and development	12,931	9,441
Stock-based compensation expense before taxes	30,941	23,800
Related income tax benefits	(25,906)	(11,076)
Stock-based compensation expense, net of taxes	\$ 5,035	\$ 12,724
Net impact on earnings per share:		
Diluted earnings per share	\$ (0.06)	\$ (0.15)

CURRENCY

CURRENCY IMPACTS: The first quarter 2020 revenue and operating income, as compared to the first quarter 2019, were impacted by fluctuations in the exchange rates of foreign currencies against the U.S. Dollar. The impacts on non-GAAP revenue and operating income are reflected in the table below. Amounts in brackets indicate an adverse impact from currency fluctuations.

<i>(in thousands)</i>	Non-GAAP	
	Three Months Ended	
	March 31, 2020	
Revenue	\$	(2,596)
Operating income	\$	(371)

The foreign exchange impact on deferred revenue and backlog was \$6.7 million unfavorable for the first quarter 2020.

OUTLOOK

Guidance Commentary on COVID-19 Outbreak and China Trade Restrictions:

The impact from the rapidly changing market and economic conditions due to the recent COVID-19 outbreak is uncertain, disrupting the business of our customers and partners, and will impact our business and consolidated results of operations. While our current expectation, and that reflected in our financial guidance, is that the impact will be a delay in business with an adverse impact on our full year results, this expectation is subject to significant uncertainty and dependent upon how widespread the virus becomes, the duration and severity of its impact, the geographic markets affected, the actions taken by governmental authorities and other factors. Further 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 the financial guidance.

During 2019, 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. While our 2019 results were adversely impacted by these restrictions for a portion of the year, the 2019 operating results include approximately \$20 million each of ACV and revenue related to transactions that occurred prior to the placement of the restrictions. The guidance provided below assumes that the existing trade restrictions related to these entities will remain throughout 2020. 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 the financial guidance.

Our second quarter and full year financial guidance estimates are provided below. Because of the very significant market and economic uncertainty associated with the COVID-19 outbreak, 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 the year.

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

- We expect the most significant business disruption to occur in the second quarter. During much of the quarter, our teams and those of our customers will continue to be working remotely. There will be a significant delay in the timing of closing certain transactions, and closing the larger enterprise-type deals may be especially difficult. Customers will delay certain purchases to later in the year.
- We expect a modest recovery in the business environment during the third quarter as people return to work and businesses begin to resume their operations. The third quarter business environment is expected to be stronger than that of the second quarter, but will remain adversely impacted by the continuing effects of COVID-19, with a disproportionate impact on certain customers and industries. We expect a stronger recovery in the fourth quarter, perhaps buoyed by sales transactions that may have been deferred from earlier quarters.
- The pace of economic recovery is highly uncertain. The lower end of our financial guidance assumes that the pace will occur more slowly than that provided above, and the higher end of our financial guidance assumes that the pace will be accelerated as compared to that provided above. We have no ability to reasonably predict the pace of the recovery or whether the recovery will occur even more slowly than our worst-case assumptions.
- The up-front recognition of revenue on large, multi-year lease contracts has a significant impact on our operating results. We have reduced our assumptions for these contracts based on the expectation that customers may be less willing to commit to large-magnitude contracts in this environment and that the sales cycles for many customers who are willing to commit to these contracts will be extended.
- While our expectations for the larger enterprise contracts are reduced, we expect that our larger customer accounts will perform more strongly than the small- and medium-sized businesses. The R&D cycles with the 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 stable and our assumptions are that they will continue to remain stable for the majority of our business. Our assumptions include the expectation for some deterioration in renewal rates among our smaller customers, particularly the small- and medium-sized businesses that are not as well capitalized and may be experiencing cash flow issues. We expect the largest adverse impact on renewal rates to occur during the second quarter.
- We expect a disproportionate reduction in sales of our perpetual licenses, as customers transition to working from home and 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 distress.
- A number of our demand generation events and those of our channel partners have been cancelled due to social distancing requirements. We have adjusted to a stronger digital focus for demand generation. However, we expect the absence of certain demand generation to have an adverse impact on our second half results, particularly for certain channel partners.

- We are assuming that world government stimulus programs continue to evolve as global economies recover. We have not assumed that such stimulus is targeted to a single segment of our customer base, but is more broad and supportive in helping countries to avoid prolonged recessions.
- We are adjusting our spending to reflect our expectations for the pace at which economic recovery will occur. These adjustments include slowing the pace of our hiring and reducing non-headcount-related discretionary spending, as well as spending on certain facilities and infrastructure projects. However, we are not reducing our spending on critical digital transformation projects, such as CRM and our human resources management system (HRMS), as those projects are critical to our ability to operate efficiently and scale the business for future growth.
- Our operating cash flow guidance is provided for the full year. That guidance has been adjusted to reflect the updated ACV, revenue and profitability estimates. It has also been adjusted for the assumption that an incremental \$10 - \$20 million of customer payments that would have otherwise been made in 2020 will be delayed to 2021 as a result of extended payment term requests on new contracts and delayed payments on existing contracts.

We are currently forecasting the following:

Q2 2020 OUTLOOK:

<i>(in millions, except percentages and per share data)</i>	GAAP	non-GAAP
Revenue	\$330.9 - \$370.9	\$335.0 - \$375.0
Operating margin	16.5% - 26.0%	33.5% - 39.0%
Effective tax rate	7.0% - 13.0%	19.5%
Diluted earnings per share	\$0.55 - \$0.92	\$1.01 - \$1.33

FY 2020 OUTLOOK:

<i>(in millions, except percentages and per share data)</i>	GAAP	non-GAAP
Revenue	\$1,543.6 - \$1,618.6	\$1,555.0 - \$1,630.0
Operating margin	25.5% - 29.5%	40.0% - 42.0%
Effective tax rate	12.5% - 15.5%	19.5%
Diluted earnings per share	\$3.84 - \$4.62	\$5.61 - \$6.23

In addition, we are currently forecasting the following for FY 2020:

<i>(in millions)</i>	Other Financial Metrics
ACV	\$1,500.0 - \$1,575.0
Operating cash flows	\$425.0 - \$470.0

We are currently expecting approximately 87.0 - 87.5 million fully diluted shares outstanding for both Q2 2020 and FY 2020.

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
Q2 2020 and FY 2020	1.08 - 1.11	106 - 109

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 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 the 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. Risks, uncertainties, and factors that could cause actual results to differ materially from those implied by these forward-looking statements include: current and potential future impacts of the COVID-19 pandemic on the global economy and our business, financial position, results of operations and cash flows; adverse changes in global economic and/or political conditions; declines in our customers’ businesses resulting in adverse changes in customer 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, including those arising from the need of customers to utilize our products from remote locations; plans for future capital spending; delays or declines in anticipated sales due to reduced or altered sales and marketing interactions with customers; 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; 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; political, economic, regulatory and public health and safety risks and uncertainties in the countries and regions in which we operate; impacts from tariffs, trade sanctions, export license requirements or other trade barriers; the effect of changes in currency exchange rates and changes in interest rates; potential variations in our sales forecasts compared to actual sales; the volatility of our stock price; failures or errors in our products and services; our industry's rapidly changing technology; the quality of our products, including the strength of features, functionality and integrated multi-physics capabilities; lease license volatility; higher than anticipated costs for research and development or slowdown in our research and development activities; increased pricing pressure as a result of the competitive environment in which we operate; 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; 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; disclosure and misuse of employee or customer data whether as a result of a cybersecurity incident or otherwise; implementation of our new IT systems; investments in global sales and marketing organizations and global business infrastructure; dependence on our channel partners for the distribution of our products; 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; operational disruptions generally or specifically in connection with transitions to and from remote work environments, or the failure of our technological infrastructure; the outcome of contingencies, including legal proceedings and government or regulatory investigations and service tax audit cases; uncertainty regarding income tax estimates in the jurisdictions in which we operate; changes in accounting principles or standards; the effect of changes in tax laws and regulations in the jurisdictions in which we operate; the uncertainty of estimates relating to the impact on reported revenue related to the acquisition accounting treatment of deferred revenue; and other risks and uncertainties described in our reports filed from time to time with the Securities and Exchange Commission. 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 publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

RECONCILIATION OF GAAP TO NON-GAAP MEASURES

ANSYS, INC. AND SUBSIDIARIES Reconciliation of Non-GAAP Measures (Unaudited)

<i>(in thousands, except percentages and per share data)</i>	Three Months Ended					
	March 31, 2020			March 31, 2019		
	GAAP Results	Adjustments	Non-GAAP Results	GAAP Results	Adjustments	Non-GAAP Results
Total revenue	\$ 304,985	\$ 3,912 (1)	\$ 308,897	\$ 317,130	\$ 2,780 (4)	\$ 319,910
Operating income	34,073	56,500 (2)	90,573	95,649	41,537 (5)	137,186
Operating profit margin	11.2%		29.3%	30.2%		42.9%
Net income	\$ 46,064	\$ 26,241 (3)	\$ 72,305	\$ 86,230	\$ 24,440 (6)	\$ 110,670
Earnings per share – diluted:						
Earnings per share	\$ 0.53		\$ 0.83	\$ 1.01		\$ 1.29
Weighted average shares	87,369		87,369	85,493		85,493

- (1) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.
- (2) Amount represents \$30.9 million of stock-based compensation expense, \$7.0 million of excess payroll taxes related to stock-based awards, \$13.7 million of amortization expense associated with intangible assets acquired in business combinations, \$1.0 million of transaction expenses related to business combinations and the \$3.9 million adjustment to revenue as reflected in (1) above.
- (3) Amount represents the impact of the adjustments to operating income referred to in (2) above, decreased for the related GAAP to non-GAAP tax provision impact of \$30.3 million based on a normalized non-GAAP annual effective tax rate of 19.5%.
- (4) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.
- (5) Amount represents \$23.8 million of stock-based compensation expense, \$4.0 million of excess payroll taxes related to stock-based awards, \$8.3 million of amortization expense associated with intangible assets acquired in business combinations, \$2.7 million of transaction expenses related to business combinations and the \$2.8 million adjustment to revenue as reflected in (4) above.
- (6) Amount represents the impact of the adjustments to operating income referred to in (5) above, decreased for the related income tax impact of \$15.6 million, adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of \$1.3 million, and rabbi trust income of \$0.2 million.

In the second quarter and fiscal year 2020 guidance, the expected impacts of non-GAAP adjustments to revenue associated with the acquisition accounting for deferred revenue, inclusive of an estimate for the Lumerical acquisition, are \$4.1 million and \$11.4 million, respectively. We have not yet performed a valuation of the acquired deferred revenue for the Lumerical acquisition. Until such valuation is completed, the expected reductions in reported revenue will remain preliminary estimates that are likely to change. 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 June 30, 2020

	Operating Margin	Earnings Per Share - Diluted
U.S. GAAP expectation	16.5% - 26.0%	\$0.55 - \$0.92
Exclusions before tax:		
Acquisition adjustments to deferred revenue	1.1% - 1.2%	\$0.05
Acquisition-related amortization	3.7% - 4.6%	\$0.16 - \$0.17
Stock-based compensation and related excess payroll tax	8.2% - 11.2%	\$0.38 - \$0.44
Adjustment for income tax effect	N/A	(\$0.18) - (\$0.20)
Non-GAAP expectation	33.5% - 39.0%	\$1.01 - \$1.33

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Year Ending December 31, 2020

	Operating Margin	Earnings Per Share - Diluted
U.S. GAAP expectation	25.5% - 29.5%	\$3.84 - \$4.62
Exclusions before tax:		
Acquisition adjustments to deferred revenue	0.7%	\$0.13
Acquisition-related amortization	3.4% - 3.8%	\$0.63 - \$0.67
Stock-based compensation and related excess payroll tax	8.4% - 10.0%	\$1.59 - \$1.77
Adjustment for income tax effect	N/A	(\$0.74) - (\$0.80)
Non-GAAP expectation	40.0% - 42.0%	\$5.61 - \$6.23

NON-GAAP MEASURES

We provide non-GAAP revenue, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share as supplemental measures to GAAP regarding 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 annual 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 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 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 costs 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 and the impacts of the tax rate change on net deferred tax assets. 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
Operating Income
Operating Profit Margin
Net Income
Diluted Earnings Per Share

Non-GAAP Reporting Measure

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

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