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

FORM 10-Q

(MARK ONE)

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

FOR THE QUARTERLY PERIOD ENDED JANUARY 31, 2020

OR

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

FOR THE TRANSITION PERIOD FROM TO

COMMISSION FILE NUMBER: 001-36334

KEYSIGHT TECHNOLOGIES, INC.

(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Delaware	**46-4254555**
(State or other jurisdiction of incorporation or organization)	(IRS employer Identification no.)
1400 Fountaingrove Parkway	
Santa Rosa California	**95403**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(800) 829-4444**

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $0.01 per share	**KEYS**	**New York Stock Exchange**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer ☒	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☐
Emerging growth company ☐	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section13(a)of the Exchange Act. ☐

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

The number of shares of common stock outstanding at March 2, 2020 was 187,395,353.

KEYSIGHT TECHNOLOGIES, INC.
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PART I — FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

KEYSIGHT TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS
(in millions, except per share data)
(unaudited)

	Three Months Ended January 31,	
	2020	**2019**
Net revenue:		
Products	$ 902	$ 837
Services and other	193	169
Total net revenue	1,095	1,006
Costs and expenses:		
Cost of products	359	347
Cost of services and other	81	81
Total costs	440	428
Research and development	187	173
Selling, general and administrative	300	288
Other operating expense (income), net	(35)	(4)
Total costs and expenses	892	885
Income from operations	203	121
Interest income	6	4
Interest expense	(19)	(20)
Other income (expense), net	12	15
Income before taxes	202	120
Provision for income taxes	39	6
Net income	$ 163	$ 114
Net income per share:		
Basic	$ 0.87	$ 0.61
Diluted	$ 0.86	$ 0.60
Weighted average shares used in computing net income per share:		
Basic	188	187
Diluted	191	190

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

KEYSIGHT TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
(in millions)
(unaudited)

	Three Months Ended January 31,	
	2020	**2019**
Net income	$ 163	$ 114
Other comprehensive income (loss):		
Unrealized gain (loss) on derivative instruments, net of tax benefit (expense) of $(1) and zero	1	(2)
Amounts reclassified into earnings related to derivative instruments, net of tax benefit (expense) of zero	1	1
Foreign currency translation, net of tax benefit (expense) of zero	—	30
Net defined benefit pension cost and post retirement plan costs:		
Change in net actuarial loss, net of tax expense of zero and $3	17	13
Change in net prior service credit, net of tax benefit of $1 and $1	(2)	(3)
Other comprehensive income	17	39
Total comprehensive income	$ 180	$ 153

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

KEYSIGHT TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED BALANCE SHEET
(in millions, except par value and share data)
(unaudited)

	January 31, 2020	October 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,691	$ 1,598
Accounts receivable, net	670	668
Inventory	737	705
Other current assets	228	244
Total current assets	3,326	3,215
Property, plant and equipment, net	578	576
Operating lease right-of-use assets	155	—
Goodwill	1,215	1,209
Other intangible assets, net	435	490
Long-term investments	48	46
Long-term deferred tax assets	737	755
Other assets	347	332
Total assets	$ 6,841	$ 6,623
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$ 224	$ 253
Operating lease liabilities	36	—
Employee compensation and benefits	215	278
Deferred revenue	363	334
Income and other taxes payable	51	55
Other accrued liabilities	93	83
Total current liabilities	982	1,003
Long-term operating lease liabilities	128	—
Long-term debt	1,788	1,788
Retirement and post-retirement benefits	350	357
Long-term deferred revenue	176	176
Other long-term liabilities	290	295
Total liabilities	3,714	3,619
Commitments and contingencies (Note 14)		
Stockholders’ equity:		
Preferred stock; $0.01 par value; 100 million shares authorized; none issued and outstanding	—	—
Common stock; $0.01 par value; 1 billion shares authorized; 195 million shares at January 31, 2020 and 194 million shares at October 31, 2019 issued	2	2
Treasury stock at cost; 7.2 million shares at January 31, 2020 and 6.5 million shares at October 31, 2019	(417)	(342)
Additional paid-in-capital	2,031	2,013
Retained earnings	2,072	1,909
Accumulated other comprehensive loss	(561)	(578)
Total stockholders' equity	3,127	3,004
Total liabilities and equity	$ 6,841	$ 6,623

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

KEYSIGHT TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS
(in millions)
(unaudited)

	Three Months Ended January 31,	
	2020	2019
Cash flows from operating activities:		
Net income	$ 163	$ 114
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	24	24
Amortization	56	52
Share-based compensation	39	27
Deferred tax expense (benefit)	18	(12)
Excess and obsolete inventory-related charges	7	7
Gain on insurance proceeds received for damage to property, plant and equipment	(32)	—
Other non-cash expense (income), net	1	(4)
Changes in assets and liabilities:		
Accounts receivable	(3)	56
Inventory	(36)	(26)
Accounts payable	(26)	(10)
Employee compensation and benefits	(63)	(68)
Deferred revenue	29	43
Income taxes payable	10	10
Retirement and post-retirement benefits	(3)	(12)
Other assets and liabilities	13	39
Net cash provided by operating activities	197	240
Cash flows from investing activities:		
Investments in property, plant and equipment	(32)	(31)
Insurance proceeds received for damage to property, plant and equipment	32	—
Acquisition of businesses and intangible assets, net of cash acquired	(5)	—
Proceeds from divestiture	—	2
Net cash used in investing activities	(5)	(29)
Cash flows from financing activities:		
Proceeds from issuance of common stock under employee stock plans	26	30
Payment of taxes related to net share settlement of equity awards	(49)	(23)
Treasury stock repurchases	(76)	(40)
Net cash used in financing activities	(99)	(33)
Effect of exchange rate movements	—	7
Net increase in cash, cash equivalents, and restricted cash	93	185
Cash, cash equivalents, and restricted cash at beginning of period	1,600	917
Cash, cash equivalents, and restricted cash at end of period	$ 1,693	$ 1,102

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

KEYSIGHT TECHNOLOGIES, INC.
CONDENSED CONSOLIDATED STATEMENT OF EQUITY
(in millions, except number of shares in thousands)
(unaudited)

	Common Stock			Treasury Stock				
	Number of Shares	Par Value	Additional Paid-in Capital	Number of Shares	Treasury Stock at Cost	Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Stockholders' Equity
Balance as of October 31, 2019	193,769	$ 2	$ 2,013	(6,458)	$ (342)	$ 1,909	$ (578)	$ 3,004
Net income	—	—	—	—	—	163	—	163
Other comprehensive income, net of tax	—	—	—	—	—	—	17	17
Issuance of common stock	1,270	—	26	—	—	—	—	26
Taxes related to net share settlement of equity awards	—	—	(49)	—	—	—	—	(49)
Share-based compensation	—	—	41	—	—	—	—	41
Repurchase of common stock	—	—	—	(732)	(75)	—	—	(75)
Balance as of January 31, 2020	195,039	$ 2	$ 2,031	(7,190)	$ (417)	$ 2,072	$ (561)	$ 3,127
Balance as of October 31, 2018	191,204	$ 2	$ 1,889	(4,364)	$ (182)	$ 1,212	$ (488)	$ 2,433
Adjustment due to adoption of new accounting standards	—	—	—	—	—	76	—	76
Net income	—	—	—	—	—	114	—	114
Other comprehensive income, net of tax	—	—	—	—	—	—	39	39
Issuance of common stock	1,597	—	30	—	—	—	—	30
Taxes related to net share settlement of equity awards	—	—	(22)	—	—	—	—	(22)
Share-based compensation	—	—	28	—	—	—	—	28
Repurchase of common stock	—	—	—	(686)	(40)	—	—	(40)
Balance as of January 31, 2019	192,801	$ 2	$ 1,925	(5,050)	$ (222)	$ 1,402	$ (449)	$ 2,658

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

KEYSIGHT TECHNOLOGIES, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. OVERVIEW, BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Overview. Keysight Technologies, Inc. ("we," "us," "Keysight" or the "company"), incorporated in Delaware on December 6, 2013, is a technology company that helps enterprises, service providers and governments accelerate innovation to connect and secure the world by providing electronic design and test solutions that are used in the simulation, design, validation, manufacture, installation, optimization and secure operation of electronics systems in the communications, networking and electronics industries. We also offer customization, consulting and optimization services throughout the customer's product lifecycle, including start-up assistance, asset management, up-time services, application services and instrument calibration and repair.

Our fiscal year-end is October 31, and our fiscal quarters end on January 31, April 30 and July 31. Unless otherwise stated, these dates refer to our fiscal year and fiscal quarters.

Basis of Presentation. We have prepared the accompanying financial statements pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles in the U.S. ("GAAP") have been condensed or omitted pursuant to such rules and regulations. The accompanying financial statements and information should be read in conjunction with our Annual Report on Form 10-K.

In the opinion of management, the accompanying condensed consolidated financial statements contain all normal and recurring adjustments necessary to state fairly our financial position as of January 31, 2020 and October 31, 2019, our results of operations for the three months ended January 31, 2020 and 2019 and cash flows for the three months ended January 31, 2020 and 2019.

Use of Estimates. The preparation of condensed consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in our condensed consolidated financial statements and accompanying notes. Management bases its estimates on historical experience and various other assumptions believed to be reasonable. Although these estimates are based on management’s knowledge of current events and actions that may impact the company in the future, actual results may be different from the estimates. Our critical accounting policies are those that affect our financial statements materially and involve difficult, subjective or complex judgments by management. Those policies are revenue recognition, inventory valuation, share-based compensation, retirement and post-retirement plan assumptions, valuation of goodwill and other intangible assets, warranty, loss contingencies, restructuring, and accounting for income taxes.

Update to Significant Accounting Policies. Except as set forth in Note 2, "New Accounting Pronouncements," there have been no material changes to our significant accounting policies as described in our Annual Report on Form 10-K for the fiscal year ended October 31, 2019.

2. NEW ACCOUNTING PRONOUNCEMENTS

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02 or Accounting Standards Codification Topic 842, *Leases* (“ASC 842”), that requires substantially all leases to be reported on the balance sheet as right-of-use (“ROU”) assets and lease obligations and also requires disclosures by lessees and lessors about the amount, timing and uncertainty of cash flows arising from leases. Consistent with current GAAP, the recognition, measurement and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance or operating lease.

We adopted the standard on November 1, 2019, using the modified retrospective transition approach provided by ASU 2018-11, *Leases: Targeted Improvements*, with the cumulative effect of initially applying the standard recognized at the date of adoption. Under this method of adoption, comparative information has not been restated and continues to be reported under the standards in effect (ASC 840) for the prior periods presented. Adoption of the standard resulted in recording ROU assets and lease obligations for our operating leases of approximately $155 million and $164 million, respectively, but did not have a material impact on beginning retained earnings, the condensed consolidated statement of operations, cash flows, or earnings per share.

We elected the package of practical expedients for leases that commenced before the effective date of ASC 842, whereby we elected to not reassess the following: (i) whether any expired or existing contracts contain leases; (ii) the lease classification for any expired or existing leases; and (iii) initial direct costs for any existing leases. In addition, we have lease agreements with lease and non-lease components, and we have elected the practical expedient for all underlying asset classes and account for them as a single lease component. Our finance lease and lessor arrangements are immaterial.

ASU 2018-15, Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. In August 2018, the FASB issued guidance that requires a customer in a cloud computing arrangement (i.e., hosting arrangement) that is a service contract to follow the internal-use software guidance to determine which implementation costs to defer and recognize as an asset and aligns the recognition of implementation costs to those incurred in an arrangement that includes an internal-use software license. Further, new disclosures about implementation costs for both internal-use software and hosting arrangements are required. The standard is effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. Early adoption is permitted. We are evaluating the impact of adopting this guidance on our consolidated financial statements.

Other amendments to GAAP that have been issued by the FASB or other standards-setting bodies that do not require adoption until a future date are not expected to have a material impact on our consolidated financial statements upon adoption.

3. REVENUE

Disaggregation of Revenue

We disaggregate our revenue from contracts with customers by geographic region, end market, and timing of transfer of products and services to customers, as we believe these categories best depict how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. Disaggregated revenue is presented for each of our reportable segments. Prior period amounts have been reclassified to conform to our organizational change as described in Note 17, "Segment Information."

	Three Months Ended January 31, 2020			Three Months Ended January 31, 2019		
	Communications Solutions Group	Electronic Industrial Solutions Group	Total	Communications Solutions Group	Electronic Industrial Solutions Group	Total
		(in millions)			(in millions)	
Region						
Americas	$ 386	$ 61	$ 447	$ 346	$ 57	$ 403
Europe	115	71	186	115	63	178
Asia Pacific	317	145	462	288	137	425
Total net revenue	$ 818	$ 277	$ 1,095	$ 749	$ 257	$ 1,006
End Market						
Aerospace, Defense & Government	$ 245	$ —	$ 245	$ 223	$ —	$ 223
Commercial Communications	573	—	573	526	—	526
Electronic Industrial	—	277	277	—	257	257
Total net revenue	$ 818	$ 277	$ 1,095	$ 749	$ 257	$ 1,006
Timing of Revenue Recognition						
Revenue recognized at a point in time	$ 701	$ 250	$ 951	$ 652	$ 235	$ 887
Revenue recognized over time	117	27	144	97	22	119
Total net revenue	$ 818	$ 277	$ 1,095	$ 749	$ 257	$ 1,006

Contract Balances

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets) and deferred revenue (contract liabilities) on our condensed consolidated balance sheet. In addition, we defer and capitalize certain costs incurred to obtain a contract (contract costs).

Contract assets - Contract assets represent unbilled amounts from arrangements for which we have performed by transferring goods or services to the customer in advance of receiving all or partial consideration for such goods and services from the customer. Contract assets arise primarily from service agreements and products delivered pending a formal customer acceptance, which generally occurs within 30 days. The contract assets balance was $48 million and $34 million at January 31, 2020 and October 31, 2019, respectively, and is included in "accounts receivables, net" in our condensed consolidated balance sheet.

Contract costs - We recognize an asset for the incremental costs of obtaining a contract with a customer. We have determined that certain employee and third-party representative commissions programs meet the requirements to be capitalized. Employee commissions are based on the achievement of order volume compared to a sales target. Third-party representative commission costs relate directly to a customer contract as the commission is tied to orders contracted through and contracts arranged by our third-party representatives. Without obtaining the contracts, the commissions would not be paid and, as such, are determined to be an incremental cost to obtaining a contract. We only defer these costs when we have determined the commissions are, in fact, incremental and would not have been incurred absent the customer contract.

Capitalized incremental costs are allocated to the individual performance obligations in proportion to the transaction price allocated to each performance obligation and amortized based on the pattern of performance for the underlying performance obligation. Contract costs related to initial contracts and renewals are amortized over the same period because the commissions paid on both the initial contract and renewals are commensurate with one another.

The following table provides a roll-forward of our capitalized contract costs, current and non-current:

	Three Months Ended	
	January 31, 2020	January 31, 2019
	(in millions)	
Beginning balance	$ 28	$ —
Costs capitalized on November 1, 2018 due to ASC 606 adoption	—	29
Costs capitalized during the period	16	17
Costs amortized during the period	(16)	(18)
Foreign currency translation impact	—	1
Ending balance	$ 28	$ 29

Contract liabilities - Our contract liabilities consist of deferred revenue that arises when we receive consideration in advance of providing the goods or services promised in the contract. Contract liabilities are primarily generated from customer deposits received in advance of shipments for products or rendering of services and are recognized as revenue when services are provided to the customer. We classify deferred revenue as current or non-current based on the timing of when we expect to recognize revenue. Contract liabilities are recognized as revenue when services are provided to the customer.

The following table provides a roll-forward of our contract liabilities, current and non-current:

	Three Months Ended	
	January 31, 2020	January 31, 2019
	(in millions)	
Balance at October 31	$ 510	$ 461
Impact of adopting new revenue standard	—	(64)
Balance at November 1	510	397
Deferral of revenue billed in current period, net of recognition	161	167
Revenue recognized that was deferred as of the beginning of the period	(132)	(124)
Foreign currency translation impact	—	3
Balance at January 31	$ 539	$ 443

Remaining Performance Obligations

Revenue expected to be recognized in any future period related to remaining performance obligations, excluding revenue pertaining to contracts that have an original expected duration of one year or less, was approximately $329 million as of January 31, 2020, and represents the company’s obligation to deliver products and services and obtain customer acceptance on delivered products. Since we typically invoice customers at contract inception, this amount is included in our current and long-term deferred revenue balances. As of January 31, 2020, we expect to recognize approximately 37% of the revenue related to these unsatisfied performance obligations during the remainder of 2020, 33% during 2021, and 30% thereafter.

4. SHARE-BASED COMPENSATION

Keysight accounts for share-based awards in accordance with the provisions of the authoritative accounting guidance, which requires the measurement and recognition of compensation expense for all share-based payment awards made to our employees and directors, including restricted stock units ("RSUs"), employee stock purchases made under our Employee Stock Purchase Plan (“ESPP”), employee stock option awards, and performance share awards granted to selected members of our senior management under the Long-Term Performance (“LTP”) Program, based on estimated fair values.

The impact of share-based compensation on our results was as follows:

	Three Months Ended January 31,	
	2020	2019
	(in millions)	
Cost of products and services	$ 5	$ 4
Research and development	8	6
Selling, general and administrative	26	17
Total share-based compensation expense	$ 39	$ 27

The increase in share-based compensation expense for the three months ended January 31, 2020 was primarily driven by an increase in the fair value of our financial metrics-based performance awards and accelerated expense for retirement eligible employees. Share-based compensation capitalized within inventory was $2 million at January 31, 2020 and $1 million at January 31, 2019.

The following assumptions were used to estimate the fair value of awards granted under the LTP Program that are based on total shareholder return ("TSR"):

	Three Months Ended January 31,	
	2020	2019
Volatility of Keysight shares	28%	25%
Volatility of index/peer group	13%	12%
Price-wise correlation with selected peers	61%	57%

The TSR-based performance awards were valued using a Monte Carlo simulation model, which requires the use of highly subjective and complex assumptions, including the price volatility of the underlying stock. The estimated fair value of restricted stock awards and the financial metrics-based performance awards is determined based on the market price of Keysight's common stock on the grant date. The compensation cost for financial metrics-based performance awards reflects the cost of awards that are probable to vest at the end of the performance period. We did not grant option awards in the three months ended January 31, 2020 and 2019.

5. INCOME TAXES

The company's effective tax rate was 19.1 percent and 5.2 percent for the three months ended January 31, 2020 and 2019, respectively. The income tax expense was $39 million and $6 million for the three months ended January 31, 2020 and 2019, respectively. The income tax expense for the three months ended January 31, 2020 included a net discrete expense of $3 million. The income tax expense for the three months ended January 31, 2019 included a net discrete benefit of $23 million, primarily related to a change in tax reserves resulting from a change in judgment.

Keysight benefits from tax incentives in several jurisdictions, most significantly in Singapore, that have granted us tax incentives that require renewal at various times in the future. The tax incentives provide lower rates of taxation on certain classes of income and require thresholds of investments and employment or specific types of income in those jurisdictions. The impact of the tax incentives decreased the income tax provision by $15 million and $8 million for the three months ended January 31, 2020 and 2019, respectively, resulting in a benefit to net income per share (diluted) of approximately$0.08 and $0.04 for the three months ended January 31, 2020 and 2019, respectively. The majority of our tax incentives are due for renewal between 2024 and 2025. With regard to the incentive in Malaysia, a formal application must be filed during fiscal year 2020 to renew the tax incentive through 2025. Keysight intends to file the application timely and does not anticipate any impediments to the renewal process.

The open tax years for the IRS and most states are from November 1, 2015 through the current tax year. For the majority of our foreign entities, the open tax years are from November 1, 2014 through the current tax year. For certain foreign entities, the tax years remain open, at most, back to the year 2008. Given the number of years and numerous matters that remain subject to examination in various tax jurisdictions, we are unable to estimate the range of possible changes to the balance of our unrecognized tax benefits.

The company was audited in Malaysia for the 2008 tax year. Although this tax year pre-dates our separation from Agilent, pursuant to the agreement between Agilent and Keysight pertaining to tax matters, as finalized at the time of separation, for certain entities, including Malaysia, any historical tax liability is the responsibility of Keysight. In the fourth quarter of fiscal 2017, Keysight paid income taxes and penalties of $68 million on gains related to intellectual property rights. We are currently in the process of appealing to the Special Commissioners of Income Tax ("SCIT") in Malaysia. A decision from SCIT is expected during fiscal year 2020. The company believes there are numerous defenses to the current assessment; the statute of limitations for the 2008 tax year in Malaysia was closed, and the income in question is exempt from tax in Malaysia. The company is pursuing all avenues to resolve this issue favorably for the company.

6. NET INCOME PER SHARE

The following is a reconciliation of the numerator and denominator of the basic and diluted net income per share computations for the periods presented below:

	Three Months Ended January 31,	
	2020	2019
	(in millions)	
Numerator:		
Net income	$ 163	$ 114
Denominator:		
Basic weighted-average shares	188	187
Potential common shares— stock options and other employee stock plans	3	3
Diluted weighted-average shares	191	190

The dilutive effect of share-based awards is reflected in diluted net income per share by application of the treasury stock method, which includes consideration of unamortized share-based compensation expense and the dilutive effect of in-the-money options and non-vested restricted stock units. Under the treasury stock method, the amount the employee must pay for exercising stock options and unamortized share-based compensation expense are collectively assumed to be used to repurchase hypothetical shares.

We exclude stock options with exercise prices greater than the average market price of our common stock from the calculation of diluted earnings per share because their effect would be anti-dilutive. For both the three months ended January 31, 2020 and 2019, we excluded zero options from the calculation of diluted earnings per share. In addition, we also exclude from the calculation of diluted earnings per share, stock options, ESPP, LTP Program and restricted stock awards, whose combined exercise price and unamortized fair value collectively were greater than the average market price of our common stock because their effect would also be anti-dilutive. The impact was immaterial in each of the three months ended January 31, 2020 and 2019, respectively.

7. SUPPLEMENTAL CASH FLOW INFORMATION

Net cash paid for income taxes was $9 million and $1 million for the three months ended January 31, 2020 and 2019, respectively. Cash paid for interest was zero for both the three months ended January 31, 2020 and 2019.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheet to the amount shown in the condensed consolidated statement of cash flows:

	January 31, 2020	October 31, 2019
	(in millions)	
Cash and cash equivalents	$ 1,691	$ 1,598
Restricted cash included in other assets	2	2
Total cash, cash equivalents, and restricted cash shown in the statement of cash flows	$ 1,693	$ 1,600

Restricted cash consisted primarily of deposits held as collateral against bank guarantees.

8. INVENTORY

	January 31, 2020	October 31, 2019
	(in millions)	
Finished goods	$ 342	$ 317
Purchased parts and fabricated assemblies	395	388
Total inventory	$ 737	$ 705

Inventory-related excess and obsolescence charges recorded in total cost of products were $7 million for the three months ended January 31, 2020 and 2019. We record excess and obsolete inventory charges for inventory at our sites as well as inventory at our contract manufacturers and suppliers, where we have non-cancellable purchase commitments.

9. GOODWILL AND OTHER INTANGIBLE ASSETS

The goodwill balances as of January 31, 2020 and October 31, 2019 and the activity for the three months ended January 31, 2020 for each of our reportable operating segments were as follows. Prior period amounts have been reclassified to conform to our organizational change as described in Note 17, "Segment Information."

	Communications Solutions Group	Electronic Industrial Solutions Group	Total
		(in millions)	
Balance as of October 31, 2019:			
Goodwill	$ 1,651	$ 267	$ 1,918
Accumulated impairment losses	(709)	—	(709)
Goodwill as reported	942	267	1,209
Goodwill arising from acquisitions	8	—	8
Foreign currency translation impact	(2)	—	(2)
Balance as of January 31, 2020	$ 948	$ 267	$ 1,215
Components of goodwill as of January 31, 2020:			
Goodwill	$ 1,657	$ 267	$ 1,924
Accumulated impairment losses	(709)	—	(709)
Goodwill as reported	$ 948	$ 267	$ 1,215

Goodwill was assessed for impairment upon the completion of the organizational change, and it was determined that it was more-likely-than-not that the fair value of the reporting unit was greater than its carrying value. The company has not identified any triggering events that indicate an impairment of goodwill in the three months ended January 31, 2020.

Other intangible assets as of January 31, 2020 and October 31, 2019 consisted of the following:

	Other Intangible Assets as of January 31, 2020			Other Intangible Assets as of October 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
			(in millions)			
Developed technology	$ 876	$ 621	$ 255	$ 876	$ 578	$ 298
Backlog	13	13	—	13	13	—
Trademark/Tradename	34	22	12	34	21	13
Customer relationships	316	150	166	316	139	177
Non-compete agreements	1	1	—	1	1	—
Total amortizable intangible assets	1,240	807	433	1,240	752	488
In-Process R&D	2	—	2	2	—	2
Total	$ 1,242	$ 807	$ 435	$ 1,242	$ 752	$ 490

During the three months ended January 31, 2020, there was no foreign exchange translation impact to other intangible assets. Amortization of other intangible assets was $55 million and $51 million for the three months ended January 31, 2020 and 2019, respectively.

Estimated intangible assets amortization expense for each of the five succeeding fiscal years is as follows:

	Amortization expense (in millions)
2020 (remainder)	$ 156
2021	142
2022	66
2023	49
2024	18
Thereafter	2

10. FAIR VALUE MEASUREMENTS

The authoritative guidance defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, we consider the principal or most advantageous market and assumptions that market participants would use when pricing the asset or liability.

Fair Value Hierarchy

The guidance establishes a fair value hierarchy that prioritizes inputs used in valuation techniques into three levels. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. There are three levels of inputs that may be used to measure fair value:

Level 1 - applies to assets or liabilities for which there are quoted prices in active markets for identical assets or liabilities.

Level 2 - applies to assets or liabilities for which there are inputs other than quoted prices included within Level 1 that are observable, either directly or indirectly, for the asset or liability such as: quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in less active markets; or other inputs that can be derived principally from, or corroborated by, observable market data.

Level 3 - applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

Financial assets and liabilities measured at fair value on a recurring basis as of January 31, 2020 and October 31, 2019 were as follows:

	Fair Value Measurements at									
	January 31, 2020					October 31, 2019				
	Total	Level 1	Level 2	Level 3	Other	Total	Level 1	Level 2	Level 3	Other
	(in millions)									
Assets:										
Short-term										
Cash equivalents										
Money market funds	$ 969	$ 969	$ —	$ —	$ —	$ 932	$ 932	$ —	$ —	$ —
Derivative instruments (foreign exchange contracts)	5	—	5	—	—	2	—	2	—	—
Long-term										
Equity investments	39	39	—	—	—	37	37	—	—	—
Equity investments - other	9	—	—	—	9	9	—	—	—	9
Total assets measured at fair value	$ 1,022	$ 1,008	$ 5	$ —	$ 9	$ 980	$ 969	$ 2	$ —	$ 9
Liabilities:										
Short-term										
Derivative instruments (foreign exchange contracts)	$ 2	$ —	$ 2	$ —	$ —	$ 6	$ —	$ 6	$ —	$ —
Long-term										
Deferred compensation liability	16	—	16	—	—	14	—	14	—	—
Total liabilities measured at fair value	$ 18	$ —	$ 18	$ —	$ —	$ 20	$ —	$ 20	$ —	$ —

Net realized gains (losses) on sale of our equity investments was zero for both the three months ended January 31, 2020 and 2019. Net unrealized gains (losses) on our equity investments was zero and $5 million for the three months ended January 31, 2020 and 2019, respectively.

Our money market funds and equity investments with readily determinable fair values are measured at fair value using quoted market prices and, therefore, are classified within Level 1 of the fair value hierarchy. Equity investments without readily determinable fair values that are measured at cost adjusted for observable changes in price or impairments are not categorized in the fair value hierarchy and are presented as "Equity investments - other" in the tables above. Our deferred compensation liability is classified as Level 2 because the inputs used in the calculations are observable, although the values are not directly based on quoted market prices. Our derivative financial instruments are classified within Level 2 as there is not an active market for each hedge contract, but the inputs used to calculate the value of the instruments are tied to active markets.

Equity investments, including securities that are earmarked to pay the deferred compensation liability, and the deferred compensation liability are reported at fair value, with gains or losses resulting from changes in fair value recognized in earnings. Certain derivative instruments are reported at fair value, with unrealized gains and losses, net of tax, included in accumulated other comprehensive income (loss).

11. DERIVATIVES

We are exposed to foreign currency exchange rate fluctuations and interest rate changes in the normal course of our business. As part of our risk management strategy, we use derivative instruments, primarily forward contracts to hedge economic and/or accounting exposures resulting from changes in foreign currency exchange rates.

Cash Flow Hedges

We enter into foreign exchange contracts to hedge our forecasted operational cash flow exposures resulting from changes in foreign currency exchange rates. These foreign exchange contracts, carried at fair value, have maturities between one and fourteen months. These derivative instruments are designated and qualify as cash flow hedges under the criteria prescribed in the authoritative guidance. The changes in the value of the derivative instrument included in the assessment of effectiveness are recognized in accumulated other comprehensive income and reclassified into earnings when the forecasted transaction occurs in the same financial statement line item in the condensed consolidated statement of operations where the earnings effect of the hedged item is presented. If it becomes probable that the forecasted transaction will not occur, the hedge relationship will be de-designated and amounts accumulated in other comprehensive income will be reclassified into earnings in the current period. Gains and losses on the derivative instrument representing hedge components excluded from the assessment of effectiveness are recognized immediately in earnings and are presented in the same financial statement line of the condensed consolidated statement of operations where the earnings effect of the hedged item is presented.

Other Hedges

Additionally, we enter into foreign exchange contracts to hedge monetary assets and liabilities that are denominated in currencies other than the functional currency of our subsidiaries. These foreign exchange contracts are carried at fair value and do not qualify for hedge accounting treatment and are not designated as hedging instruments. Changes in value of the derivative are recognized in other income (expense), net, in the condensed consolidated statement of operations in the current period, along with the offsetting foreign currency gain or loss on the underlying assets or liabilities.

Our use of derivative instruments exposes us to credit risk to the extent that the counterparties may be unable to meet the terms of the agreement. We do, however, seek to mitigate such risks by limiting our counterparties to major financial institutions that are selected based on their credit ratings and other factors. We have established policies and procedures for mitigating credit risk that include establishing counterparty credit limits, monitoring credit exposures, and continually assessing the creditworthiness of counterparties.

There were 201 and 64 open foreign exchange forward contracts designated as "cash flow hedges" and "not designated as hedging instruments," respectively, as of January 31, 2020. The aggregated notional amounts by currency and designation as of January 31, 2020 were as follows:

	Derivatives in Cash Flow Hedging Relationships	Derivatives Not Designated as Hedging Instruments
	Forward Contracts	Forward Contracts
Currency	Buy/(Sell)	Buy/(Sell)
	(in millions)	
Euro	$ 13	$ 10
British Pound	—	(91)
Singapore Dollar	15	8
Malaysian Ringgit	84	7
Japanese Yen	(88)	(49)
Other currencies	(19)	(9)
Total	$ 5	$ (124)

Derivative instruments are subject to master netting arrangements and are disclosed gross in the condensed consolidated balance sheet. The gross fair values and balance sheet presentation of derivative instruments held as of January 31, 2020 and October 31, 2019 were as follows:

Fair Values of Derivative Instruments					
Derivative Assets			Derivative Liabilities		
	Fair Value			Fair Value	
Balance Sheet Location	January 31, 2020	October 31, 2019	Balance Sheet Location	January 31, 2020	October 31, 2019
	(in millions)			(in millions)	
Derivatives designated as hedging instruments:					
Cash flow hedges					
Foreign exchange contracts					
Other current assets	$ 3	$ 1	Other accrued liabilities	$ 1	$ 2
Derivatives not designated as hedging instruments:					
Foreign exchange contracts					
Other current assets	2	1	Other accrued liabilities	1	4
Total derivatives	$ 5	$ 2		$ 2	$ 6

The effect of derivative instruments for foreign exchange contracts designated as hedging instruments and for those not designated as hedging instruments in our condensed consolidated statement of operations was as follows:

	Three Months Ended January 31,	
	2020	2019
	(in millions)	
Derivatives designated as hedging instruments:		
Cash Flow Hedges		
Foreign exchange contracts:		
Gain (loss) recognized in accumulated other comprehensive income (loss)	$ 2	$ (2)
Gain (loss) reclassified from accumulated other comprehensive income (loss) into earnings:		
Cost of products	$ (1)	$ —
Selling, general and administrative	$ —	$ (1)
Gain (loss) excluded from effectiveness testing recognized in earnings based on changes in fair value:		
Cost of products	$ 1	$ 1
Derivatives not designated as hedging instruments:		
Gain (loss) recognized in other income (expense), net	$ —	$ (3)

The estimated amount at January 31, 2020 expected to be reclassified from accumulated other comprehensive income (loss) to earnings within the next twelve months is a gain of $1 million.

12. RETIREMENT PLANS AND POST-RETIREMENT BENEFIT PLANS

For the three months ended January 31, 2020 and 2019, our net pension and post-retirement benefit cost (benefit) was comprised of the following:

	Pensions					
	U.S. Defined Benefit Plans		Non-U.S. Defined Benefit Plans		U.S. Post-Retirement Benefit Plan	
	Three Months Ended January 31,					
	2020	2019	2020	2019	2020	2019
	(in millions)					
Service cost—benefits earned during the period	$ 6	$ 5	$ 4	$ 3	$ —	$ —
Interest cost on benefit obligation	6	7	4	6	1	2
Expected return on plan assets	(11)	(11)	(21)	(19)	(3)	(3)
Amortization:						
Net actuarial loss	4	3	8	7	3	2
Prior service credit	—	(1)	—	—	(3)	(3)
Settlement loss	—	—	—	2	—	—
Net periodic benefit cost (benefit)	$ 5	$ 3	$ (5)	$ (1)	$ (2)	$ (2)

We record the service cost component of net periodic benefit cost (benefit) in the same line item as other employee compensation costs and the non-service components of net periodic benefit cost (benefit) such as interest cost, expected return on assets, amortization of prior service cost, and actuarial gains or losses are reported within other income (expense), net in the condensed consolidated statement of operations.

We did not contribute to our U.S. Defined Benefit Plans or U.S. Post-Retirement Benefit Plan during the three months ended January 31, 2020 and 2019. We contributed $2 million and $8 million to our Non-U.S. Defined Benefit Plans during the three months ended January 31, 2020 and 2019, respectively.

For the remainder of 2020, we do not expect to contribute to our U.S. Defined Benefit Plans, and we expect to contribute $6 million to our Non-U.S. Defined Benefit Plans.

On January 1, 2019, we transferred a portion of the assets and liabilities of our Switzerland defined benefit plan to an insurance company, resulting in the recognition of a settlement loss of $2 million, which is included in other income (expense), net in the condensed consolidated statement of operations.

13. LEASES

We determine whether an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use ("ROU") assets and operating lease liabilities (current and non-current) on our condensed consolidated balance sheet. Finance leases are included in property, plant and equipment, other accrued liabilities, and other long-term liabilities in our condensed consolidated balance sheet. Our finance lease and lessor arrangements are immaterial.

ROU assets and lease obligations are recognized based on their present value of the future minimum lease payments over the lease term at commencement date. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate, based on the lease term and economic environment, to discount lease obligations. ROU assets also include any lease payments made and exclude lease incentives and initial direct costs incurred. We initially measure payments based on an index by using the applicable rate at lease commencement. Variable payments that do not depend on an index are not included in the lease liability and are recognized as they are incurred.

We have operating leases for items including office space, order fulfillment, sales and service centers, R&D and certain equipment, primarily automobiles. Our leases have remaining terms of up to 12 years, some of which may include options to extend the leases for 3 to 5 years. We consider options to renew in our lease terms and measurement of ROU assets and lease liabilities if we determined they were reasonably certain to be exercised.

For the three months ended January 31, 2020, operating lease cost was $11 million and variable lease cost was $4 million. Short-term lease and finance lease costs were immaterial for the three months ended January 31, 2020.

Supplemental Information Related to our Leases

During the three months ended January 31, 2020, cash paid for operating leases included in operating cash flows was $11 million. ROU assets obtained in exchange for operating lease obligations was $12 million for the three months ended January 31, 2020. Amounts related to finance lease activities for the three months ended January 31, 2020, were not material.

As of January 31, 2020, the weighted average lease term of our operating leases was 6.3 years and the weighted average discount rate of our operating leases was 3%.

Maturity Analysis of Liabilities

The following table presents the maturity of our operating lease liabilities as of January 31, 2020:

	Operating Leases (in millions)
2020 (remainder)	$ 31
2021	38
2022	31
2023	21
2024	15
Thereafter	45
Total undiscounted lease liability	181
Imputed Interest	17
Total discounted lease liability	$ 164

As of October 31, 2019, future non-cancellable rent obligations as determined under ASC 840 were as follows:

		Operating Leases
		(in millions)
2020	$	48
2021		40
2022		31
2023		19
2024		12
Thereafter	$	46

Leases That Have Not Yet Commenced

As of January 31, 2020, we did not have material leases that had not yet commenced.

Lessor Disclosure

The rental income from leasing out excess facilities of $3 million for the three months ended January 31, 2020 is included in other operating expense (income), net. Other lessor arrangements were immaterial.

14. WARRANTIES, COMMITMENTS AND CONTINGENCIES

Standard Warranty

Our warranties on products sold through direct sales channels are primarily for one year. Warranties for products sold through distribution channels are primarily for three years. We accrue for standard warranty costs based on historical trends in warranty charges. The accrual is reviewed regularly and periodically adjusted to reflect changes in warranty cost estimates. Estimated warranty charges are recorded within cost of products at the time related product revenue is recognized.

Activity related to the standard warranty accrual, which is included in other accrued and other long-term liabilities in our condensed consolidated balance sheet, is as follows:

	Three Months Ended January 31,			
	2020		2019	
	(in millions)			
Beginning balance	$	38	$	45
Accruals for warranties including change in estimate		5		8
Settlements made during the period		(8)		(9)
Ending balance	$	35	$	44
Accruals for warranties due within one year	$	22	$	25
Accruals for warranties due after one year		13		19
Ending balance	$	35	$	44

Commitments

During the three months ended January 31, 2020, there were no material changes to our contractual commitments reported in the company's 2019 Annual Report on Form 10-K.

Contingencies

We are involved in lawsuits, claims, investigations and proceedings, including, but not limited to, patent, commercial and environmental matters, which arise in the ordinary course of business. There are no matters pending that we currently believe are reasonably possible of having a material impact to our business, consolidated financial condition, results of operations or cash flows.

15. DEBT

The following table summarizes the components of our long-term debt:

	January 31, 2020	October 31, 2019
	(in millions)	
2024 Senior Notes at 4.55% ($600 face amount less unamortized costs of $3 and $3)	$ 597	$ 597
2027 Senior Notes at 4.60% ($700 face amount less unamortized costs of $5 and $5)	695	695
2029 Senior Notes at 3.00% ($500 face amount less unamortized costs of $4 and $4)	496	496
Total debt	$ 1,788	$ 1,788

Short-Term Debt

Revolving Credit Facility

We maintain a credit facility (the "Revolving Credit Facility") that provides for a $450 million, five-year unsecured revolving credit facility that will expire on February 15, 2022. In addition, the Revolving Credit Facility permits us to increase the total commitments under this credit facility by up to $150 million in the aggregate on one or more occasions upon request. We may use amounts borrowed under the facility for general corporate purposes. As of January 31, 2020 and October 31, 2019, we had no borrowings outstanding under the Revolving Credit Facility. We were in compliance with the covenants of the Revolving Credit Facility during the three months ended January 31, 2020.

Long-Term Debt

There have been no changes to the principal, maturity, interest rates and interest payment terms of the senior notes during the three months ended January 31, 2020 as compared to the senior notes described in our Annual Report on Form 10-K for the fiscal year ended October 31, 2019.

As of January 31, 2020 and October 31, 2019, we had $38 million and $37 million, respectively, of outstanding letters of credit and surety bonds unrelated to the credit facility that were issued by various lenders.

The fair value of our long-term debt, calculated from quoted prices that are primarily Level 1 inputs under the accounting guidance fair value hierarchy, exceeded the carrying value by approximately $175 million and $139 million as of January 31, 2020 and October 31, 2019, respectively.

16. STOCKHOLDERS' EQUITY

Stock Repurchase Program

On May 29, 2019, the Board of Directors approved a new stock repurchase program authorizing the purchase of up to $500 million of the company's common stock. Shares may be purchased from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases, privately negotiated transactions or other means. All such shares and related costs are held as treasury stock and accounted for at trade date using the cost method. The stock repurchase program may be commenced, suspended or discontinued at any time at the company's discretion and does not have an expiration date.

For the three months ended January 31, 2020, we repurchased 731,918 shares of common stock for $75 million. For the three months ended January 31, 2019, we repurchased 686,398 shares of common stock for $40 million.

Accumulated Other Comprehensive Loss

Changes in accumulated other comprehensive loss by component and related tax effects for the three months ended January 31, 2020 and 2019 were as follows:

	Foreign currency translation	Net defined benefit pension cost and post retirement plan costs		Unrealized gains (losses) on derivatives	Total
		Actuarial loss	Prior service credit		
			(in millions)		
As of October 31, 2019	$ (43)	$ (536)	$ 4	$ (3)	$ (578)
Other comprehensive income (loss) before reclassifications	—	—	—	2	2
Amounts reclassified out of accumulated other comprehensive loss	—	17	(3)	1	15
Tax (expense) benefit	—	—	1	(1)	—
Other comprehensive income (loss)	—	17	(2)	2	17
As of January 31, 2020	$ (43)	$ (519)	$ 2	$ (1)	$ (561)
As of October 31, 2018	$ (60)	$ (445)	$ 19	$ (2)	$ (488)
Other comprehensive income (loss) before reclassifications	30	4	—	(2)	32
Amounts reclassified out of accumulated other comprehensive loss	—	12	(4)	1	9
Tax (expense) benefit	—	(3)	1	—	(2)
Other comprehensive income (loss)	30	13	(3)	(1)	39
As of January 31, 2019	$ (30)	$ (432)	$ 16	$ (3)	$ (449)

Reclassifications out of accumulated other comprehensive loss for the three months ended January 31, 2020 and 2019 were as follows:

Details about Accumulated Other Comprehensive Loss Components	Three Months Ended January 31, 2020	Three Months Ended January 31, 2019	Affected Line Item in Statement of Operations
	(in millions)		
Unrealized gain (loss) on derivatives	$ (1)	$ —	Cost of products
	—	(1)	Selling, general and administrative
	—	—	Provision for income taxes
	(1)	(1)	Net of income tax
Net defined benefit pension cost and post retirement plan costs:			
Actuarial net loss	(17)	(12)	
Prior service credit	3	4	
	(14)	(8)	Total before income tax
	(1)	3	Provision (benefit) for income taxes
	(15)	(5)	Net of income tax
Total reclassifications for the period	$ (16)	$ (6)	

An amount in parentheses indicates a reduction to income and an increase to the accumulated other comprehensive loss.

Reclassifications of prior service benefit and actuarial net loss in respect of retirement plans and post retirement pension plans are included in the computation of net periodic cost (see Note 12, "Retirement Plans and Post-Retirement Benefit Plans").

17. SEGMENT INFORMATION

We are a technology company that helps enterprises, service providers and governments accelerate innovation to connect and secure the world by providing electronic design and test solutions that are used in the simulation, design, validation, manufacture, installation, optimization and secure operation of electronics systems in the communications, networking and electronics industries.

We also offer customization, consulting and optimization services throughout the customer's product lifecycle, including start-up assistance, asset management, up-time services, application services and instrument calibration and repair.

Our operating segments were determined based primarily on how the chief operating decision maker views and evaluates our operations. Segment operating results are regularly reviewed by the chief operating decision maker to make decisions about resources to be allocated to each segment and to assess performance. Other factors, including market separation and customer specific applications, go-to-market channels, products and services and manufacturing are considered in determining the formation of these operating segments.

To more effectively and efficiently address customer solution needs across the communications ecosystem as the network transforms, in the first quarter of fiscal 2020, we completed an organizational change to manage our Ixia Solutions Group within our Communications Solutions Group. This change enables us to create improved go-to-market and product development alignment, as well as accelerate solution synergies in 5G as this new technology is deployed globally. As a result, we now have two reportable operating segments, Communications Solutions Group (“CSG”) and Electronic Industrial Solutions Group (“EISG”).

The Communications Solutions Group serves customers spanning the worldwide commercial communications and aerospace, defense, and government end markets. The group’s solutions consist of electronic design and test software, instruments, systems and related services. These solutions are used in the simulation, design, validation, manufacturing, installation, and optimization of electronic equipment and networks.

The Electronic Industrial Solutions Group provides test and measurement solutions and related services across a broad set of electronic industrial end markets, focusing on high-value applications in the automotive and energy industry and measurement solutions for consumer electronics, education, general electronics design and manufacturing, and semiconductor design and manufacturing. The group provides electronic design and test software, instruments and systems and related services used in the simulation, design, validation, manufacturing, installation and optimization of electronic equipment.

A significant portion of the segments' expenses arise from shared services and infrastructure that we have historically provided to the segments in order to realize economies of scale and to efficiently use resources. These expenses, collectively called corporate charges, include legal, accounting, real estate, insurance services, information technology services, treasury and other corporate infrastructure expenses. Charges are allocated to the segments, and the allocations have been determined on a basis that we considered to be a reasonable reflection of the utilization of services provided to or benefits received by the segments.

The following tables reflect the results of our reportable segments under our management reporting system. These results are not necessarily in conformity with GAAP. The performance of each segment is measured based on several metrics, including income from operations. These results are used, in part, by the chief operating decision maker in evaluating the performance of, and in allocating resources to, each of the segments. Prior period amounts have been revised to conform to the new organizational structure.

The profitability of each of the segments is measured after excluding share-based compensation expense, amortization of acquisition-related balances, acquisition and integration costs, restructuring and related costs, northern California wildfire-related impacts, interest income, interest expense and other items as noted in the reconciliations below.

	Communications Solutions Group	Electronic Industrial Solutions Group	Total Segments
		(in millions)	
Three months ended January 31, 2020:			
Total net and segment revenue	$ 818	$ 277	$ 1,095
Segment income from operations	$ 201	$ 73	$ 274
Three months ended January 31, 2019:			
Total net revenue	$ 749	$ 257	$ 1,006
Amortization of acquisition-related balances	3	—	3
Total segment revenue	$ 752	$ 257	$ 1,009
Segment income from operations	$ 150	$ 54	$ 204

The following table reconciles reportable operating segments' income from operations to our total enterprise income before taxes:

	Three Months Ended January 31, 2020	Three Months Ended January 31, 2019
	(in millions)	
Total reportable operating segments' income from operations	$ 274	$ 204
Share-based compensation expense	(39)	(27)
Amortization of acquisition-related balances	(59)	(54)
Acquisition and integration costs	(2)	(2)
Northern California wildfire-related impacts	32	—
Other	(3)	—
Income from operations, as reported	203	121
Interest income	6	4
Interest expense	(19)	(20)
Other income (expense), net	12	15
Income before taxes, as reported	$ 202	$ 120

The following table presents assets directly managed by each segment. Unallocated assets primarily consist of cash and cash equivalents, investments and other assets.

	Communications Solutions Group	Electronic Industrial Solutions Group	Total Segments
		(in millions)	
Assets:			
As of January 31, 2020	$ 3,888	$ 989	$ 4,877
As of October 31, 2019	$ 3,671	$ 928	$ 4,599

The increase in segment assets as of January 31, 2020 as compared to October 31, 2019 is primarily due to the addition of operating lease right-of-use assets as a result of adoption of *ASU 2016-02, Leases,* on November 1, 2019.

18. IMPACT OF NORTHERN CALIFORNIA WILDFIRES

In the first quarter of 2020, we received $37 million of insurance proceeds primarily related to replacement of capital and recovery of fire-related expenses, which resulted in an other operating gain of $32 million. No additional insurance proceeds or material expenses related to the 2017 northern California wildfires are expected.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (UNAUDITED)

The following discussion should be read in conjunction with the condensed consolidated financial statements and notes thereto included elsewhere in this Form 10-Q and our Annual Report on Form 10-K. This report contains forward-looking statements including, without limitation, statements regarding trends, seasonality, cyclicality and growth in, and drivers of, the markets we sell into, our strategic direction, our future effective tax rate and tax valuation allowance, earnings from our foreign subsidiaries, remediation activities, new solution and service introductions, the ability of our solutions to meet market needs, changes to our manufacturing processes, the use of contract manufacturers, the impact of local government regulations on our ability to pay vendors or conduct operations, our liquidity position, our ability to generate cash from operations, growth in our businesses, our investments, the potential impact of adopting new accounting pronouncements, our financial results, our purchase commitments, our contributions to our pension plans, the selection of discount rates and recognition of any gains or losses for our benefit plans, our cost-control activities, savings and headcount reduction recognized from our restructuring programs and other cost saving initiatives, and other regulatory approvals, the integration of our completed acquisitions and other transactions, our transition to lower-cost regions, the existence of political or economic instability, impact on the supply chain and slowdown in customer purchasing caused by epidemic and pandemic conditions, and our and the combined group's estimated or anticipated future results of operations, that involve risks and uncertainties. Our actual results could differ materially from the results contemplated by these forward-looking statements due to various factors, including but not limited to those risks and uncertainties discussed in Part II Item 1A and elsewhere in this Form 10-Q.

Basis of Presentation

The financial information presented in this Form 10-Q is not audited and is not necessarily indicative of our future consolidated financial position, results of operations, comprehensive income or cash flows. Our fiscal year-end is October 31, and our fiscal quarters end on January 31, April 30 and July 31. Unless otherwise stated, these dates refer to our fiscal year and fiscal quarter periods.

Overview and Executive Summary

Keysight Technologies, Inc. ("we," "us," "Keysight" or the "company"), incorporated in Delaware on December 6, 2013, is a technology company that helps enterprises, service providers and governments accelerate innovation to connect and secure the world by providing electronic design and test solutions that are used in the simulation, design, validation, manufacture, installation, optimization and secure operation of electronics systems in the communications, networking and electronics industries. We also offer customization, consulting and optimization services throughout the customer's product lifecycle, including start-up assistance, asset management, up-time services, application services and instrument calibration and repair.

We invest in research and development ("R&D") to align our business with available markets and position the company for growth. Our R&D efforts focus on improvements to existing software and hardware products and development to support new software and hardware product introductions and complete customer solutions aligned to the industries we serve. We anticipate that we will continue to have significant R&D expenditures in order to maintain our competitive position with a continuous flow of innovative, high-quality software, customer solutions, products and services. We remain committed to investment in research and development and have focused our development efforts on strategic opportunities to capture future growth.

To more effectively and efficiently address customer solution needs across the communications ecosystem as the network transforms, in the first quarter of fiscal 2020, we completed an organizational change to manage our Ixia Solutions Group within our Communications Solutions Group. This change enables us to create improved go-to-market and product development alignment, as well as accelerate solution synergies in 5G as this new technology is deployed globally. As a result, we now have two reportable operating segments, Communications Solutions Group (“CSG”) and Electronic Industrial Solutions Group (“EISG”).

Three months ended January 31, 2020 and 2019

Total orders for the three months ended January 31, 2020 were $1,141 million, an increase of 12 percent when compared to the same period last year and an increase of 11 percent excluding the impact of acquisitions. Foreign currency movements had an immaterial impact on the order growth for the three months ended January 31, 2020. For the three months ended January 31, 2020, orders grew across all geographies, with stronger growth in the Americas and Asia Pacific.

Net revenue for the three months ended January 31, 2020 was $1,095 million, an increase of 9 percent when compared to the same period last year and an increase of 8 percent excluding the impact of acquisitions. Foreign currency movements had an immaterial impact on revenue growth for the three months ended January 31, 2020. The Communications Solutions Group led the overall revenue growth with strong growth in the aerospace, defense and government and commercial communications end-markets, complemented by growth in the Electronic Industrial Solutions Group. Revenue from the Communications Solutions Group and Electronic Industrial Solutions Group represented approximately 75 percent and 25 percent, respectively, of total revenue for the three months ended January 31, 2020.

Net income for the three months ended January 31, 2020 was income of $163 million compared to $114 million for the same period last year. The increase in net income for the three months ended January 31, 2020 was driven primarily by favorable mix and higher revenue volume and an other operating gain due to insurance proceeds received for property, plant and equipment damaged in 2017 northern California wildfires, partially offset by increases in people-related costs.

In the first quarter of 2020, we received $37 million of insurance proceeds primarily related to replacement of capital and recovery of expenses related to the 2017 northern California wildfires. These proceeds resulted in an other operating gain of $32 million. No additional insurance proceeds or material expenses related to the 2017 northern California wildfires are expected.

Outlook

Our strategy of bringing solutions to market that help customers develop new technologies and accelerate innovation provides a platform for long-term growth. We expect to continue to see our customers make R&D investments in certain next-generation technologies. We are still in the early market stages for emerging technologies, such as 5G, next-generation automotive, internet of things ("IoT") and defense modernization and expect technology investments to continue. We continue to closely monitor the current macro environment related to trade, tariffs, monetary and fiscal policies, as well as pandemics or epidemics, such as the recent coronavirus outbreak. We have complied and will continue to comply with recent U.S. Department of Commerce export control regulations regarding China. While short-term uncertainties exist, we remain confident in our strategy and believe we are well-positioned to capture future growth opportunities.

Critical Accounting Policies and Estimates

There were no material changes during the three months ended January 31, 2020 to the critical accounting estimates described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended October 31, 2019. Changes to our accounting policy for leases as a result of adopting Accounting Standard Update 2016-02, *Leases*, are discussed in Note 2, "New Accounting Pronouncements," and Note 13, "Leases," to the condensed consolidated financial statements.

Adoption of New Pronouncements

See Note 2, “New Accounting Pronouncements,” to the condensed consolidated financial statements for a description of new accounting pronouncements.

Foreign Currency

Our revenues, costs and expenses, and monetary assets and liabilities are exposed to changes in foreign currency exchange rates as a result of our global operating and financing activities. We hedge revenues, expenses and balance sheet exposures that are not denominated in the functional currencies of our subsidiaries on a short-term and anticipated basis. The result of the hedging has been included in our consolidated statement of operations. We experience some fluctuations within individual lines of the consolidated balance sheet and consolidated statement of operations because our hedging program is not designed to offset the currency movements in each category of revenues, expenses, monetary assets and liabilities. Our hedging program is designed to hedge currency movements on a relatively short-term basis of up to a rolling twelve-month in advance. Therefore, we are exposed to currency fluctuations over the longer term. To the extent that we are required to pay for all, or portions, of an acquisition price in foreign currencies, we may enter into foreign exchange contracts to reduce the risk that currency movements will impact the U.S. dollar cost of the transaction.

Results from Operations

Net Revenue

Revenue is recognized upon transfer of control of the promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. Cancellations are recorded in the period received from the customer and historically have not been material.

	Three Months Ended January 31,		Year over Year Change
	2020	2019	Three Months
	(in millions)		
Net revenue:			
Products	$ 902	$ 837	8%
Services and other	193	169	14%
Total net revenue	$ 1,095	$ 1,006	9%

The following table provides the percent change in net revenue for the three months ended January 31, 2020 by geographic region including and excluding the impact of foreign currency movements as compared to the same period last year.

	Year over Year Change Three Months Ended January 31, 2020	
Geographic Region	Actual	Currency Adjusted
Americas	11%	11%
Europe	4%	5%
Asia Pacific	9%	9%
Total net revenue	9%	9%

Net revenue for the three months ended January 31, 2020 was $1,095 million, an increase of 9 percent when compared to the same period last year and an increase of 8 percent excluding the impact of acquisitions. Foreign currency movements had an immaterial impact on revenue growth for the three months ended January 31, 2020. Currency had an unfavorable impact of 1 percent on revenue growth in Europe for the three months ended January 31, 2020.

Costs and Expenses

	Three Months Ended January 31,		Year over Year Change
	2020	2019	Three Months
Total gross margin	59.8%	57.4%	2 ppts
Operating margin	18.5%	12.0%	7 ppts
in millions			
Research and development	$ 187	$ 173	8%
Selling, general and administrative	$ 300	$ 288	4%
Other operating expense (income), net	$ (35)	$ (4)	—

Gross margin increased 2 percentage points for the three months ended January 31, 2020 compared to the same period last year, primarily driven by favorable mix, higher revenue volume and lower warranty and other period costs.

Research and development expense increased 8 percent for the three months ended January 31, 2020 compared to the same period last year, primarily driven by greater investment in key growth opportunities in our end markets, leading-edge technologies and people. As a percentage of revenue, research and development expense was 17 percent for both the three months ended January 31, 2020 and 2019.

Selling, general and administrative expense increased 4 percent for the three months ended January 31, 2020 compared to the same period last year, primarily driven by higher people-related costs, partially offset by a decline in marketing-related expenses.

Other operating expense (income), net primarily was income of $35 million and $4 million for the three months ended January 31, 2020 and 2019, respectively. Other operating expense (income), net for the three months ended January 31, 2020, includes an other operating gain of $32 million due to insurance proceeds received for property, plant and equipment damaged in the 2017 northern California wildfires.

Operating margin for the three months ended January 31, 2020 increased 7 percentage points compared to the same period last year, primarily due to gross margin gains driven by favorable mix and higher revenue volume, and the other operating gain related to the 2017 northern California wildfires, partially offset by increases in people-related costs.

As of January 31, 2020, our headcount was approximately 13,600 compared to approximately 13,000 at January 31, 2019.

Interest Income and Expense

Interest income for the three months ended January 31, 2020 and 2019 was $6 million and $4 million, respectively, and primarily relates to interest earned on our cash balances. Interest expense for the three months ended January 31, 2020 and 2019 was $19 million and $20 million, respectively, and primarily relates to interest on our senior notes.

Other income (expense), net

Other income (expense), net for the three months ended January 31, 2020 was income of $12 million compared to $15 million for the same period last year and primarily includes net income related to our defined benefit and post-retirement benefit plans (interest cost, expected return on assets and amortization of net actuarial loss and prior service credits) and the change in fair value of our equity investments.

Income Taxes

The company's effective tax rate was 19.1 percent and 5.2 percent for the three months ended January 31, 2020 and 2019, respectively. The income tax expense was $39 million and $6 million for the three months ended January 31, 2020 and 2019, respectively. The income tax expense for the three months ended January 31, 2020 included a net discrete expense of $3 million. The income tax expense for the three months ended January 31, 2019 included a net discrete benefit of $23 million, primarily related to a change in tax reserves resulting from a change in judgment.

Keysight benefits from tax incentives in several jurisdictions, most significantly in Singapore, that have granted us tax incentives that require renewal at various times in the future. The tax incentives provide lower rates of taxation on certain classes of income and require thresholds of investments and employment or specific types of income in those jurisdictions. The impact of the tax incentives decreased the income tax provision by $15 million and $8 million for the three months ended January 31, 2020 and 2019, respectively, resulting in a benefit to net income per share (diluted) of approximately $0.08 and $0.04 for the three months ended January 31, 2020 and 2019, respectively. The majority of our tax incentives are due for renewal between 2024 and 2025. With regard to the incentive in Malaysia, a formal application must be filed during fiscal year 2020 to renew the tax incentive through 2025. Keysight intends to file the application timely and does not anticipate any impediments to the renewal process.

The open tax years for the IRS and most states are from November 1, 2015 through the current tax year. For the majority of our foreign entities, the open tax years are from November 1, 2014 through the current tax year. For certain foreign entities, the tax years remain open, at most, back to the year 2008. Given the number of years and numerous matters that remain subject to examination in various tax jurisdictions, we are unable to estimate the range of possible changes to the balance of our unrecognized tax benefits.

The company was audited in Malaysia for the 2008 tax year. Although this tax year pre-dates our separation from Agilent, pursuant to the agreement between Agilent and Keysight pertaining to tax matters, as finalized at the time of separation, for certain entities, including Malaysia, any historical tax liability is the responsibility of Keysight. In the fourth quarter of fiscal 2017, Keysight paid income taxes and penalties of $68 million on gains related to intellectual property rights. We are currently in the process of appealing to the Special Commissioners of Income Tax (“SCIT”) in Malaysia. A decision from SCIT is expected during fiscal year 2020. The company believes there are numerous defenses to the current assessment; the statute of limitations for the 2008 tax year in Malaysia was closed, and the income in question is exempt from tax in Malaysia. The company is pursuing all avenues to resolve this issue favorably for the company.

At January 31, 2020, our estimated annual effective tax rate for fiscal 2020 is an expense of 17.1 percent excluding discrete items. We determine our interim tax provision using an estimated annual effective tax rate methodology except in jurisdictions where we anticipate a full year loss or we have a year-to-date ordinary loss for which no tax benefit can be recognized. In these jurisdictions, tax expense is computed separately. Our estimated annual effective tax rate was lower than the U.S. statutory rate, primarily due to the beneficial impact of the mix of earnings in non-U.S. jurisdictions taxed at lower rates and the U.S. federal research and development tax credit, partially offset by the expense impact of the U.S. GILTI tax on earnings in non-U.S. jurisdictions net of U.S. foreign tax credits and other U.S. tax reform deductions and reserves for uncertain tax positions.

We do not recognize deferred taxes for temporary differences expected to impact the GILTI tax expense in future years. We recognize the tax expense related to GILTI in each year in which the tax is incurred.

Segment Overview

To more effectively and efficiently address customer solution needs across the communications ecosystem as the network transforms, in the first quarter of fiscal 2020, we completed an organizational change to manage our Ixia Solutions Group within our Communications Solutions Group. This change enables us to create improved go-to-market and product development alignment, as well as accelerate solution synergies in 5G as this new technology is deployed globally. As a result, we now have two reportable operating segments, Communications Solutions Group (“CSG”) and Electronic Industrial Solutions Group (“EISG”).

The profitability of each of the segments is measured after excluding share-based compensation expense, amortization of acquisition-related balances, acquisition and integration costs, restructuring and related costs, northern California wildfire-related impacts, interest income and interest expense.

Communications Solutions Group

The Communications Solutions Group serves customers spanning the worldwide commercial communications and aerospace, defense, and government end markets. The group’s solutions consist of electronic design and test software, instruments, systems and related services. These solutions are used in the simulation, design, validation, manufacturing, installation, and optimization of electronic equipment and networks. Prior period amounts have been revised to conform to our new organizational structure described previously in the Segment Overview.

Net Revenue

	Three Months Ended January 31,		Year over Year Change
	2020	2019	Three Months
	(in millions)		
Net revenue	$ 818	$ 752	9%

The Communications Solutions Group revenue for the three months ended January 31, 2020 increased 9 percent compared to the same period last year and grew 8 percent excluding the impact of acquisitions. Foreign currency movements had an immaterial impact on revenue growth. Revenue growth was driven by strength in the aerospace, defense and government and commercial communications end markets. For the three months ended January 31, 2020, revenue growth was driven by solid growth in the Americas and Asia Pacific, while Europe was flat.

Revenue from the commercial communications market represented approximately 70 percent of the total Communications Solutions Group revenue for the three months ended January 31, 2020 and increased 8 percent year-over-year. For the three months ended January 31, 2020, revenue growth in Asia Pacific and the Americas was partially offset by a slight decline in Europe. The commercial communications market revenue growth was driven by continued investments in 5G, fueled by the ongoing redesign of every aspect of communications systems, including wireless access, infrastructure, wireline technologies, data center and the cloud.

Revenue from the aerospace, defense and government market represented approximately 30 percent of the total Communications Solutions Group revenue for the three months ended January 31, 2020 and increased 10 percent year-over-year. For the three months ended January 31, 2020, revenue grew across all regions, led by stronger growth in the Americas. The aerospace, defense and government market revenue growth was driven by on-going investments in technology modernization.

Gross Margin and Operating Margin

The following table shows the Communications Solutions Group margins, expenses and income from operations for the three months ended January 31, 2020 versus the three months ended January 31, 2019.

	Three Months Ended January 31,		Year over Year Change
	2020	2019	Three Months
Total gross margin	65.7%	62.8%	3 ppts
Operating margin	24.6%	19.9%	5 ppts
in millions			
Research and development	$ 139	$ 128	8%
Selling, general and administrative	$ 201	$ 197	2%
Other operating expense (income), net	$ (3)	$ (2)	16%
Income from operations	$ 201	$ 150	34%

Gross margin for the three months ended January 31, 2020 increased 3 percentage points compared to the same period last year, driven by favorable mix, higher revenue volume and lower warranty and other period costs.

Research and development expense for the three months ended January 31, 2020 increased 8 percent compared to the same period last year, driven by greater investment in key growth opportunities in our end markets and leading-edge technologies.

Selling, general and administrative expense for the three months ended January 31, 2020 increased 2 percent compared to the same period last year, driven by incremental costs of an acquired business.

Other operating expense (income), net was income of $3 million and $2 million for the three months ended January 31, 2020 and 2019, respectively.

Income from Operations

Income from operations for the three months ended January 31, 2020 increased $51 million on a corresponding revenue increase of $66 million compared to the same period last year.

Operating margin increased 5 percentage points for the three months ended January 31, 2020 compared to the same period last year, driven by gross margin gains and lower selling, general and administrative expense as a percent of revenue.

Electronic Industrial Solutions Group

The Electronic Industrial Solutions Group provides test and measurement solutions and related services across a broad set of electronic industrial end markets, focusing on high-value applications in the automotive and energy industry and measurement solutions for consumer electronics, education, general electronics design and manufacturing, and semiconductor design and manufacturing.The group provides electronic design and test software, instruments and systems and related services used in the simulation, design, validation, manufacturing, installation and optimization of electronic equipment.

Net Revenue

	Three Months Ended January 31,		Year over Year Change
	2020	2019	Three Months
	(in millions)		
Net revenue	$ 277	$ 257	8%

The Electronic Industrial Solutions Group revenue for the three months ended January 31, 2020 increased 8 percent compared to the same period last year. Foreign currency movements had an immaterial impact on revenue growth. The revenue growth was primarily driven by stronger growth in semiconductor measurement solutions and automotive and energy. Revenue grew across all regions for the three months ended January 31, 2020 compared to the same period last year.

Gross Margin and Operating Margin

The following table shows the Electronic Industrial Solutions Group margins, expenses and income from operations for the three months ended January 31, 2020 versus the three months ended January 31, 2019.

	Three Months Ended January 31,		Year over Year Change
	2020	2019	Three Months
Total gross margin	61.1%	58.9%	2 ppts
Operating margin	26.3%	20.9%	5 ppts
in millions			
Research and development	$ 41	$ 39	3%
Selling, general and administrative	$ 57	$ 59	(4)%
Other operating expense (income), net	$ (1)	$ (1)	16%
Income from operations	$ 73	$ 54	36%

Gross margin increased 2 percentage points for the three months ended January 31, 2020 compared to the same period last year, driven by favorable mix, higher revenue volume and lower warranty and other period costs.

Research and development expense for the three months ended January 31, 2020 increased 3 percent compared to the same period last year, primarily driven by greater investment in key growth opportunities in our end markets and leading-edge technologies.

Selling, general and administrative expense decreased 4 percent for the three months ended January 31, 2020 compared to the same period last year, primarily due to lower infrastructure-related costs and selling costs.

Other operating expense (income) for both the three months ended January 31, 2020 and 2019 was income of $1 million.

Income from Operations

Income from operations for the three months ended January 31, 2020 increased $19 million on a corresponding revenue increase of $20 million compared to the same period last year.

Operating margin for the three months ended January 31, 2020 increased 5 percentage points compared to the same period last year, primarily driven by gross margin improvement and lower operating expenses as a percent of revenue.

FINANCIAL CONDITION

Liquidity and Capital Resources

Our financial position as of January 31, 2020 consisted of cash, cash equivalents and restricted cash of $1,693 million as compared to $1,600 million as of October 31, 2019.

As of January 31, 2020, approximately $1,274 million of our cash, cash equivalents and restricted cash was held outside of the U.S. in our foreign subsidiaries. Our cash and cash equivalents consist mainly of short-term deposits held at major global financial institutions, investments in institutional money market funds, and similar short duration instruments with original maturities of 90 days or less. We continuously monitor the creditworthiness of the financial institutions in which we invest our funds. We utilize a variety of funding strategies in an effort to ensure that our worldwide cash is available in the locations in which it is needed. Most significant international locations have access to internal funding through an offshore cash pool for working capital needs. In addition, a few locations that are unable to access internal funding have access to temporary local overdraft and short-term working capital lines of credit.

We believe our cash and cash equivalents, cash generated from operations, and ability to access capital markets and credit lines will satisfy, for at least the next twelve months, our liquidity requirements, both globally and domestically, including the following: working capital needs, capital expenditures, business acquisitions, contractual obligations, commitments, principal and interest payments on debt, and other liquidity requirements associated with our operations.

Net Cash Provided by Operating Activities

Cash flows from operating activities can fluctuate significantly from period to period as working capital needs and the timing of payments for income taxes, restructuring activities, pension funding, variable pay, and other items impact reported cash flows.

Net cash provided by operating activities was $197 million for the three months ended January 31, 2020, compared to $240 million for the same period last year.

- Net income for the three months ended January 31, 2020 increased $49 million compared to the same period last year. Non-cash adjustments increased $19 million primarily due to a $30 million increase in deferred tax expense, a $12 million increase in share-based compensation expense, a $4 million increase in amortization expense and a $5 million increase from other miscellaneous non-cash activities, partially offset by an adjustment for a gain of $32 million resulting from insurance proceeds received for property, plant and equipment damaged in the 2017 California wildfires, which is reflected in investing activities.

- The aggregate of accounts receivable, inventory and accounts payable used net cash of $65 million during the first three months of fiscal 2020 compared to net cash provided of $20 million in the comparable period last year. The amount of cash flow generated from or used by the aggregate of accounts receivable, inventory and accounts payable depends upon the cash conversion cycle, which represents the number of days that elapse from the day we pay for the purchase of raw materials and components to the collection of cash from our customers and can be significantly impacted by the timing of shipments and purchases, as well as collections and payments in a period.

- The aggregate of employee compensation and benefits, income tax payable, deferred revenue and other assets and liabilities used net operating cash of $11 million during the first three months of fiscal 2020 compared to net cash provided of $24 million in the comparable period last year. The difference is primarily due to lower insurance recoveries related to the northern California wildfires and less cash inflow from deferred revenue as compared to the same period last year.

- We contributed $2 million to our non-U.S. defined benefit plans during the first three months of fiscal 2020 compared to $8 million in the same period last year. We expect to contribute $6 million to our non-U.S. defined benefit plans during the remainder of 2020. For the three months ended January 31, 2020, we did not contribute to our U.S. defined benefit plans or U.S. post-retirement benefit plan, and we do not expect to contribute to our U.S. defined benefit plans during the remainder of 2020.

Net Cash Used in Investing Activities

Net cash used in investing activities was $5 million for the three months ended January 31, 2020 as compared to $29 million for the same period last year. For the three months ended January 31, 2020 and 2019, investments in property, plant and equipment were $32 million and $31 million, respectively. For the three months ended January 31, 2020, we received $32 million of insurance proceeds for property, plant and equipment damaged in the 2017 northern California wildfires, and we used $5 million for a small acquisition. For the three months ended January 31, 2019, we received $2 million from a small divestiture that closed in 2018.

We anticipate total fiscal 2020 capital spending to be approximately $125 million.

Net Cash Used in Financing Activities

For the three months ended January 31, 2020, we used $99 million for financing activities, which included $76 million for treasury stock repurchases and $49 million for tax payments related to net share settlement of equity awards, partially offset by proceeds of $26 million from issuance of common stock under employee stock plans.

On May 29, 2019, the Board of Directors approved a new stock repurchase program authorizing the purchase of up to $500 million of the company's common stock. The stock repurchase program may be commenced, suspended or discontinued at any time at the company's discretion and does not have an expiration date. At January 31, 2020, the maximum approximate dollar value of shares of common stock that may yet be purchased under the program was $335 million.

In the three months ended January 31, 2019, we used $33 million for financing activities, including $40 million for treasury stock repurchases and $23 million for tax payments related to net share settlement of equity awards, partially offset by proceeds of $30 million from issuance of common stock under employee stock plans.

Short-Term Debt

Revolving Credit Facility

We maintain a credit facility (the "Revolving Credit Facility") that provides for a $450 million, five-year unsecured revolving credit facility that will expire on February 15, 2022. In addition, the Revolving Credit Facility permits us to increase the total commitments under this credit facility by up to $150 million in the aggregate on one or more occasions upon request. We may use amounts borrowed under the facility for general corporate purposes. As of January 31, 2020 and October 31, 2019, we had no borrowings outstanding under the Revolving Credit Facility. We were in compliance with the covenants of the Revolving Credit Facility during the three months ended January 31, 2020.

Long-Term Debt

There have been no changes to the principal, maturity, interest rates and interest payment terms of the senior notes during the three months ended January 31, 2020 as compared to the senior notes described in our Annual Report on Form 10-K for the fiscal year ended October 31, 2019.

Other

There were no other material changes from our Annual Report on Form 10-K for the fiscal year ended October 31, 2019, to our contractual commitments in the first three months of 2020.

There were no material changes in our liabilities toward uncertain tax positions from our Annual Report on Form 10-K for the fiscal year ended October 31, 2019. We are unable to accurately predict when these will be realized or released. However, it is reasonably possible that there could be significant changes to our unrecognized tax benefits in the next 12 months due to either the expiration of a statute of limitations or a tax audit settlement.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Quantitative and qualitative disclosures about market risk appear in "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" in Part II of our Annual Report on Form 10-K for the fiscal year ended October 31, 2019. There were no material changes during the three months ended January 31, 2020 to this information reported in the company's 2019 Annual Report on Form 10-K.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of our disclosure controls and procedures as required by Exchange Act Rule 13a-15(b) as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that these disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

Effective November 1, 2019, we adopted *Accounting Standards Update ("ASU") 2016-02, Leases*. Although the new lease standard is not expected to have a material impact on our operating results on an ongoing basis, we did implement changes to our processes related to lease control activities, including information systems. These included the development of new policies based on identifying leases, determining lease commencement, calculating the present value of leases, determining the incremental borrowing rate and gathering information for required disclosures. There were no other changes in our internal control over financial reporting during the first quarter of 2020, which were identified in connection with management's evaluation required by paragraph (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are involved in lawsuits, claims, investigations and proceedings, including, but not limited to, patent, commercial, employment and environmental matters, which arise in the ordinary course of business. There are no matters pending that we currently believe are probable of having a material impact to our business, consolidated financial condition, results of operations or cash flows.

ITEM 1A. RISK FACTORS

Risks, Uncertainties and Other Factors That May Affect Future Results

Risks Related to Our Business

Failure to introduce successful new solutions and services in a timely manner to address increased competition, rapid technological changes, and changing industry standards could result in our solutions and services becoming obsolete.

We generally sell our solutions in industries that are characterized by increased competition through frequent new solution and service introductions, rapid technological changes and changing industry standards. In addition, many of the markets in which we operate are seasonal and cyclical. Without the timely introduction of new solutions, services and enhancements, our solutions and services will become technologically obsolete over time, in which case our revenue and operating results would suffer. Our ability to offer new solutions and services and to deploy them in a timely manner depend on several factors, including but not limited to our ability to:

- properly identify customer needs;
- innovate and develop new technologies, services and applications;
- successfully commercialize new technologies in a timely manner;
- manufacture and deliver our solutions in sufficient volumes and on time;
- differentiate our offerings from our competitors' offerings;
- price our solutions competitively;
- anticipate our competitors' development of new solutions, services or technological innovations; and
- control product quality in our manufacturing process.

Our future operating results may fluctuate significantly if our investments in innovative technologies are not as profitable as we anticipate.

On a regular basis, we review the existing technologies available in the market and identify strategic new technologies to develop and invest in. We are currently devoting significant resources to the 5G technology and other new technologies in the automotive, battery, Internet of Things, and mobile industries. We are investing in R&D, developing relationships with customers and suppliers, and re-directing our corporate and operational resources to grow within these innovative technologies. Our income could be harmed if we fail to gain sufficient market share, if demand for our solutions is lower than we expect, or if our income related to the innovative technologies is lower than we anticipate. For example, when the 5G standards are published, we may not be able to produce a satisfactory return on investment if our strategic vision and the resources that we are spending on developing our presence in the 5G technology industry turn out to be misaligned with such standards. We provide solutions for the design, development, and manufacturing stages of our customers' workflow. Our customers who currently use our solutions in one stage of their workflow may not use our solutions in other aspects of their manufacturing process.

Uncertainty in general economic conditions may adversely affect our operating results and financial condition.

Our business is sensitive to negative changes in general economic conditions, both inside and outside the United States. Global and regional economic uncertainty or depression may impact our business, resulting in:

- reduced demand for our solutions, delays in the shipment of orders or increases in order cancellations;
- increased risk of excess and obsolete inventories;
- increased price pressure for our solutions and services; and
- greater risk of impairment to the value, and a detriment to the liquidity, of our future investment portfolio.

In addition, global and regional macroeconomic developments, such as increased unemployment, decreased income, reduced access to credit, volatility in capital markets, decreased liquidity, uncertain or destabilizing national election results in the U.S., Europe, and Asia, and negative changes or volatility in general economic conditions in the U.S., Europe, and Asia could negatively affect our ability to conduct business in those territories. Financial difficulties experienced by our suppliers and customers, including distributors, due to economic volatility or negative changes could result in product delays and inventory issues. Economic risks related to accounts receivable could result in delays in collection and greater bad debt expense.

Our operating results and financial condition could be harmed if the markets into which we sell our solutions decline or do not grow as anticipated.

Visibility into our markets is limited. Our quarterly sales and operating results are highly dependent on the volume and timing of technology-related spending and orders received during the fiscal quarter, which are difficult to forecast and may be cancelled by our customers. In addition, our revenues and earnings forecasts for future fiscal quarters are often based on the expected seasonality or cyclicality of our markets. However, the markets we serve do not always experience the seasonality or cyclicality that we expect. Any decline in our customers' markets would likely result in a reduction in demand for our solutions and services. The broader semiconductor market is one of the drivers for our business, and therefore, a decrease in the semiconductor market could harm our business. Also, if our customers' markets decline, we may not be able to collect on outstanding amounts due to us. Such declines could harm our financial position, results of operations, cash flows and stock price, and could limit our profitability. Also, in such an environment, pricing pressures could intensify. Since a significant portion of our operating expenses is relatively fixed in nature due to sales, R&D and manufacturing costs, if we were unable to respond quickly enough, these pricing pressures could further reduce our operating margins.

Failure to adjust our purchases due to changing market conditions or failure to estimate our customers' demand could adversely affect our income.

Our income could be harmed if we are unable to adjust our purchases to market fluctuations, including those caused by the seasonal or cyclical nature of the markets in which we operate. The sale of our solutions and services are dependent, to a large degree, on customers whose industries are subject to seasonal or cyclical trends in the demand for their products. For example, the consumer electronics market is particularly volatile, making demand difficult to anticipate. During a market upturn, we may not be able to purchase sufficient supplies or components to meet increasing product demand, which could materially affect our results. In the past, we have seen a shortage of parts for some of our products. In addition, some of the parts that require custom design are not readily available from alternate suppliers due to their unique design or the length of time necessary for design work. Should a supplier cease manufacturing such a component, we would be forced to re-engineer our solution. In addition to discontinuing parts, suppliers may also extend lead times, limit supplies or increase prices due to capacity constraints or other factors. In order to secure components for the production of products, we may continue to enter into non-cancellable purchase commitments with vendors, or at times make advance payments to suppliers, which could impact our ability to adjust our inventory to declining market demands. Prior commitments of this type have resulted in an excess of parts when demand for electronic products has decreased. If demand for our solutions is less than we expect, we may experience additional excess and obsolete inventories and be forced to incur additional charges.

Economic and political policies favoring national interests could adversely affect our results of operations.

Nationalistic economic policies and political trends in the United States, the United Kingdom, the European Union, Singapore, Malaysia and China among other countries, such as opposition to globalization and free trade, sanctions or trade restrictions, withdrawal from or re-negotiation of global trade agreements, tax policies that favor domestic industries and interests, the exit of the United Kingdom from the European Union (known as Brexit), the distancing or potential exit of other countries from the European Union, and other similar actions may result in increased transaction costs, reduced ability to hire employees, reduced access to supplies and materials, reduced demand or access to customers in international markets, and inability to conduct our operations as they have been conducted historically. Each of these factors may adversely affect our business.

International trade disputes and increased tariffs between the United States and such jurisdictions could substantially change our expectations and ability to operate in such jurisdictions as we have done historically. Many of our suppliers, vendors, customers, partners, and other entities with whom we do business have strong ties to doing business in China. Their ability to supply materials to us, buy products or services from us, or otherwise work with us is affected by their ability to do business in China. If the U.S.'s relationship with China deteriorates or results in trade disputes, trade protection measures, retaliatory actions, tariffs and increased barriers, policies that favor domestic industries, or increased import or export licensing requirements or restrictions, then our deployment of resources in jurisdictions affected by such measures could be misaligned and our operations may be adversely affected due to such changes in the economic and political ecosystem in which our suppliers, vendors, customers, partners, and other entities with whom we do business operate.

A decreased demand for our customers' products or trade restrictions could adversely affect our results of operations.

Our business depends on our customers' ability to manufacture, design, and sell their products in the marketplace. International trade disputes affecting our customers could adversely affect our business. Tariffs on imports to or from China could increase the cost of our customers' components and raw materials, which could make our customers' products and services more expensive and could reduce demand for our customers' products. Protectionist and retaliatory trade measures by either China or the United States could limit our customers' ability to sell their products and services and could reduce demand of our customers' products. Our customers and other entities in our customer chain could decide to take actions in response to international trade disputes that we could not foresee. A decrease in demand or significant change in operations from our customers due to international trade disputes could adversely affect our operating results and financial condition.

In addition to the above, our customers and suppliers could become subject to U.S. export restrictions and sanctions, such as, being added to the U.S. Department of Commerce's "Lists of Parties of Concern" and having U.S. export privileges denied or suspended. In the event that a customer or supplier of ours becomes subject to such sanctions, we will suspend our business with such customer or supplier. Because of the increasingly tense political and economic relationship between the United States and China, such sanctions could be imposed with little notice, which could leave us without an adequate alternative solution to compensate for our inability to continue to do business with such customer or supplier. Some of our suppliers and customers in the supply chain are working on unique solutions and products in the market, and it may be difficult if not impossible to replace them, especially with short notice. We cannot predict what impact future sanctions could have on our customers or suppliers, and therefore, our business. Any export restrictions or sanctions and any tariffs or other trade restriction imposed on our customers or suppliers could adversely affect our financial condition and business.

Economic, political, and other risks associated with international sales and operations could adversely affect our results of operations.

Because we sell our solutions worldwide, our business is subject to risks associated with doing business internationally. We anticipate that revenue from international operations will continue to represent a majority of our total revenue. However, there can be no assurances that our international sales will continue at existing levels or grow in accordance with our effort to increase foreign market penetration. In addition, many of our employees, contract manufacturers, suppliers, job functions and manufacturing facilities are located outside the United States. Accordingly, our future results could be harmed by a variety of factors, including but not limited to:

- changes in a specific country's or region's political, economic or other conditions, including but not limited to changes that favor national interests and economic volatility;
- negative consequences from changes in tax laws;
- difficulty in protecting intellectual property;
- interruption to transportation flows for delivery of parts to us and finished goods to our customers;
- changes in foreign currency exchange rates;
- difficulty in staffing and managing foreign operations;
- local competition;

- differing labor regulations;
- unexpected changes in regulatory requirements;
- inadequate local infrastructure;
- potential incidences of corruption and fraudulent business practices; and
- volatile geopolitical turmoil, including popular uprisings, regional conflicts, terrorism, and war.

We centralize most of our accounting processes at two locations: India and Malaysia. These processes include general accounting, inventory cost accounting, accounts payable and accounts receivables functions. If conditions change in those countries, it may adversely affect operations, including impairing our ability to pay our suppliers. Our results of operations, as well as our liquidity, may be adversely affected and possible delays may occur in reporting financial results.

Further, even if we are able to successfully manage the risks of international operations, our business may be adversely affected if our business partners are not able to successfully manage similar risks.

Dependence on contract manufacturing and outsourcing other portions of our supply chain may adversely affect our ability to bring solutions to market and damage our reputation. Dependence on outsourced information technology and other administrative functions may impair our ability to operate effectively.

As part of our efforts to streamline operations and to cut costs, we outsource aspects of our manufacturing processes and other functions and continue to evaluate additional outsourcing. If our contract manufacturers or other outsourcers fail to perform their obligations in a timely manner or at satisfactory quality levels, our ability to bring solutions to market and our reputation could suffer. For example, during a market upturn, our contract manufacturers may be unable to meet our demand requirements, which may preclude us from fulfilling our customers' orders on a timely basis. The ability of these manufacturers to perform is largely outside of our control. Additionally, changing or replacing our contract manufacturers or other outsourced vendors could cause disruptions or delays. In addition, we outsource significant portions of our information technology ("IT") and other administrative functions. Since IT is critical to our operations, any failure of our IT providers to perform could impair our ability to operate effectively. In addition to the risks outlined above, problems with manufacturing or IT outsourcing could result in lower revenues and unrealized efficiencies and could impact our results of operations and stock price. Much of our outsourcing takes place in developing countries and, as a result, may be subject to geopolitical uncertainty.

Our operating results may suffer if our manufacturing capacity does not match the demand for our solutions.

Because we cannot immediately adapt our production capacity and related cost structures to rapidly changing market conditions, when demand does not meet our expectations, our manufacturing capacity will likely exceed our production requirements. During a general market upturn or an upturn in our business, we cannot increase our manufacturing capacity to meet product demand, we will not be able to fulfill orders in a timely manner, which could lead to order cancellations, contract breaches or indemnification obligations. This inability could materially and adversely limit our ability to improve our income, margin and operating results. By contrast, if, during an economic downturn, we had excess manufacturing capacity, then our fixed costs associated with excess manufacturing capacity would adversely affect our income, margins and operating results.

Key customers or large orders may expose us to additional business and legal risks that could have a material adverse impact on our operating results and financial condition.

Certain key customers have substantial purchasing power and leverage in negotiating contractual arrangements with us. These customers may demand contract terms that differ considerably from our standard terms and conditions. Large orders may also include severe contractual liabilities for us if we fail to provide the quantity and quality of product at the required delivery times. While we attempt to contractually limit our potential liability under such contracts, we may have to agree to some or all of these types of provisions to secure these orders and to continue to grow our business. Such actions expose us to significant additional risks, which could result in a material adverse impact on our operating results and financial condition.

Industry consolidation and consolidation among our customer base may lead to increased competition and may harm our operating results.

There is potential for industry consolidation in our markets. As companies attempt to strengthen or hold their market positions in an evolving industry, companies could be acquired or may be unable to continue operations. Companies that are strategic alliance partners in some areas of our business may acquire or form alliances with our competitors, thereby reducing their business with us. We believe that industry consolidation may result in stronger competitors and could lead to more variability in our operating results and could have a material adverse effect on our business, operating results, and financial condition. Furthermore, particularly in the communications market, rapid consolidation would lead to fewer customers, with the effect that loss of a major customer could have a material impact on results not anticipated in a customer marketplace composed of more numerous participants.

Additionally, if there is consolidation among our customer base, our customers may be able to command increased leverage in negotiating prices and other terms of sale, which could adversely affect our profitability. In addition, if, as a result of increased leverage, customer pressures require us to reduce our pricing such that our gross margins are diminished, we could decide not to sell our solutions under such less favorable terms, which would decrease our revenue. Consolidation among our customer base may also lead to reduced demand for our solutions, replacement of our products by the combined entity with those of our competitors and cancellations of orders, each of which could harm our operating results.

Our acquisitions, strategic alliances, joint ventures, internal reorganizations and divestitures may result in financial results that are different than expected.

In the normal course of business, we may engage in discussions with third parties relating to possible acquisitions, strategic alliances, joint ventures and divestitures. Additionally, we occasionally make changes to our internal structure to align business products, services and solutions with market demands and to obtain cost synergies and operational efficiencies. As a result of such transactions, our financial results may differ from our own or the investment community's expectations in a given fiscal quarter, or over the long term. If market conditions or other factors lead us to change our strategic direction, we may not realize the expected value from such transactions or reorganizations. Further, such third-party transactions often have post-closing arrangements, including, but not limited to, post-closing adjustments, transition services, escrows or indemnifications, the financial results of which can be difficult to predict. In addition, acquisitions and strategic alliances may require us to integrate a different company culture, management team, employees and business infrastructure into our existing operations without impacting the business operations of the newly acquired company. We may have difficulty developing, manufacturing and marketing the products of a newly acquired company in a way that enhances performance and expands the markets of the newly acquired company. The acquired company may not enhance the performance of our businesses or product lines such that we do not realize the value from expected synergies. Depending on the size and complexity of an acquisition, the successful integration of the entity depends on a variety of factors, including but not limited to:

- the achievement of anticipated cost savings, synergies, business opportunities and growth prospects from combining the acquired company;
- the scalability of production, manufacturing and marketing of products of a newly acquired company to broader adjacent markets;
- the ability to cohesively integrate operations, product definitions, price lists, delivery, and technical support for products and solutions of a newly acquired company into our existing operations;
- the compatibility of our infrastructure, operations, policies and organizations with those of the acquired company;
- the retention of key employees and/or customers;
- the management of facilities and employees in different geographic areas; and
- the management of relationships with our strategic partners, suppliers, and customer base.

If we do not realize the expected benefits or synergies of such transactions, our consolidated financial position, results of operations, cash flows and stock price could be negatively impacted. Additionally, we may record significant goodwill and other assets as a result of acquisitions or investments, and we may be required to incur impairment charges, which could adversely affect our consolidated financial position and results of operations.

Any inability to complete acquisitions on acceptable terms could negatively impact our growth rate and financial performance.

Our ability to grow revenues, earnings and cash flow depends in part upon our ability to identify and successfully acquire and integrate businesses at appropriate prices and realize anticipated synergies and business performance. Appropriate targets for acquisition are difficult to identify and complete for a variety of reasons, including but not limited to, limited due diligence, high valuations, business and intellectual property evaluations, other interested parties, negotiations of the definitive documentation, satisfaction of closing conditions, the need to obtain antitrust or other regulatory approvals on acceptable terms, and availability of funding. The inability to close appropriate acquisitions on acceptable terms could adversely impact our growth rate, revenue, and financial performance.

We may need additional financing in the future to meet our capital needs or to make opportunistic acquisitions, and such financing may not be available on terms favorable to us, if at all, and may be dilutive to existing shareholders.

We may need to seek additional financing for our general corporate purposes. For example, we may need to increase our investment in R&D activities or need funds to make acquisitions. We may be unable to obtain any desired additional financing on terms favorable to us, if at all. If adequate funds are not available on acceptable terms, we may be unable to fund our expansion, successfully develop or enhance solutions or respond to competitive pressures, any of which could negatively affect our business. If we finance acquisitions by issuing additional convertible debt or equity securities, our existing stockholders may experience share dilution, which could affect the market price of our stock. If we raise additional funds through the issuance of equity securities, our shareholders will experience dilution of their ownership interest. If we raise additional funds by issuing debt, we may be subject to further limitations on our operations and ability to pay dividends due to restrictive covenants.

We have outstanding debt and may incur other debt in the future, which could adversely affect our financial condition, liquidity and results of operations.

We currently have outstanding debt as well as availability to borrow under a revolving credit facility. We may borrow additional amounts in the future and use the proceeds from any future borrowing for general corporate purposes, future acquisitions, expansion of our business or repurchases of our outstanding shares of common stock.

Our incurrence of this debt, and increases in our aggregate levels of debt, may adversely affect our operating results and financial condition by, among other things:

- requiring a portion of our cash flow from operations to make interest payments on this debt;
- increasing our vulnerability to general adverse economic and industry conditions;
- reducing the cash flow available to fund capital expenditures and other corporate purposes and to grow our business; and
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry.

Our current revolving credit facility and term loan imposes restrictions on us, including restrictions on our ability to create liens on our assets and the ability of our subsidiaries to incur indebtedness, and requires us to maintain compliance with specified financial ratios. Our ability to comply with these ratios may be affected by events beyond our control. In addition, the indenture governing our senior notes contains covenants that may adversely affect our ability to incur certain liens or engage in certain types of sale and leaseback transactions. If we breach any of the covenants and do not obtain a waiver from the lenders, then, subject to applicable cure periods, our outstanding indebtedness could be declared immediately due and payable.

If currency exchange rates fluctuate substantially in the future, our financial results could be adversely affected.

A substantial amount of our solutions are priced and paid for in U.S. Dollars, although many of our solutions are priced in local currencies and a significant amount of certain types of expenses, such as payroll, utilities, tax and marketing expenses, are paid in local currencies. Our hedging programs are designed to reduce, but not entirely eliminate, within any given 12-month period, the impact of currency exchange rate movements, including those caused by currency controls, which could impact our business, operating results and financial condition by resulting in lower revenue or increased expenses. However, for expenses beyond a 12-month period, our hedging strategy will not mitigate our exchange rate risk. In addition, our currency hedging programs involve third-party financial institutions as counterparties. The weakening or failure of these counterparties may adversely affect our hedging programs and our financial condition through, among other things, a reduction in the number of available counterparties, increasingly unfavorable terms or the failure of counterparties to perform under hedging contracts.

If we suffer a loss to our employees, factories, facilities or distribution system due to a catastrophic event, our operations could be significantly harmed.

Our factories, facilities and distribution system are subject to catastrophic loss due to fire, flood, terrorism, epidemic, pandemic, or other natural or man-made disasters. Several of our facilities could be subject to a catastrophic loss caused by earthquake or other natural disasters due to their locations. For example, our production facilities, headquarters and laboratories in California and our production facilities in Japan are all located in areas with above-average seismic activity. If any of these facilities were to experience a catastrophic loss, it could disrupt our operations, delay production, shipments and revenue and result in large expenses to repair or replace the facility. Pandemics, or epidemics, such as the recent coronavirus outbreak, could result in government or institutionally imposed travel bans or restrictions, quarantines, factory shutdowns and work stoppages. Long-term impacts could include supply chain volatility, resulting in a shortage of or inability to get parts, labor shortages due to prolonged illness or quarantine, loss of critical employees, slowdown or cancellation of orders, inability to ship orders, increased risk of excess inventory and adverse impact on our revenue. If such a disruption were to occur, we could breach our agreements, our reputation could be harmed and our business and operating results could be adversely affected. In addition, since we have consolidated our manufacturing facilities, we are more likely to experience an interruption to our operations in the event of a catastrophe in any one location. Although we carry insurance for property damage and business interruption, we do not carry insurance or financial reserves for interruptions or potential losses arising from earthquakes or terrorism. Also, our third-party insurance coverage will vary from time to time in both type and amount depending on availability, cost and our decisions with respect to risk retention. Economic conditions and uncertainties in global markets may adversely affect the cost and other terms upon which we are able to obtain third-party insurance. If our third-party insurance coverage is adversely affected, or to the extent we have elected to self-insure, we may be at a greater risk that our operations will be harmed by a catastrophic loss.

Additionally, we and our customers and suppliers are vulnerable to the increasing impact of climate change. Volatile changes in weather conditions, including extreme heat or cold could result in increased risk of fire, flood, blizzards, hurricanes and other weather-related disasters. Disasters created by extreme conditions could cause catastrophic damage to our facilities or those of our customers or suppliers, resulting in temporary or long-term closures of our facilities and operations or those of customers or suppliers and significant expense for repair or replacement of damaged or destroyed facilities. This could result in adverse impact to the supply chain, damage to or destruction of inventory, inability to manufacture and deliver solutions, cancellation of orders, and breaches of customer contracts leading to reduced revenue.

Third parties may claim that we are infringing their intellectual property rights, and we could suffer significant litigation or licensing expenses or be prevented from selling solutions or services.

Third parties may claim that one or more of our solutions or services infringe their intellectual property rights. We analyze and take action in response to such claims on a case-by-case basis. Any dispute or litigation regarding patents or other intellectual property could be costly and time-consuming due to the complexity of our technology and the uncertainty of intellectual property litigation and could divert our management and key personnel from business operations. A claim of intellectual property infringement could cause us to enter into a costly or restrictive license agreement (which may not be available under acceptable terms, or at all), require us to redesign certain of our solutions (which would be costly and time-consuming) and/or subject us to significant damages or an injunction against the development and sale of certain solutions or services. In certain of our businesses, we rely on third-party intellectual property licenses, and we cannot ensure that these licenses will be available to us in the future on terms favorable to us or at all.

Third parties may infringe our intellectual property rights, and we may suffer competitive injury or expend significant resources enforcing our intellectual property rights.

Our success depends in part on our proprietary technology, including technology we obtained through acquisitions. We rely on various intellectual property rights, including patents, copyrights, trademarks and trade secrets, as well as confidentiality provisions and licensing arrangements, to establish our proprietary rights. If we do not enforce our intellectual property rights successfully, our competitive position may suffer, which could harm our operating results.

Our pending patent, copyright and trademark registration applications may not be allowed or competitors may challenge the validity or scope of our patents, copyrights or trademarks. In addition, our patents, copyrights, trademarks and other intellectual property rights may not provide us with a significant competitive advantage. In preparation for the separation and distribution, we have applied for trademarks related to our new global brand name in various jurisdictions worldwide. Any successful opposition to our applications in material jurisdictions could impose material costs on us or make it more difficult to protect our brand. Different jurisdictions vary widely in the level of protection and priority they give to trademark and other intellectual property rights.

We may be required to spend significant resources monitoring our intellectual property rights, and we may or may not be able to detect infringement of such rights by third parties. Our competitive position may be harmed if we cannot detect infringement and enforce our intellectual property rights in a timely manner, or at all. In some circumstances, we may choose to not pursue enforcement due to a variety of reasons. In addition, competitors may avoid infringement by designing around our intellectual property rights or by developing non-infringing competing technologies. Intellectual property rights and our ability to enforce them may be unavailable or limited in some countries, which could make it easier for competitors to capture market share and could result in lost revenues to the company. Furthermore, some of our intellectual property is licensed to others, which allows them to compete with us using that intellectual property.

If we experience a significant cybersecurity attack or disruption in our IT systems, our business, reputation, and operating results could be adversely affected.

We rely on several centralized IT systems to provide solutions and services, maintain financial records, retain sensitive data such as intellectual property, proprietary business information, and data related to customers, suppliers, and business partners, process orders, manage inventory, process shipments to customers and operate other critical functions. The ongoing maintenance and security of this information is pertinent to the success of our business operations and our strategic goals.

Despite our implementation of network security measures, our network may be vulnerable to cybersecurity attacks, computer viruses, break-ins and similar disruptions. Our network security measures include, but are not limited to, the implementation of firewalls, antivirus protection, patches, log monitors, routine backups, offsite storage, network audits, and routine updates and modifications. Despite our efforts to create these security barriers, we may not be able to keep pace as new threats emerge and it is virtually impossible for us to entirely eliminate this risk. Cybersecurity attacks are evolving and include, but are not limited to, malicious software, attempts to gain unauthorized access to data, and other electronic security breaches that could lead to disruptions in systems, unauthorized release of confidential or otherwise protected information and corruption of data. Any such event could have a material adverse effect on our business, reputation, operating results and financial condition, and no assurance can be given that our efforts to reduce the risk of such attacks will be successful.

In addition, our IT systems may be susceptible to damage, disruptions or shutdowns due to power outages, hardware failures, telecommunication failures, user errors, implementation of new operational systems or software or upgrades to existing systems and software, or catastrophes or other unforeseen events. Such events could result in the disruption of business processes, network degradation and system downtime, along with the potential that a third party will exploit our critical assets such as intellectual property, proprietary business information and data related to our customers, suppliers and business partners. Further, such events could result in loss of revenue, loss of or reduction in purchase orders, inability to report financial information, litigation, regulatory fines and penalties, and other damage that could have a material impact on our business operations. To the extent that such disruptions occur, our customers and partners may lose confidence in our solutions and we may lose business or brand reputation, resulting in a material and adverse effect on our business operating results and financial condition.

We are or will be subject to ongoing tax examinations of our tax returns by the IRS and other tax authorities. An adverse outcome of any such audit or examination by the IRS or other tax authority could have a material adverse effect on our results of operations, financial condition and liquidity.

We are or will be subject to ongoing tax examinations of our tax returns by the IRS and other tax authorities in various jurisdictions. We regularly assess the likelihood of adverse outcomes resulting from ongoing tax examinations to determine the adequacy of our provision for income taxes. These assessments can require considerable estimates and judgments. Intercompany transactions associated with the sale of inventory, services, intellectual property and cost sharing arrangements are complex and affect our tax liabilities. The calculation of our tax liabilities involves uncertainties in the application of complex tax laws and regulations in multiple jurisdictions. The outcomes of these tax examinations could have an adverse effect on our operating results and financial condition. Due to the complexity of tax contingencies, the ultimate resolution of any tax matters related to operations may result in payments greater or less than amounts accrued.

Our operations may be adversely impacted by changes in our business mix or changes in the tax legislative landscape.

Our effective tax rate may be adversely impacted by, among other things, changes in the mix of our earnings among countries with differing statutory tax rates, changes in the valuation allowance of deferred tax assets, and changes in tax laws. We cannot give any assurance as to what our effective tax rate will be in the future because, among other things, there is uncertainty regarding the tax policies of the jurisdictions where we operate. Changes in tax laws, such as tax reform in the United States or changes in tax laws resulting from the Organization for Economic Co-operation and Development’s (“OECD”) multi-jurisdictional plan of action to address “base erosion and profit shifting” and the taxation of the “Digital Economy” could impact our effective tax rate.

If tax laws or incentives change or cease to be in effect, our income taxes could increase significantly.

We are subject to federal, state, and local taxes in the United States and numerous foreign jurisdictions. We devote significant resources to evaluating our tax positions and our worldwide provision for taxes. Our financial results and tax treatment are susceptible to changes in tax, accounting, and other laws, regulations, principles, and interpretations in the United States and in other jurisdictions where we do business. With the rise of economic and political policies that favor domestic interests, it is possible that more countries will enact tax laws that either increase the tax rates, or reduce or change the tax incentives available to multinational companies like ours. Upon a change in tax laws in any territory where we do significant business, such as the U.S., the European Union, or Singapore, we may not be able to maintain our current tax rate or qualify for or maintain the benefits of any tax incentives offered, to the extent such incentives are offered.

We currently benefit from tax incentives extended to certain of our foreign subsidiaries to encourage investment or employment, the most significant of which being Singapore. The Singapore tax incentives require that specific conditions be satisfied, which include achieving thresholds of employment, ownership of certain assets, as well as specific types of investment activities within Singapore. Based on the current tax environment, we believe that we will satisfy such conditions in the future as needed, but cannot guarantee that the tax environment will not change or that such conditions will be satisfied.

Our Singapore tax incentives are due for renewal in fiscal 2024, but we cannot guarantee that Singapore will not revoke the tax incentives earlier. Our taxes could increase if the existing Singapore incentives are not renewed upon revocation or expiration. We cannot guarantee that we will qualify for any new incentive regime that may exist in fiscal 2024, or that such conditions will be satisfied. If we cannot or do not wish to satisfy all or portions of the tax incentives conditions, we may lose the related tax incentives and could be required to refund the benefits that the tax incentives previously provided. As a result, our effective tax rate could be higher than it would have been had we maintained the benefits of the tax incentives and could harm our operating results.

Our business will suffer if we are not able to retain and hire key personnel.

Our future success depends partly on the continued service of our key research, engineering, sales, marketing, manufacturing, executive and administrative personnel, including personnel joining our company through acquisitions. The markets in which we operate are dynamic, and we may need to respond with reorganizations, workforce reductions and site closures from time to time. We believe our pay levels are competitive within the regions that we operate. However, there is also intense competition for certain highly technical specialties in geographic areas in which we operate, and it may become more difficult to retain key employees. If we fail to retain and hire a sufficient number of these personnel, we may not be able to meet key objectives, such as launching effective product innovations and meeting financial goals, and maintain or expand our business.

If we fail to maintain satisfactory compliance with certain regulations, we may be subject to substantial negative financial consequences and civil or criminal penalties.

We and our customers are subject to various significant international, federal, state and local regulations, including, but not limited to, health and safety, packaging, data privacy, product content, labor and import/export regulations. These regulations are complex, change frequently and have tended to become more stringent over time. We may be required to incur significant expenses to comply with these regulations or to remedy violations of these regulations. Any failure by us to comply with applicable government regulations could also result in cessation of our operations or portions of our operations, high financial penalties, product recalls or impositions of fines, and restrictions on our ability to carry on or expand our operations. If demand for our solutions is adversely affected or our costs increase, our business would suffer.

We have developed internal data handling policies and practices to comply with the General Data Protection Regulation ("GDPR") in the European Union and data privacy regulations similar to GDPR in other jurisdictions. Our existing business strategy does not rely on aggregating or selling personally identifiable information, and as a general matter Keysight does not process personally identifiable information on behalf of our customers. We devote resources to keep up with the changing regulatory environment on data privacy in the jurisdictions where we do business. Despite our efforts, no assurance can be given that we will be compliant with data privacy regulations. New laws, amendments, or interpretations of regulations, industry standards, and contractual obligations relating to data privacy may require us to incur additional costs and restrict our business operations. If we fail to comply with GDPR or other data privacy regulation, we may be subject to significant financial fines and civil or criminal penalties, and may suffer damage to our reputation or brand, which could adversely affect our business and financial results.

In addition, our products and operations are also often subject to the rules of industrial standards bodies, like the International Standards Organization, as well as regulation by other agencies such as the U.S. Federal Communications Commission. We also must comply with work safety rules. If we fail to adequately address any of these regulations, our businesses could be harmed.

Failure to comply with anti-corruption laws could adversely affect our business and result in financial penalties.

Because we have extensive international operations, we must comply with complex foreign and U.S. laws and regulations, such as the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and other local laws prohibiting corrupt payments to governmental officials, and anti-competition regulations. Although we actively maintain policies and procedures designed to ensure ongoing compliance with these laws and regulations, there can be no assurance that our employees, contractors or agents will not violate these policies and procedures. Violations of these laws and regulations could result in fines and penalties, criminal sanctions, restrictions on our business conduct and on our ability to offer our solutions in one or more countries, and could also materially affect our brand, ability to attract and retain employees, international operations, business and operating results.

Our business and financial results may be adversely affected by various legal and regulatory proceedings.

We are subject to legal proceedings, lawsuits and other claims in the normal course of business and could become subject to additional claims in the future, some of which could be material. The outcome of existing proceedings, lawsuits and claims may differ from our expectations because the outcomes of litigation are often difficult to reliably predict. Various factors or developments can lead us to change current estimates of liabilities and related insurance receivables where applicable, or permit us to make such estimates for matters previously not susceptible to reasonable estimates, such as a significant judicial ruling or judgment, a significant settlement, significant regulatory developments or changes in applicable law. A future adverse ruling, settlement or unfavorable development could result in charges that could adversely affect our business, operating results or financial condition.

Our internal controls may be determined to be ineffective, which may adversely affect investor confidence in our company, the value of our stock, and our access to capital.

The Sarbanes-Oxley Act of 2002 requires us to furnish a report by management on the effectiveness of our internal control over financial reporting, among other things. We are devoting significant resources and time to comply with such internal control over financial reporting requirements. However, we cannot be certain that these measures will ensure that we design, implement and maintain adequate control over our financial processes and reporting in the future, especially in the context of acquisitions of other businesses. Any difficulties in the assimilation of acquired businesses into our control system could harm our operating results or cause us to fail to meet our financial reporting obligations. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our stock or on our access to capital, or cause us to be subject to investigation or sanctions by the SEC.

Adverse conditions in the global banking industry and credit markets may adversely impact the value of our cash investments or impair our liquidity.

Our cash and cash equivalents are invested or held in a mix of money market funds, time deposit accounts and bank demand deposit accounts. Disruptions in the financial markets may, in some cases, result in an inability to access assets such as money market funds that traditionally have been viewed as highly liquid. Any failure of our counterparty financial institutions or funds in which we have invested may adversely impact our cash and cash equivalent positions and, in turn, our results and financial condition.

Future investment returns on pension assets may be lower than expected or interest rates may decline, requiring us to make significant additional cash contributions to our future plans.

We sponsor several defined benefit pension plans that cover many of our salaried and hourly employees. The Federal Pension Protection Act of 2006 requires that certain capitalization levels be maintained in each of the U.S. plans, and there may be similar funding requirements in the plans outside the United States. Because it is unknown what the investment return on and the fair value of our pension assets will be in future years or what interest rates and discount rates may be at any point in time, no assurances can be given that applicable law will not require us to make future material plan contributions. Any such contributions could adversely affect our financial condition.

Environmental contamination from past operations could subject us to unreimbursed costs and could harm on-site operations and the future use and value of the properties involved, and environmental contamination caused by ongoing operations could subject us to substantial liabilities in the future.

Some of our properties are undergoing remediation by HP Inc. ("HP") for subsurface contaminations that were known at the time of Agilent's separation from HP in 1999. In connection with Agilent's separation from HP, HP and Agilent entered into an agreement pursuant to which HP agreed to retain the liability for this subsurface contamination, perform the required remediation and indemnify Agilent with respect to claims arising out of that contamination. Agilent has assigned its rights and obligations under this agreement to Keysight in respect of facilities transferred to us in the separation. As a result, HP will have access to a limited number of our properties to perform remediation. Although HP agreed to minimize interference with on-site operations at such properties, remediation activities and subsurface contamination may require us to incur unreimbursed costs and could harm on-site operations and the future use and value of the properties. In connection with the separation, Agilent will indemnify us directly for any liabilities related thereto. We cannot be sure that HP will continue to fulfill its remediation obligations or that Agilent will continue to fulfill its indemnification obligations.

In connection with the separation from Agilent, Agilent also agreed to indemnify us for any liability associated with contamination from past operations at all properties transferred from Agilent to Keysight. We cannot be sure that Agilent will fulfill its indemnification obligations.

Our current manufacturing processes involve the use of substances regulated under various international, federal, state and local laws governing the environment. As a result, we may become subject to liabilities for environmental contamination, and these liabilities may be substantial. Although our policy is to apply strict standards for environmental protection at our sites inside and outside the United States, even if the sites outside the United States are not subject to regulations imposed by foreign governments, we may not be aware of all conditions that could subject us to liability.

Risks Related to Our Common Stock

Our share price may fluctuate significantly.

Our common stock is listed on NYSE under the ticker symbol “KEYS.” The market price of our common stock may fluctuate widely, depending on many factors, some of which may be beyond our control, including but not limited to:

- actual or anticipated fluctuations in our operating results due to factors related to our business;
- success or failure of our business strategy;
- our quarterly or annual earnings, or those of other companies in our industry;
- our ability to obtain third-party financing as needed;
- announcements by us or our competitors of significant acquisitions or dispositions;
- changes in accounting standards, policies, guidance, interpretations or principles;
- the failure of securities analysts to cover our common stock;
- changes in earnings estimates by securities analysts or our ability to meet those estimates;
- the operating and share price performance of other comparable companies;
- investor perception of our company;
- natural or other disasters that investors believe may affect us;
- overall market fluctuations;
- results from any material litigation or government investigations;
- changes in laws or regulations affecting our business; and
- general economic conditions and other external factors.

Stock markets in general have experienced volatility that has often been unrelated to the operating performance of a particular company. These broad market fluctuations could adversely affect the trading price of our common stock.

In addition, when the market price of a company’s shares drops significantly, shareholders often institute securities class action lawsuits against the company. A lawsuit against us could cause us to incur substantial costs and could divert the time and attention of management and other resources.

We do not currently pay dividends on our common stock.

We do not currently pay dividends on our common stock. The payment of any dividends in the future, and the timing and amount thereof, to our stockholders fall within the discretion of our board of directors. The board's decisions regarding the payment of dividends will depend on many factors, such as our financial condition, earnings, capital requirements, debt service obligations, restrictive covenants in our debt, industry practice, legal requirements, regulatory constraints and other factors that the board deems relevant. We cannot guarantee that we will pay a dividend in the future or continue to pay any dividends if we commence paying dividends.

Certain provisions in our amended and restated certificate of incorporation and bylaws, and of Delaware law, may prevent or delay an acquisition of the company, which could decrease the trading price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws contain, and Delaware law contains, provisions that are intended to deter coercive takeover practices and inadequate takeover bids by making such practices or bids unacceptably expensive to the bidder and to encourage prospective acquirers to negotiate with our board of directors rather than to attempt a hostile takeover. These provisions include but are not limited to:

- the inability of our shareholders to call a special meeting;
- the inability of our shareholders to act without a meeting of shareholders;

- rules regarding how shareholders may present proposals or nominate directors for election at shareholder meetings;
- the right of our board to issue preferred stock without shareholder approval;
- the division of our board of directors into three classes of directors, with each class serving a staggered three-year term, and this classified board provision could have the effect of making the replacement of incumbent directors more time consuming and difficult;
- a provision that shareholders may only remove directors with cause;
- the ability of our directors, and not shareholders, to fill vacancies on our board of directors; and
- the requirement that the affirmative vote of shareholders holding at least 80 percent of our voting stock is required to amend certain provisions in our amended and restated certificate of incorporation (relating to the number, term and removal of our directors, the filling of our board vacancies, the advance notice to be given for nominations for elections of directors, the calling of special meetings of shareholders, shareholder action by written consent, the ability of the board of directors to amend the bylaws, elimination of liability of directors to the extent permitted by Delaware law, exclusive forum for certain types of actions and proceedings that may be initiated by our shareholders and amendments of the certificate of incorporation) and certain provisions in our amended and restated bylaws (relating to the calling of special meetings of shareholders, the business that may be conducted or considered at annual or special meetings, the advance notice of shareholder business and nominations, shareholder action by written consent, the number, tenure, qualifications and removal of our directors, the filling of our board vacancies, director and officer indemnification and amendments of the bylaws).

In addition, because we have not chosen to be exempt from Section 203 of the Delaware General Corporation Law (the "DGCL"), this provision could also delay or prevent a change of control that some shareholders may favor. Section 203 provides that, subject to limited exceptions, persons that acquire, or are affiliated with a person that acquires, more than 15 percent of the outstanding voting stock of a Delaware corporation (an "interested stockholder") shall not engage in any business combination with that corporation, including by merger, consolidation or acquisitions of additional shares, for a three-year period following the date on which the person became an interested stockholder, unless (i) prior to such time, the board of directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85 percent of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) the voting stock owned by directors who are also officers or held in employee benefit plans in which the employees do not have a confidential right to tender or vote stock held by the plan); or (iii) on or subsequent to such time the business combination is approved by the board of directors of such corporation and authorized at a meeting of shareholders by the affirmative vote of at least two-thirds of the outstanding voting stock of such corporation not owned by the interested stockholder.

We believe these provisions will protect our shareholders from coercive or otherwise unfair takeover tactics by requiring potential acquirers to negotiate with our board of directors and by providing our board of directors with more time to assess any acquisition proposal. These provisions are not intended to make us immune from takeovers. However, these provisions will apply even if the offer may be considered beneficial by some shareholders and could delay or prevent an acquisition that our board of directors determines is not in the best interests of the company and our shareholders. These provisions may also prevent or discourage attempts to remove and replace incumbent directors.

Our amended and restated certificate of incorporation designates that the state courts in the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal court for the District of Delaware, as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our shareholders, which could discourage lawsuits against the company and our directors and officers.

Our amended and restated certificate of incorporation provide that unless the board of directors otherwise determines, the state courts in the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal court for the District of Delaware, will be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to the company or our shareholders, any action asserting a claim against us or any of our directors or officers arising pursuant to any provision of the DGCL or Keysight's amended and restated certificate of incorporation or bylaws, or any action asserting a claim against us or any of our directors or officers governed by the internal affairs doctrine. This exclusive forum provision may limit the ability of our shareholders to bring a claim in a judicial forum that such shareholders find favorable for disputes with us or our directors or officers, which may discourage such lawsuits against us and our directors and officers.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

ISSUER PURCHASES OF EQUITY SECURITIES

The table below summarizes information about the company's purchases, based on trade date; of its equity securities registered pursuant to Section 12 of the Exchange Act during the quarterly period ended January 31, 2020.

Period	Total Number of Shares of Common Stock Purchased (1)	Weighted Average Price Paid per Share of Common Stock (2)	Total Number of Shares of Common Stock Purchased as Part of Publicly Announced Plans or Programs (1)	Maximum Approximate Dollar Value of Shares of Common Stock that May Yet Be Purchased Under the Program (1)
November 1, 2019 through November 30, 2019	—	—	—	$410,222,249
December 1, 2019 through December 31, 2019	351,493	$103.38	351,493	$373,885,683
January 1, 2020 through January 31, 2020	380,425	$101.61	380,425	$335,230,353
Total	731,918		731,918	

(1) On May 29, 2019, the Board of Directors approved a new stock repurchase program authorizing the purchase of up to $500 million of the company's common stock, replacing a previously approved 2018 program authorizing the purchase of up to $350 million of the company's common stock, of which $160 million remained. Under the new program, shares may be purchased from time to time, subject to general business and market conditions and other investment opportunities, through open market purchases, privately negotiated transactions or other means. All such shares and related costs are held as treasury stock and accounted for at trade date using the cost method.

(2) The weighted average price paid per share of common stock does not include the cost of commissions.

ITEM 6. EXHIBITS

Exhibit Number	Description
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Extension Schema Document
101.CAL	XBRL Extension Calculation Linkbase Document
101.LAB	XBRL Extension Label Linkbase Document
101.PRE	XBRL Extension Presentation Linkbase Document
101.DEF	XBRL Extension Definition Linkbase Document

KEYSIGHT TECHNOLOGIES, INC.

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 thereunto duly authorized.

Dated:	March 5, 2020	By:	/s/ Neil Dougherty
			Neil Dougherty
			Senior Vice President and Chief Financial Officer
			(Principal Financial Officer)

Dated:	March 5, 2020	By:	/s/ John C. Skinner
			John C. Skinner
			Vice President and Corporate Controller
			(Principal Accounting Officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Ronald S. Nersesian, certify that:

1. I have reviewed this Form 10-Q of Keysight Technologies, Inc. ("the Registrant");

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

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

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

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

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

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

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

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

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

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: March 5, 2020

/s/ Ronald S. Nersesian

Ronald S. Nersesian

President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Neil Dougherty, certify that:

1. I have reviewed this Form 10-Q of Keysight Technologies, Inc. ("the Registrant");

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

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

4. The Registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

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

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

   (c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

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

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

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

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: March 5, 2020

/s/ Neil Dougherty

Neil Dougherty

Senior Vice President and Chief Financial Officer

Exhibit 32.1

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

In connection with the Quarterly Report of Keysight Technologies, Inc. (the "Company") on Form 10-Q for the period ended January 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ronald S. Nersesian, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Date: March 5, 2020

/s/ Ronald S. Nersesian

Ronald S. Nersesian

President and Chief Executive Officer

Exhibit 32.2

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

In connection with the Quarterly Report of Keysight Technologies, Inc. (the "Company") on Form 10-Q for the period ended January 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Neil Dougherty, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Date: March 5, 2020

/s/ Neil Dougherty

Neil Dougherty

Senior Vice President and Chief Financial Officer