

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

FORM 10-Q

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

For the quarterly period ended: **June 30, 2019**

Or

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

For the transition period from: to

Commission File Number: **0-26820**

CRAY INC.

(Exact name of registrant as specified in its charter)

Washington (State or Other Jurisdiction of Incorporation or Organization)	93-0962605 (I.R.S. Employer Identification No.)
901 Fifth Avenue, Suite 1000 Seattle, Washington (Address of Principal Executive Office)	98164 (Zip Code)
206 701-2000 (Registrant's telephone number, including area code)	

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	CRAY	The Nasdaq Stock Market LLC

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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer" "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

As of July 31, 2019, there were 41,414,306 shares of Common Stock issued and outstanding.

CRAY INC.
TABLE OF CONTENTS

	<u>Page No.</u>
<u>PART I. FINANCIAL INFORMATION</u>	<u>4</u>
<u>Item 1. Unaudited Condensed Consolidated Financial Statements:</u>	<u>4</u>
<u>Condensed Consolidated Balance Sheets as of June 30, 2019 and December 31, 2018</u>	<u>4</u>
<u>Condensed Consolidated Statements of Operations for the Three and Six Months Ended June 30, 2019 and June 30, 2018</u>	<u>5</u>
<u>Condensed Consolidated Statements of Comprehensive Loss for the Three and Six Months Ended June 30, 2019 and June 30, 2018</u>	<u>6</u>
<u>Condensed Consolidated Statements of Shareholders' Equity for the Three and Six Months Ended June 30, 2019 and June 30, 2018</u>	<u>7</u>
<u>Condensed Consolidated Statements of Cash Flows for the Six Months Ended June 30, 2019 and June 30, 2018</u>	<u>8</u>
<u>Notes to Condensed Consolidated Financial Statements</u>	<u>9</u>
<u>Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>27</u>
<u>Item 3. Quantitative and Qualitative Disclosures About Market Risk</u>	<u>39</u>
<u>Item 4. Controls and Procedures</u>	<u>40</u>
<u>PART II. OTHER INFORMATION</u>	<u>41</u>
<u>Item 1. Legal Proceedings</u>	<u>41</u>
<u>Item 1A. Risk Factors</u>	<u>41</u>
<u>Item 6. Exhibits</u>	<u>55</u>
<u>SIGNATURES</u>	<u>56</u>

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Available Information

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, amendments to those reports and proxy statements filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge at our website at www.cray.com as soon as reasonably practicable after we electronically file such reports with the U.S. Securities and Exchange Commission.

PART I. FINANCIAL INFORMATION

Item 1. Unaudited Condensed Consolidated Financial Statements

CRAY INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited and in thousands, except share data)

	June 30, 2019	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 147,533	\$ 228,434
Restricted cash	3,772	1,300
Accounts and other receivables, net	76,501	87,819
Inventory	88,035	80,360
Prepaid expenses and other current assets	25,053	22,331
Total current assets	340,894	420,244
Long-term restricted cash	13,847	16,030
Property and equipment, net	38,290	35,737
Operating lease right-of-use assets	32,656	—
Goodwill	14,182	14,182
Intangible assets other than goodwill, net	2,602	3,178
Other non-current assets	17,200	27,761
TOTAL ASSETS	\$ 459,671	\$ 517,132
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 30,098	\$ 32,847
Accrued payroll and related expenses	20,462	23,703
Accrued and other liabilities	13,206	10,805
Customer contract liabilities	54,353	61,983
Total current liabilities	118,119	129,338
Long-term customer contract liabilities	23,077	32,021
Long-term operating lease liabilities	39,845	—
Other non-current liabilities	2,384	12,394
TOTAL LIABILITIES	183,425	173,753
Commitments and contingencies (Note 10)		
Shareholders' equity:		
Preferred stock — Authorized and undesignated, 5,000,000 shares; no shares issued or outstanding	—	—
Common stock and additional paid-in capital, par value \$.01 per share — Authorized, 75,000,000 shares; issued and outstanding 41,337,879 and 40,893,807 shares, respectively	654,948	647,045
Accumulated other comprehensive income	1,534	3,208
Accumulated deficit	(380,236)	(306,874)
TOTAL SHAREHOLDERS' EQUITY	276,246	343,379
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 459,671	\$ 517,132

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

CRAY INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited and in thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Revenue:				
Product	\$ 29,924	\$ 83,379	\$ 64,082	\$ 127,833
Service	38,775	36,824	76,163	71,964
Total revenue	68,699	120,203	140,245	199,797
Cost of revenue:				
Cost of product revenue	23,424	65,274	49,526	99,319
Cost of service revenue	21,328	17,122	40,748	35,719
Total cost of revenue	44,752	82,396	90,274	135,038
Gross profit	23,947	37,807	49,971	64,759
Operating expenses:				
Research and development, net	37,171	29,382	72,957	59,274
Sales and marketing	14,919	15,218	29,194	30,883
General and administrative	15,890	5,624	21,832	11,403
Restructuring	—	—	—	476
Total operating expenses	67,980	50,224	123,983	102,036
Loss from operations	(44,033)	(12,417)	(74,012)	(37,277)
Other income, net	272	430	25	48
Interest income, net	1,223	667	2,148	1,380
Loss before income taxes	(42,538)	(11,320)	(71,839)	(35,849)
Income tax benefit (expense)	(22)	370	(141)	(109)
Net loss	\$ (42,560)	\$ (10,950)	\$ (71,980)	\$ (35,958)
Basic net loss per common share	\$ (1.03)	\$ (0.27)	\$ (1.75)	\$ (0.89)
Diluted net loss per common share	\$ (1.03)	\$ (0.27)	\$ (1.75)	\$ (0.89)
Basic weighted average shares outstanding	41,191	40,616	41,069	40,527
Diluted weighted average shares outstanding	41,191	40,616	41,069	40,527

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

CRAY INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited and in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Net loss	\$ (42,560)	\$ (10,950)	\$ (71,980)	\$ (35,958)
Other comprehensive income (loss), net of tax:				
Unrealized gain on available-for-sale investments	—	9	—	7
Foreign currency translation adjustments	(52)	(1,185)	156	(1,159)
Unrealized gain (loss) on cash flow hedges	(912)	2,306	(1,761)	1,074
Reclassification adjustments on cash flow hedges included in net loss	143	633	143	1,109
Other comprehensive income (loss)	(821)	1,763	(1,462)	1,031
Comprehensive loss	<u>\$ (43,381)</u>	<u>\$ (9,187)</u>	<u>\$ (73,442)</u>	<u>\$ (34,927)</u>

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

CRAY INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(Unaudited and in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Total shareholders' equity, beginning balance	\$ 317,672	\$ 378,878	\$ 343,379	\$ 400,297
Common stock and additional paid-in capital:				
Beginning balance	651,441	637,783	647,045	633,408
Exercise of stock options	740	255	1,569	1,792
Restricted shares issued for compensation, net of forfeitures and taxes	(1,334)	(1,448)	(1,433)	(1,552)
Share-based compensation	4,101	3,192	7,767	6,134
Ending balance	654,948	639,782	654,948	639,782
Accumulated other comprehensive income:				
Beginning balance	2,355	183	3,208	915
Other comprehensive income (loss)	(821)	1,763	(1,462)	1,031
Reclassification of stranded tax effects resulting from adoption of ASU 2018-02	—	—	(212)	—
Ending balance	1,534	1,946	1,534	1,946
Accumulated deficit:				
Beginning balance	(336,124)	(259,088)	(306,874)	(234,026)
Net loss	(42,560)	(10,950)	(71,980)	(35,958)
Restricted shares issued for compensation, net of forfeitures and taxes	(1,552)	(963)	(1,594)	(1,017)
Reclassification of stranded tax effects resulting from adoption of ASU 2018-02	—	—	212	—
Ending balance	(380,236)	(271,001)	(380,236)	(271,001)
Total shareholders' equity, ending balance	\$ 276,246	\$ 370,727	\$ 276,246	\$ 370,727

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

CRAY INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited and in thousands)

	Six Months Ended June 30,	
	2019	2018
Operating activities:		
Net loss	\$ (71,980)	\$ (35,958)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	7,608	8,269
Share-based compensation expense	7,767	6,134
Other	577	(384)
Cash provided (used) due to changes in operating assets and liabilities:		
Accounts and other receivables	11,407	46,484
Inventory	(9,561)	32,755
Prepaid expenses and other assets	7,429	6,056
Accounts payable	(2,628)	(40,264)
Accrued payroll and related expenses and other liabilities	(5,403)	3,777
Customer contract liabilities	(16,396)	(27,049)
Net cash used in operating activities	(71,180)	(180)
Investing activities:		
Sales/maturities of available-for-sale investments	—	7,000
Cash received in strategic transaction	—	1,584
Purchases of property and equipment	(7,952)	(3,275)
Net cash provided by (used in) investing activities	(7,952)	5,309
Financing activities:		
Purchase of employee restricted shares to fund related statutory tax withholding	(3,027)	(2,569)
Proceeds from exercises of stock options	1,569	1,792
Net cash used in financing activities	(1,458)	(777)
Effect of foreign exchange rate changes on cash, cash equivalents and restricted cash	(22)	(185)
Net increase (decrease) in cash, cash equivalents and restricted cash	(80,612)	4,167
Cash, cash equivalents and restricted cash:		
Beginning of period	245,764	140,320
End of period	\$ 165,152	\$ 144,487
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	\$ 308	\$ 401
Non-cash investing and financing activities:		
Inventory transfers to fixed assets and service spares	\$ 1,261	\$ 5,503

The following is a reconciliation of cash, cash equivalents and restricted cash reported within the Condensed Consolidated Balance Sheets that sum to the total of the same such amounts shown in the Condensed Consolidated Statements of Cash Flows:

	June 30, 2019	December 31, 2018
Cash and cash equivalents	\$ 147,533	\$ 228,434
Restricted cash (1)	3,772	1,300
Long-term restricted cash (1)	13,847	16,030
Total cash, cash equivalents and restricted cash	\$ 165,152	\$ 245,764

(1) Restricted cash primarily associated with certain letters of credit to secure customer prepayments and other customer related obligations.

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

CRAY INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

Note 1— Basis of Presentation

In these notes, the Company and its wholly-owned subsidiaries are collectively referred to as the “Company.” In the opinion of management, the accompanying Condensed Consolidated Balance Sheets, Statements of Operations, Statements of Comprehensive Loss, Statements of Shareholders’ Equity and Statements of Cash Flows have been prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP, for interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and notes required by GAAP for complete financial statements. Management believes that all adjustments (consisting of normal recurring adjustments) considered necessary for fair presentation have been included. Interim results are not necessarily indicative of results for a full year. The information included in this quarterly report on Form 10-Q should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the financial statements and notes thereto included in the Company’s annual report on Form 10-K for the fiscal year ended December 31, 2018.

The Company’s revenue, results of operations and cash balances are likely to fluctuate significantly from quarter to quarter. These fluctuations are due to such factors as the high average sales prices and limited number of sales of the Company’s products, the timing of purchase orders and product deliveries, the revenue recognition accounting policy of generally not recognizing product revenue until customer acceptance and other contractual provisions have been fulfilled and the timing of payments for product sales, maintenance services, government research and development funding and purchases of inventory. Given the nature of the Company’s business, its revenue, receivables and other related accounts are likely to be concentrated among a relatively small number of customers.

Pending Merger with Hewlett Packard Enterprise Company

On May 16, 2019, the Company entered into an agreement and plan of merger, (the “Merger Agreement”), with Hewlett Packard Enterprise Company, a Delaware corporation (“HPE”), and Canopy Merger Sub, Inc., a Washington corporation and a wholly owned subsidiary of HPE (“Merger Sub”).

Pursuant to the terms of the Merger Agreement, and subject to the conditions specified in the Merger Agreement, Merger Sub will merge with and into the Company, and the Company will become a wholly owned subsidiary of HPE (such transaction, the “Merger”). If the Merger is completed, the Company’s shareholders will be entitled to receive \$35.00 in cash, without interest and less any withholding taxes required by applicable law, for each share of the Company’s common stock owned by them as of immediately prior to the effective time of the Merger, except with respect to Company shareholders who have properly demanded statutory dissenters’ rights with respect to the Merger.

The consummation of the Merger is subject to certain conditions, including (i) approval of the Merger Agreement by holders of not less than a majority of the outstanding shares of the Company’s common stock; (ii) the absence of any temporary restraining order, preliminary or permanent injunction, or any law or other judgment enacted, issued, promulgated, enforced or entered into by any governmental authority of competent jurisdiction that is then in effect and has the effect of making the Merger illegal or otherwise prevents or prohibits the consummation of the Merger; (iii) the expiration or termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the “HSR Act”), as well as all other required approvals, consents or clearances as may be required under the competition, merger control, antitrust or similar law of certain non-U.S. jurisdictions; (iv) the accuracy of the Company’s, HPE’s and Merger Sub’s respective representations and warranties, subject to specified materiality qualifications; (v) the absence of a Material Adverse Effect (as defined in the Merger Agreement); and (vi) other customary conditions. The consummation of the Merger is not subject to a financing condition and the Company expects HPE to finance the payment of the applicable consideration in the Merger with cash on hand, existing financing facilities and/or other debt financing.

The special meeting of the Company’s shareholders to vote on the approval of the Merger Agreement is scheduled to be held on August 27, 2019. The Company anticipates that the closing of the transactions contemplated by the Merger Agreement is expected to occur in the next 3 ½ to 6 ½ months, subject to the Company’s shareholders approving the Merger Agreement at the special meeting, all regulatory approvals being received and all other conditions set forth in the Merger Agreement being either satisfied or waived. On June 14, 2019, the Company and HPE filed their respective notification and report forms pursuant to the HSR Act with the Antitrust Division of the U.S. Department of Justice and the Federal Trade Commission. On July 15, 2019, HPE voluntarily withdrew its notification and report form for administrative reasons and refiled it on July 17, 2019. The Company expects that the waiting period under the HSR Act will, absent a second request, expire or be terminated on or before August 16, 2019. For additional information related to the Merger and the Merger Agreement, please refer to the Company’s Current Report on Form 8-K filed with the SEC on May 16, 2019 and the Definitive Proxy Statement on Schedule

14A filed with the Securities and Exchange Commission on June 25, 2019. Upon completion of the Merger, shares of the Company's common stock will cease trading on The Nasdaq Global Select Market.

The Company recorded transaction-related costs of \$7.6 million principally for legal and investment banker fees associated with the pending Merger, during the three months ended June 30, 2019. These costs are recorded in general and administrative expenses included in the condensed consolidated statement of operations for the three months ended June 30, 2019. Retention bonuses of approximately \$17 million have also been granted to employees. Payment of these bonuses is contingent on completion of the transaction and continued service of the employees through the closing of the Merger. Additional transaction-related costs are expected to be incurred through the closing of the Merger.

The Company may be required to pay HPE a \$46.0 million termination fee if the Merger Agreement is terminated in accordance with certain circumstances provided therein.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All material intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the amounts reported in the Company's condensed consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates.

New Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2016-02, Leases: Topic 842 (ASU 2016-02), which replaces existing lease guidance. The new standard is intended to provide enhanced transparency and comparability by requiring lessees to record right-of-use ("ROU") assets and corresponding lease liabilities on the balance sheet. The new standard initially required application with a modified retrospective approach to each prior reporting period presented with various optional practical expedients. In July 2018, this requirement was amended with the issuance of Accounting Standards Update No. 2018-11, Leases: Topic 842: Targeted Improvements (ASU 2018-11), which permits an additional (and optional) transition method to adopt the new leases standard.

The Company adopted ASU 2016-02 and related ASUs, collectively ASC 842, on January 1, 2019 using the optional transition method. Consequently, periods before January 1, 2019 will continue to be reported in accordance with the prior accounting guidance, ASC 840, Leases.

The Company elected the package of practical expedients, which permits the Company to retain prior conclusions about lease identification, lease classification and initial direct costs for leases that commenced before January 1, 2019. The new standard also provides practical expedients for an entity's ongoing accounting. The Company elected the short-term lease recognition exemption for all leases that qualify. The Company also elected the practical expedient to combine lease and non-lease components for all of its leases other than net lease real estate leases.

Adoption of ASC 842 resulted in the recording of ROU assets and lease liabilities of \$34.4 million and \$46.6 million, respectively, as of January 1, 2019. The difference between ROU assets and lease liabilities relates to liabilities of \$12.2 million for deferred rent and lease incentives liabilities that were included on the Company's Condensed Consolidated Balance Sheets prior to adoption of ASC 842. These amounts were eliminated at the time of adoption and are included in the lease liabilities number above. Adoption of ASC 842 did not have a material impact on the Company's consolidated net earnings and had no impact on cash flows.

In August 2017, FASB issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities (ASU 2017-12). The new standard simplifies and expands the eligible hedging strategies for financial and nonfinancial risks. It also enhances the transparency of how hedging results are presented and disclosed. Further, the new standard provides partial relief on the timing of certain aspects of hedge documentation and eliminates the requirement to recognize hedge ineffectiveness separately in earnings. The Company adopted ASU 2017-12 on January 1, 2019. Adoption of ASU 2017-12 did not have a material impact on the Company's consolidated financial statements. Upon adoption of ASU 2017-12, the Company revised its accounting policy for foreign currency derivatives from the policy included in the Notes to Consolidated Financial Statements in its annual report on Form 10-K for year ended December 31, 2018. The revised accounting policy for foreign currency derivatives is included below.

In February 2018, FASB issued Accounting Standards Update No. 2018-02, Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (ASU 2018-02).

The new standard amends ASC 220 to allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act and requires entities to provide certain disclosures regarding stranded tax effects. The Company adopted ASU 2018-02 on January 1, 2019. At the time of adoption, the Company reclassified \$0.2 million of stranded tax effects resulting from the Tax Cuts and Jobs Act from accumulated other comprehensive income to accumulated deficit. Adoption of ASU 2018-02 did not have a material impact on the Company's consolidated financial statements.

In August 2018, FASB issued Accounting Standards Update No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement (ASU 2018-13). The new standard makes various modifications to the disclosure requirements on fair value measurement in Topic 820. The Company adopted ASU 2018-13 on January 1, 2019. Adoption of ASU 2018-13 did not have a material impact on the Company's consolidated financial statements.

Revised Accounting Policies

Foreign Currency Derivatives

The Company uses foreign currency exchange contracts to manage certain foreign currency exposures. Foreign currency exchange contracts are cash flow hedges of the Company's foreign currency exposures on certain revenue contracts and are recorded at the contract's fair value. Most of the Company's foreign currency exchange contracts are designated as cash flow hedges for the purposes of hedge accounting treatment and any gains or losses on the foreign currency exchange contract is initially reported in "Accumulated other comprehensive income," a component of shareholders' equity, with a corresponding asset or liability recorded based on the fair value of the foreign currency exchange contract. When the hedged transaction is recognized, any unrecognized gains or losses on the hedged transaction are reclassified into results of operations in the same period and presented in the same income statement line item as the earnings effect of the hedged item. The Company excludes the changes in fair value of the contract related to forward points from the assessment of hedge effectiveness and the gains and losses associated with the excluded component are presented in the same line of the income statement for the hedged item. For hedging relationships executed before the date of adoption of ASU 2017-12, the gains and losses associated with the excluded components are recognized currently in earnings. The amortization approach is used for hedging relationships executed after the date of adoption of ASU 2017-02. Cash flows from foreign currency exchange contracts accounted for as cash flow hedges are classified in the same category as the cash flows from the items being hedged. The Company typically dedesignates its cash flow hedges for the purposes of hedge accounting treatment when the receivable related to the hedged cash flow is recorded. Unrealized gains or losses related to foreign currency exchange contracts that are not designated as cash flow hedges for the purposes of hedge accounting treatment are recorded in other income (expense) in the Condensed Consolidated Statements of Operations and are generally offset by foreign currency adjustments on related receivables. The Company does not use derivative financial instruments for speculative purposes.

Note 2— Revenue Recognition

The Company's performance obligations are satisfied over time as work is performed or at a point in time. The majority of the Company's revenue is recognized at a point in time when products are accepted, installed or delivered. Most of the Company's revenue is derived from long-term contracts that can span several years. Revenue is recognized when performance obligations under the terms of a contract with the customer are satisfied; generally, this occurs with the transfer of control of the Company's systems or services. In general, this does not occur until the products have been shipped or services provided to the customer, risk of loss has transferred to the customer, and, where applicable, a customer acceptance has been obtained. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods or providing services. Sales, value add, and other taxes that the Company collects concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense.

To determine the proper revenue recognition method for contracts, the Company evaluates whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. Contracts are often modified to account for changes in contract specifications and requirements. To determine the proper revenue recognition method for contract modifications, the Company evaluates whether the contract modification should be accounted for as a separate contract, part of an existing contract, or termination of an existing contract and the creation of a new contract. This evaluation requires significant judgment and the decision to combine a group of contracts or separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period. For contracts with multiple performance obligations, the Company allocates the contract's transaction price to each performance obligation using the Company's estimate of the standalone selling price of each distinct good or service in the contract.

The Company determines the transaction price by reviewing the established contractual terms and other relevant information. Contracts can include penalty clauses and contracts with government customers may not be fully funded, both of which represent variable consideration. Generally, the Company includes both the funded and unfunded portions of a contract with a government customer in the transaction price, as most often it is deemed the contract will become fully funded. The Company also assesses

the likelihood of certain penalties that would result in contract price reductions and, if deemed probable, the transaction price is adjusted.

The majority of the Company's contracts include multiple promised goods and services, which are assessed at contract inception. Each distinct good or service is identified as a performance obligation, which may be an individual good or service or a bundle of goods or services. In order to determine whether the promises are distinct, the Company assesses the use of its products and services by its customers to determine whether the customer can benefit from the good or service on its own or from other readily available resources, and whether the promised transfer of goods or services is separately identifiable from other promises in the contract.

The majority of the Company's revenues are from product solutions which include supercomputers, storage, and data analytics systems, each of which are usually separate performance obligations. Revenue is recognized when obligations under the terms of a contract with a customer are satisfied. Product revenue is typically recognized upon customer acceptance, or upon installation or delivery if formal acceptance is not required. Service revenue is typically recognized over time and consists mainly of system maintenance, analyst services, and engineering services, each of which are usually separate performance obligations. System maintenance commences upon customer acceptance or installation, depending on the contract terms, and revenue is recognized ratably over the remaining term of the maintenance contract. On-site analysts provide specialized services to customers, the revenue for which is recognized ratably over the contract period. Service revenue is recognized on a straight-line basis over the service period as the services are available continuously to the customer. Revenue from engineering services can be recognized as services are performed or as milestones are achieved, depending on the terms of the contract and nature of services performed. If, in a contract, the customer has an option to acquire additional goods or services, that option gives rise to a performance obligation if the option provides a material right to the customer that it would not receive without entering into that contract. Revenue from purchase options can be recognized as those future goods or services are transferred or when the option expires.

The Company performs an assessment to determine whether a significant financing component is present in a contract. If a contract is determined to include a significant financing component, the interest rate used in the calculation is based on the prevailing interest rates at contract inception and the entity's creditworthiness. When the period between providing a good or service to the customer is expected to be less than one year from payment, the Company applies the practical expedient and does not adjust the consideration for the effects of a significant financing component.

Occasionally, the Company's contracts include noncash consideration. This typically consists of returned parts when a system is upgraded or de-installed. Noncash consideration is measured at contract inception at estimated fair value.

The total transaction price is allocated to each performance obligation identified in the contract based on its relative standalone selling price. The Company does not have directly observable standalone selling prices for the majority of its performance obligations due to a relatively small number of customer contracts that differ in system size and contract terms which can be due to infrequently selling each performance obligation separately, not pricing products within a narrow range, or only having a limited sales history, such as in the case of certain advanced and emerging technologies. When a directly observable standalone selling price is not available, the Company estimates the standalone selling price. In determining the estimated standalone selling price, the Company uses the cost to provide the product or service plus a margin, or considers other factors. When using cost plus a margin, the Company considers the total cost of the product or service, including customer-specific and geographic factors as appropriate. The Company also considers the historical margins of the product or service on previous contracts and several other factors including any changes to pricing methodologies, competitiveness of products and services, and cost drivers that would cause future margins to differ from historical margins.

The Company sometimes offers discounts to its customers. As these discounts are offered on bundles of goods and services, the discounts are applied to all performance obligations in the contract on a pro-rata basis.

The following table provides information about contract receivables, contract assets, and contract liabilities from contracts with customers (in thousands) and includes both short-term and long-term portions:

	June 30, 2019	December 31, 2018	Change
Contract receivables	\$ 67,214	\$ 78,634	\$ (11,420)
Contract assets	5,793	6,404	(611)
Contract liabilities	77,430	94,004	(16,574)

Contract receivables consist of amounts billed to customers and include the Company's investment in a sales type lease, a portion of which is due beyond one year. Generally, billing occurs subsequent to product revenue recognition and payment is expected within 30 days. Contract assets primarily relate to the Company's rights to consideration for work completed but not billed where right to payment is not just subject to the passage of time. Contract assets become contract receivables when the rights become unconditional. The Company sometimes receives advances or deposits from customers before revenue is recognized,

resulting in customer contract liabilities (formerly deferred revenue). These assets and liabilities are reported on the Condensed Consolidated Balance Sheet on a contract-by-contract basis at the end of each reporting period. The Company's payment terms vary from contract to contract. Contracts may require payment before, at or after the Company's performance obligations have been satisfied.

For the six month period ended June 30, 2019, the Company recognized \$35.1 million in revenues from the contract liability balance at the beginning of the period.

The Company's incremental direct costs of obtaining a contract come primarily from sales commissions, a portion of which are payable upon contract signing. These commissions are generally capitalized upon payment and expensed at the time of revenue recognition. These deferred commissions are included in prepaid expenses in the Condensed Consolidated Balance Sheet. As of June 30, 2019 and December 31, 2018, the Company had \$4.2 million and \$2.0 million, respectively, of deferred commissions. For the three and six months ended June 30, 2019, the Company recognized \$0.8 million and \$1.8 million, respectively, in commissions expense. For the three and six months ended June 30, 2018, the Company recognized \$1.5 million and \$2.6 million, respectively, in commissions expense.

The Company's remaining performance obligations reflect the deliverables within contracts with customers that will have revenue recognized in a future period (this may also be referred to as backlog). Due to the nature of the Company's business and the size of individual transactions, forecasting the timing and total amount of revenue recognition is subject to significant uncertainties. As of June 30, 2019, the Company has an aggregate of \$639 million in remaining performance obligations stemming from a mixture of system contracts with their related service obligations and other service obligations. Included in this balance are \$0.2 million in losses resulting from hedged foreign currency transactions, which offset the related increase in revenue from currency fluctuations. These losses will be reclassified from accumulated other comprehensive income to revenue in the period the related transactions are recognized as revenue. These obligations are anticipated to be recognized as revenue over approximately the next six years. The Company estimates that about 60% of these obligations are expected to be recognized as revenue in the next 18 months, with the remainder thereafter. The Company's previously announced contract to build the Frontier exascale system for the Oak Ridge National Laboratory, which is valued in excess of \$500 million, is not included in the amounts above as it is subject to a Go/No-Go provision and is therefore not considered a performance obligation.

The Company's revenue is presented on a disaggregated basis in "Note 13-Segment Information" in the Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

Note 3— Fair Value Measurement

Based on the observability of the inputs used in the valuation techniques used to determine the fair value of certain financial assets and liabilities, the Company is required to provide the following information according to the fair value hierarchy. The fair value hierarchy ranks the quality and reliability of the information used to determine fair values.

In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs utilize observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities. Fair values determined by Level 3 inputs are unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. The following table presents information about the Company's financial assets that have been measured at fair value as of June 30, 2019, and indicates the level within the fair value hierarchy of the valuation inputs utilized to determine such fair value (in thousands):

Description	Fair Value as of June 30, 2019	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)
Assets:			
Cash, cash equivalents and restricted cash	\$ 165,152	\$ 165,152	\$ —
Foreign currency exchange contracts (1)	2,400	—	2,400
Assets measured at fair value at June 30, 2019	<u>\$ 167,552</u>	<u>\$ 165,152</u>	<u>\$ 2,400</u>
Liabilities:			
Foreign currency exchange contracts (2)	111	\$ —	111
Liabilities measured at fair value at June 30, 2019	<u>\$ 111</u>	<u>\$ —</u>	<u>\$ 111</u>

(1) Included in "Prepaid expenses and other current assets" and "Other non-current assets" on the Company's Condensed Consolidated Balance Sheets.

(2) Included in "Other accrued liabilities" and "Other non-current liabilities" on the Company's Consolidated Balance Sheets.

Foreign Currency Derivatives

The Company may enter into foreign currency derivatives to hedge future cash receipts on certain sales transactions that are payable in foreign currencies.

As of June 30, 2019 and December 31, 2018, the Company had outstanding foreign currency exchange contracts that were designated and accounted for as cash flow hedges of anticipated future cash receipts on sales contracts payable in foreign currencies. The outstanding notional amounts were approximately (in millions):

	June 30, 2019	December 31, 2018
Canadian Dollars (CAD)	6.5	54.4
Japanese Yen (JPY)	711.5	—
Singapore Dollars (SGD)	1.8	—

The Company had hedged foreign currency exposure related to these designated cash flow hedges of approximately \$12.9 million as of June 30, 2019 and \$41.6 million as of December 31, 2018.

As of June 30, 2019 and December 31, 2018, the Company had outstanding foreign currency exchange contracts that had been dedesignated for the purposes of hedge accounting treatment. The Company dedesignates cash flow hedges when the receivable related to the hedged cash flow is recorded. The outstanding notional amounts were approximately (in millions):

	June 30, 2019	December 31, 2018
British Pounds (GBP)	13.1	24.8
Canadian Dollars (CAD)	47.9	—
Korean Won (KRW)	—	4,446.5
Singapore Dollars (SGD)	—	2.0

The foreign currency exposure related to these contracts was approximately \$55.8 million as of June 30, 2019 and \$40.6 million as of December 31, 2018. Unrealized gains or losses related to these dedesignated contracts are recorded in other expense in the Condensed Consolidated Statements of Operations and are generally offset by foreign currency adjustments on related receivables. These foreign currency exchange contracts are considered to be economic hedges.

Cash receipts associated with the foreign currency exchange contracts are expected to be received from 2019 through 2022, during which time the revenue on the associated sales contracts is expected to be recognized, or in the case of receivables denominated in a foreign currency, the receivables balances will be collected. Any gain or loss on hedged foreign currency will be recognized at the time of customer acceptance, or in the case of receivables denominated in a foreign currency, over the period during which hedged receivables denominated in a foreign currency are outstanding.

Fair values of derivative instruments designated as cash flow hedges (in thousands):

Balance Sheet Location	Fair Value as of June 30, 2019	Fair Value as of December 31, 2018
Prepaid expenses and other current assets	\$ —	\$ 1,296
Other non-current assets	—	137
Other accrued liabilities	(62)	—
Other non-current liabilities	(6)	—
Total fair value of derivative instruments designated as cash flow hedges	<u>\$ (68)</u>	<u>\$ 1,433</u>

Fair values of derivative instruments not designated as cash flow hedges (in thousands):

Balance Sheet Location	Fair Value as of June 30, 2019	Fair Value as of December 31, 2018
Prepaid expenses and other current assets	\$ 1,941	\$ 1,894
Other non-current assets	459	1,242
Accrued and other liabilities	(43)	(63)
Total fair value of derivative instruments not designated as cash flow hedges	<u>\$ 2,357</u>	<u>\$ 3,073</u>

The following table shows the impact on product revenue of foreign currency exchange contracts that were designated as cash flow hedges (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Total amounts of product revenue presented in the condensed consolidated statement of operations in which the effects of cash flow hedges are recorded	\$ 29,924	\$ 83,379	\$ 64,082	127,833
Amount of gain (loss) recognized in other comprehensive income included in the assessment of effectiveness	(171)	2,939	(1,020)	2,183
Amount of loss reclassified from accumulated other comprehensive income to product revenue	(143)	(633)	(143)	(1,109)
Amount excluded from effectiveness testing recognized as an increase in product revenue based on changes in fair value	63	—	119	—
Amount excluded from effectiveness testing recognized in earnings based on an amortization approach	6	—	6	—

The following table shows the impact on other expense of losses on foreign currency exchange contracts that were not designated as cash flow hedges. These amounts increased other income for all periods presented (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Other income, net	\$ 442	\$ 3,501	\$ 16	\$ 1,590

Note 4— Accumulated Other Comprehensive Income

The following table shows the impact on product revenue of reclassification adjustments from accumulated other comprehensive income resulting from hedged foreign currency transactions recorded by the Company for the three and six months ended June 30, 2019 and 2018 (in thousands). The reclassification adjustments decreased product revenue for the three and six months ended June 30, 2019 and 2018.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Gross of tax reclassifications	\$ (143)	\$ (633)	\$ (143)	\$ (1,109)
Net of tax reclassifications	\$ (143)	\$ (633)	\$ (143)	\$ (1,109)

The following tables show the changes in accumulated other comprehensive income by component for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30, 2019			
	Foreign Currency Translation Adjustments	Unrealized Gain on Cash Flow Hedges	Accumulated Other Comprehensive Income	
Beginning balance	\$ 1,024	\$ 1,331	\$ 2,355	
Current-period change, net of tax	(52)	(769)	(821)	
Ending balance	\$ 972	\$ 562	\$ 1,534	
Income tax expense (benefit) associated with current-period change	\$ —	\$ —	\$ —	

Three Months Ended June 30, 2018

	Unrealized Loss on Investments	Foreign Currency Translation Adjustments	Unrealized Gain (Loss) on Cash Flow Hedges	Accumulated Other Comprehensive Income
Beginning balance	\$ (9)	\$ 1,637	\$ (1,445)	183
Current-period change, net of tax	9	(1,185)	2,939	1,763
Ending balance	<u>\$ —</u>	<u>\$ 452</u>	<u>\$ 1,494</u>	<u>\$ 1,946</u>
Income tax expense (benefit) associated with current-period change	\$ —	\$ —	\$ —	\$ —

Six Months Ended June 30, 2019

	Foreign Currency Translation Adjustments	Unrealized Gain on Cash Flow Hedges	Accumulated Other Comprehensive Income
Beginning balance	\$ 606	\$ 2,602	\$ 3,208
Current-period change, net of tax	156	(1,618)	(1,462)
Reclassification of stranded tax effects resulting from adoption of ASU 2018-02	210	(422)	(212)
Ending balance	<u>\$ 972</u>	<u>\$ 562</u>	<u>\$ 1,534</u>
Income tax expense (benefit) associated with current-period change	\$ —	\$ —	\$ —

Six Months Ended June 30, 2018

	Unrealized Loss on Investments	Foreign Currency Translation Adjustments	Unrealized Gain (Loss) on Cash Flow Hedges	Accumulated Other Comprehensive Income
Beginning balance	\$ (7)	\$ 1,611	\$ (689)	\$ 915
Current-period change, net of tax	7	(1,159)	2,183	1,031
Ending balance	<u>\$ —</u>	<u>\$ 452</u>	<u>\$ 1,494</u>	<u>\$ 1,946</u>
Income tax expense (benefit) associated with current-period change	\$ —	\$ —	\$ —	\$ —

Note 5— Loss Per Share ("EPS")

Basic EPS is computed by dividing net loss available to common shareholders by the weighted average number of common shares, excluding unvested restricted stock, outstanding during the period. Diluted EPS is computed by dividing net loss available to common shareholders by the weighted average number of common and potential common shares outstanding during the period, which includes the additional dilution related to conversion of stock options, unvested restricted stock and unvested restricted stock units as computed under the treasury stock method.

For the three and six months ended June 30, 2019 and 2018, outstanding stock options, unvested restricted stock and unvested restricted stock units were antidilutive because of the net losses and, as such, their effect has not been included in the calculation of diluted EPS. For the three and six months ended June 30, 2019, potential gross common shares of 3.1 million, were antidilutive and not included in computing diluted EPS. For the three and six months ended June 30, 2018, potential gross common shares of and 3.0 million, were antidilutive and not included in computing diluted EPS. An additional 0.5 million performance vesting restricted stock and performance vesting restricted stock units were excluded from the computation of potential common shares for each of the three and six months ended June 30, 2019 and 2018, because the conditions for vesting had not been met as of the balance sheet date.

Note 6— Accounts and Other Receivables, Net

Net accounts and other receivables consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Trade accounts receivable	\$ 49,285	\$ 63,414
Current contract assets	4,003	4,391
Advance billings	2,924	1,832
Short-term investment in sales-type lease	12,607	12,462
Other receivables	7,699	6,708
	<u>76,518</u>	<u>88,807</u>
Allowance for doubtful accounts	(17)	(988)
Accounts and other receivables, net	<u>\$ 76,501</u>	<u>\$ 87,819</u>

Contract assets represent amounts where the Company has recognized revenue in advance of the contractual billing terms. Advance billings represent billings made based on contractual terms for which revenue has not been recognized.

As of June 30, 2019 and December 31, 2018, accounts receivable included \$12.0 million and \$25.6 million, respectively, that resulted from sales to the U.S. government and system acquisitions primarily funded by the U.S. government (“U.S. Government”). Of these amounts, \$2.4 million and \$1.5 million were unbilled and included in contract assets as of June 30, 2019 and December 31, 2018, respectively, based upon contractual billing arrangements with these customers. As of June 30, 2019, two non-U.S. Government customer accounted for 35% of total accounts and other receivables. As of December 31, 2018, two non-U.S. Government customers accounted for 28% of total accounts and other receivables.

Note 7— Leases

The Company leases certain equipment and facilities used in operations under operating leases in its normal course of business. The Company’s leases have remaining lease terms of 1 to 11 years, some of which include options to extend the leases for up to 5 years, and some of which include options to terminate the leases within 1 to 5 years. The exercise of these options is at the Company’s sole discretion. The Company has not included these options to extend or terminate in its calculation of right-of-use assets or lease liabilities as it is not reasonably certain to exercise these options.

The Company’s lease agreements do not contain any residual value guarantees, material restrictions or covenants.

Operating lease cost for the three and six months ended June 30, 2019 was \$1.9 million and \$3.7 million, respectively.

The Company has elected the practical expedient for short-term leases. Operating lease cost for the Company’s short-term leases for the three and six months ended June 30, 2019 was immaterial.

Supplemental cash flow information related to operating leases for the three and six months ended June 30, 2019 was as follows (in thousands):

	Three Months Ended June 30, 2019	Six Months Ended June 30, 2019
Cash paid for amounts included in the measurement of operating lease liabilities:	\$ 2,081	\$ 4,119
Operating right-of-use assets obtained in exchange for lease obligations:	\$ 116	\$ 465

Supplemental balance sheet information related to operating leases as of June 30, 2019 was as follows (in thousands, except lease term and discount rate):

	June 30, 2019
Operating lease right-of-use assets	\$ 32,656
Current portion of operating lease liabilities, included in accrued and other liabilities	\$ 4,664
Long-term operating lease liabilities	39,845
Total operating lease liabilities	\$ 44,509

Weighted average remaining lease term (in years):	8.72
Weighted average discount rate (1):	6.76%

(1) Where the Company could not determine the rate inherent in the lease, its incremental borrowing rate was calculated using LIBOR plus a spread for similar companies.

As of June 30, 2019, maturities of operating lease liabilities were as follows (in thousands):

2019 (less than 1 year)	\$ 4,143
2020	8,184
2021	7,979
2022	7,628
2023	6,731
Thereafter	30,046
Total lease payments	64,711
Less: interest	(20,202)
Present value of lease liabilities	\$ 44,509

Sales-type Lease

The Company has a sales-type lease with one non-U.S. Government customer, under which it receives quarterly payments over the term of the lease, which expires in September 2020. The lease is denominated in British Pounds and the Company has entered into certain foreign currency exchange contracts that act as an economic hedge for the foreign currency exposure associated with this arrangement.

Interest income for the sales-type lease for the three and six months ended June 30, 2019 was \$0.1 million and \$0.3 million, respectively.

The following table shows the components of the net investment in the sales-type lease as of June 30, 2019 and December 31, 2018 (in thousands):

	June 30, 2019	December 31, 2018
Total minimum lease payments to be received	\$ 18,169	\$ 25,543
Less: executory costs	(2,123)	(2,985)
Net minimum lease payments receivable	16,046	22,558
Less: unearned income	(242)	(510)
Net investment in sales-type lease	15,804	22,048
Less: long-term investment in sales-type lease included in other non-current assets	(3,197)	(9,586)
Investment in sales-type lease included in accounts and other receivables	\$ 12,607	\$ 12,462

As of June 30, 2019, minimum lease payments related to our sales-type lease for each of the succeeding two fiscal years are as follows (in thousands):

2019 (less than 1 year)	\$ 7,274
2020	10,895
Total minimum lease payments to be received	<u>\$ 18,169</u>

Note 8— Inventory

Inventory consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Components and subassemblies	\$ 34,165	\$ 42,390
Work in process	12,294	17,429
Finished goods	41,576	20,541
Total	<u>\$ 88,035</u>	<u>\$ 80,360</u>

Finished goods inventory of \$41.6 million and \$16.0 million was located at customer sites pending acceptance as of June 30, 2019 and December 31, 2018, respectively. At June 30, 2019, the U.S. Government accounted for \$12.7 million of finished goods inventory and one non-U.S. Government customer accounted for \$27.0 million of finished goods inventory. At December 31, 2018, the U.S. Government accounted for \$13.9 million of finished goods inventory.

The Company wrote off \$0.6 million and \$3.8 million of excess and obsolete inventory during the three and six months ended June 30, 2019. The Company did not write off any inventory during the three and six months ended June 30, 2018.

Note 9— Customer Contract Liabilities

Liabilities from contracts with customers consisted of the following (in thousands):

	June 30, 2019	December 31, 2018
Contract liability - product	\$ 5,916	\$ 5,667
Contract liability - service	71,514	88,337
Total contract liabilities	77,430	94,004
Less: long-term contract liabilities	(23,077)	(32,021)
Current contract liabilities	<u>\$ 54,353</u>	<u>\$ 61,983</u>

As of June 30, 2019 and December 31, 2018, the U.S. Government accounted for \$22.3 million and \$29.8 million, respectively, of total customer contract liabilities. As of June 30, 2019 and December 31, 2018, no non-U.S. government customers accounted for more than 10% of total customer contract liabilities.

Note 10— Contingencies

The Company is subject to patent lawsuits brought by Raytheon Company (“Raytheon”). A first suit was brought by Raytheon on September 25, 2015 in the Eastern District of Texas (Civil Action No. 2:15-cv-1554) asserting infringement of four patents owned by Raytheon (“First Action”). Two of the originally asserted patents relate to computer hardware alleged to be encompassed by Cray’s current and past products (the “Hardware Patents”), and the two remaining asserted patents relate to features alleged to be performed by certain third-party software that Cray optionally includes as part of its product offerings (the “Software Patents”). A second suit was brought by Raytheon on April 22, 2016 in the Eastern District of Texas (Civil Action No. 2:16-cv-423) asserting infringement of five patents owned by Raytheon (“Second Action”). In the Second Action, all five asserted patents relate to features alleged to be performed by certain third-party software that Cray optionally includes as part of its product offerings. On September 21, 2017, the United States Court of Appeals for the Federal Circuit granted Cray’s petition for writ of mandamus and overturned the trial court’s determination that venue in the First Action was proper in the Eastern District of Texas. Accordingly on April 5, 2018, the trial court ordered that the First Action should be transferred to the Western District of Wisconsin, as had been requested by Cray, which was effective on April 30, 2018 (Civil Action No. 3:18-cv-00318-wmc). After transfer, Raytheon indicated its desire to withdraw its claims for infringement of the Hardware Patents. The Wisconsin court, upon joint motion of the parties, dismissed with prejudice the counts related to the Hardware Patents, and Raytheon has served on the Company and filed with the court covenants not to sue for infringement of the Hardware Patents. The Texas court, upon joint motion of the parties, transferred

the Second Action to the Northern District of California (Civil Action No. 3:18-cv-03388-RS). Per joint motion of the parties, the California court has stayed the Second Action pending resolution of the First Action. In the First Action, the Wisconsin court held a summary judgment hearing on January 10, 2019. Respecting Cray's contentions that Raytheon's claims of infringement of the Software Patents fail as a matter of law, on April 15, 2019, the Wisconsin court, by opinion and order, granted Cray's motion for summary judgment and directed judgment in favor of Cray regarding Raytheon's claims of infringement of the Software Patents. On May 15, 2019, Cray filed a motion seeking attorneys fees under 35 U.S.C. § 285 which provides that the Court in "exceptional cases may award reasonable attorney fees to the prevailing party." That motion is currently pending. On May 24, 2019, Raytheon filed a notice of appeal with the Court of Appeals for the Federal Circuit of the Wisconsin court's April 15, 2019 order granting Cray's motion for summary judgment that the Software Patents were not infringed. No decision on the appeal is expected until 2020. The Company will continue to vigorously defend these actions including the appeal of the favorable decision by the Wisconsin court in the First Action. The probable outcome of the described litigation cannot be determined, nor can the Company estimate a range of potential loss (or gain from a potential recovery of attorney's fees). Based on its review of the matters to date, the Company notes that its defenses have to date prevailed in the First Action, and the Company believes that it has valid defenses in the Second Action. As a result, the Company considers the likelihood of a material loss related to these matters to be remote.

The Company is also subject to putative shareholder class action lawsuits in connection with the Merger Agreement.

On June 19, 2019, a putative shareholder class action complaint was filed in the Superior Court of the State of Washington for King County against Cray and the individual members of Cray's Board of Directors, captioned *Keith v. Cray Inc., et al.*, Case No. 19-2-16273-2 SEA (the "Keith Complaint"), asserting that the Board of Directors breached its fiduciary duties in connection with the proposed transaction with HPE by, among other things, allegedly conducting a flawed and conflicted sales process and by causing to be disseminated a materially incomplete and misleading proxy statement. On June 24, 2019, a similar putative shareholder class action complaint was filed in the Superior Court of the State of Washington for Snohomish County against Cray and the individual members of Cray's Board of Directors, captioned *Delman v. Ungaro, et al.*, Case No. 19-2-05756-31 (the "Delman Complaint"). On July 10, 2019, another similar putative shareholder class action complaint was filed in the Superior Court of the State of Washington for King County against Cray and the individual members of Cray's Board of Directors, captioned *Rapacki v. Cray, et al.*, Case No. 19-2-18093-5 SEA (the "Rapacki Complaint" and together with the Keith Complaint and the Delman Complaint, the "State Court Actions").

On June 20, 2019, a putative shareholder class action complaint was filed in the United States District Court, District of Delaware, against Cray, the individual members of Cray's Board of Directors, HPE and Merger Sub, captioned *Davie v. Cray Inc. et al.*, Case No. 1:19-cv-01148-UNA (the "Davie Complaint"). On June 21, 2019, another putative shareholder class action complaint was filed in the same court against Cray, the individual members of Cray's Board of Directors, HPE and Merger Sub, captioned *Kent v. Cray Inc. et al.*, Case No. 1:19-cv-01157-UNA (the "Kent Complaint"), and on June 24, 2019, an individual action was filed in the same court against the same defendants, captioned *Stein v. Cray Inc. et al.*, Case No. 1:19-cv-01188-UNA (the "Stein Complaint" and together with the Davie Complaint and Kent Complaint, the "Delaware Complaints"). On July 2, 2019, a putative shareholder class action complaint was filed in the United States District Court for the Western District of Washington against Cray and the individual members of Cray's Board of Directors, captioned *Epstein v. Cray Inc., et al.*, Case No. [2:19-cv-01026] (the "Epstein Complaint" and together with the Delaware Complaints, the "Federal Court Actions"). The Federal Court Actions each assert that defendants violated Sections 14(a) and 20(a) of the Exchange Act by making untrue statements of material fact and omitting certain material facts related to the contemplated merger in the proxy statement.

The State Court Actions and the Federal Court Actions seek, among other things, an order enjoining defendants from consummating the Merger, money damages and an award of attorneys' and experts' fees. The probable outcome of the State Court Actions and the Federal Court Actions cannot be determined, nor can the Company estimate a range of potential loss. The Company believes that the lawsuits are without merit and intends to vigorously defend those actions. As a result, the Company considers the likelihood of a material loss related to these matters to be remote.

Note 11— Share-Based Compensation

The Company accounts for its share-based compensation based on an estimate of fair value of the grant on the date of grant.

In determining the fair value of stock options, the Company uses the Black-Scholes option pricing model. The following key weighted average assumptions were employed in the calculation for the six month period ended June 30, 2019 and the three and six month periods ended June 30, 2018. There were no stock option grants during the three month period ended June 30, 2019:

	Three Months Ended June 30,	Six Months Ended June 30,	
	2018	2019	2018
Risk-free interest rate	2.85%	2.47%	2.85%
Expected dividend yield	—%	—%	—%
Volatility	48.93%	48.04%	48.93%
Expected life	4.0 years	4.0 years	4.0 years
Weighted average Black-Scholes value of options granted	\$11.13	\$9.05	\$11.13

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The Company does not anticipate declaring dividends in the foreseeable future. Volatility is based on historical data. The expected life of an option is based on the assumption that options will be exercised, on average, about two years after vesting occurs. The Company recognizes compensation expense for only the portion of options that are expected to vest. Therefore, management applies an estimated forfeiture rate that is derived from historical employee termination data and adjusted for expected future employee turnover rates. The estimated forfeiture rate applied to the Company's stock option grants during the three and six months ended June 30, 2019 and 2018 was 8.0%. If the actual number of forfeitures differs from those estimated by management, additional adjustments to compensation expense may be required in future periods. The Company's stock price volatility, option lives and expected forfeiture rates involve management's best estimates at the time of such determination, which impact the fair value of the option calculated under the Black-Scholes methodology and, ultimately, the expense that will be recognized over the vesting period or requisite service period of the option. The Company typically issues stock options with a four year vesting period (the requisite service period) and amortizes the fair value of stock options (stock compensation cost) ratably over the requisite service period.

A summary of the Company's year-to-date stock option activity and related information follows:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)
Outstanding at December 31, 2018	1,877,602	\$ 18.81	
Grants	20,000	\$ 22.62	
Exercises	(260,232)	\$ 6.03	
Canceled and forfeited	(5,006)	\$ 14.61	
Outstanding at June 30, 2019	1,632,364	\$ 20.90	5.5
Exercisable at June 30, 2019	1,326,280	\$ 20.29	4.9
Available for grant at June 30, 2019 (1)	2,958,018		

(1) Using the plan's fungible ratio of 1.55:1 for full-value awards, 1,908,399 shares were available for restricted stock awards, stock bonus awards, restricted stock units, performance shares or performance units.

As of June 30, 2019, there was \$22.9 million of aggregate intrinsic value of outstanding stock options, including \$19.5 million of aggregate intrinsic value of exercisable stock options. Intrinsic value represents the total pretax intrinsic value for all "in-the-money" options (*i.e.*, the difference between the Company's closing stock price on the last trading day of its second quarter of 2019 and the exercise price, multiplied by the number of shares of common stock underlying the stock options) that would have been received by the option holders had all option holders exercised their options on June 30, 2019. During the three and six months ended June 30, 2019, stock options covering 65,332 and 260,232 shares of common stock, respectively, with a total intrinsic value of \$1.1 million and \$4.7 million, respectively, were exercised. During the three and six months ended June 30, 2018, stock options covering 20,699 and 192,814 shares of common stock, respectively, with a total intrinsic value of \$0.3 million and \$2.7 million, respectively, were exercised.

The fair value of unvested restricted stock and unvested restricted stock units is based on the market price of a share of the Company's common stock on the date of grant and is amortized over the vesting period.

A summary of the Company's unvested restricted stock grants and changes during the six months ended June 30, 2019 is as follows:

	Service Vesting Restricted Shares	
	Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	34,269	\$ 27.64
Granted	32,208	\$ 34.69
Forfeited	—	\$ —
Vested	(34,269)	\$ 27.64
Outstanding at June 30, 2019	32,208	\$ 34.69

The estimated forfeiture rate applied to the Company's restricted stock grants during the three and six months ended June 30, 2019 and 2018, was 8.0%. The aggregate fair value of restricted stock vested during the three and six months ended June 30, 2019, was \$0.9 million and \$0.9 million, respectively. The aggregate fair value of restricted stock vested during the three and six months ended June 30, 2018, was \$1.9 million and \$2.0 million, respectively.

A summary of the Company's unvested restricted stock unit grants and changes during the six months ended June 30, 2019 is as follows:

	Service Vesting Restricted Stock Units		Performance Vesting Restricted Stock Units		Total Restricted Stock Units	
	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	1,166,308	\$ 23.07	482,485	\$ 30.13	1,648,793	\$ 25.14
Granted	544,700	\$ 26.28	—	\$ —	544,700	\$ 26.28
Forfeited	(28,039)	\$ 22.21	—	\$ —	(28,039)	\$ 22.21
Vested	(242,050)	\$ 23.84	—	\$ —	(242,050)	\$ 23.84
Outstanding at June 30, 2019	1,440,919	\$ 24.17	482,485	\$ 30.13	1,923,404	\$ 25.66

The estimated forfeiture rate applied to the Company's service vesting restricted stock unit grants during the three and six months ended June 30, 2019 and 2018, was 8.0%. The aggregate fair value of restricted stock units vested during the three and six months ended June 30, 2019, was \$5.4 million and \$5.8 million, respectively. The aggregate fair value of restricted stock units vested during the three and six months ended June 30, 2018, was \$4.7 million and \$5.1 million, respectively. Restricted stock units are not outstanding shares and do not have any voting or dividend rights. At the time of vesting, a share of common stock representing each restricted stock unit vested will be issued by the Company. The performance vesting restricted stock units are subject to performance measures that are currently not considered "probable" of attainment and as such, no compensation cost has been recorded for these units. The period for which the performance measures of the performance vesting restricted stock units can be satisfied ends at the end of 2019. Under certain conditions, the performance vesting restricted shares vest upon a change in control. Based on the size of the Company's merger with HPE, approximately 241 thousand performance vesting restricted stock units will ultimately vest, the majority of which require a one year service period by the holders subsequent to the close of our merger with HPE.

Including performance-based equity awards, the Company had \$41.5 million of total unrecognized compensation cost related to unvested stock options, unvested restricted stock and unvested restricted stock units as of June 30, 2019. Excluding the \$14.5 million of unrecognized compensation cost related to unvested restricted stock units that are subject to performance measures that are currently not considered "probable" of attainment, unrecognized compensation cost is \$27.0 million. No compensation expense is recognized for unvested restricted stock units subject to performance measures that are not considered "probable" of attainment. Unrecognized compensation cost related to unvested stock options and unvested non-performance-based restricted stock is expected to be recognized over a weighted average period of 3.1 years.

The following table sets forth the gross share-based compensation cost resulting from stock options, unvested restricted stock and unvested restricted stock units that were recorded in the Company's Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Cost of product revenue	\$ 139	\$ 110	\$ 264	\$ 216
Cost of service revenue	115	103	223	200
Research and development, net	1,354	1,101	2,523	1,961
Sales and marketing	1,044	744	1,833	1,478
General and administrative	1,449	1,134	2,924	2,279
Total	\$ 4,101	\$ 3,192	\$ 7,767	\$ 6,134

Note 12— Taxes

The Company's effective tax rates for the three and six months ended June 30, 2019 and 2018 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Effective tax rates	(0.1)%	3%	(0.2)%	(0.3)%

The difference between the expected statutory tax rate of 21% and the actual tax rates for the three and six months ended June 30, 2019 and 2018, was attributable to the Company's decision to continue to provide a full valuation allowance against its U.S. federal deferred tax assets offset, in part, by foreign taxes.

As of June 30, 2019, the Company continued to provide a full valuation allowance against its U.S. federal deferred tax assets and against the majority of its deferred tax assets arising in state and foreign jurisdictions as the realization of such assets is not considered to be more likely than not at this time. The Company's conclusion about the realizability of its deferred tax assets, and therefore the appropriateness of the valuation allowance, is reviewed quarterly and could change in future periods depending on the Company's future assessment of all available evidence in support of the likelihood of realization of its deferred tax assets. If the Company's conclusion about the realizability of its deferred tax assets and therefore the appropriateness of its valuation allowance changes in a future period, it could record a substantial tax benefit in its Condensed Consolidated Statements of Operations when that occurs.

Note 13— Segment Information

The Company has the following reportable segments: Supercomputing, Storage and Data Management, Maintenance and Support, and Engineering Services and Other. The Company's reportable segments represent components of the Company for which separate financial information is available that is utilized on a regular basis by the Chief Executive Officer, who is the Chief Operating Decision Maker, in determining how to allocate the Company's resources and evaluate performance. The segments are determined based on several factors, including the Company's internal operating structure, the manner in which the Company's operations are managed, client base, similar economic characteristics and the availability of separate financial information.

Supercomputing

Supercomputing includes a suite of highly advanced, tightly integrated and cluster supercomputer systems which are used by large research and engineering centers in universities, government laboratories, and commercial institutions. Supercomputing also includes the ongoing maintenance of these systems as well as system analysts.

Storage and Data Management

Storage and Data Management offers Cray DataWarp and ClusterStor (formerly branded Sonexion), as well as other third-party storage products and their ongoing maintenance as well as system analysts.

Maintenance and Support

Maintenance and Support provides ongoing maintenance of Cray supercomputers, big data storage and analytics systems, as well as system analysts.

Engineering Services and Other

Engineering Services and Other includes analytics and artificial intelligence-driven systems as well as Custom Engineering.

The following data presents the Company's operating segment revenues disaggregated by primary geographic market, which is determined based on a customer's geographic location (in thousands). Regions represent Europe, the Middle East, and Africa ("EMEA"); Asia-Pacific and Japan; and the United States, Canada, and Latin America ("Americas"). Revenues were reduced by \$0.1 million for the three and six months ended June 30, 2019 and \$0.6 million and \$1.1 million for the three and six months ended June 30, 2018 related to hedging gains and losses which do not represent revenues recognized from contracts with customers.

	Americas	EMEA	Asia Pacific & Japan	Total
Three Months Ended June 30, 2019				
Supercomputing	\$ 36,860	\$ 9,082	\$ 4,890	\$ 50,832
Storage and Data Management	6,288	2,613	1,764	10,665
Maintenance and Support	22,376	7,388	6,433	36,197
Engineering Services and Other	4,433	71	2,698	7,202
Elimination of inter-segment revenue	(22,376)	(7,388)	(6,433)	(36,197)
Total revenue	\$ 47,581	\$ 11,766	\$ 9,352	\$ 68,699
Three Months Ended June 30, 2018				
Supercomputing	\$ 44,318	\$ 14,148	\$ 43,305	\$ 101,771
Storage and Data Management	6,876	3,268	2,817	12,961
Maintenance and Support	21,117	7,752	5,425	34,294
Engineering Services and Other	5,189	58	224	5,471
Elimination of inter-segment revenue	(21,117)	(7,752)	(5,425)	(34,294)
Total revenue	\$ 56,383	\$ 17,474	\$ 46,346	\$ 120,203
Six Months Ended June 30, 2019				
Supercomputing	\$ 72,542	\$ 14,064	\$ 14,533	\$ 101,139
Storage and Data Management	19,346	4,753	3,652	27,751
Maintenance and Support	43,730	14,448	13,346	71,524
Engineering Services and Other	8,047	352	2,956	11,355
Elimination of inter-segment revenue	(43,730)	(14,448)	(13,346)	(71,524)
Total revenue	\$ 99,935	\$ 19,169	\$ 21,141	\$ 140,245
Six Months Ended June 30, 2018				
Supercomputing	\$ 64,927	\$ 22,806	\$ 69,904	\$ 157,637
Storage and Data Management	14,914	7,444	11,356	33,714
Maintenance and Support	41,663	15,241	10,224	67,128
Engineering Services and Other	7,910	118	418	8,446
Elimination of inter-segment revenue	(41,663)	(15,241)	(10,224)	(67,128)
Total revenue	\$ 87,751	\$ 30,368	\$ 81,678	\$ 199,797

The following table presents gross profit for the Company's operating segments for the three and six months ended June 30, 2019 and 2018 (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Gross Profit:				
Supercomputing	\$ 16,010	\$ 29,051	\$ 32,555	\$ 47,172
Storage and Data Management	4,324	5,316	11,503	12,349
Maintenance and Support	15,910	17,871	32,583	32,946
Engineering Services and Other	3,613	3,440	5,913	5,238
Elimination of inter-segment gross profit	(15,910)	(17,871)	(32,583)	(32,946)
Total gross profit	\$ 23,947	\$ 37,807	\$ 49,971	\$ 64,759

Revenue and cost of revenue is the only discrete financial information the Company prepares for its segments. Other financial results or assets are not separated by segment.

Sales to the U.S. Government totaled approximately \$25.6 million and \$61.6 million for the three and six months ended June 30, 2019, respectively, compared to approximately \$42.5 million and \$61.4 million for the three and six months ended June 30, 2018, respectively. For the six months ended June 30, 2019, one non-U.S. Government customer accounted for 14% of total revenue. For the six months ended June 30, 2018, one non-U.S. Government customer, which was located in Japan, accounted for 17% of total revenue. For the six months ended June 30, 2018, total revenue in Japan accounted for 26% of total revenue.

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

Preliminary Note Regarding Forward-Looking Statements

This quarterly report on Form 10-Q contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they never materialize or if they prove incorrect, could cause our actual results to differ materially from those expressed or implied by such forward-looking statements. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to them. In some cases you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expect," "plans," "anticipates," "believes," "continue," "estimates," "projects," "predicts", "likely", "forecast" and "potential" and similar expressions, but the absence of these words does not mean that a statement is not forward-looking. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, and examples of forward-looking statements include statements regarding our proposed Merger with HPE, including the timing, likelihood and expected benefits of the Merger; the ability of the parties to consummate the Merger, including the receipt of shareholder approval or the regulatory approvals required for the Merger; any projections of earnings, revenue or other results of operations or financial results; any statements of the plans, strategies, objectives and beliefs of our management; any statements concerning proposed new products, technologies or services such as our next generation "Shasta" system; any statements regarding potential new markets or applications for our products or our ability to sell into any market or to any customer; any statements regarding the timing of recognizing revenue for sales of our products or service; any statements regarding the effects of the acquisition of Seagate's ClusterStor line of business; any statements regarding technological developments or trends; any statements regarding future research and development or co-funding for such efforts; any statements regarding future market and economic conditions; any statements regarding the expected vesting of our performance-based equity awards; and any statements of assumptions underlying any of the foregoing. These forward-looking statements are subject to the safe harbor created by Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Our actual results could differ materially from those anticipated in these forward-looking statements for many reasons, including the risks faced by us and described in Item 1A. Risk Factors in Part II and other sections of this report and our other filings with the U.S. Securities and Exchange Commission, or SEC. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this report. You should read this report completely and with the understanding that our actual future results may be materially different from what we expect. We assume no obligation to update these forward-looking statements, whether as a result of new information, future events, or otherwise, except as otherwise required by law.

Recent Development - Pending Merger with Hewlett Packard Enterprise Company

On May 16, 2019, we entered into an agreement and plan of merger, or the Merger Agreement, with Hewlett Packard Enterprise Company, a Delaware corporation, or HPE, and Canopy Merger Sub, Inc., a Washington corporation and a wholly owned subsidiary of HPE, or Merger Sub.

Pursuant to the terms of the Merger Agreement, and subject to the conditions specified in the Merger Agreement, Merger Sub will merge with and into Cray, and we will become a wholly-owned subsidiary of HPE. We refer to this transaction as the Merger. If the Merger is completed, our shareholders will be entitled to receive \$35.00 in cash, without interest and less any withholding taxes required by applicable law, for each share of our common stock owned by them as of immediately prior to the effective time of the Merger, except with respect to Company shareholders who have properly demanded statutory dissenters' rights with respect to the Merger.

The consummation of the Merger is subject to certain conditions, including (i) approval of the Merger Agreement by holders of not less than a majority of the outstanding shares of our common stock; (ii) the absence of any temporary restraining order, preliminary or permanent injunction, or any law or other judgment enacted, issued, promulgated, enforced or entered into by any governmental authority of competent jurisdiction that is then in effect and has the effect of making the Merger illegal or otherwise prevents or prohibits the consummation of the Merger; (iii) the expiration or termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, or the HRS Act, as well as all other required approvals, consents or clearances as may be required under the competition, merger control, antitrust or similar law of certain non-U.S. jurisdictions; (iv) the accuracy of our, HPE's and Merger Sub's respective representations and warranties, subject to specified materiality qualifications; (v) the absence of a Material Adverse Effect (as defined in the Merger Agreement); and (vi) other customary conditions. The consummation of the Merger is not subject to a financing condition and we expect HPE to finance the payment of the applicable consideration in the Merger with cash on hand, existing financing facilities and/or other debt financing.

The special meeting of our shareholders to vote on the approval of the Merger Agreement is scheduled to be held on August 27, 2019. We anticipate the closing of the transactions contemplated by the Merger Agreement is expected to occur in the next 3 ½ to 6 ½ months, subject to our shareholders approving the Merger Agreement at the special meeting, all regulatory approvals being received and all other conditions set forth in the Merger Agreement being either satisfied or waived. On June 14, 2019, the Company and HPE filed their respective notification and report forms pursuant to the HSR Act with the Antitrust Division of the

U.S. Department of Justice and the Federal Trade Commission. On July 15, 2019, HPE voluntarily withdrew its notification and report form for administrative reasons and refiled it on July 17, 2019. The Company expects that the waiting period under the HSR Act will, absent a second request, expire or be terminated on or before August 16, 2019. For additional information related to the Merger and the Merger Agreement, please refer to our Current Report on Form 8-K filed with the SEC on May 16, 2019 and the Definitive Proxy Statement on Schedule 14A filed with the SEC on June 25, 2019. Upon completion of the Merger, shares of our common stock will cease trading on The Nasdaq Global Select Market.

We recorded transaction-related costs of \$7.6 million, principally for legal and investment banker fees associated with the pending Merger, during the three months ended June 30, 2019. These costs are recorded in general and administrative expenses included in the condensed consolidated statement of operations for the three months ended June 30, 2019. Retention bonuses of approximately \$17 million have also been granted to employees. Payment of these bonuses is contingent on completion of the transaction and continued service of the employees through the closing of the Merger. Additional transaction-related costs are expected to be incurred through the closing of the Merger.

Overview

Our focus is on the design, development, manufacture, marketing, and servicing of computing products that magnify and enhance human capital, foster discovery and innovation, and create scientific break-throughs, as well as competitive advantages. That means our products are aimed primarily at the high end of the high-performance computing (HPC), data analytics, and artificial intelligence (AI) markets—the segments populated by the pioneers, executives, and entrepreneurs leading their industries in both the public and private sectors. These products include compute systems commonly known as supercomputers, as well as high-performance storage, data analytics, and AI solutions. We offer them individually, integrated into a complete solution, or hosted in the cloud, depending on a customer's needs. We also provide related software and system maintenance, support, and engineering services. Our customers include domestic and foreign government and government-funded entities, academic institutions, and commercial companies. We provide solutions based on four main models: (1) tightly integrated supercomputing designed throughout for scalability and sustained performance; (2) customizable cluster supercomputing based on highest-performance, industry-standard components; (3) robust high-performance storage solutions; and (4) integrated solutions for graph analysis, large-scale analytics, and AI applications. All of our solutions also emphasize total cost of ownership, scalable performance, and data center flexibility as key features. Our continuing strategy is to gain market share by extending our technology leadership, and differentiation, as well as expanding our addressable market in areas where we can leverage our experience and technology, such as in AI applications and data analytics. Underpinning this strategy is our focus on understanding our customers' needs and building products that continually extend their capabilities.

Summary of First Six Months of 2019 Results

Total revenue decreased by \$59.6 million for the first six months of 2019 compared to the first six months of 2018, from \$199.8 million to \$140.2 million, due to lower product revenue. Product revenue was \$63.8 million lower in the first six months of 2019 compared to the first six months of 2018, primarily driven by fewer high-dollar value product acceptances in the first half of 2019 as compared to the first half of 2018.

Net loss for the first six months of 2019 was \$72.0 million compared to net loss of \$36.0 million for the same period in 2018. The increase in net loss was primarily driven by lower product revenue, transaction costs of \$7.6 million related to the Merger, and an increase in research and development costs of \$13.7 million.

Net cash used in operating activities was \$71.2 million for the first six months of 2019 compared to \$0.2 million for the first six months of 2018. Net cash used in operating activities for the first six months of 2019 was primarily driven by our net loss, adjusted for non-cash expenses, of \$56.0 million, and a \$16.4 million decrease in customer contract liabilities as the associated revenue was recognized. These amounts were partially offset by a decrease in accounts receivable of \$11.4 million due to payments from customers.

Market Overview and Challenges

Significant trends in the HPC industry include:

- convergence of traditional supercomputing modeling simulation with big data analytics and AI;
- supercomputing with many-core commodity processors driving increasing scalability requirements;
- increased micro-architectural diversity, including increased usage of many-core processors and accelerators (such as graphics processors or GPUs), as the rate of increases in per-core performance slows;
- data I/O and storage capacity needs growing as fast as computational needs;

- the rise of AI, machine learning, and deep learning algorithms that utilize HPC technologies for performance and scale;
- technology innovations in memory and storage allowing for faster data access such as high bandwidth memory, non-volatile memory and storage, solid state and flash devices;
- the increasing commoditization of HPC hardware;
- the growing concentration of very large suppliers of key computing, memory and storage components in the industry;
- the growing commoditization of software, including more capable open source software;
- electrical power and system cooling requirements becoming a design constraint and driver in total cost of ownership determinations;
- increasing use of AI and analytics technologies in both the HPC and big data markets;
- increased adoption of cloud computing as a solution for loosely-coupled HPC applications;
- significant price volatility for memory in recent years; and
- significant variability in market demand for high-end supercomputers from quarter-to-quarter and year-to-year.

Several of these trends have recently impacted the growth rate, competitive intensity, and the related improvements in price-performance of products in the industry and has contributed to the expansion and acceptance of loosely-coupled cluster systems using processors manufactured by Intel, AMD and others combined with commercially available, commodity networking and other components, particularly in the middle and lower portions of the supercomputing market. These systems may offer higher theoretical peak performance for equivalent cost, and “price/peak performance” is sometimes the dominant factor in HPC procurements. This has increased the breadth of competition. Vendors of such systems often put pricing pressure on us, resulting in lower margins in competitive procurements.

In the market for the largest, and most scalable systems, those often costing in excess of \$10 million, the use of generally available network components can result in increasing data transfer bottlenecks as these components do not balance processor power with network communication and system software capability. With increasing processor core counts due to new many-core processors, these unbalanced systems will typically have lower productivity, especially in larger systems running more complex applications. We and others augment standard microprocessors with other processor types, such as graphics processing units, in order to increase computational power, further complicating programming models. In addition, with increasing scale, bandwidth and processor core counts, large computer systems use progressively higher amounts of power to operate and require special cooling capabilities.

To position ourselves to meet the market’s demanding needs, we concentrate our research and development efforts on technologies that enable our supercomputers to perform at scale - that is, to continue to increase actual performance as systems and applications grow ever larger in size - and in areas where we can leverage our core expertise in other markets whose applications demand these tightly coupled architectures. We also invest relatively significantly in next-generation technology to successfully and uniquely address the challenges of “Exascale computing” (systems with exaflops-levels of performance, which is an order of magnitude more processing power than the current top systems). In addition, we are industry leaders in developing an integrated supercomputing software stack with demonstrated expertise in system and performance software for several processor architectures. We expect to be in a comparatively advantageous position as larger many-core processors become available and as multiple processing technologies become integrated into single systems in heterogeneous environments. In addition, we have continued to expand our addressable market by leveraging our technologies, customer base, the Cray brand and by introducing complementary products and services to new and existing customers, as demonstrated by our emphasis on strategic initiatives, such as big data analytics, AI and storage.

In analytics and AI, we are developing and delivering high performance data discovery, advanced analytics, machine learning and deep learning solutions. These solutions use both Cray developed and open source software, delivering faster time-to-solution and advanced capabilities that are key drivers for many of our data analytics and AI customers. We support open source technologies such as Hadoop, Spark and Jupyter Notebook to design large-scale data analytics stacks that simplify analyses of scientific data; other open source libraries like Keras to enable the quick development of neural networks and commercial application; and Python and R, distributed Dask, BigDL, TensorFlow and TensorBoard for advanced AI solutions, as well as many others.

In storage, we are developing and delivering high value products for the high performance parallel storage market. Our 2017 transaction with Seagate, which included acquiring the Seagate ClusterStor team and products from Seagate, enhances our capabilities in storage and data management. Our storage products are primarily positioned to enable tight integration of storage

with computing solutions and/or utilize parallel file processing technologies and facilitate storage across multiple data tiers. We support open source parallel file systems and protocols such as Lustre.

We have also expanded our addressable market by providing cluster systems and solutions to the supercomputing market that allow us to offer flexible platforms to incorporate best of breed components to allow customers to optimize the system to fit their unique requirements.

Key Performance Indicators

Our management monitors and analyzes several key performance indicators in order to manage our business and evaluate our financial and operating performance, including:

Revenue. Product revenue generally constitutes the major portion of our revenue in any reporting period and, for the reasons discussed in this quarterly report on Form 10-Q and in our annual report on Form 10-K for the year ended December 31, 2018, is subject to significant variability from period to period and is very difficult to forecast. In the short term, we closely review the status of customer proposals, customer contracts, product shipments, installations and acceptances in order to forecast revenue and cash receipts. In the longer-term, we monitor the status of the pipeline of product sales opportunities and product development cycles. We believe product revenue growth measured over several quarters is a better indicator of whether we are achieving our objective of growth and increased market share in the supercomputing market. The Cray XC and Cray CS products, along with our longer-term product roadmap are efforts to increase product revenue. We have increased our business and product development efforts in big data analytics, AI and storage and data management. Service revenue related to our maintenance offerings is subject to less variations in the short term and may assist, in part, to offset the impact that the variability in product revenue has on total revenue.

Gross profit margin. Gross profit margin is impacted by the level of revenue, different customer requirements, competitive considerations, product type and our anticipated and actual, compared to expected, cost to build and deliver our products and services. Our services tend to carry higher gross profit margins than our products. We often bid contracts and commit to future system performance where certain key components are not available in the market at the time of bid and/or whose price might change from what was expected. While we have significant experience doing so, such actions are inherently risky and can impact our gross profit margin significantly in any period. For example, memory prices, although currently in decline, recently more than doubled in less than a year, which had a significant impact on our reported product gross profit margin in both 2017 and 2018. Our costs are also currently being impacted by tariffs on certain parts we buy from suppliers. To mitigate this and other similar risks, we monitor the cost of components, manufacturing, and installation of our products. In assessing our service gross profit margin, we monitor headcount levels and third-party costs.

Operating expenses. Our operating expenses are driven primarily by headcount that drive compensation expense, including variable incentive compensation and contracted third-party research and development services. As part of our ongoing expense management efforts, we continue to monitor headcount levels in specific geographic and operational areas.

Liquidity and cash flows. Due to the variability in product revenue, new contracts, acceptance and payment terms, our cash position also varies significantly from quarter-to-quarter and within a quarter. We monitor our expected cash levels, particularly in light of increased inventory purchases for large system installations and the risk of delays in product shipments, customer acceptances and, in the long-term, product development. Cash receipts generally lag customer acceptances by an average of approximately thirty days.

Results of Operations

Our revenue, results of operations and cash balances fluctuate significantly from period-to-period. These fluctuations are due to such factors as the strength or weakness of the HPC market, high average sales prices and limited number of sales of our products with variable gross margin levels, win rates on larger opportunities, the timing of purchase orders and product deliveries, the availability of components, the revenue recognition accounting policy of generally not recognizing product revenue until customer acceptance and other contractual provisions have been fulfilled, the timing of payments for product sales, maintenance services, government research and development funding, the impact of the timing of new products on customer orders, and purchases of inventory during periods of inventory build-up. As a result of these factors, revenue, gross margin, expenses, cash, receivables, inventory and other related financial statement items have in the past varied, and are expected to continue to vary, significantly from quarter-to-quarter and year-to-year.

Revenue and Gross Profit Margins

Our revenue, cost of revenue and gross profit margin for the three and six months ended June 30, 2019 and 2018, respectively, were (in thousands, except for percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Product revenue	\$ 29,924	\$ 83,379	\$ 64,082	\$ 127,833
Less: Cost of product revenue	23,424	65,274	49,526	99,319
Product gross profit	\$ 6,500	\$ 18,105	\$ 14,556	\$ 28,514
Product gross profit margin	22%	22%	23%	22%
Service revenue	\$ 38,775	\$ 36,824	\$ 76,163	\$ 71,964
Less: Cost of service revenue	21,328	17,122	40,748	35,719
Service gross profit	\$ 17,447	\$ 19,702	\$ 35,415	\$ 36,245
Service gross profit margin	45%	54%	46%	50%
Total revenue	\$ 68,699	\$ 120,203	\$ 140,245	\$ 199,797
Less: Total cost of revenue	44,752	82,396	90,274	135,038
Total gross profit	\$ 23,947	\$ 37,807	\$ 49,971	\$ 64,759
Total gross profit margin	35%	31%	36%	32%

Product Revenue

Product revenue for the three and six months ended June 30, 2019 and 2018 was primarily from sales of our Cray XC and Cray CS supercomputing systems, and ClusterStor storage systems. Product revenue was \$53.5 million lower for the three months ended June 30, 2019, compared to the three months ended June 30, 2018. Product revenue was \$63.8 million lower for the six months ended June 30, 2019, compared to the six months ended June 30, 2018. The lower product revenue for the three and six month periods ended June 30, 2019 was primarily driven by fewer high-dollar value product acceptances during the same periods in 2018.

Service Revenue

Service revenue was \$2.0 million higher for the three months ended June 30, 2019, compared to the three months ended June 30, 2018, and was \$4.2 million higher for the six months ended June 30, 2019, compared to the six months ended June 30, 2018, both primarily driven by higher maintenance revenue, as well as non-recurring engineering and Center of Excellence work for the Oak Ridge National Laboratory in connection with the future delivery of the Frontier exascale system.

Cost of Product Revenue and Product Gross Profit

Cost of product revenue decreased by \$41.9 million for the three months ended June 30, 2019 compared to the three months ended June 30, 2018 and decreased by \$49.8 million for the six months ended June 30, 2019 compared to the six months ended June 30, 2018, both due mainly to lower product revenue. For the three months ended June 30, 2019, despite a write down for excess and obsolete inventory of \$0.6 million, product gross profit margin was unchanged from the same period in 2018. For the six months ended June 30, 2019, despite a write down for excess and obsolete inventory of \$3.8 million in the six months ended June 30, 2019, product gross profit margin increased 1 percentage point to 23% from 22% in the same period in 2018.

Cost of Service Revenue and Service Gross Profit

For the three months ended June 30, 2019, cost of service revenue increased by \$4.2 million compared to the same period in 2018 and for the six months ended June 30, 2019, cost of service revenue increased by \$5.0 million compared to the same period in 2018, both due mainly to increased incentive compensation costs and higher costs for nonrecurring engineering and Center of Excellence work for the Oak Ridge National Laboratory in connection with the future delivery of the Frontier exascale system. Service gross profit margin for the three months ended June 30, 2019 decreased 9 percentage points to 45% compared to 54% in the same period in 2018. Service gross profit margin for the six months ended June 30, 2019 decreased 4 percentage point to 46% compared to 50% in the same period in 2018. The decrease in gross profit margin for the three and six month periods ended June 30, 2019 was attributable to the higher incentive compensation as well as services performed for the Oak Ridge National Laboratory mentioned above, which carries lower margins than our typical services.

Research and Development Expenses

Research and development expenses for the three and six months ended June 30, 2019 and 2018, respectively, were (in thousands, except for percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Gross research and development expenses	\$ 41,894	\$ 36,244	\$ 79,643	\$ 74,280
Less: Amounts included in cost of revenue	(1,051)	(708)	(1,826)	(1,555)
Less: Reimbursed research and development (excludes amounts in cost of revenue)	(3,672)	(6,154)	(4,860)	(13,451)
Net research and development expenses	\$ 37,171	\$ 29,382	\$ 72,957	\$ 59,274
Percentage of total revenue	54%	24%	52%	30%

Gross research and development expenses in the table above reflect all research and development expenditures. Research and development expenses include personnel expenses, depreciation, allocations for certain overhead expenses, software, prototype materials and third-party contract engineering expenses.

For the three months ended June 30, 2019, gross research and development expenses increased by \$5.7 million compared to the same period in 2018. For the six months ended June 30, 2019, gross research and development expenses increased by \$5.4 million compared to the same period in 2018. The increase for the three and six month periods ended June 30, 2019 were mainly due to higher incentive compensation expense and higher salaries and benefits, resulting mostly from higher headcount, related to the development of our next generation "Shasta" system and nonrecurring engineering services performed for the Oak Ridge National Laboratory in connection with the future delivery of the Frontier exascale system.

Net research and development expense increased by \$7.8 million for the three months ended June 30, 2019 and increased by \$13.7 million for the six months ended June 30, 2019 compared to the same periods in 2018, primarily due to the higher gross research and development expenses discussed above and lower reimbursements. The amount and timing of research and development costs related to engineering development contracts and the level of reimbursement from third parties for research and development projects varies significantly from period to period, often due to the timing of milestone acceptances, and can have a significant impact on net reported research and development expense in any period.

Sales and Marketing and General and Administrative Expenses

Our sales and marketing and general and administrative expenses for the three and six months ended June 30, 2019 and 2018, respectively, were (in thousands, except for percentages):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Sales and marketing	\$ 14,919	\$ 15,218	\$ 29,194	\$ 30,883
Percentage of total revenue	22%	13%	21%	15%
General and administrative	\$ 15,890	\$ 5,624	\$ 21,832	\$ 11,403
Percentage of total revenue	23%	5%	16%	6%

Sales and Marketing. Sales and marketing expense for the three months ended June 30, 2019 decreased by \$0.3 million compared to the same period in 2018 and decreased by \$1.7 million for the six months ended June 30, 2019 compared to the same period in 2018. The decrease for both periods was primarily attributable to lower sales commissions.

General and Administrative. General and administrative expense for the three months ended June 30, 2019 increased by \$10.3 million compared to the same period in 2018. General and administrative expense for the six months ended June 30, 2019 increased by \$10.4 million compared to the same period in 2018. The increase for the three and six month periods ended June 30, 2019 was primary attributable to transaction costs of \$7.6 million related to the Merger with HPE and increased incentive compensation.

Other Income (Expense), net

For the three and six months ended June 30, 2019, we recognized net other income of \$0.3 million and \$25 thousand, respectively, compared to net other income of \$0.4 million and \$48 thousand, respectively, for the same periods in 2018. Net other

income and expense for the three and six months ended June 30, 2019 and 2018 included gains and losses from foreign currency transactions, investments and disposals of assets.

Interest Income, net

Our interest income and interest expense for the three and six months ended June 30, 2019 and 2018, respectively, were (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Interest income	\$ 1,224	\$ 669	\$ 2,206	\$ 1,369
Interest expense	(1)	(2)	(58)	11
Interest income, net	\$ 1,223	\$ 667	\$ 2,148	\$ 1,380

Interest income is earned on cash and cash equivalents, investment balances and the investment in sales-type lease.

Taxes

Our effective tax rate was approximately (0.1)% and (0.2)% for the three and six months ended June 30, 2019, respectively, compared to 3% and (0.3)%, respectively, for the three and six months ended June 30, 2018. The difference between the expected statutory tax rate of 21% and the actual tax rates for the three and six months ended June 30, 2019 and 2018, respectively, was attributable to our decision to continue to provide a full valuation allowance against our U.S. federal deferred tax assets offset, in part, by foreign taxes.

New Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2016-02, Leases: Topic 842 (ASU 2016-02), which replaces existing lease guidance. The new standard is intended to provide enhanced transparency and comparability by requiring lessees to record right-of-use (ROU) assets and corresponding lease liabilities on the balance sheet. The new standard initially required application with a modified retrospective approach to each prior reporting period presented with various optional practical expedients. In July 2018, this requirement was amended with the issuance of Accounting Standards Update No. 2018-11, Leases: Topic 842: Targeted Improvements (ASU 2018-11), which permits an additional (and optional) transition method to adopt the new leases standard.

We adopted ASU 2016-02 and related ASUs, collectively ASC 842, on January 1, 2019, using the optional transition method. Consequently, periods before January 1, 2019 will continue to be reported in accordance with the prior accounting guidance, ASC 840, Leases.

We elected the package of practical expedients, which permits us to retain prior conclusions about lease identification, lease classification and initial direct costs for leases that commenced before January 1, 2019. The new standard also provides practical expedients for an entity's ongoing accounting. We elected the short-term lease recognition exemption for all leases that qualify. We also elected the practical expedient to combine lease and non-lease components for all of our leases other than net lease real estate leases.

Adoption of ASC 842 resulted in the recording of ROU assets and lease liabilities of \$34.4 million and \$46.6 million, respectively, as of January 1, 2019. The difference between the ROU assets and lease liabilities relates to liabilities of \$12.2 million for deferred rent and lease incentives liabilities that were included on our Condensed Consolidated Balance Sheets prior to adoption of ASC 842. These amounts were eliminated at the time of adoption and are included in the lease liabilities number above. Adoption of ASC 842 did not have a material impact on our consolidated net earnings and had no impact on cash flows.

In August 2017, FASB issued Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities (ASU 2017-12). The new standard simplifies and expands the eligible hedging strategies for financial and nonfinancial risks. It also enhances the transparency of how hedging results are presented and disclosed. Further, the new standard provides partial relief on the timing of certain aspects of hedge documentation and eliminates the requirement to recognize hedge ineffectiveness separately in earnings. We adopted ASU 2017-12 on January 1, 2019. Adoption of ASU 2017-12 did not have a material impact on our consolidated financial statements. Upon adoption of ASU 2017-12, we revised our accounting policy for foreign currency derivatives from the policy included in the Notes to Consolidated Financial Statements in our annual report on Form 10-K for year ended December 31, 2018. The revised accounting policy for foreign currency derivatives is included in "Note 1-Basis of Presentation" in the Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

In February 2018, FASB issued Accounting Standards Update No. 2018-02, Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income (ASU 2018-02).

The new standard amends ASC 220 to allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act and requires entities to provide certain disclosures regarding stranded tax effects. We adopted ASU 2018-02 on January 1, 2019. At the time of adoption, we reclassified \$0.2 million of stranded tax effects resulting from the Tax Cuts and Jobs Act from accumulated other comprehensive income to accumulated deficit. Adoption of ASU 2018-02 did not have a material impact on our consolidated financial statements.

In August 2018, FASB issued Accounting Standards Update No. 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement (ASU 2018-13). The new standard makes various modifications to the disclosure requirements on fair value measurement in Topic 820. We adopted ASU 2018-13 on January 1, 2019. Adoption of ASU 2018-13 did not have a material impact on our consolidated financial statements.

Liquidity and Capital Resources

We generate cash from operations predominantly from the sale of supercomputing systems and related services. We typically have a small number of significant contracts that make up the majority of total revenue. We also have a sales-type lease agreement with a customer, under which we will receive quarterly payments over the term of the lease, which expires in September 2020. Material changes in certain of our balance sheet accounts were due to the level and timing of: product deliveries and customer acceptances, contractually determined billings, cash collections of receivables, inventory purchased for future deliveries, and incentive compensation. Working capital requirements, including inventory purchases and normal capital expenditures, are generally funded with cash from operations.

Cash, cash equivalents and restricted cash decreased by \$80.6 million, from \$245.8 million at December 31, 2018 to \$165.2 million at June 30, 2019. As of June 30, 2019, we had working capital of \$222.8 million compared to \$290.9 million as of December 31, 2018.

Cash flow information included the following (in thousands):

	Six Months Ended June 30,	
	2019	2018
Cash provided by (used in):		
Operating Activities	\$ (71,180)	\$ (180)
Investing Activities	\$ (7,952)	\$ 5,309
Financing Activities	\$ (1,458)	\$ (777)

Operating Activities. Net cash used in operating activities was \$71.2 million for the first six months of 2019 compared to \$0.2 million for the first six months of 2018. Net cash used in operating activities in the first six months of 2019 was primarily driven by our cash adjusted net loss of \$56.0 million, which included the payment of certain transaction-related costs associated with our pending merger with HPE, and is adjusted for non-cash expenses, and a \$16.4 million decrease in customer contract liabilities as the associated revenue was recognized. These amounts were partially offset by a decrease in accounts receivable of \$11.4 million due to payments from customers.

Net cash used in operating activities in the first six months of 2018 was primarily driven by the net loss, adjusted for non-cash expenses, of \$21.9 million, a decrease in our accounts payable balance of \$40.3 million due to the timing of payments to vendors, largely in connection with inventory purchases in the fourth quarter of 2017, and a decrease in customer contract liabilities of \$27.0 million. These amounts were largely offset by collections from customers that resulted in a decrease of \$46.5 million in accounts and other receivables and a decrease of \$32.8 million in inventory due to customer acceptances of systems during the first six months of 2018.

Investing Activities. Net cash used in investing activities was \$8.0 million for the six months ended June 30, 2019, compared to \$5.3 million net cash provided by investing activities for the same period in 2018. Net cash used in investing activities for the six months ended June 30, 2019 was due to purchases of property and equipment. Net cash provided by investing activities for the six months ended June 30, 2018 was primarily due to sales and maturities of debt securities of \$7.0 million.

Financing Activities. Net cash used in financing activities for the six months ended June 30, 2019 was \$1.5 million compared to \$0.8 million for the same period in 2018. Net cash flows from financing activities for both periods resulted primarily from cash received from the issuance of common stock from the exercise of options, offset by statutory tax withholding amounts made in exchange for the forfeiture of common stock by holders of vesting restricted stock awards.

In addition, we lease certain equipment and facilities used in our operations under operating leases in the normal course of business and have contractual commitments under certain development arrangements. The following table summarizes our contractual obligations as of June 30, 2019 (in thousands):

Contractual Obligations	Amounts Committed by Year				
	Total	2019 (Less than 1 Year)	2020-2021	2022-2023	Thereafter
Development agreements	\$ 57,190	\$ 20,033	\$ 37,081	\$ 76	\$ —
Operating leases	64,711	\$ 4,143	16,163	14,359	30,046
Total contractual cash obligations	\$ 121,901	\$ 24,176	\$ 53,244	\$ 14,435	\$ 30,046

In our normal course of operations, we have development arrangements under which we engage third-party engineering resources to work on our research and development projects. For the six months ended June 30, 2019, we incurred \$7.9 million for such arrangements. Our contractual obligations related to development agreements have increased in 2019 due to the non-recurring engineering and Center of Excellence work for the Oak Ridge National Laboratory in connection with the future delivery of the Frontier exascale system.

As of June 30, 2019, we had a \$15.0 million line of credit with Wells Fargo Bank, National Association. The Credit Facility is designed to be used for general corporate purposes, including working capital requirements and to support the issuance of letters of credit. The Credit Facility is secured by a first priority lien on up to \$15.0 million of the Company's investments account held with Wells Fargo Bank. The Credit Facility expires on March 1, 2020.

We made no draws and had no outstanding cash borrowings on the line of credit as of June 30, 2019.

As of June 30, 2019, we had \$17.6 million in total restricted cash. We had \$13.8 million in USD equivalent value in outstanding letters of credit, the majority of which was supported by the Wells Fargo Credit Facility, as of June 30, 2019.

At any particular time, our cash position is affected by the timing of cash receipts for product sales, maintenance contracts, government co-funding for research and development activities as well as our payments for inventory, resulting in significant fluctuations in our cash balance from quarter-to-quarter and within a quarter. Our principal sources of liquidity are our cash and cash equivalents, short-term investments and cash from operations. We expect our cash resources to be adequate for at least the next twelve months.

Critical Accounting Policies and Estimates

This discussion, as well as disclosures included elsewhere in this quarterly report on Form 10-Q, is based upon our financial statements, which have been prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingencies. In preparing our financial statements in accordance with GAAP, there are certain accounting policies that are particularly important. These include revenue recognition, inventory valuation, accounting for income taxes and research and development expenses. Our significant accounting policies are set forth in Note 2 to the Consolidated Financial Statements included in our annual report on Form 10-K for the year ended December 31, 2018 and should be reviewed in conjunction with the accompanying Condensed Consolidated Financial Statements and notes thereto as of June 30, 2019 in this quarterly report on Form 10-Q, as they are integral to understanding our results of operations and financial condition in this interim period. In some cases, these policies represent required accounting. In other cases, they may represent a choice among acceptable accounting methods or may require substantial judgment or estimation.

Additionally, we consider certain judgments and estimates to be significant, including those relating to the allocation of transaction price to each performance obligation in revenue recognition, collectibility of receivables, determination of inventory at the lower of cost or net realizable value, the value of used equipment returned or to be returned associated with customer contracts, useful lives for depreciation and amortization, determination of future cash flows associated with impairment testing of long-lived assets, including goodwill and other intangibles, determination of our incremental borrowing rate, determination of the implicit interest rate used in the sales-type lease calculation, estimated warranty liabilities, determination of the fair value of stock options and other assessments of fair value, evaluation of the probability of vesting of performance-based restricted stock and restricted stock units, calculation of deferred income tax assets, including estimates of future financial performance in the determination of the likely recovery of deferred income tax assets, our ability to utilize such assets, potential income tax assessments, the outcome of any legal proceedings and other contingencies. We base our estimates on historical experience, current conditions and on other assumptions that we believe to be reasonable under the circumstances. Actual results may differ materially from these estimates and assumptions.

Our management has discussed the selection of significant accounting policies and the effect of judgments and estimates with the Audit Committee of our Board of Directors.

Revenue Recognition

Our performance obligations are satisfied over time as work is performed or at a point in time. The majority of our revenue is recognized at a point in time when products are accepted, installed or delivered. Most of our revenue is derived from long-term contracts that can span several years. Revenue is recognized when performance obligations under the terms of a contract with the customer are satisfied; generally, this occurs with the transfer of control of our systems or services. In general, this does not occur until the products have been shipped or services provided to the customer, risk of loss has transferred to the customer, and, where applicable, a customer acceptance has been obtained. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Sales, value add, and other taxes that we collect concurrent with revenue-producing activities are excluded from revenue. Incidental items that are immaterial in the context of the contract are recognized as expense.

To determine the proper revenue recognition method for contracts, we evaluate whether two or more contracts should be combined and accounted for as one single contract and whether the combined or single contract should be accounted for as more than one performance obligation. Contracts are often modified to account for changes in contract specifications and requirements. To determine the proper revenue recognition method for contract modifications, we evaluate whether the contract modification should be accounted for as a separate contract, part of an existing contract, or termination of an existing contract and the creation of a new contract. This evaluation requires significant judgment and the decision to combine a group of contracts or separate the combined or single contract into multiple performance obligations could change the amount of revenue and profit recorded in a given period. For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our estimate of the standalone selling price of each distinct good or service in the contract.

We determine the transaction price by reviewing the established contractual terms and other relevant information. Contracts can include penalty clauses and contracts with government customers may not be fully funded, both of which represent variable consideration. Generally, we include both the funded and unfunded portions of a contract with a government customer in the transaction price, as most often it is deemed the contract will become fully funded. We also assess the likelihood of certain penalties that would result in contract price reductions and, if deemed probable, the transaction price is adjusted.

The majority of our contracts include multiple promised goods and services, which are assessed at contract inception. Each distinct good or service is identified as a performance obligation, which may be an individual good or service or a bundle of goods or services. In order to determine whether the promises are distinct, we assess the use of our products and services by customers to determine whether the customer can benefit from the good or service on its own or from other readily available resources, and whether the promised transfer of goods or services is separately identifiable from other promises in the contract.

The majority of our revenues are from product solutions which include supercomputers, storage, and data analytics systems, each of which are usually separate performance obligations. Revenue is recognized when obligations under the terms of a contract with a customer are satisfied. Product revenue is typically recognized upon customer acceptance, or upon installation or delivery if formal acceptance is not required. Service revenue is typically recognized over time and consists mainly of system maintenance, analyst services, and engineering services, each of which are usually separate performance obligations. System maintenance commences upon customer acceptance or installation, depending on the contract terms, and revenue is recognized ratably over the remaining term of the maintenance contract. On-site analysts provide specialized services to customers, the revenue for which is recognized ratably over the contract period. Service revenue is recognized on a straight-line basis over the service period as the services are available continuously to the customer. Revenue from engineering services can be recognized as services are performed or as milestones are achieved, depending on the terms of the contract and nature of services performed. If, in a contract, the customer has an option to acquire additional goods or services, that option gives rise to a performance obligation if the option provides a material right to the customer that it would not receive without entering into that contract. Revenue from purchase options can be recognized as those future goods or services are transferred or when the option expires.

Generally, billing occurs subsequent to product revenue recognition and payment is expected within 30 days, resulting in contract assets. However, we sometimes receive advances or deposits from customers before revenue is recognized, resulting in customer contract liabilities (formerly deferred revenue). These assets and liabilities are reported on the Condensed Consolidated Balance Sheet on a contract-by-contract basis at the end of each reporting period. Our payment terms vary from contract to contract. Contracts may require payment before, at or after our performance obligations have been satisfied.

We perform an assessment to determine whether a significant financing component is present in a contract. If a contract is determined to include a significant financing component, the interest rate used in the calculation is based on the prevailing interest rates at contract inception and the entity's creditworthiness. When the period between providing a good or service to the customer is expected to be less than one year from payment, we apply the practical expedient and do not adjust the consideration for the effects of a significant financing component.

Occasionally, our contracts include noncash consideration. This typically consists of returned parts when a system is upgraded or de-installed. Noncash consideration is measured at contract inception at estimated fair value.

The total transaction price is allocated to each performance obligation identified in the contract based on its relative standalone selling price. We do not have directly observable standalone selling prices for the majority of our performance obligations due to a relatively small number of customer contracts that differ in system size and contract terms which can be due to infrequently selling each performance obligation separately, not pricing products within a narrow range, or only having a limited sales history, such as in the case of certain advanced and emerging technologies. When a directly observable standalone selling price is not available, we estimate the standalone selling price. In determining the estimated standalone selling price, we use the cost to provide the product or service plus a margin, or considers other factors. When using cost plus a margin, we consider the total cost of the product or service, including customer-specific and geographic factors as appropriate. We also consider the historical margins of the product or service on previous contracts and several other factors including any changes to pricing methodologies, competitiveness of products and services, and cost drivers that would cause future margins to differ from historical margins.

We occasionally offer discounts to our customers. As these discounts are offered on bundles of goods and services, the discounts are applied to all performance obligations in the contract on a pro-rata basis.

Our incremental direct costs of obtaining a contract come primarily from sales commissions, a portion of which are paid upon contract signing. These commissions are generally capitalized upon payment and expensed at the time of revenue recognition. These deferred commissions are included in prepaid expenses in the Condensed Consolidated Balance Sheet. As of June 30, 2019 and December 31, 2018, we had \$4.2 million and \$2.0 million, respectively, of deferred commissions. For the three and six months ended June 30, 2019, we recognized \$0.8 million and \$1.8 million, respectively, in commissions expense. For the three and six months ended June 30, 2018, we recognized \$1.5 million and \$2.6 million, respectively, in commissions expense.

Our remaining performance obligations reflect the deliverables within contracts with customers that will have revenue recognized in a future period (this may also be referred to as backlog). Due to the nature of our business and the size of individual transactions, forecasting the timing and total amount of revenue recognition is subject to significant uncertainties. As of June 30, 2019, we had an aggregate of \$639 million in remaining performance obligations stemming from a mixture of system contracts with their related service obligations and other service obligations. Included in this balance are \$0.2 million in losses resulting from hedged foreign currency transactions, which offset the related increase in revenue from currency fluctuations. These losses will be reclassified from accumulated other comprehensive income to revenue in the period the related transactions are recognized as revenue. These obligations are anticipated to be recognized as revenue over approximately the next six years. We estimate that about 60% of these obligations are expected to be recognized as revenue in the next 18 months, with the remainder thereafter. The Company's previously announced contract to build the Frontier exascale system for the Oak Ridge National Laboratory, which is valued in excess of \$500 million, is not included in the amounts above as it is subject to a Go/No-Go provision and is therefore not considered a performance obligation.

Inventory Valuation

We record our inventory at the lower of cost or net realizable value, with cost computed on a first-in, first-out basis (FIFO). We regularly evaluate the technological usefulness and anticipated future demand for our inventory components. Due to rapid changes in technology and the increasing demands of our customers, we are continually developing new products. Additionally, during periods of product or inventory component upgrades or transitions, we may acquire significant quantities of inventory to support estimated current and future production and service requirements. As a result, it is possible that older inventory items we have purchased may become obsolete, be sold below cost or be deemed in excess of quantities required for production or service requirements. When we determine it is not likely we will recover the cost of inventory items through future sales, we write-down the related inventory to our estimate of its net realizable value.

Because the products we sell have high average sales prices and because a high number of our prospective customers receive funding from U.S. or foreign governments, it is difficult to estimate future sales of our products and the timing of such sales. It also is difficult to determine whether the cost of our inventories will ultimately be recovered through future sales. While we believe our inventory is stated at the lower of cost or net realizable value and that our estimates and assumptions to determine any adjustments to the cost of our inventories are reasonable, our estimates may prove to be inaccurate. We have sold inventory previously reduced in part or in whole to zero, and we may have future sales of previously written-down inventory. We also may incur additional expenses to write-down inventory to its estimated net realizable value. Adjustments to these estimates in the future may materially impact our operating results.

Accounting for Income Taxes

Deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and operating loss and tax credit carryforwards and are measured using the enacted tax rates and laws that will be in effect when the differences and carryforwards are expected to be recovered or settled.

A valuation allowance for deferred tax assets is provided when we estimate that it is more likely than not that all or a portion of the deferred tax assets will not be realized through future operations. This assessment is based upon consideration of all available positive and negative evidence, which includes, among other things, our recent results of operations, forecasted domestic and international earnings over a number of years, all known business risks and industry trends, and applicable tax planning strategies that should, if implemented, enable us to utilize our deferred tax assets before they expire. We consider our actual historical results over several years to have stronger weight than other more subjective indicators, including forecasts, when considering whether to establish or reduce a valuation allowance on deferred tax assets. We have significant difficulty projecting future results due to the nature of the business and the industry in which we operate.

The Tax Cuts and Jobs Act subjects a U.S. corporation to tax on its global intangible low taxed income (GILTI). Under GAAP, we are required to make an accounting policy election to either treat taxes due on our future GILTI inclusions as either a current period expense or to account for such taxes in the measurement of our deferred tax assets. We have elected to account for any tax due on our GILTI as a current period expense. As a result of changes made by the Tax Cuts and Jobs Act, we no longer consider the earnings of our foreign subsidiaries to be permanently reinvested outside of the United States.

As of June 30, 2019, we continued to provide a full valuation allowance against our U.S. federal deferred tax assets and against the majority of our state and foreign deferred tax assets as the realization of such assets is not considered to be more likely than not at this time. In a future period our assessment of the realizability of our deferred tax assets and therefore the appropriateness of the valuation allowance could change based on an assessment of all available evidence, both positive and negative in that future period. If our conclusion about the realizability of our deferred tax assets and therefore the appropriateness of the valuation allowance changes in a future period we could record a substantial tax benefit in our Condensed Consolidated Statement of Operations when that occurs. We recognize the income tax benefit from a tax position only if it is more likely than not that the tax position will be sustained on examination by the applicable taxing authorities, based on the technical merits of our position. The tax benefit recognized in the financial statements from such a position is measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

As of June 30, 2019, we had approximately \$129.7 million of net deferred tax assets before application of a valuation allowance. As of June 30, 2019, net deferred tax assets after reduction by the valuation allowance of \$128.2 million were \$1.5 million.

Estimated interest and penalties are recorded as a component of interest expense and other expense, respectively.

Research and Development Expenses

Research and development expenses include costs incurred in the development and production of our hardware and software, costs incurred to enhance and support existing product features, costs incurred to support and improve our development processes, and costs related to future product development. Research and development costs are expensed as incurred, and may be offset by co-funding from third parties. We may also enter into arrangements whereby we make advance, non-refundable payments to a vendor to perform certain research and development services. These payments are deferred and recognized over the vendor's estimated performance period.

We classify amounts to be received from funded research and development projects as either revenue or a reduction of research and development expense based on the specific facts and circumstances of the contractual arrangement, considering total costs expected to be incurred compared to total expected funding and the nature of the research and development contractual arrangement. In the event that a particular arrangement is determined to represent revenue, the corresponding costs are classified as cost of revenue.

Amounts to be received under co-funding arrangements with the U.S. government, other customers or suppliers are based on either contractual milestones or costs incurred. These co-funding payments are recognized as a reduction of research and development expense as performance is estimated to be completed and are measured as milestone achievements occur or as costs are incurred. These estimates are reviewed on a periodic basis and are subject to change, including in the near term. If an estimate is changed, net research and development expense could be impacted significantly.

Funding from the U.S. government is subject to certain budget restrictions and milestones may be subject to completion risk, and as a result, there are often periods in which research and development costs are expensed as incurred for which no reimbursement is recorded, as milestones have not been completed or the U.S. government has not funded an agreement. Accordingly, there can be substantial variability in the amount of net research and development expenses from quarter to quarter and year to year.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to financial market risks, including changes in interest rates and equity price fluctuations.

Interest Rate Risk: We invest our available cash in money market mutual funds whose underlying investments include investment-grade debt instruments of corporate issuers and in debt instruments of the U.S. government and its agencies. We do not have any derivative instruments or auction rate securities in our investment portfolio. We protect and preserve invested funds by limiting default, market and reinvestment risk. Investments in both fixed-rate and floating-rate interest earning instruments carry a degree of interest rate risks. Fixed-rate securities may have their fair market value adversely affected due to a rise in interest rates, while floating-rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates or we may suffer losses in principal if forced to sell securities which have declined in market value due to changes in interest rates. Although we are subject to the above noted risks, we believe that a 0.5% change in interest rates would not be material.

Foreign Currency Risk: We sell our products primarily in North America, Asia and Europe. As a result, our financial results could be affected by factors such as changes in foreign currency exchange rates or weak economic conditions in foreign markets. Our products are generally priced based on U.S. dollars, and a strengthening of the U.S. dollar could make our products less competitive in foreign markets. While we often sell products with payments in U.S. dollars, our product sales contracts may call for payment in foreign currencies, subjecting us to foreign exchange rate risk. We are also subject to foreign exchange rate risk on certain short-term or long-term transactions that we engage in with our foreign subsidiaries.

As of June 30, 2019, we had entered into foreign currency exchange contracts that were designated as cash flow hedges that hedge approximately \$12.9 million of anticipated cash receipts on specific foreign currency denominated sales contracts. These foreign currency exchange contracts hedge the risk of foreign exchange rate changes between the time that the related contracts were signed and when the cash receipts are expected to be received. As of June 30, 2019, we had entered into foreign currency exchange contracts that had been dedesignated for the purposes of hedge accounting treatment totaling \$55.8 million. Unrealized gains or losses recorded in the Condensed Consolidated Statement of Operations related to these contracts are generally offset by foreign currency adjustments on related receivables. These foreign currency exchange contracts are considered to be economic hedges.

Our foreign maintenance contracts are typically paid in local currencies and provide a partial natural hedge against foreign exchange exposure. To the extent that we wish to repatriate any of these funds to the United States, however, we are subject to foreign exchange risks. We do not hold or purchase any currency forward exchange contracts for trading purposes. As of June 30, 2019, a hypothetical 10% unfavorable change in foreign currency exchange rates would impact our annual operating results and cash flows by approximately \$0.7 million.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures. Under the supervision and with the participation of our senior management, including our chief executive officer and chief financial officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, as of the end of the period covered by this quarterly report on Form 10-Q. Based on this evaluation, our chief executive officer and chief financial officer concluded as of June 30, 2019 that our disclosure controls and procedures were effective such that the information required to be disclosed in our SEC reports (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in internal control over financial reporting. There have been no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2019 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Limitations on effectiveness of control. Our management, including our chief executive officer and chief financial officer, does not expect that our disclosure controls and procedures or our internal controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our Company have been detected.

Part II. OTHER INFORMATION

Item 1. Legal Proceedings

For a discussion of legal proceedings, see “Note 10-Contingencies” in the Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

Item 1A. Risk Factors

You should carefully consider the risks described below together with all of the other information in this quarterly report on Form 10-Q and in our annual report on Form 10-K for the year ended December 31, 2018, filed with the SEC on February 12, 2019. If any of these risks actually occur, our business, financial condition or operating results could be materially adversely affected and the trading price of our common stock could decline.

Risks Related to the Merger

Our proposed merger with HPE may not be completed within the expected timeframe, or at all, and the failure to complete the merger could adversely affect our business and the market price of our common stock. On May 16, 2019, we entered into the Merger Agreement with HPE and Merger Sub, pursuant to which we would become a wholly owned subsidiary of HPE if the Merger is completed. The Merger Agreement is subject to closing conditions, some of which are beyond our control, including receipt of the required regulatory approvals and the requirement that holders of not less than a majority of the outstanding shares of our common stock approve the Merger Agreement, and there is no guarantee that these conditions will be satisfied in a timely manner or at all. If any of the conditions to the proposed Merger are not satisfied or waived, the Merger might not be completed. In addition, the Merger Agreement may be terminated under specified circumstances. Failure to complete the Merger could adversely affect our business and the market price of our common stock in a number of ways, including:

- if the Merger is not completed, the share price of our common stock is likely to decline;
- we have incurred, and continue to incur, significant expenses for professional third-party services in connection with the proposed Merger, for which we will have received little or no benefit if the Merger is not completed. Many of these fees and costs will be payable even if the Merger is not completed and may relate to activities that we would not have undertaken other than to complete the Merger;
- a failed Merger may result in negative publicity and/or give a negative impression of us in the investment community or business community generally; and
- if the Merger Agreement is terminated under specified circumstances, we may be required to pay HPE a \$46 million termination fee.

The announcement and pendency of the Merger could adversely affect our business, financial condition, and results of operations. The announcement and pendency of our proposed Merger with HPE has and likely will continue to disrupt our business and create uncertainty about it, which could have a significant adverse effect on our business, financial condition, and results of operations, regardless of whether the Merger is completed. These risks to our business, all of which could be exacerbated by a delay in the completion of the Merger, include:

- the possibility of disruption to our business and operations, including diversion of significant management time and resources towards the completion of the Merger;
- potential uncertainty to our current and prospective customers, who may choose to purchase from other vendors or delay purchasing from us;
- difficulties maintaining relationships with employees, customers, and other business partners, including maintaining or completing contractual arrangements with customers and partners;
- impairment of our ability to attract and retain key personnel;
- restrictions on the conduct of our business prior to the completion of the Merger, which prevent us from taking specified actions without the prior consent of HPE, which we might otherwise take in the absence of the Merger Agreement;
- the fact that under the terms of the Merger Agreement, we are unable to solicit other acquisition proposals during the pendency of the Merger;

- the amount of cash per share under the Merger Agreement is fixed and will not be adjusted for changes in our business, assets, liabilities, prospects, outlook, financial condition or results of operations, including any potential long-term value of the successful execution of our current strategy as an independent company or in the event of any change in the market price of, analyst estimates of, or projections relating to, our common stock; and
- existing and potential future shareholder litigation relating to the Merger that could prevent or delay the Merger, and the related costs.

We may have difficulty attracting, motivating and retaining executives and other key employees in light of the proposed Merger. We have lost personnel as a result of the proposed Merger and we may continue to lose personnel and have a difficult time attracting new employees as a result of the pendency of the Merger. Uncertainty among our existing and potential employees about their future roles after the completion of the proposed Merger with HPE impairs our ability to attract, retain and motivate key personnel. In addition, some of our executives and key employees are entitled to severance payments if they terminate their employment after the proposed Merger as a result of, or in conjunction with specified circumstances, including changes in their duties, positions, compensation and benefits, or their primary office location. These factors may encourage some executives or key employees to consider career changes, distracting them from performing their duties to us. In addition, distractions for the workforce and management associated with integrating our employees into the HPE workforce could arise prior to and following the completion of the Merger. Any of these issues could have an adverse effect on our business operations and financial performance.

Our important business relationships may be disrupted due to uncertainties associated with the Merger, which could adversely affect our business. Some of the parties with which we do or desire to do business may be uncertain about continuing or completing a business relationship with us as a result of the proposed Merger. For example, customers, partners, distributors, suppliers, vendors and others may attempt to negotiate changes in their existing business relationships with us, or may not enter into business relationships with us, delay business transactions with us until the merger is complete, or they may consider canceling or not renewing a business relationship or contract with us, or they may enter into alternative business relationships with other parties. Some of our customers, partners, distributors, suppliers, vendors and others may have rights to terminate contracts that are triggered upon completion of the proposed Merger. These disruptions could have an adverse effect on our business, financial condition or results of operations, or the prospects of the combined business. Any delay in completion of the Merger, or termination of the Merger Agreement, could exacerbate these risks and adverse effects.

Risks Related to Our Business

Our operating results fluctuate significantly and we may not achieve profitability in any given period. Our operating results are subject to significant fluctuations which make predicting revenue and operating results for any specific period very difficult, particularly because a material portion of product revenue recognized in any given quarter or year typically depends on a limited number of system sales expected for that quarter or year and product revenue generally depends on the timing of product acceptances by customers and contractual provisions affecting revenue recognition. Receiving less than anticipated customer orders, delays in achieving customer acceptances of installed systems, and recognizing revenue from a product transaction or transactions due to development or product delivery delays, customer site readiness delays, unexpected manufacturing delays or defects, not receiving components on time or at competitive prices, not receiving components with anticipated quality and performance, the inability of a system to meet performance requirements or targets, or other contractual obligations, among other factors, could have a material adverse effect on our operating results in any specific quarter or year, such as by reducing or delaying associated revenue, gross profit, and cash receipts from one quarter to another, or even from one year to another, particularly in the case of revenue expected to be realized in the fourth quarter of any year, as has happened in the past. In addition, because our revenue can be concentrated in particular quarters, often the fourth quarter, we generally do not expect to sustain profitability over successive quarters even if we are profitable for the year.

Although we recorded positive annual net income between 2010 and 2016, we recorded a net loss in 2017 and 2018 and expect a net loss in 2019, and may well experience a net loss in any future year in addition to quarterly losses. Net income may fluctuate significantly as a result of many factors, including as a result of reduced revenue, gross margins, or significant investments we may make to grow our business which often require many years to come to fruition and may not be realized when expected, if at all. For example, we have incurred and anticipate continuing to incur significant expenditures in connection with ongoing investments in research and development. Due to the inherent difficulty in estimating costs associated with projects of this scale and nature, certain of the costs associated with these potential projects may be higher than estimated and it may take longer than expected to complete, if at all. In addition, while we were profitable in 2016, our revenue declined year over year in both 2016 and 2017, and our profitability declined year over year in 2016, 2017, and 2018, substantially driven by a slow-down in the segments of the high-end of the supercomputing market that we target. While we grew our revenue year over year in 2018, it is uncertain whether or when we will realize any significant benefit from a rebound in the segments of the high-end of the supercomputing market that we target or how strong or long-lived such a rebound will be.

Whether we will be able to increase our revenue and achieve and sustain profitability on a quarterly and annual basis depends on a number of factors, including:

- our ability to secure sufficient orders at high enough gross margins for our next generation Cray Shasta systems as well as upgrades and successor systems;
- our ability to secure sufficient orders at high enough gross margins for our Cray XC and Cray CS systems, particularly until our next generation Shasta systems are generally available;
- successfully delivering and obtaining sufficient customer acceptances of ordered systems, including attached storage systems;
- our ability to deliver upgraded or new systems in a timely manner, such as our ability to deliver our next generation Shasta systems by the fourth quarter of 2019, as currently planned;
- revenue delays or losses due to customers postponing purchases as a result of delays in available budgets, waiting until after the proposed Merger is completed, or waiting for the availability of our next generation Shasta systems or other future processors or upgraded or new systems;
- longer than expected customer acceptance cycles or penalties resulting from system acceptance issues;
- our ability to successfully generate revenue and profitability from sales of our storage, data analytics, and AI solutions;
- our ability to successfully and timely design for, procure, and integrate competitive processors for our Cray XC, Cray CS, and next generation Cray Shasta systems and upgrades and successor systems;
- our expense levels, including research and development expense;
- our ability to secure additional government funding for future development projects;
- our ability to continue to broaden our customer base beyond our traditional customers;
- the level of product gross profit contribution in any given period due to volume, competition, or product mix, particularly with the introduction of flexible commodity-based supercomputers, competitive factors, strategic transactions, product life cycle, currency fluctuations, tariffs, acceptance penalties, and component costs;
- the level of revenue recognized in any given period, which is affected by the very high average sales prices and limited number of significant system sales and resulting potential acceptances in any quarter, the timing of product orders and acceptances by customers, and contractual provisions affecting the timing and amount of revenue recognition;
- the competitiveness of our products, services, and prices;
- maintaining and successfully completing our capital and product development projects on schedule and within budgetary limitations;
- our ability to efficiently scale our internal processes to meet necessary peak requirements and growth in our business; and
- our ability to resolve and the costs incurred in connection with any actual or alleged issues with our products, including third-party components of such products, such as those that relate to product defects, such as the recent “Meltdown” and “Spectre” processor vulnerabilities or intellectual property rights;
- the level and timing of maintenance contract renewals with existing customers;
- the terms and conditions of sale or lease for our products and services.

The receipt of orders and the timing of shipments and acceptances impacts our quarterly and annual results, including cash flows, and is affected by events outside our control, such as:

- whether or when we will realize any significant benefit from a rebound in the segments of the high-end of the supercomputing market that we target or how strong or long-lived such a rebound will be;

- the timely availability of acceptable components, including, but not limited to, processors and memory, in sufficient quantities to meet customer delivery schedules and other customer commitments at a competitive cost and the identification of issues with already-delivered components, including processors, that require remediation and/or impact the performance of our products;
- the timing and level of government funding and resources available for product acquisitions and research and development contracts, which have been, and may continue to be, adversely affected by the current global economic and fiscal uncertainties, increased governmental budgetary limitations, and disruptions in the operations of the United States and other governments as has recently occurred;
- competitor and supplier pricing strategies;
- declining U.S. relations with foreign entities, including between the U.S. government and foreign governments, may make it more difficult or more expensive to sell U.S.-manufactured or U.S.-designed systems to those entities funded by governments, or in those countries;
- currency fluctuations, international conflicts or economic crises, and fluctuations in oil prices that can affect the resources available to potential customers to purchase products;
- the introduction or announcement of competitive or key industry supplier products;
- price fluctuations or product shortages in the processors and other commodity electronics and memory markets;
- the availability of adequate customer facilities to install and operate new Cray systems;
- general economic trends, including changes in levels of customer capital spending; and
- our customers' ability to make future payments in accordance with contractual terms of their purchase or sales-type lease agreements.

Because of the numerous factors affecting our operating results, we may not achieve profitability on a quarterly or annual basis in the future. We anticipate that our quarterly results will fluctuate significantly, and include losses, even in years where we expect or achieve positive annual net income. The timing of availability of acceptable third-party components, product development, receipt of orders and product acceptances, issues with third-party component performance or reliability, reductions in outside funding for our research and development efforts, a reduction in the size in the segments of the high-end of the supercomputing market that we target, the level and timing of approved government fiscal budgets, and achieving contractual development milestones have had a substantial adverse effect on our past results and are expected to continue to have such an effect on our operating results in 2019 and in future years.

Our business could be adversely affected by conditions affecting the HPC market. A substantial portion of our business depends on the demand for HPC products by the U.S. Government and foreign government customers and large enterprises, and we are dependent upon the overall economic health of the high-end of the supercomputing market, and on a relatively small number of customers and large procurements that make up that market. Demand for our products and services depends substantially upon the general demand for supercomputers and associated services, as well as technological needs in the data analytics, AI, and storage markets, which fluctuate based on numerous factors, including large-system purchase cycles, capital spending levels, political conditions and growth of our current and prospective customers. Moreover, the purchase of our products is often discretionary and may involve a significant commitment of capital and other resources. As a result, spending priorities for our current and future customers may vary and demand for our products and services may also fluctuate. For instance, while we were profitable in 2016, our revenue declined year over year in both 2016 and 2017 and our profitability declined year over year in 2016, 2017, and 2018, substantially driven by a slow-down in the segments of the high-end of the supercomputing market that we target. While we believe that we have seen early signs of a recovery in the market, we believe that these segments of the market continue to be down from past years. It is uncertain whether or when these segments will recover fully from this downturn, and because of long sales cycles there will be a delay between any recovery and when that recovery would be reflected in our revenue and other operating results. Competition has also increased globally, from large, established software and hardware companies, to smaller and more specialized new market participants. While we believe that the market's long-term growth drivers remain intact, there is no assurance that these markets will continue to rebound or if any rebound will last. A failure of these markets to recover strongly enough or in a sustained fashion could continue to harm our financial condition and results of operations.

If we are unable to sell and deliver our Cray XC systems and successfully develop, sell, and deliver our next generation Shasta systems and successor systems, our operating results will be adversely affected. We expect that a substantial portion of our revenue in the foreseeable future will come from the sale of Cray XC systems and our next generation Shasta systems and successor systems, including systems integrating future processors and accelerators where we are dependent upon third-party

suppliers to deliver according to expected plans. The development efforts related to these systems are lengthy and technically challenging processes, and require a significant investment of capital, engineering, and other resources often years ahead of the time when we can be assured that they will result in competitive products. We may invest significant resources that may prove ultimately unsuccessful. The development process for our next generation Shasta systems is particularly complex and challenging, and we are implementing new development techniques as part of our efforts to complete this significant project. Our efforts could be unsuccessful, the changes we are implementing could cause disruption to our development efforts, and unanticipated performance and/or development issues may require more engineers, time, or testing resources than are currently available. Given the breadth of our engineering challenges, changes in the market and technology and our limited engineering and technical personnel resources, we periodically review the anticipated contributions and expense of our product programs to determine their long-term viability, and we may substantially modify or terminate one or more development programs. We may not be successful in meeting our development schedules for technical reasons, including those related to our dependence on third-party suppliers of components such as processors and accelerators, and/or because of insufficient engineering resources, which could result in an uncompetitive product or cause a lack of confidence in our capabilities among our key customers. To the extent that we incur delays in completing the design, development, and production of hardware components, delays in development of requisite system software, cancellation of or changes to programs due to technical or economic infeasibility, inability to source acceptable third-party components such as processors and accelerators or investment in unproductive development efforts, our revenue, results of operations, and cash flows, and the reputation of such systems in the market, could be adversely affected.

In addition, many factors affect our ability to successfully sell and recognize revenue for these systems, including the following:

- the level of product differentiation in our Cray XC systems and our next generation Shasta systems and successor systems. We need to compete successfully against HPC systems from both large, established companies and smaller companies and demonstrate the value of our balanced, tightly integrated systems to our customers in a variety of markets;
- whether potential customers delay purchases of our products because they decide to wait for successor systems or upgrades that we or our suppliers have announced or they believe will be available in the future, as we expect in 2019 following our announcement of our next generation Shasta systems but do not expect them to be available until at least the fourth quarter of 2019;
- our ability to meet all customer requirements for acceptance. Even after a system has been delivered, we sometimes do not meet all of the contract requirements for customer acceptance and ongoing reliability of our systems within the provided-for acceptance period, which has resulted in contract penalties and delays in our ability to recognize revenue from system deliveries. Most often these penalties have adversely affected revenue and gross profit through the provision of additional equipment and services and/or service credits to satisfy delivery delays and performance shortfalls. The risk of contract penalties is increased when we bid for new business prior to us or our suppliers completing development of new products and when we must estimate future system performance and costs, such as has been and will be required with our Cray XC systems, ClusterStor storage systems, and our next generation Shasta systems; and
- our ability to source competitive, key components in appropriate quantities (to have enough to sell without ending up with excess inventory that can lead to obsolescence charges), in a timely fashion and with reasonable costs and terms and conditions, and that meet the performance criteria required.

Failure to successfully sell our Cray XC systems and develop and sell our next generation Shasta systems and successor systems will adversely affect our operating results.

If our current and future products targeting markets outside of our traditional markets, primarily products targeting the data analytics, AI, and commercial markets, are not successful, our ability to grow or even maintain our revenues and achieve and sustain profitability will be adversely affected. Our ability to materially grow or even maintain our revenues and achieve and sustain profitability will be adversely affected if we are unable to generate sufficient revenue from products targeting markets outside of our traditional markets, including if those market segments do not grow significantly. We are currently focusing on data analytics, AI, and storage opportunities as well as the commercial market for all of our products. To grow outside our primary markets, we must successfully and in a cost-effective manner design and develop products utilizing technologies different from our traditional supercomputing products, compete successfully with many established companies and new entrants in these markets, win awards for new contracts, timely perform on existing contracts, develop our capability for broader market sales and business development, and successfully develop and introduce new solution-oriented offerings, notwithstanding that these are relatively new businesses for us and we do not have significant experience targeting these markets. Data analytics, AI, and storage and data management opportunities require significant monetary investments ahead of revenue, including product development

efforts, adding and retaining experienced personnel and initiating new marketing and sales efforts and therefore may reduce net income in the short term even if ultimately successful in the longer term. As a result of our reliance on our traditional markets, the recent downturn in the high-end of the supercomputing market had a significant negative impact on our business and operating results. In addition, in our traditional markets we are reliant on large-system purchase cycles and on a relatively small number of potential customers. If we are unable to successfully target markets outside of our traditional markets, primarily products targeting the data analytics, AI, and commercial markets, our ability to grow or even maintain our revenues and achieve and sustain profitability will be adversely affected.

Our reliance on third-party suppliers poses significant risks to our operating results, business, and prospects. We rely upon third-party vendors, such as Intel, AMD, NVIDIA, Mellanox, Samsung, Hynix, and Seagate to supply processors including graphics processing units, networks, storage, and memory, and for most of the products, we sell and use service providers to co-develop key technologies. We purchase or subcontract the manufacturing of a majority of the hardware components for our high-end products, including integrated circuits, printed circuit boards, memory parts, hard disk drives and storage product enclosures, cables, and power supplies, on a sole or limited source basis to third-party suppliers, including suppliers located in China. We use contract manufacturers to assemble certain important components for all of our systems. We also rely on third parties to supply important software and hardware capabilities, such as file systems, solution-specific servers, disk drives, and storage subsystems. Because specific components must be designed into our systems well in advance of initial deliveries of those systems, we are particularly reliant on our processor vendors to deliver on the capabilities and pricing expected at the time we design key elements of the system and make binding bids to customers. We are subject to substantial risks because of our reliance on these and other limited or sole source suppliers, including the following risks:

- if a supplier does not provide components or systems that meet specifications in sufficient quantities and with acceptable performance, price, or quality on time or deliver when required, or delays future components or systems beyond anticipated delivery dates, then sales, production, delivery, acceptance, and revenue from our systems could be delayed and/or reduced and we could be subject to costly repair and/or delay costs and penalties even once delivered and accepted, which has happened multiple times in the past and has at times significantly lowered our revenue for a particular quarter or year;
- if a supplier plans future processors that are made available in a way that encourages customers to delay purchases of our products because they decide to wait for successor systems or upgrades they believe will be available in the future or to purchase products with future processors from our competitors who are willing to take greater risk on delivery, our operating results will be adversely affected;
- if a supplier, including those in China or who source components from China, provides us with hardware or software that contains bugs or other errors, defects, or security vulnerabilities, such as happened with the “Meltdown” and “Spectre” processor vulnerabilities, or is different from what we expected, our development projects and production systems may be adversely affected, the production and sales of our systems could be delayed, systems installed at customer sites could require significant, expensive field component replacements or other remediation, we might be required to pay penalties, and the trust customers and potential customers place in our products might be negatively affected;
- if our relationship with a key supplier is adversely affected for any reason, such as due to competitive pressures or changes in company strategies and priorities, our ability to obtain components on competitive financial terms could be adversely affected;
- if a supplier cannot provide a competitive key component, for example, due to inadequate performance or a prohibitive price, or eliminates key features from components, such as with the processors we design into our systems, our systems may be less competitive than systems using components with greater capabilities;
- if an interruption of supply of our components, services, or capabilities occurs because a supplier changes its technology roadmap, suffers damage to its manufacturing facilities, decides to no longer provide those products or services, increases the price of those products or services significantly, or imposes reduced delivery allocations on its customers, it could take us a considerable period of time to identify and qualify alternative suppliers, to redesign our products as necessary, and to begin to manufacture the redesigned components or otherwise obtain those services or capabilities. In some cases, such as with key integrated circuits and memory parts or processors, we may not be able to redesign such components or find alternate sources that we could use in any realistic timeframe, if at all;
- if Cray systems at customer sites develop significant issues with third-party components, as has occurred in the past, the cost to Cray to repair or replace the components or otherwise address such issue may be material. If we are unable to effectively address such problem or a problem causes customer disruption, our relationship with our customers may also be harmed;

- if a supplier of a component is subject to a claim that the component infringes a third-party’s intellectual property rights, as has happened with multiple suppliers, we may not be able to obtain necessary components or our cost to obtain such components could increase significantly;
- if a key supplier is acquired or undergoes a significant business change, as has occurred in the past and is expected to occur this year with a supplier of interconnect technology, Mellanox, having entered into an agreement to be acquired by NVIDIA, the production and sales of our systems and services may be delayed or adversely affected, or our development programs may be delayed or may be impossible to complete;
- if a supplier providing us with key research and development and design services or core technology components with respect to integrated circuit design, network communication capabilities, or software is late, fails to provide us with effective functionality, or loses key internal talent, our development programs may be delayed or prove to be impossible to complete; and
- some of our key component and service suppliers are small companies with limited financial and other resources, and consequently may be more likely to experience financial and operational difficulties than larger, well-established companies, which increases the risk that they will be unable to deliver products as needed.

Delays in the availability of components with acceptable performance, features, and reliability or our inability to obtain such acceptable components in the quantities we need or at all, the discovery of issues with components after delivery and introduction into our products, and increases in prices and order lead times for certain components have occurred in the past. We have also experienced increased prices and/or delivery timelines of memory and other key components and have had to address the “Meltdown” and “Spectre” security vulnerabilities in processors included in our products. These types of issues have adversely affected our revenue and operating results in multiple prior periods, in some cases significantly, and could result in significant costs and/or effort to address in the future.

If we are unable to compete successfully in the highly competitive HPC market, our business will not be successful. The market for HPC systems is very competitive. An increase in competitive pressures in our market or our failure to compete effectively may result in pricing reductions, reduced gross margins, and loss of market share and revenue. Many of our competitors are established well-known companies in the HPC market, including HPE, IBM, Lenovo, Dell/EMC, Huawei, NEC, Hitachi, Fujitsu, and Atos-Bull. Most of these competitors have substantially greater research, engineering, manufacturing, marketing, and financial resources than we do. In addition, certain Chinese companies are investing significantly in HPC and are becoming more aggressive and more competitive in the HPC global arena.

We also compete with systems builders and resellers of systems that are constructed from commodity components using processors manufactured and/or designed by Intel, ARM, AMD, NVIDIA, and others. These competitors include the companies named above, as well as smaller companies that benefit from the low research and development costs needed to assemble systems from commercially available commodity products. Such companies, because they can offer high peak performance per dollar, can put pricing pressure on us in certain competitive procurements. In addition, to the extent that Intel, AMD, NVIDIA, IBM, MARVEL, and other processor suppliers develop processors with greater capabilities or at a lower cost than the processors we use in our products at any given time, our Cray systems may be at a competitive disadvantage to systems utilizing such other processors until we can design in, integrate, and secure competitive processors, if at all. Also, to the extent any component supplier successfully adds differentiating capabilities to their HPC products that compete with what we provide, such as Intel, we may experience greater competitive pressures. Additionally, cloud service providers, such as Amazon and Microsoft, have also increased efforts to compete in the HPC market in addition to their initiatives in analytics and AI.

Our growth initiatives in the data analytics, AI, and storage markets must also compete successfully with many established companies and new entrants, many of whom have significantly greater resources and brand recognition in these markets than we do.

Periodic announcements by our competitors of new HPC, storage, or data analytics systems or plans for future systems and price adjustments may reduce customer demand for our products. Many of our potential customers already own or lease high performance computer, storage, or data analytics systems. Some of our competitors have offered substantial discounts to potential customers. We have in the past been and may again be required to provide substantial discounts to make strategic sales, which may reduce or eliminate any gross profit on such transactions, or we may be required to provide lease financing for our products, which could result in a multi-year deferral of our receipt of cash and revenue for these systems. These developments limit our revenue and financial resources and reduce our ability to be profitable and grow.

The continuing commoditization of HPC hardware and software has resulted in increased pricing pressure and may adversely affect our operating results. The continuing commoditization of HPC hardware, such as processors, interconnects, storage, and other infrastructure, and the growing commoditization of software, including plentiful building blocks and more

capable open source software, as well as the potential for integration of differentiated technology into already-commoditized components, has resulted in and may result in increased pricing pressure that may cause us to reduce our pricing in order to remain competitive, which can negatively impact our gross margins and adversely affect our operating results.

If the U.S. Government and other governments purchase, or fund the purchase of, fewer high-end supercomputers or delay such purchases, our revenue would be reduced and our operating results would be adversely affected. Historically, sales to the U.S. Government have represented the largest single market segment for supercomputer sales worldwide, including our products and services. In 2016, 2017, 2018, and the first six months of 2019, approximately 47%, 53%, 28% and 44%, respectively, of our total revenue was derived from such sales. Our plans for the foreseeable future contemplate significant sales to the U.S. Government. Sales to the U.S. Government and other governments, including further sales pursuant to existing contracts, have been, and may continue to be, adversely affected by factors outside our control, such as by:

- uncertainties relating to priorities of the current administration or adverse decisions by the current administration to reduce or eliminate budgets for governmental agencies or departments that purchase or fund the purchase of our products and services;
- Congressional and executive branch decisions in addressing budget concerns and current policy;
- disruptions in the operations of the U.S. Government, including impacts of the current administration and government “shutdowns” such as has occurred in the past and has recently occurred;
- “sequestration”;
- the downgrading of U.S. Government debt or the possibility of such action;
- the political climate in the United States focusing on cutting or limiting budgets and its effect on government budgets;
- the limits on federal borrowing capacity;
- changes in procurement policies;
- budgetary considerations, including Congressional delays in completing appropriation bills as has occurred in the past;
- domestic crises, such as costs of addressing the damage associated with natural disasters; or
- international political developments, such as the downgrading of European debt or the United Kingdom’s departure from the European Union.

In particular, the U.S. government announced plans to procure multiple, large “exascale” systems for delivery in future years and provide funding for certain research and development efforts associated with those system deliveries. The U.S. government recently announced two of those exascale system awards, and that Cray was selected as a prime contractor or subcontractor to deliver those systems. If we are unable to complete or deliver those systems as expected or at all, or secure a sufficient portion of the continuing funding for research and development of those exascale systems sales, our ability to grow in future years and our ability to offset research and development expenses leading up to those deliveries may be adversely affected. In addition, if agencies and departments of the United States or other governments were to stop, reduce, or delay their use and purchases of supercomputers, our revenue and operating results would be adversely affected.

Changes in U.S. trade policy, including the imposition of tariffs and the resulting consequences, may harm our business. The U.S. government has adopted a new approach to trade policy and in some cases to renegotiate, or potentially terminate, certain existing bilateral or multi-lateral trade agreements. It has also imposed tariffs on certain components and products sourced or manufactured outside of the United States, most notably China, including, but not limited to, printed circuit board and related components, certain storage devices, and potentially certain microprocessors that are used in Cray systems. These measures may materially increase costs for goods imported into the United States, requiring us to materially increase prices to our customers which may reduce demand, or, if we are unable to increase prices, result in lowering our margin on products sold. In addition, certain foreign governments have imposed tariffs, taxes, and other limitations on products and services that are manufactured or designed in the United States in response to these new policies. These changes and related trade disputes could make it more difficult or costly for us to compete with our competitors outside the United States.

If we cannot retain, attract, and motivate key personnel, we may be unable to effectively implement our business plan. Our success depends in large part upon our ability to retain, attract, and motivate highly skilled management, development, marketing, sales, and service personnel. The loss of and failure to replace key technical management and personnel could adversely

affect multiple development efforts, including those related to our next generation Shasta systems. Recruitment and retention of senior management and skilled technical, sales, and other personnel is very competitive, and we may not be successful in either attracting or retaining such personnel. We have lost key personnel to other high technology companies, and many larger companies with significantly greater resources than us have aggressively recruited, and continue to aggressively recruit, key personnel. As part of our strategy to attract and retain key personnel, we may offer equity compensation through grants of stock options, restricted stock awards, or restricted stock units. Potential employees, however, may not perceive our equity incentives as attractive enough. In addition, due to the intense competition for qualified employees, we may be required to, and have had to, increase the level of compensation paid to existing and new employees, which could materially increase our operating expenses.

Customers and other third parties may make statements speculating about or announcing the purchase, acceptance, or intention to complete purchases or acceptances of our products, or the selection or award of government procurements, before such purchases, acceptances, or selection or awards are substantially certain, and these proposed purchases, acceptances, or selections or awards may not be completed when or as expected, if at all. From time to time, customers and other third parties may make statements speculating about or announcing a potential purchase of our products, or the selection or award of government procurements, before we have been selected or awarded a procurement, obtained an order for such purchases, or completed negotiations and signed a contract for the purchase of such products or relating to such procurement. In some instances, government and government-funded customers may announce possible purchases even before they have obtained the necessary budget to procure the products. In addition, government procurements may be subject to a Go/No-Go provision, as is the case with our previously announced contract to build the Frontier exascale system for the Oak Ridge National Laboratory. As a result, these statements, postings, or announcements do not mean that we will ultimately be able to secure the sale when or as expected or at all, or will be selected or awarded a procurement, for a number of reasons, including that it is not certain that the contract or order negotiations will be completed successfully or as expected or that the customer will be able to obtain the budget they hope for or expect. In addition, from time to time, customers and other third parties may make statements speculating about or announcing the completion of an acceptance process of a delivery system before such acceptance is completed or certain. As a result, these statements or announcements do not mean that we will ultimately be able to obtain the acceptance when or as expected or recognize revenue.

We may infringe or be subject to claims that we infringe the intellectual property rights of others. We are and may in the future be subject to patent infringement and other intellectual property claims and lawsuits in various jurisdictions, and we cannot be certain that our products or activities do not violate the patents, trademarks, or other intellectual property rights of third-parties. Companies in the technology industry, and other patent, copyright, and trademark holders seeking to profit from royalties, own large numbers of patents, copyrights, trademarks, domain names, and trade secrets and frequently commence litigation based on allegations of infringement, misappropriation, or other violations of intellectual property or other rights. As we face increasing competition and gain an increasingly high profile, the intellectual property rights claims against us have grown and will likely continue to grow. For example, we have been involved in litigation with Raytheon Company (Raytheon) which is described in Note 10, "Contingencies" in the Notes to our Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

We intend to vigorously defend and prosecute these litigation matters and, based on our reviews and court decisions to date, we believe we have valid defenses with respect to each of these matters. However, litigation is inherently uncertain, and any judgment or injunctive relief entered against us or any adverse settlement could materially and adversely impact our business, financial condition, operating results, and prospects. As a result of these or other intellectual property infringement claims, we could be required or otherwise decide that it is appropriate to:

- pay third-party infringement claims;
- discontinue manufacturing, using, or selling particular products subject to infringement claims;
- discontinue using the technology or processes subject to infringement claims;
- develop other technology not subject to infringement claims, which could be time-consuming and costly or may not be possible; and/or
- license technology from third-parties, which license may not be available on commercially reasonable terms, or at all.

In addition, litigation can involve significant management time and attention and be expensive, as it has been with Raytheon, regardless of outcome. During the course of these litigation matters, there may be announcements of the results of hearings and motions, and other interim developments related to the litigation matters. If securities analysts or investors regard these announcements as negative, the market price of our common stock may decline.

We have made and entered into in the past, and may make and enter into in the future, acquisitions or strategic transactions which could require significant management attention, disrupt our business, result in dilution to our shareholders, deplete our cash reserves, increase our business risks, and adversely affect our financial results. Acquisitions and strategic transactions, such as our 2017 acquisition of the ClusterStor business from Seagate, involve numerous risks, including the following:

- difficulties in successfully integrating the operations, systems, technologies, products, sales channels, manufacturing processes, offerings, and personnel of the acquired company or companies, assets, and/or business;
- insufficient revenue, margin, or other benefits to offset increased expenses or other negative impacts associated with acquisitions or strategic transactions;
- diversion of management's attention from normal daily operations of the business and the challenges of managing larger and more widespread operations resulting from acquisitions or strategic transactions, including other customers of an acquired business;
- potential difficulties in completing projects associated with in-process research and development intangibles;
- difficulties in entering markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions;
- initial dependence on unfamiliar supply chains or relatively small supply partners;
- the potential loss of key employees, customers, distributors, vendors, and other business partners of the companies or businesses we acquire following and continuing after announcement of any transaction; and
- the potential to invest significant time and resources into a potential acquisition or strategic transaction that does not ultimately complete or close.

Acquisitions or strategic transactions may also cause us to:

- use a substantial portion of our cash reserves or incur debt;
- issue equity securities or grant equity incentives to acquired employees that would dilute our current shareholders' percentage ownership;
- assume or incur liabilities, including potentially unknown or underestimated liabilities;
- record goodwill and non-amortizable intangible assets that are subject to impairment testing on a regular basis and potential periodic impairment charges;
- incur amortization expenses related to certain intangible assets;
- incur large and immediate write-offs and restructuring and other related expenses; or
- become subject to intellectual property litigation or other litigation.

Acquisitions of high-technology companies, assets, and/or businesses are inherently risky and subject to many factors outside of our control, and no assurance can be given that our previously completed, currently planned, or future acquisitions or strategic transactions will be successful and will not materially adversely affect our business, operating results, or financial condition. Failure to manage and successfully integrate acquisitions could materially harm our business and operating results.

We maintain confidential and proprietary information on our computer networks and employ security measures designed to protect this information from unauthorized access. If our security measures are breached, we could lose proprietary data and may suffer economic losses. We maintain confidential information on our computer networks, including information and data that are proprietary to our customers and third parties, as well as to us. Although we have designed and employed and continue to enhance a multitude of security measures to protect this information from unauthorized access, security breaches may occur, and in the past have occurred, as a result of third-party action, including computer hackers, employee error, inherent hardware or software vulnerabilities (including in products or components sourced from suppliers in China), malfeasance, or otherwise. Any breach, malfeasance, or human or technological error could result in unauthorized access to disclosure, modification, misuse, loss, or destruction of Cray, customer, supplier, or other third-party data, including trade secrets and other confidential business information. Because the techniques employed by hackers to obtain unauthorized access or to sabotage systems change frequently, we may be unable to anticipate these techniques or to implement adequate preventative measures. If

this should happen, we could be exposed to potentially significant legal liability, remediation expense, harm to our reputation, and other harm to our business.

As a global enterprise, the regulatory environment with respect to cybersecurity, privacy, and data protection is increasingly complex and may have impacts on the company's business, including increased risk, costs, and expanded compliance obligations. The General Data Protection Regulation that came into force in the European Union in May 2018 will also cause us to incur additional compliance costs and potential financial or other exposure if we were found to fail to comply with such regulations.

We may not be able to protect our proprietary information and rights adequately. We rely on a combination of patent, copyright, trademark and trade secret protection, nondisclosure agreements, and licensing arrangements to establish, protect, and enforce our proprietary information and rights. We have a number of patents and have additional applications pending. There can be no assurance, however, that patents will be issued from the pending applications or that any issued patents will adequately protect those aspects of our technology to which such patents will relate. Despite our efforts to safeguard and maintain our proprietary rights, we cannot be certain that we will succeed in doing so or that our competitors will not independently develop or patent technologies that are substantially equivalent or superior to our technologies. The laws of some countries do not protect intellectual property rights to the same extent or in the same manner as do the laws of the United States. Additionally, under certain conditions, the U.S. government might obtain non-exclusive rights to certain of our intellectual property. Although we continue to implement protective measures and intend to defend our proprietary rights vigorously, these efforts may not be successful.

We are subject to market and financial risks due to our international operations that could adversely affect those operations or our profitability and operating results. Our international operations include sales and service offices in Europe, the Middle East, South America, Asia, Australia, and Canada. Our operations in countries outside of the United States, which accounted for approximately 30% of our total revenue for the first six months of 2019, expose us to greater risks associated with international sales and operations. Our profitability and international operations are, and will continue to be, subject to a number of risks and potential costs, including:

- supporting multiple languages;
- recruiting sales and technical support personnel internationally with the skills to sell and support our products and the potentially high cost related to employee separations;
- complying with governmental regulations, including obtaining required import or export approval for our products;
- additional tariffs, taxes, and penalties;
- increased complexity and costs of managing international operations;
- increased exposure to foreign currency exchange rate fluctuations;
- trade protection measures and business practices that favor local competition, including as a result of recent measures and threats by the United States to levy tariffs on certain products;
- risks and costs associated with employee-favorable labor laws in many foreign jurisdictions;
- longer sales cycles and manufacturing lead times;
- financial risks such as longer payment cycles and difficulties in collecting accounts receivable;
- difficulties associated with repatriating cash generated or held abroad in a tax-efficient manner;
- ineffective legal protection, including of intellectual property rights;
- more complicated logistics and distribution arrangements;
- inadequate local infrastructure that could result in business disruptions;
- global political and economic instability; and
- other factors beyond our control such as natural disasters, terrorism, civil unrest, war, and infectious disease.

Our global operations are also subject to numerous U.S. and foreign laws and regulations, including those related to anti-corruption, tax, corporate governance, imports and exports, privacy and data security, financial and other disclosures, and labor relations. These laws and regulations are complex and may have differing, conflicting, and evolving legal standards, making compliance difficult and costly. If we or our employees, contractors, or agents violate these laws and regulations, we could be

subject to fines, penalties, or criminal sanctions and may be prohibited from conducting business in one or more countries. Any violations, individually or in the aggregate, could have a material adverse effect on our operations and financial condition.

In addition, the United Kingdom gave formal notice of withdrawal from the European Union in March 2017. Consequently, the British government is currently negotiating the terms of the United Kingdom's future relationship with the European Union. The negotiated measures, or the lack of any such measures, could potentially disrupt some of our target markets and jurisdictions in which we operate, including the United Kingdom and Germany, such as by adversely affecting tax benefits or liabilities in these or other jurisdictions or by restricting the movement of employees between the United Kingdom and other countries. Any such changes may adversely affect our operations and financial results.

We are subject to increasing government regulations and other requirements due to the nature of our business, which may adversely affect our business operations. In 2016, 2017, 2018, and the first six months of 2019, approximately 47%, 53%, 28% and 44%, respectively, of our total revenue was derived from U.S. Government sales. In addition to normal business risks, our contracts with the U.S. government are subject to unique risks, some of which are beyond our control. Our contracts with the U.S. government are subject to particular risks, including:

The funding of U.S. government programs is subject to Congressional appropriations. Many of the U.S. government programs in which we participate may extend for several years; however, these programs are normally funded annually. Changes in U.S. strategy and priorities may affect our future procurement opportunities and existing programs. Long-term government contracts and related orders are subject to cancellation, or delay, if appropriations for subsequent performance periods are not made. The termination of funding for existing or new U.S. government programs could result in a material adverse effect on our results of operations and financial condition.

The U.S. government may modify, curtail, or terminate its contracts with us. The U.S. government may modify, curtail, or terminate its contracts and subcontracts with us without prior notice at its convenience upon payment for work done. Modification, curtailment, or termination of our major programs or contracts could have a material adverse effect on our results of operations and financial condition.

Our U.S. government contract costs are subject to audits by U.S. government agencies. U.S. government representatives may audit the costs we incur on certain U.S. government contracts, including allocated indirect costs. Such audits could result in adjustments to our contract costs. Any costs found to be improperly allocated to a specific contract will not be reimbursed, and such costs already reimbursed must be refunded. If any audit uncovers improper or illegal activities or non-compliance with the terms of a specific contract, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines, and suspension or prohibition from doing business with the U.S. government.

Our business is subject to potential U.S. government inquiries and investigations. We may be subject to U.S. government inquiries and investigations of our business practices due to our participation in government contracts. Any such inquiry or investigation could potentially result in a material adverse effect on our results of operations and financial condition.

Our U.S. government business is also subject to specific procurement regulations and other requirements. These requirements, although customary in U.S. government contracts, increase our performance and compliance costs. These costs might increase in the future, reducing our margins, which could have a negative effect on our financial condition. Failure to comply with these regulations and requirements could lead to suspension or debarment, for cause, from U.S. government contracting or subcontracting for a period of time or the inability to participate in certain procurements and could have a negative effect on our reputation and ability to secure future U.S. government contracts.

U.S. export controls could hinder our ability to make sales to foreign customers and our future prospects. The U.S. government regulates the export of HPC systems such as our products. We have experienced delays for up to several months in receiving appropriate approvals necessary for certain sales, which have delayed the shipment of our products. Delay or denial in the granting of any required licenses could make it more difficult to make sales to certain foreign customers, eliminating an important source of potential revenue. Restrictions on the export of information needed to manufacture our products has in the past impacted and could in the future impact our ability to have certain products and components made in certain lower cost jurisdictions.

Our stock price is volatile. The trading price of our common stock is subject to significant fluctuations in response to many factors, including stock market trends and shareholder profile, our quarterly operating results, changes in analysts' estimates or our outlook, our capital raising activities, the status of the pending Merger, announcements of technological innovations and customer contracts by us or our competitors, others in the industry or our customers, a significant aggressive seller or buyer, litigation activities, general economic conditions, and conditions in our industry. From January 1, 2018 through June 30, 2019, the closing sales price of our common stock on The Nasdaq Global Market ranged from \$18.89 to \$36.52 per share. Because our stock price has been volatile, investing in our common stock is risky.

We incorporate software licensed from third parties into the operating systems for our products as well as in our tools to design products and any significant interruption in the availability of these third-party software products or defects in these products could reduce the demand for our products or cause delay in development. The operating system as well as other software we develop for our supercomputers contains components that are licensed to us under open source software licenses. Our business could be disrupted if this software, or functional equivalents of this software, were either no longer available to us or no longer offered to us on commercially reasonable terms. In either case we would be required to redesign our operating system software to function with alternative third-party software, or develop these components ourselves, which would result in increased costs and could result in delays in product shipments. Our supercomputer systems utilize software system variants that incorporate Linux technology. The open source licenses under which we have obtained certain components of our operating system software may not be enforceable. Any ruling by a court that these licenses are not enforceable, or that Linux-based operating systems, or significant portions of them, may not be copied, modified, or distributed as provided in those licenses, would adversely affect our ability to sell our systems. In addition, as a result of concerns about the risks of litigation and open source software generally, we may be forced to protect our customers from potential claims of infringement. In any such event, our financial condition and results of operations may be adversely affected.

We also incorporate proprietary software from third parties, such as for file systems, job scheduling, and storage subsystems. We have experienced functional issues in the past with implementing such software with our supercomputer systems. In addition, we may not be able to secure needed software systems on acceptable terms, or at all, which may make our systems less attractive to potential customers. These issues may result in lost revenue, additional expense by us, and/or loss of customer confidence.

The “conflict minerals” rule of the SEC has caused us to incur additional expenses, could limit the supply and increase the cost of certain metals used in manufacturing our products, and could make us less competitive in our target markets. The SEC requires public companies to disclose the origin, source, and chain of custody of specified minerals, known as conflict minerals, that are necessary to the functionality or production of products manufactured or contracted to be manufactured by us. Companies must obtain sourcing data from suppliers, engage in supply chain due diligence, and file annually with the SEC a specialized disclosure report on Form SD covering the prior calendar year. Implementation of our conflict minerals policy could limit our ability to source at competitive prices and to secure sufficient quantities of certain minerals used in the manufacture of our products, specifically tantalum, tin, gold, and tungsten, as the number of suppliers that provide conflict-free minerals may be limited. In addition, we have incurred, and may continue to incur, material costs associated with complying with the conflict minerals rule, such as costs related to the determination of the origin, source, and chain of custody of the minerals used in our products, the adoption of conflict minerals-related governance policies, processes, and controls, and possible changes to products or sources of supply as a result of such activities. Within our supply chain, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the data collection and due diligence procedures that we implement, which may harm our reputation. Furthermore, we may encounter challenges in satisfying those customers that require that all of the components of our products be certified as conflict free, and if we cannot satisfy these customers, they may choose a competitor’s products. We continue to investigate the presence of conflict materials within our supply chain.

We are required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 at the end of each fiscal year, and any adverse results from such future evaluations could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price. Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management and a report by our independent registered public accounting firm on our internal control over financial reporting in our annual reports on Form 10-K as to whether we have any material weaknesses in our internal controls over financial reporting. Depending on their nature and severity, any future material weaknesses could result in our having to restate financial statements, could make it difficult or impossible for us to obtain an audit of our annual financial statements, or could result in a qualification of any such audit. In such events, we could experience a number of adverse consequences, including our inability to comply with applicable reporting and listing requirements, a loss of market confidence in our publicly available information, delisting from The Nasdaq Global Market, an inability to complete a financing, loss of other financing sources such as our line of credit, and litigation based on the events themselves or their consequences.

Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States. Generally accepted accounting principles in the United States are subject to interpretation by the Financial Accounting Standards Board, the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, and could affect the reporting of transactions completed before the announcement of a change.

Provisions of our Restated Articles of Incorporation and Amended and Restated Bylaws could make a proposed acquisition of our business that is not approved by our Board of Directors more difficult. Provisions of our Restated Articles of Incorporation and Amended and Restated Bylaws could make it more difficult for a third-party to acquire us. These provisions could limit the price that investors might be willing to pay in the future for our common stock. For example, our Restated Articles of Incorporation and Amended and Restated Bylaws provide for:

- removal of a director only in limited circumstances and only upon the affirmative vote of not less than two-thirds of the shares entitled to vote to elect directors;
- the ability of our Board of Directors to issue up to 5,000,000 shares of preferred stock, without shareholder approval, with rights senior to those of the common stock;
- no cumulative voting of shares;
- the right of shareholders to call a special meeting of the shareholders only upon demand by the holders of not less than 30% of the shares entitled to vote at such a meeting;
- the affirmative vote of not less than two-thirds of the outstanding shares entitled to vote on an amendment, unless the amendment was approved by a majority of our continuing directors, who are defined as directors who have either served as a director since August 31, 1995, or were nominated to be a director by the continuing directors;
- special voting requirements for mergers and other business combinations, unless the proposed transaction was approved by a majority of continuing directors;
- special procedures to bring matters before our shareholders at our annual shareholders' meeting; and
- special procedures to nominate members for election to our Board of Directors.

These provisions could delay, defer, or prevent a merger, consolidation, takeover, or other business transaction between us and a third-party that is not approved by our Board of Directors.

Item 6. Exhibits

Exhibit	Exhibit Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exhibit/Annex	
2.1	Agreement and Plan of Merger, dated May 16, 2019, by and among Hewlett Packard Enterprise Company, Canopy Merger Sub, Inc. and Cray Inc.	8-K	000-26820	May 17, 2019	2.1	
3.1	Third Amendment to Amended and Restated Bylaws	8-K	000-26820	May 17, 2019	3.1	
3.2	Fourth Amendment to Amended and Restated Bylaws	8-K	000-26820	June 24, 2019	3.1	
31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1*	Certificate pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X

101.INS XBRL Instance Document

101.SCH XBRL Taxonomy Extension Schema Document

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document

101.DEF XBRL Taxonomy Extension Definition Linkbase Document

101.LAB XBRL Taxonomy Extension Label Linkbase Document

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

*This certification is deemed not filed for purposes of section 18 of the Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Act.

SIGNATURES

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

CRAY INC.

Date: August 2, 2019

/S/ PETER J. UNGARO

Peter J. Ungaro
President and Chief Executive Officer

Date: August 2, 2019

/S/ BRIAN C. HENRY

Brian C. Henry
Executive Vice President and Chief Financial Officer

Date: August 2, 2019

/S/ CHARLES D. FAIRCHILD

Charles D. Fairchild
Vice President, Corporate Controller and Chief Accounting Officer

Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Peter J. Ungaro, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cray Inc.;

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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for 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 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 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: August 2, 2019

/s/ PETER J. UNGARO

Peter J. Ungaro
President and Chief Executive Officer
(Principal Executive Officer)

Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Brian C. Henry, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cray Inc.;

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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for 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 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 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: August 2, 2019

/s/ BRIAN C. HENRY

Brian C. Henry

Executive Vice President and Chief Financial Officer

(Principal Financial Officer)

Certificate pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officers of Cray Inc. (the "Company") hereby certify, to such officers' knowledge, that:

(i) the accompanying Quarterly Report on Form 10-Q of the Company for the period ended June 30, 2019 (the "Report"), fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

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

Date: August 2, 2019

/s/ PETER J. UNGARO

Peter J. Ungaro
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 2, 2019

/s/ BRIAN C. HENRY

Brian C. Henry
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing.