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

FORM 10-Q

(Mark One)

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

For the quarterly period ended August 31, 2018
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: **0-19417**

PROGRESS SOFTWARE CORPORATION
(Exact name of registrant as specified in its charter)

DELAWARE	**04-2746201**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

14 Oak Park
Bedford, Massachusetts 01730
(Address of principal executive offices) (Zip code)

Telephone Number: (781) 280-4000

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 x No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes x No ☐

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

Large accelerated filer	x		Accelerated filer	☐
Non-accelerated filer	☐	(Do not check if a smaller reporting company)	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 x

As of September 27, 2018, there were 44,902,607 shares of the registrant’s common stock, $.01 par value per share, outstanding.

PROGRESS SOFTWARE CORPORATION

FORM 10-Q

FOR THE NINE MONTHS ENDED AUGUST 31, 2018

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited)

Condensed Consolidated Balance Sheets

(In thousands, except share data)	August 31, 2018	November 30, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 98,697	$ 133,464
Short-term investments	39,184	50,145
Total cash, cash equivalents and short-term investments	137,881	183,609
Accounts receivable (less allowances of $701 and $676, respectively)	45,817	61,210
Other current assets	13,696	18,588
Total current assets	197,394	263,407
Property and equipment, net	42,689	42,261
Intangible assets, net	67,712	94,894
Goodwill	314,951	315,041
Deferred tax assets	876	1,123
Other assets	1,810	1,992
Total assets	$ 625,432	$ 718,718
Liabilities and shareholders' equity		
Current liabilities:		
Current portion of long-term debt, net	$ 5,819	$ 5,819
Accounts payable	8,299	9,000
Accrued compensation and related taxes	17,534	32,373
Dividends payable to shareholders	6,324	6,619
Income taxes payable	2,889	1,173
Other accrued liabilities	15,498	20,496
Short-term deferred revenue	131,854	132,538
Total current liabilities	188,217	208,018
Long-term debt, net	111,725	116,090
Long-term deferred revenue	12,975	9,750
Deferred tax liabilities	1,323	2,809
Other noncurrent liabilities	5,720	5,967
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, $0.01 par value; authorized, 10,000,000 shares; issued, none	—	—
Common stock, $0.01 par value, and additional paid-in capital; authorized, 200,000,000 shares; issued and outstanding, 45,133,361 shares in 2018 and 47,281,035 shares in 2017	263,255	249,836
Retained earnings	68,329	145,247
Accumulated other comprehensive loss	(26,112)	(18,999)
Total shareholders' equity	305,472	376,084
Total liabilities and shareholders' equity	$ 625,432	$ 718,718

See notes to unaudited condensed consolidated financial statements.

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Condensed Consolidated Statements of Operations

(In thousands, except per share data)	Three Months Ended August 31, 2018	Three Months Ended August 31, 2017	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017
Revenue:				
Software licenses	$ 27,204	$ 28,529	$ 78,986	$ 78,443
Maintenance and services	68,479	68,781	206,846	203,050
Total revenue	95,683	97,310	285,832	281,493
Costs of revenue:				
Cost of software licenses	1,077	1,337	3,571	4,347
Cost of maintenance and services	10,110	10,970	29,445	32,724
Amortization of acquired intangibles	5,509	5,768	17,226	14,129
Total costs of revenue	16,696	18,075	50,242	51,200
Gross profit	78,987	79,235	235,590	230,293
Operating expenses:				
Sales and marketing	21,752	23,159	64,838	70,116
Product development	19,338	19,620	59,405	55,745
General and administrative	12,218	11,164	35,670	33,338
Amortization of acquired intangibles	3,319	3,319	9,956	9,721
Fees related to shareholder activist	—	—	1,472	—
Restructuring expense	135	923	2,382	18,724
Acquisition-related expenses	42	751	128	844
Total operating expenses	56,804	58,936	173,851	188,488
Income from operations	22,183	20,299	61,739	41,805
Other (expense) income, net:				
Interest expense	(1,337)	(1,221)	(3,774)	(3,455)
Interest income and other, net	322	239	961	717
Foreign currency (loss) gain, net	(946)	(418)	(2,017)	(1,561)
Total other (expense) income, net	(1,961)	(1,400)	(4,830)	(4,299)
Income before income taxes	20,222	18,899	56,909	37,506
Provision for income taxes	3,476	7,727	11,848	16,518
Net income	$ 16,746	$ 11,172	$ 45,061	$ 20,988
Earnings per share:				
Basic	$ 0.37	$ 0.23	$ 0.99	$ 0.43
Diluted	$ 0.37	$ 0.23	$ 0.97	$ 0.43
Weighted average shares outstanding:				
Basic	45,130	48,071	45,730	48,342
Diluted	45,576	48,370	46,380	48,631
Cash dividends declared per common share	$ 0.140	$ 0.125	$ 0.420	$ 0.375

See notes to unaudited condensed consolidated financial statements.

Condensed Consolidated Statements of Comprehensive Income

	Three Months Ended		Nine Months Ended	
(In thousands)	August 31, 2018	August 31, 2017	August 31, 2018	August 31, 2017
Net income	$ 16,746	$ 11,172	$ 45,061	$ 20,988
Other comprehensive (loss) income, net of tax:				
Foreign currency translation adjustments	(1,950)	5,920	(7,137)	11,291
Unrealized gains on investments, net of tax provision of $18 and $57 for the third quarter and first nine months of 2018, respectively and $17 and $62 for the third quarter and first nine months of 2017, respectively	52	27	24	105
Total other comprehensive (loss) income, net of tax	(1,898)	5,947	(7,113)	11,396
Comprehensive income	$ 14,848	$ 17,119	$ 37,948	$ 32,384

See notes to unaudited condensed consolidated financial statements.

Condensed Consolidated Statements of Cash Flows

(In thousands)	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017
Cash flows from operating activities:		
Net income	$ 45,061	$ 20,988
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization of property and equipment	5,158	5,794
Amortization of intangibles and other	28,489	25,530
Stock-based compensation	14,716	9,559
Loss on disposal of property	201	186
Deferred income taxes	(1,487)	3,518
Excess tax benefit from stock plans	—	(403)
Allowances for accounts receivable	140	53
Changes in operating assets and liabilities:		
Accounts receivable	15,017	15,769
Other assets	4,465	3,783
Accounts payable and accrued liabilities	(20,290)	(10,971)
Income taxes payable	1,575	759
Deferred revenue	3,980	(1,394)
Net cash flows from operating activities	97,025	73,171
Cash flows from (used in) investing activities:		
Purchases of investments	(8,258)	(30,482)
Sales and maturities of investments	18,495	25,904
Purchases of property and equipment	(5,968)	(865)
Payments for acquisitions, net of cash acquired	—	(77,149)
Proceeds from sale of property, plant and equipment, net	—	1,557
Net cash flows from (used in) investing activities	4,269	(81,035)
Cash flows used in financing activities:		
Proceeds from stock-based compensation plans	7,943	7,245
Payments for taxes related to net share settlements of equity awards	(1,942)	(2,369)
Repurchases of common stock	(110,000)	(43,936)
Excess tax benefit from stock plans	—	403
Dividend payments to shareholders	(19,472)	(18,151)
Payment of long-term debt	(4,641)	(11,250)
Net cash flows used in financing activities	(128,112)	(68,058)
Effect of exchange rate changes on cash	(7,949)	13,643
Net decrease in cash and cash equivalents	(34,767)	(62,279)
Cash and cash equivalents, beginning of period	133,464	207,036
Cash and cash equivalents, end of period	$ 98,697	$ 144,757

Condensed Consolidated Statements of Cash Flows, continued

	Nine Months Ended	
	August 31, 2018	August 31, 2017
Supplemental disclosure:		
Cash paid for income taxes, net of refunds of $889 in 2018 and $3,584 in 2017	$ 7,515	$ 10,469
Cash paid for interest	$ 3,096	$ 2,703
Non-cash investing and financing activities:		
Total fair value of restricted stock awards, restricted stock units and deferred stock units on date vested	$ 9,546	$ 13,833
Dividends declared	$ 6,324	$ 5,975

See notes to unaudited condensed consolidated financial statements.

Notes to Condensed Consolidated Financial Statements

Note 1: Basis of Presentation

Company Overview - Progress Software Corporation ("Progress," the "Company," "we," "us," or "our") offers the leading platform for developing and deploying strategic business applications. We enable customers and partners to deliver modern, high-impact digital experiences with a fraction of the effort, time and cost. Progress offers powerful tools for easily building adaptive user experiences across any type of device or touchpoint, award-winning machine learning that enables cognitive capabilities to be a part of any application, the flexibility of a serverless cloud to deploy modern apps, business rules, web content management, plus leading data connectivity technology. Over 1,700 independent software vendors, 100,000 enterprise customers, and 2 million developers rely on Progress to power their applications.

Our products are generally sold as perpetual licenses, but certain products also use term licensing models and our cloud-based offerings use a subscription-based model. More than half of our worldwide license revenue is realized through relationships with indirect channel partners, principally application partners and original equipment manufacturers ("OEMs"). Application partners are ISVs that develop and market applications using our technology and resell our products in conjunction with sales of their own products that incorporate our technology. OEMs are companies that embed our products into their own software products or devices.

We operate in North America and Latin America (the "Americas"); Europe, the Middle East and Africa ("EMEA"); and the Asia Pacific region, through local subsidiaries as well as independent distributors.

Basis of Presentation and Significant Accounting Policies - We prepared the accompanying unaudited condensed consolidated financial statements pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC") regarding interim financial reporting. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America ("GAAP") for complete financial statements and these unaudited financial statements should be read in conjunction with the audited financial statements included in our Annual Report on Form 10-K for the fiscal year ended November 30, 2017, as amended ("Annual Report").

We made no material changes in the application of our significant accounting policies that were disclosed in our Annual Report. We have prepared the accompanying unaudited condensed consolidated financial statements on the same basis as the audited financial statements included in our Annual Report, and these financial statements include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the results of the interim periods presented. The operating results for the interim periods presented are not necessarily indicative of the results expected for the full fiscal year.

Recent Accounting Pronouncements - In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2018-15, *Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40), Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"). ASU 2018-15 amends current guidance to align the accounting for costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing costs associated with developing or obtaining internal-use software. Capitalized implementation costs must be expensed over the term of the hosting arrangement and presented in the same line item in the statement of income as the fees associated with the hosting element (service) of the arrangement. The guidance in ASU 2018-15 is effective for annual reporting periods beginning after December 15, 2019, with early adoption permitted. We are currently accounting for costs incurred in a cloud computing arrangement in accordance with the guidance provided in ASU 2018-15.

In February 2018, the 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"). ASU 2018-02 gives entities the option to reclassify the disproportionate income tax effects ("stranded tax effects") caused by the newly-enacted US Tax Cuts and Jobs Act from accumulated other comprehensive income to retained earnings. The update also requires new disclosures, some of which are applicable for all entities. The guidance in ASU 2018-02 is effective for annual reporting periods beginning after December 15, 2018, with early adoption permitted. We are currently considering whether to adopt the optional reclassification of the stranded tax effects and evaluating the effect that implementation of this update will have upon adoption on our consolidated financial position and results of operations.

In August 2017, the FASB issued Accounting Standards Update No. 2017-12, *Derivatives and Hedging (Topic 815), Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12"). ASU 2017-12 intends to better align an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The amendments expand and refine hedge accounting for both nonfinancial and financial risk components and align the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. The guidance in ASU 2017-12 is required for annual reporting periods beginning after December 15, 2018, with early adoption permitted. We are currently evaluating the effect that implementation of this update will have upon adoption on our consolidated financial position and results of operations.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04, *Intangibles - Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"). ASU 2017-04 amends Topic 350 to simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. This update requires the performance of an annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An impairment charge should be recognized for the amount by which the carrying amount exceeds the reporting unit's fair value. However, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The guidance in ASU 2017-04 is required for annual reporting periods beginning after December 15, 2019, with early adoption permitted. We are currently considering whether to adopt this update prior to the required adoption date.

In October 2016, the FASB issued Accounting Standards Update No. 2016-16, *Income Taxes (Topic 740), Intra-Entity Transfers of Assets Other Than Inventory* ("ASU 2016-16"), which requires entities to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. Under current GAAP, the recognition of current and deferred income taxes for an intra-entity transfer are prohibited until the asset has been sold to an outside party. The amendments in ASU 2016-16 are effective for annual reporting periods beginning after December 15, 2017, with early adoption permitted. We are currently evaluating the impact of the adoption of this update on our consolidated financial position, results of operations, and disclosure requirements.

In March 2016, the FASB issued Accounting Standards Update No. 2016-09, *Compensation - Stock Compensation (Topic 718), Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"). ASU 2016-09 is intended to simplify various aspects of the accounting for employee share-based payment transactions, including accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The guidance in ASU 2016-09 is required for annual reporting periods beginning after December 15, 2016, with early adoption permitted. The standard requires, on a prospective basis, the recognition of all excess tax benefits and tax deficiencies as income tax benefit or expense in the statement of operations and the tax effect of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. The excess tax benefits and tax deficiencies should not be considered in an entity's calculation of its annual estimated effective tax rate and, as excess tax benefits are no longer recognized in additional paid-in capital, the assumed proceeds from applying the treasury stock method to calculate diluted earnings per share should exclude such excess tax benefits. Further, on either a prospective or retrospective basis, excess tax benefits should be classified as operating activities in the statement of cash flows. The standard also provides entities the option to make an entity-wide accounting policy election to either estimate the number of awards that are expected to vest (current GAAP) or account for forfeitures when they occur, which is to be applied in accordance with a modified retrospective transition. Additionally, the standard updates the threshold to qualify for equity classification for minimum statutory tax withholding requirements by permitting an entity to withhold up to the maximum statutory rates in the applicable jurisdictions, applied on a modified retrospective basis. Finally, the standard requires that cash paid by an employer to a taxing authority when directly withholding shares for tax withholding purposes be classified as a financing activity in the statement of cash flows, applied retrospectively.

We adopted this standard at the beginning of the first quarter of fiscal year 2018 and elected to classify excess tax benefits as operating activities on a prospective basis in the condensed consolidated statement of cash flows. As such, the prior period condensed consolidated statement of cash flows was not adjusted. We also elected to account for forfeitures as they occur and recorded a cumulative-effect adjustment of $0.6 million to retained earnings during the period of adoption. The adoption of ASU 2016-09 did not have a material impact on our consolidated financial position, results of operations, and cash flows.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"), which requires lessees to record most leases on their balance sheets, recognizing a lease liability for the obligation to make lease payments and a right-to-use asset for the right to use the underlying asset for the lease term. The guidance in ASU 2016-02 is required for annual reporting periods beginning after December 15, 2018, with early adoption permitted. We currently expect that most of our operating lease commitments will be subject to the update and recognized as operating lease liabilities and right-of-use assets upon adoption. However, we are currently evaluating the effect that implementation of this update will have upon adoption on our consolidated financial position and results of operations.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"). ASU 2014-09 outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The guidance provided in Topic 606 requires entities to use a five-step model to recognize revenue by allocating the consideration from contracts to performance obligations on a relative standalone selling price basis. Revenue is recognized when a customer obtains control of promised goods or services in an amount that reflects the consideration that the entity expects to receive in exchange for those goods or services. The standard also requires new disclosures regarding the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Topic 606 also includes Subtopic 340-40, *Other Assets and Deferred Costs - Contracts with Customers*, which requires the deferral of incremental costs of obtaining a contract with a customer. This new guidance was initially effective for annual reporting periods (including interim reporting periods within those periods) beginning after December 15, 2016 and early adoption was not permitted. However, in July 2015, the FASB voted to defer the effective date of this ASU by one year for reporting periods beginning after December 15, 2017, with early adoption permitted as of the original effective date. As a result, the effective date for the Company will be December 1, 2018.

Entities have the option of using either a full retrospective or a modified approach to adopt the guidance. The Company currently plans to adopt this ASU in accordance with the full retrospective approach, effective December 1, 2018. Fiscal year 2019 quarterly results, and comparative prior periods, will be prepared in accordance with ASC Topic 606. The first Annual Report on Form 10-K issued in accordance with ASC Topic 606 will be for the period ended November 30, 2019.

Management is currently assessing the impact the adoption of this standard will have on the Company’s consolidated financial statements, but anticipates that the revenue recognition related to accounting for the following transactions will be most impacted:

- **Revenue from term licenses with extended payment terms over the term of the agreement within our Data Connectivity and Integration segment -** These transactions are typically recognized when the amounts are billed to the customer under current revenue recognition guidance. In accordance with ASU 2014-09, revenue from term license performance obligations is expected to be recognized upon delivery and revenue from maintenance performance obligations is expected to be recognized over the contract term. To the extent the Company enters into future term licenses with extended payment terms after the adoption of ASU 2014-09, revenue from term licenses with extended payment terms will be recognized prior to the customer being billed and the Company will recognize an unbilled receivable on the balance sheet. Accordingly, the recognition of license revenue will be accelerated under ASU 2014-09 as the Company currently does not recognize revenue until the amounts have been billed to the customer.

- **Revenue from transactions with multiple elements within our Application Development and Deployment segment (i.e., sales of perpetual licenses with maintenance and/or support) -** These transactions are currently recognized ratably over the associated maintenance period as the Company does not have vendor specific objective evidence ("VSOE") for maintenance or support. Under ASU 2014-09, the requirement to have VSOE for undelivered elements that exists under current guidance is eliminated. Accordingly, the Company will recognize a portion of the sales price as revenue upon delivery of the license instead of recognizing the entire sales price ratably over the maintenance period.

Note 2: Cash, Cash Equivalents and Investments

A summary of our cash, cash equivalents and available-for-sale investments at August 31, 2018 is as follows (in thousands):

	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Cash	$ 92,827	$ —	$ —	$ 92,827
Money market funds	5,870	—	—	5,870
State and municipal bond obligations	24,349	—	(125)	24,224
U.S. treasury bonds	6,715	—	(25)	6,690
Corporate bonds	8,332	—	(62)	8,270
Total	$ 138,093	$ —	$ (212)	$ 137,881

A summary of our cash, cash equivalents and available-for-sale investments at November 30, 2017 is as follows (in thousands):

	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
Cash	$ 130,547	$ —	$ —	$ 130,547
Money market funds	2,917	—	—	2,917
State and municipal bond obligations	40,458	—	(231)	40,227
U.S. treasury bonds	3,517	—	(26)	3,491
Corporate bonds	6,463	—	(36)	6,427
Total	$ 183,902	$ —	$ (293)	$ 183,609

Such amounts are classified on our condensed consolidated balance sheets as follows (in thousands):

	August 31, 2018		November 30, 2017	
	Cash and Equivalents	Short-Term Investments	Cash and Equivalents	Short-Term Investments
Cash	$ 92,827	$ —	$ 130,547	$ —
Money market funds	5,870	—	2,917	—
State and municipal bond obligations	—	24,224	—	40,227
U.S. treasury bonds	—	6,690	—	3,491
Corporate bonds	—	8,270	—	6,427
Total	$ 98,697	$ 39,184	$ 133,464	$ 50,145

The fair value of debt securities by contractual maturity is as follows (in thousands):

	August 31, 2018	November 30, 2017
Due in one year or less	$ 26,209	$ 22,333
Due after one year (1)	12,975	27,812
Total	$ 39,184	$ 50,145

(1) Includes state and municipal bond obligations, U.S. treasury bonds, and corporate bonds, which are securities representing investments available for current operations and are classified as current on the condensed consolidated balance sheets.

We did not hold any investments with continuous unrealized losses as of August 31, 2018 or November 30, 2017.

Note 3: Derivative Instruments

We generally use forward contracts that are not designated as hedging instruments to hedge economically the impact of the variability in exchange rates on intercompany accounts receivable and loans receivable denominated in certain foreign currencies. We generally do not hedge the net assets of our international subsidiaries.

All forward contracts are recorded at fair value on the consolidated balance sheets at the end of each reporting period and expire from 30 days to one year. At August 31, 2018, $1.8 million was recorded in other accrued liabilities on the condensed consolidated balance sheet. At November 30, 2017, $0.2 million and $0.2 million was recorded in other accrued liabilities and other assets, respectively, on the consolidated balance sheet. In the three and nine months ended August 31, 2018, realized and unrealized losses of $1.0 million and $4.1 million, respectively, from our forward contracts were recognized in foreign currency (loss) gain, net, on the condensed consolidated statements of operations. In the three and nine months ended August 31, 2017, realized and unrealized gains of $5.2 million and $9.6 million, respectively, from our forward contracts were recognized in foreign currency (loss) gain, net on the condensed consolidated statements of operations. The losses and gains were substantially offset by realized and unrealized gains and losses on the offsetting positions.

The table below details outstanding foreign currency forward contracts where the notional amount is determined using contract exchange rates (in thousands):

	August 31, 2018		November 30, 2017	
	Notional Value	Fair Value	Notional Value	Fair Value
Forward contracts to sell U.S. dollars	$ 149,204	$ (1,806)	$ 119,192	$ (27)
Forward contracts to purchase U.S. dollars	—	—	462	—
Total	$ 149,204	$ (1,806)	$ 119,654	$ (27)

Note 4: Fair Value Measurements

Recurring Fair Value Measurements

The following table details the fair value measurements within the fair value hierarchy of our financial assets and liabilities at August 31, 2018 (in thousands):

		Fair Value Measurements Using		
	Total Fair Value	Level 1	Level 2	Level 3
Assets				
Money market funds	$ 5,870	$ 5,870	$ —	$ —
State and municipal bond obligations	24,224	—	24,224	—
U.S. treasury bonds	6,690	—	6,690	—
Corporate bonds	8,270	—	8,270	—
Liabilities				
Foreign exchange derivatives	$ (1,806)	$ —	$ (1,806)	$ —

The following table details the fair value measurements within the fair value hierarchy of our financial assets and liabilities at November 30, 2017 (in thousands):

		Fair Value Measurements Using		
	Total Fair Value	Level 1	Level 2	Level 3
Assets				
Money market funds	$ 2,917	$ 2,917	$ —	$ —
State and municipal bond obligations	40,227	—	40,227	—
U.S. treasury bonds	3,491	—	3,491	—
Corporate bonds	6,427	—	6,427	—
Liabilities				
Foreign exchange derivatives	$ (27)	$ —	$ (27)	$ —

When developing fair value estimates, we maximize the use of observable inputs and minimize the use of unobservable inputs. When available, we use quoted market prices to measure fair value. The valuation technique used to measure fair value for our Level 1 and Level 2 assets is a market approach, using prices and other relevant information generated by market transactions involving identical or comparable assets. If market prices are not available, the fair value measurement is based on models that use primarily market based parameters including yield curves, volatilities, credit ratings and currency rates. In certain cases where market rate assumptions are not available, we are required to make judgments about assumptions market participants would use to estimate the fair value of a financial instrument.

We did not have any nonrecurring fair value measurements during the nine months ended August 31, 2018.

Note 5: Intangible Assets and Goodwill

Intangible Assets

Intangible assets are comprised of the following significant classes (in thousands):

	August 31, 2018			November 30, 2017		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Purchased technology	$ 154,301	$ (105,451)	$ 48,850	$ 154,301	$ (88,224)	$ 66,077
Customer-related	67,802	(54,024)	13,778	67,802	(46,230)	21,572
Trademarks and trade names	17,740	(12,656)	5,084	17,740	(10,495)	7,245
Total	$ 239,843	$ (172,131)	$ 67,712	$ 239,843	$ (144,949)	$ 94,894

In the three and nine months ended August 31, 2018, amortization expense related to intangible assets was $8.8 million and $27.2 million, respectively. In the three and nine months ended August 31, 2017, amortization expense related to intangible assets was $9.1 million and $23.9 million, respectively.

Future amortization expense for intangible assets as of August 31, 2018, is as follows (in thousands):

Remainder of 2018	$ 8,873
2019	34,932
2020	10,152
2021	10,033
2022	3,722
Total	$ 67,712

Goodwill

Changes in the carrying amount of goodwill in the nine months ended August 31, 2018 are as follows (in thousands):

Balance, November 30, 2017	$ 315,041
Translation adjustments	(90)
Balance, August 31, 2018	$ 314,951

Changes in the goodwill balances by reportable segment in the nine months ended August 31, 2018 are as follows (in thousands):

	November 30, 2017	Translation adjustments	August 31, 2018
OpenEdge	$ 249,036	$ (90)	$ 248,946
Data Connectivity and Integration	19,040	—	19,040
Application Development and Deployment	46,965	—	46,965
Total goodwill	$ 315,041	$ (90)	$ 314,951

During the quarter ending August 31, 2018, no triggering events occurred that would indicate that it is more likely than not that the carrying values of any of our reporting units exceeded their fair values.

Note 6: Business Combinations

Kinvey Acquisition

On June 1, 2017, we acquired by merger 100% of the outstanding securities of Kinvey for an aggregate sum of $49.2 million, which includes approximately $0.3 million held-back from the founder of Kinvey as an incentive to remain with the Company for at least two years following the acquisition. The $0.3 million held-back is being recorded to expense over the service period. Kinvey allows developers to set up, use, and operate a serverless cloud backend for any native, hybrid, web, or IoT app built using any development tools. The acquisition was accounted for as a business combination, and accordingly, the results of operations of Kinvey are included in our operating results as part of the OpenEdge business segment from the date of acquisition. We paid the purchase price in cash from available funds.

The total consideration, less the $0.3 million held-back discussed above, which is considered to be a compensation arrangement, was allocated to Kinvey's tangible assets, identifiable intangible assets and assumed liabilities based on their estimated fair values. The excess of the total consideration, less the amount held-back from the founder, over the tangible assets, identifiable intangible assets and assumed liabilities was recorded as goodwill. The allocation of the purchase price was completed in the fourth quarter of fiscal year 2017 upon the finalization of our valuation of identifiable intangible assets and deferred taxes.

The allocation of the purchase price is as follows (in thousands):

	Total	Life
Net working capital	$ (963)	
Property, plant and equipment	26	
Purchased technology	22,100	5 Years
Trade name	1,800	5 Years
Customer relationships	100	5 Years
Net deferred tax assets	1,465	
Goodwill	24,351	
Net assets acquired	$ 48,879	

The fair value of the intangible assets was estimated using the income approach in which the after-tax cash flows are discounted to present value. The cash flows are based on estimates used to price the acquisition, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model as well as the weighted average cost of capital.

Deferred taxes include deferred tax liabilities resulting from the tax effects of fair value adjustments related to identifiable intangible assets, which are more than offset by the value of deferred tax assets acquired from Kinvey. Tangible assets acquired and assumed liabilities were recorded at fair value.

We recorded the excess of the purchase price over the identified tangible and intangible assets as goodwill. We believe that the investment value of the future enhancement of our product and solution offerings created as a result of this acquisition has principally contributed to a purchase price that resulted in the recognition of $24.4 million of goodwill, which is not deductible for tax purposes.

Acquisition-related transaction costs (e.g., legal, due diligence, valuation, and other professional fees) are not included as a component of consideration paid, but are required to be expensed as incurred. We incurred minimal acquisition-related costs during the three and nine months ended August 31, 2018, which are included in acquisition-related expenses on our condensed consolidated statements of operations.

We have not disclosed the amount of revenues and earnings of Kinvey since acquisition, nor pro forma financial information, as those amounts are not significant to our consolidated financial statements.

DataRPM Acquisition

On March 1, 2017, we acquired by merger 100% of the outstanding securities of DataRPM for an aggregate sum of $30.0 million. Approximately $1.7 million of the purchase price was paid to DataRPM’s founders in the form of restricted stock units, subject to a two-year vesting schedule and continued employment. DataRPM is a leader in cognitive predictive maintenance for the industrial IoT ("IIoT") market. The acquisition was accounted for as a business combination, and accordingly, the results of operations of DataRPM are included in our operating results as part of the OpenEdge business segment from the date of acquisition. We paid the purchase price in cash from available funds.

The total consideration, less the fair value of the granted restricted stock units discussed above, which are considered compensation arrangements, was allocated to DataRPM’s tangible assets, identifiable intangible assets and assumed liabilities based on their estimated fair values. The excess of the total consideration, less the fair value of the restricted stock units, over the tangible assets, identifiable intangible assets and assumed liabilities was recorded as goodwill. The allocation of the purchase price was completed in the fourth quarter of fiscal year 2017 upon the finalization of our valuation of identifiable intangible assets and deferred taxes.

The allocation of the purchase price is as follows (in thousands):

	Total	Life
Net working capital	$ (174)	
Property, plant and equipment	68	
Purchased technology	19,900	5 Years
Trade name	800	5 Years
Customer relationships	100	5 Years
Deferred taxes	(5,006)	
Goodwill	12,583	
Net assets acquired	$ 28,271	

The fair value of the intangible assets was estimated using the income approach in which the after-tax cash flows are discounted to present value. The cash flows are based on estimates used to price the acquisition, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model as well as the weighted average cost of capital.

Deferred taxes include deferred tax liabilities resulting from the tax effects of fair value adjustments related to identifiable intangible assets, partially offset by the fair value of deferred tax assets acquired from DataRPM. Tangible assets acquired and assumed liabilities were recorded at fair value.

We recorded the excess of the purchase price over the identified tangible and intangible assets as goodwill. We believe that the investment value of the future enhancement of our product and solution offerings created as a result of this acquisition has principally contributed to a purchase price that resulted in the recognition of $12.6 million of goodwill, which is not deductible for tax purposes.

As discussed above, approximately $1.7 million of the total consideration was paid to DataRPM’s founders in restricted stock units, subject to a vesting schedule and continued employment. We concluded that the restricted stock units are compensation arrangements and we are recognizing stock-based compensation expense in accordance with the vesting schedule over the service period of the awards, which is two-years. During the three months ended August 31, 2018, we incurred minimal stock-based compensation expense related to these restricted stock units. During the nine months ended August 31, 2018, as a result of the termination of employment of one of the founders, we recorded a minimal credit to stock-based compensation expense related to forfeitures. These amounts are included in operating expenses on our condensed consolidated statements of operations.

Acquisition-related transaction costs (e.g., legal, due diligence, valuation, and other professional fees) are not included as a component of consideration transferred, but are required to be expensed as incurred. We did not incur any acquisition-related costs during the three and nine months ended August 31, 2018 and do not expect to incur additional material costs with respect to this acquisition.

We have not disclosed the amount of revenues and earnings of DataRPM since acquisition, nor pro forma financial information, as those amounts are not significant to our consolidated financial statements.

Note 7: Term Loan and Line of Credit

Our credit agreement provides for a $123.8 million secured term loan and a $150.0 million secured revolving credit facility. The revolving credit facility may be made available in U.S. Dollars and certain other currencies and may be increased by up to an additional $125.0 million if the existing or additional lenders are willing to make such increased commitments. The revolving credit facility has sublimits for swing line loans up to $25.0 million and for the issuance of standby letters of credit in a face amount up to $25.0 million. We expect to use the revolving credit facility for general corporate purposes, including acquisitions of other businesses, and may also use it for working capital.

The credit facility matures on November 20, 2022, when all amounts outstanding will be due and payable in full. The revolving credit facility does not require amortization of principal. The outstanding balance of the term loan as of August 31, 2018 was $119.1 million, with $6.2 million due in the next 12 months. The term loan requires repayment of principal at the end of each fiscal quarter, beginning with the fiscal quarter ended February 28, 2018. The principal repayment amounts are in accordance with the following schedule: (i) eight payments of $1.5 million each, (ii) four payments of $2.3 million each, (iii) four payments of $3.1 million each, (iv) three payments of $3.9 million each, and (v) the last payment is of the remaining principal amount. Any amounts outstanding under the term loan thereafter would be due on the maturity date. The term loan may be prepaid before maturity in whole or in part at our option without penalty or premium. As of August 31, 2018, the carrying value of the term loan approximates the fair value, based on Level 2 inputs (observable market prices in less than active markets), as the interest rate is variable over the selected interest period and is similar to current rates at which we can borrow funds. The interest rate of the credit facility as of August 31, 2018 was 3.63%.

Costs incurred to obtain our long-term debt of $1.8 million are recorded as debt issuance costs as a direct deduction from the carrying value of the debt liability on our condensed consolidated balance sheets as of August 31, 2018. These costs are being amortized over the term of the debt agreement using the effective interest rate method. Amortization expense related to the debt issuance costs of $0.1 million for the three months ended August 31, 2018 and August 31, 2017 and $0.3 million for the nine months ended August 31, 2018 and August 31, 2017, respectively, is recorded in interest expense on our condensed consolidated statements of operations.

Revolving loans may be borrowed, repaid, and reborrowed until November 20, 2022, at which time all amounts outstanding must be repaid. As of August 31, 2018, there were no amounts outstanding under the revolving line and $1.3 million of letters of credit.

As of August 31, 2018, aggregate principal payments of long-term debt for the next five years are (in thousands):

Remainder of 2018	$	1,546
2019		6,188
2020		9,281
2021		12,375
2022		89,719
Total	$	119,109

Note 8: Common Stock Repurchases

In the three and nine months ended August 31, 2018, we repurchased and retired 0.5 million shares of our common stock for $20.0 million and 2.6 million shares for $110.0 million, respectively. In the three and nine months ended August 31, 2017, we repurchased and retired 0.6 million shares for $19.0 million and 1.5 million shares for $43.9 million, respectively. The shares were repurchased in all periods as part of our Board of Directors authorized share repurchase program.

In September 2017, our Board of Directors increased our total share repurchase authorization to $250.0 million. As of August 31, 2018, there was $110.0 million remaining under this current authorization.

Note 9: Stock-Based Compensation

Stock-based compensation expense reflects the fair value of stock-based awards, less the present value of expected dividends, measured at the grant date and recognized over the relevant service period. We estimate the fair value of each stock-based award on the measurement date using the current market price of the stock, the Black-Scholes option valuation model, or the Monte Carlo Simulation valuation model.

During fiscal years 2016 and 2017, we granted performance-based restricted stock units that include a three-year market condition under a Long-Term Incentive Plan (“LTIP”) where the performance measurement period is three years. Vesting of the LTIP awards is based on our level of attainment of specified total shareholder return ("TSR") targets relative to the percentage appreciation of a specified index of companies for the respective three-year periods and is also subject to the continued employment of the grantees. In order to estimate the fair value of such awards, we used a Monte Carlo Simulation valuation model.

During the first quarter of fiscal year 2018, we granted performance-based restricted stock units that include two performance metrics under the LTIP where the performance measurement period is three years. Vesting of the 2018 LTIP awards is as follows: (i) 50% is based on the three-year market condition as described above (TSR), and (ii) 50% is based on achievement of a three-year cumulative performance condition (operating income). In order to estimate the fair value of such awards, we used a Monte Carlo Simulation valuation model for the market condition portion of the award, and used the closing price of our common stock on the date of grant, less the present value of expected dividends, for the portion related to the performance condition.

The Black-Scholes and Monte Carlo Simulation valuation models incorporate assumptions as to stock price volatility, the expected life of options or awards, a risk-free interest rate and dividend yield. We recognize stock-based compensation expense related to options and restricted stock units on a straight-line basis over the service period of the award, which is generally 4 years for options and 3 years for restricted stock units. We recognize stock-based compensation expense related to our employee stock purchase plan using an accelerated attribution method.

The following table provides the classification of stock-based compensation as reflected on our condensed consolidated statements of operations (in thousands):

	Three Months Ended		Nine Months Ended	
	August 31, 2018	August 31, 2017	August 31, 2018	August 31, 2017
Cost of maintenance and services	$ (96)	$ 239	$ 419	$ 790
Sales and marketing	762	808	2,127	1,371
Product development	1,744	1,645	5,774	2,699
General and administrative	2,156	1,604	6,396	4,699
Total stock-based compensation	$ 4,566	$ 4,296	$ 14,716	$ 9,559

Note 10: Accumulated Other Comprehensive Loss

The following table summarizes the changes in accumulated balances of other comprehensive loss during the nine months ended August 31, 2018 (in thousands):

	Foreign Currency Translation Adjustment	Unrealized (Losses) Gains on Investments	Accumulated Other Comprehensive Loss
Balance, December 1, 2017	$ (18,770)	$ (229)	$ (18,999)
Other comprehensive loss before reclassifications, net of tax	(7,137)	24	(7,113)
Balance, August 31, 2018	$ (25,907)	$ (205)	$ (26,112)

The tax effect on accumulated unrealized (losses) gains on investments was minimal as of August 31, 2018 and November 30, 2017.

Note 11: Restructuring Charges

The following table provides a summary of activity for our restructuring actions, which are detailed further below (in thousands):

	Excess Facilities and Other Costs	Employee Severance and Related Benefits	Total
Balance, December 1, 2017	$ 570	$ 3,556	$ 4,126
Costs incurred	1,132	1,250	2,382
Cash disbursements	(1,172)	(4,752)	(5,924)
Translation adjustments and other	45	10	55
Balance, August 31, 2018	$ 575	$ 64	$ 639

During fiscal year 2017, we undertook certain operational restructuring initiatives intended to significantly reduce annual costs. As part of this action, management committed to a new strategic plan highlighted by a new product strategy and a streamlined operating approach. To execute these operational restructuring initiatives, we reduced our global workforce by over 20%. These workforce reductions occurred in substantially all functional units and across all geographies in which we operate. We also consolidated offices in various locations during fiscal year 2017 and fiscal year 2018. We expect to incur additional expenses related to facility closures as part of this restructuring action through fiscal year 2019, but we do not expect these additional costs to be material.

Restructuring expenses are related to employee costs, including severance, health benefits and outplacement services (but excluding stock-based compensation), facilities costs, which include fees to terminate lease agreements and costs for unused space, net of sublease assumptions, and other costs, which include asset impairment charges.

As part of this fiscal year 2017 restructuring, for the three and nine months ended August 31, 2018, we incurred expenses of $0.1 million and $2.4 million, respectively, which are recorded in restructuring expenses on the condensed consolidated statements of operations.

Cash disbursements for expenses incurred to date under this restructuring are expected to be made through fiscal year 2019. The short-term portion of the restructuring reserve of $0.5 million is included in other accrued liabilities and the long-term portion of $0.1 million is included in other noncurrent liabilities on the condensed consolidated balance sheets at August 31, 2018.

Note 12: Income Taxes

Our income tax provision for the third quarter of fiscal years 2018 and 2017 reflects our estimate of the effective tax rates expected to be applicable for the full fiscal years, adjusted for any discrete events which are recorded in the period in which they occur. The estimates are reevaluated each quarter based on our estimated tax expense for the full fiscal year.

Our effective income tax rate was 17% in the third quarter of fiscal year 2018 compared to 41% in the third quarter of fiscal year 2017, and 21% in the first nine months of fiscal year 2018 compared to 44% in the same period last year. The primary reason for the decrease in the effective rate is due to the enactment of tax reform in the United States in December 2017.

During the first quarter of fiscal year 2018, the Tax Cuts and Jobs Act (the "Act") was enacted in the United States. The Act reduces the U.S. federal corporate tax rate from 35% to 21% effective January 1, 2018, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and, effective fiscal year 2019, creates new taxes on certain foreign sourced earnings. In December 2017, the SEC issued SAB 118, which directs taxpayers to consider the impact of the U.S. legislation as “provisional” when it does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete its accounting for the change in tax law. As of August 31, 2018, we have not completed our accounting for the tax effects of enactment of the Act, however, as described below, we have made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax.

As a result of the Act, we re-measured certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future, which is generally 21%. However, we are still analyzing certain aspects of the Act and refining our calculations, which could potentially affect the measurement of these balances or potentially give rise to changes in deferred tax amounts. During the first quarter of fiscal year 2018, we recognized a provisional tax benefit of $1.4 million related to the re-measurement of our U.S. deferred tax balances. During the third quarter of fiscal year 2018, we recognized an additional provisional tax benefit of $0.6 million related to the re-measurement of our U.S. deferred tax balances for the true-up of deferred tax assets and liabilities that we expect upon the filing of our fiscal year 2017 U.S. income tax return in the fourth quarter of fiscal year 2018.

The one-time transition tax associated with the Act is based on our total post-1986 earnings and profits ("E&P") that we previously deferred from U.S. federal taxation. During the first quarter of fiscal year 2018, we made a provisional determination that we have an accumulated deficit in our foreign subsidiaries' E&P and thus do not have a transition tax associated with deferred foreign earnings related to the Act. We have not yet completed our calculation of the total post-1986 E&P for our foreign subsidiaries or the tax pools of our foreign subsidiaries. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when we finalize the calculation of post-1986 foreign E&P previously deferred from U.S. federal taxation and finalize the amounts held in cash or other specified assets.

Our Federal income tax returns have been examined or are closed by statute for all years prior to fiscal year 2015. Our state income tax returns have been examined or are closed by statute for all years prior to fiscal year 2013.

Tax authorities for certain non-U.S. jurisdictions are also examining returns. With some exceptions, we are generally not subject to tax examinations in non-U.S. jurisdictions for years prior to fiscal year 2012.

Note 13: Earnings per share

We compute basic earnings per share using the weighted average number of common shares outstanding. We compute diluted earnings per share using the weighted average number of common shares outstanding plus the effect of outstanding dilutive stock options, restricted stock units and deferred stock units, using the treasury stock method. The following table sets forth the calculation of basic and diluted earnings per share on an interim basis (in thousands, except per share data):

	Three Months Ended		Nine Months Ended	
	August 31, 2018	August 31, 2017	August 31, 2018	August 31, 2017
Net income	$ 16,746	$ 11,172	$ 45,061	$ 20,988
Weighted average shares outstanding	45,130	48,071	45,730	48,342
Dilutive impact from common stock equivalents	446	299	650	289
Diluted weighted average shares outstanding	45,576	48,370	46,380	48,631
Basic earnings per share	$ 0.37	$ 0.23	$ 0.99	$ 0.43
Diluted earnings per share	$ 0.37	$ 0.23	$ 0.97	$ 0.43

We excluded stock awards representing approximately 690,000 shares and 577,000 shares of common stock from the calculation of diluted earnings per share in the three and nine months ended August 31, 2018, respectively, because these awards were anti-dilutive. In the three and nine months ended August 31, 2017, we excluded stock awards representing 905,000 shares and 648,000 shares of common stock, respectively, from the calculation of diluted earnings per share as they were anti-dilutive.

Note 14: Business Segments and International Operations

Operating segments are components of an enterprise that engage in business activities for which discrete financial information is available and regularly reviewed by the chief operating decision maker in deciding how to allocate resources and assess performance. Our chief operating decision maker is our Chief Executive Officer.

We operate as three distinct business segments: OpenEdge, Data Connectivity and Integration, and Application Development and Deployment.

We do not manage our assets or capital expenditures by segment or assign other income (expense) and income taxes to segments. We manage and report such items on a consolidated company basis.

The following table provides revenue and contribution margin from our reportable segments and reconciles to our consolidated income before income taxes:

(In thousands)	Three Months Ended August 31, 2018	Three Months Ended August 31, 2017	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017
Segment revenue:				
OpenEdge	$ 68,029	$ 68,135	$ 204,404	$ 198,533
Data Connectivity and Integration	7,597	8,987	20,989	22,911
Application Development and Deployment	20,057	20,188	60,439	60,049
Total revenue	95,683	97,310	285,832	281,493
Segment costs of revenue and operating expenses:				
OpenEdge	16,419	18,374	47,194	52,538
Data Connectivity and Integration	1,520	2,200	4,823	6,531
Application Development and Deployment	7,071	6,369	20,068	19,896
Total costs of revenue and operating expenses	25,010	26,943	72,085	78,965
Segment contribution margin:				
OpenEdge	51,610	49,761	157,210	145,995
Data Connectivity and Integration	6,077	6,787	16,166	16,380
Application Development and Deployment	12,986	13,819	40,371	40,153
Total contribution margin	70,673	70,367	213,747	202,528
Other unallocated expenses (1)	48,490	50,068	152,008	160,723
Income from operations	22,183	20,299	61,739	41,805
Other (expense) income, net	(1,961)	(1,400)	(4,830)	(4,299)
Income before income taxes	$ 20,222	$ 18,899	$ 56,909	$ 37,506

(1) The following expenses are not allocated to our segments as we manage and report our business in these functional areas on a consolidated basis only: certain product development and corporate sales and marketing expenses, customer support, administration, amortization of acquired intangibles, stock-based compensation, fees related to shareholder activist, restructuring, and acquisition-related expenses.

Our revenues are derived from licensing our products, and from related services, which consist of maintenance, hosting services, and consulting and education. Information relating to revenue from customers by revenue type is as follows (in thousands):

(In thousands)	Three Months Ended August 31, 2018	Three Months Ended August 31, 2017	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017
Software licenses	$ 27,204	$ 28,529	$ 78,986	$ 78,443
Maintenance	60,566	60,536	184,368	179,572
Services	7,913	8,245	22,478	23,478
Total revenue	$ 95,683	$ 97,310	$ 285,832	$ 281,493

In the following table, revenue attributed to North America includes sales to customers in the U.S. and sales to certain multinational organizations. Revenue from EMEA, Latin America and the Asia Pacific region includes sales to customers in each region plus sales from the U.S. to distributors in these regions. Information relating to revenue from external customers from different geographical areas is as follows (in thousands):

	Three Months Ended		Nine Months Ended	
(In thousands)	August 31, 2018	August 31, 2017	August 31, 2018	August 31, 2017
North America	$ 52,212	$ 55,703	$ 154,676	$ 157,438
EMEA	33,422	31,830	101,769	92,320
Latin America	4,341	5,009	13,058	15,669
Asia Pacific	5,708	4,768	16,329	16,066
Total revenue	$ 95,683	$ 97,310	$ 285,832	$ 281,493

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

Cautionary Note Regarding Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 contains certain safe harbor provisions regarding forward-looking statements. This Form 10-Q, and other information provided by us or statements made by our directors, officers or employees from time to time, may contain "forward-looking" statements and information, which involve risks and uncertainties. Actual future results may differ materially. Statements indicating that we "believe," "may," "could," "would," "might," "should," "expect," "intend," "plan," "target," "anticipate" and "continue," are forward-looking, as are other statements concerning future financial results, product offerings or other events that have not yet occurred. There are various factors that could cause actual results or events to differ materially from those anticipated by the forward-looking statements, including but not limited to the following: (1) Economic, geopolitical and market conditions can adversely affect our business, results of operations and financial condition, including our revenue growth and profitability, which in turn could adversely affect our stock price. (2) We may fail to achieve our financial forecasts due to such factors as delays or size reductions in transactions, fewer large transactions in a particular quarter, fluctuations in currency exchange rates, or a decline in our renewal rates for contracts. (3) Our ability to successfully manage transitions to new business models and markets, including an increased emphasis on a cloud and subscription strategy, may not be successful. (4) If we are unable to develop new or sufficiently differentiated products and services, or to enhance and improve our existing products and services in a timely manner to meet market demand, partners and customers may not purchase new software licenses or subscriptions or purchase or renew support contracts. (5) We depend upon our extensive partner channel and we may not be successful in retaining or expanding our relationships with channel partners. (6) Our international sales and operations subject us to additional risks that can adversely affect our operating results, including risks relating to foreign currency gains and losses. (7) If the security measures for our software, services or other offerings are compromised or subject to a successful cyber-attack, or if such offerings contain significant coding or configuration errors, we may experience reputational harm, legal claims and financial exposure. (8) We have made acquisitions, and may make acquisitions in the future, and those acquisitions may not be successful, may involve unanticipated costs or other integration issues or may disrupt our existing operations. (9) Those factors discussed in Part II, Item 1A (Risk Factors) in this Quarterly Report on Form 10-Q, and in Part I, Item 1A (Risk Factors) in our Annual Report on Form 10-K for the fiscal year ended November 30, 2017, as amended ("Annual Report"). Although we have sought to identify the most significant risks to our business, we cannot predict whether, or to what extent, any of such risks may be realized. We also cannot assure you that we have identified all possible issues which we might face. We undertake no obligation to update any forward-looking statements that we make.

Use of Constant Currency

Revenue from our international operations has historically represented a substantial portion of our total revenue. As a result, our revenue results have been impacted, and we expect will continue to be impacted, by fluctuations in foreign currency exchange rates. For example, if the local currencies of our foreign subsidiaries strengthen, our consolidated results stated in U.S. dollars are positively impacted.

As exchange rates are an important factor in understanding period to period comparisons, we present revenue growth rates on a constant currency basis, which helps improve the understanding of our revenue results and our performance in comparison to prior periods. The constant currency information presented is calculated by translating current period results using prior *period weighted average foreign currency exchange rates. These results should be considered in addition to, not as a substitute for, results reported in accordance with accounting principles generally accepted in the United States of America ("GAAP").*

Overview

Progress Software Corporation ("Progress," the "Company," "we," "us," or "our") offers the leading platform for developing and deploying strategic business applications. We enable customers and partners to deliver modern, high-impact digital experiences with a fraction of the effort, time and cost. Progress offers powerful tools for easily building adaptive user experiences across any type of device or touchpoint, award-winning machine learning that enables cognitive capabilities to be a part of any application, the flexibility of a serverless cloud to deploy modern apps, business rules, web content management, plus leading data connectivity technology. Over 1,700 independent software vendors, 100,000 enterprise customers, and 2 million developers rely on Progress to power their applications. We operate as three distinct segments: OpenEdge, Data Connectivity and Integration, and Application Development and Deployment.

Beginning in late October 2016, with the appointment of Yogesh Gupta as our new Chief Executive Officer, our Board of Directors and executive management team undertook a comprehensive review of our strategy and operations.

On January 16, 2017, we announced a new strategic plan highlighted by a new product strategy and a streamlined operating approach with a tighter focus on areas of strength to more efficiently drive revenue. The key tenets of the strategic plan are as follows:

- **Streamlined Operating Approach**. In fiscal year 2017, we adapted our organization and operating principles to focus primarily on customer and partner retention and success for many of our core products. For selected products that have new customer acquisition potential, we also strengthened our demand generation and high volume, low touch e-commerce capabilities.

- **Product Strategy**. As part of the strategic plan implemented in early 2017, we undertook a new product strategy to provide the platform and tools enterprises need to build next generation applications that drive their businesses, known as “Cognitive Applications.” We offer this platform to both new customers and partners as well as our existing OpenEdge partner and customer ecosystems. Our platform for Cognitive Applications enables developers to build the most modern applications quickly and easily, and includes:

    - Our leading UI development tools, which enable organizations to easily build engaging user interfaces for any device or front end;
    - Our NativeScript offering, which allows developers to use JavaScript to build native applications across multiple mobile platforms;
    - A modern high productivity cloud backend application platform that runs on any cloud, is secure, high-performing, and highly-scalable while supporting all modern user interfaces;
    - Automated and intuitive machine learning capabilities for accelerating the creation and delivery of cognitive applications;
    - Our data connectivity and integration capabilities;
    - Our business logic and rules capabilities; and
    - Web Content Management for delivering personalized and engaging digital experiences.

- **Restructuring**. With the adoption of our new product strategy in fiscal year 2017, we discontinued our investment in our Digital Factory strategy and re-aligned our resources consistent with our core operating approach. To that end, during fiscal year 2017, we implemented restructuring efforts including the consolidation of facilities, implementation of a simplified organizational structure and a reduction of marketing and other external expenses. In addition, we reduced headcount by over 400 employees, totaling over 20% of our workforce. We reduced our full year expenses by over $30 million by the end of fiscal year 2017.

We derive a significant portion of our revenue from international operations, which are primarily conducted in foreign currencies. As a result, changes in the value of these foreign currencies relative to the U.S. dollar have significantly impacted our results of operations and may impact our future results of operations. For example, in late fiscal 2017 and the first six months of fiscal 2018, the value of the U.S. dollar weakened in comparison to certain foreign currencies, including in Europe. Since approximately one-third of our revenue is denominated in foreign currency, our revenue results during those periods were positively impacted. However, during our third fiscal quarter, the U.S. dollar strengthened in comparison to those currencies, negatively impacting our revenue during the period. We expect that future fluctuations in foreign currency exchange rates will continue to impact our results.

In September 2017, we announced a new capital allocation strategy pursuant to which we are targeting to return approximately 50% of our annual cash flows from operations to stockholders in the form of share repurchases and 25-30% through dividends. To that end, our Board of Directors increased our total share repurchase authorization to $250.0 million. As of August 31, 2018, there is $110.0 million remaining under this current authorization. We expect to repurchase an additional $10 million of shares of our common stock in the remainder of fiscal year 2018 and the remaining $100 million in fiscal year 2019. However, the timing and amount of any shares repurchased will be determined by management based on its evaluation of market conditions and other factors, and we may choose to suspend, expand or discontinue the repurchase program at any time.

On September 21, 2018, our Board of Directors approved an 11% increase to our quarterly cash dividend from $0.14 to $0.155 per share of common stock, which will be paid on December 17, 2018 to shareholders of record as of the close of business on December 3, 2018. We began paying quarterly cash dividends of $0.125 per share of common stock to Progress stockholders in December 2016 and increased the quarterly cash dividend to $0.14 per share in September 2017. We expect to continue paying quarterly cash dividends in subsequent quarters consistent with our capital allocation strategy. However, we may terminate or modify this program at any time without notice.

We expect to continue to evaluate possible acquisitions and other strategic transactions designed to expand our business and/or add complementary products and technologies to our existing product sets. As a result, our expected uses of cash could change, our cash position could be reduced and we may incur additional debt obligations to the extent we complete additional acquisitions. However, we believe that existing cash balances, together with funds generated from operations and amounts available under our credit facility, will be sufficient to finance our operations and meet our foreseeable cash requirements, including quarterly cash dividends and stock repurchases to Progress stockholders, through at least the next twelve months.

During the first quarter of fiscal year 2018, the Tax Cuts and Jobs Act was enacted in the United States. The Act reduces the U.S. federal corporate tax rate from 35% to 21% effective January 1, 2018, requires companies to pay a one-time transition tax on earnings of certain foreign subsidiaries that were previously tax deferred, and creates new taxes on certain foreign sourced earnings. In December 2017, the Securities and Exchange Commission (the "SEC") issued SAB 118, which directs taxpayers to consider the impact of the U.S. legislation as “provisional” when it does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete its accounting for the change in tax law. As of August 31, 2018, we have not completed our accounting for the tax effects of enactment of the Act, however, as described elsewhere in this Form 10-Q, we have made a reasonable estimate of the effects on our existing deferred tax balances and the one-time transition tax.

Results of Operations

Revenue

	Three Months Ended		Percentage Change	
(In thousands)	August 31, 2018	August 31, 2017	As Reported	Constant Currency
Revenue	$ 95,683	$ 97,310	(2)%	(1)%

	Nine Months Ended		Percentage Change	
(In thousands)	August 31, 2018	August 31, 2017	As Reported	Constant Currency
Revenue	$ 285,832	$ 281,493	2%	—%

Total revenue decreased in the third quarter of fiscal year 2018 as compared to the same quarter last year due to the strengthening of the U.S. dollar during the quarter, which resulted in an unfavorable impact from foreign currency exchange rates, and a decrease in license revenue as further described below. In addition, total revenue increased in the first nine months of fiscal year 2018 as compared to the same period last year. The increase was primarily due to a favorable impact of currency exchange rates during the first nine months of fiscal year 2018 and an increase in maintenance revenue. Changes in prices from fiscal year 2017 to 2018 did not have a significant impact on our revenue.

Software License Revenue

(In thousands)	Three Months Ended August 31, 2018	Three Months Ended August 31, 2017	Percentage Change As Reported	Percentage Change Constant Currency
Software Licenses	$ 27,204	$ 28,529	(5)%	(4)%
As a percentage of total revenue	*28%*	*29%*		

(In thousands)	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017	Percentage Change As Reported	Percentage Change Constant Currency
Software Licenses	$ 78,986	$ 78,443	1%	(1)%
As a percentage of total revenue	*28%*	*28%*		

Software license revenue decreased in the third quarter of fiscal year 2018 as compared to the same period last year due to a decrease in software license revenue in our Data Connectivity and Integration and Application Development and Deployment segments, partially offset by an increase in license sales in our OpenEdge segment. Software license revenue increased in the first nine months of fiscal year 2018 as compared to the same period last year primarily due to a favorable impact from currency exchange rates and an increase in license sales in our OpenEdge segment. The increase was offset by a decline in software license revenue in our Data Connectivity and Integration and Application Development and Deployment segments.

Maintenance and Services Revenue

(In thousands)	Three Months Ended August 31, 2018	Three Months Ended August 31, 2017	Percentage Change As Reported	Percentage Change Constant Currency
Maintenance	$ 60,566	$ 60,536	— %	1 %
As a percentage of total revenue	*63%*	*62%*		
Services	7,913	8,245	(4)%	(4)%
As a percentage of total revenue	*8%*	*8%*		
Total maintenance and services revenue	$ 68,479	$ 68,781	— %	— %
As a percentage of total revenue	*72%*	*71%*		

(In thousands)	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017	Percentage Change As Reported	Percentage Change Constant Currency
Maintenance	$ 184,368	$ 179,572	3 %	1 %
As a percentage of total revenue	*65%*	*64%*		
Services	22,478	23,478	(4)%	(5)%
As a percentage of total revenue	*8%*	*8%*		
Total maintenance and services revenue	$ 206,846	$ 203,050	2 %	— %
As a percentage of total revenue	*72%*	*72%*		

Maintenance and services revenue remained flat in the third quarter of fiscal year 2018 as compared to the same period last year. Maintenance revenue increased in the first nine months of fiscal year 2018 due to a favorable impact from currency exchange rates and an increase in maintenance revenue in our Application Development and Deployment and OpenEdge segments, partially offset by a decline in our Data Connectivity and Integration segment. Services revenue decreased in all periods primarily due to lower professional services revenue from our OpenEdge segment.

Revenue by Region

(In thousands)	Three Months Ended		Percentage Change	
	August 31, 2018	August 31, 2017	As Reported	Constant Currency
North America	$ 52,212	$ 55,703	(6)%	(6)%
As a percentage of total revenue	*55%*	*57%*		
Europe, the Middle East and Africa ("EMEA")	$ 33,422	$ 31,830	5 %	5 %
As a percentage of total revenue	*35%*	*33%*		
Latin America	$ 4,341	$ 5,009	(13)%	(1)%
As a percentage of total revenue	*4%*	*5%*		
Asia Pacific	$ 5,708	$ 4,768	20 %	23 %
As a percentage of total revenue	*6%*	*5%*		

(In thousands)	Nine Months Ended		Percentage Change	
	August 31, 2018	August 31, 2017	As Reported	Constant Currency
North America	$ 154,676	$ 157,438	(2)%	(2)%
As a percentage of total revenue	*54%*	*56%*		
EMEA	$ 101,769	$ 92,320	10 %	4 %
As a percentage of total revenue	*36%*	*33%*		
Latin America	$ 13,058	$ 15,669	(17)%	(11)%
As a percentage of total revenue	*4%*	*5%*		
Asia Pacific	$ 16,329	$ 16,066	2 %	2 %
As a percentage of total revenue	*6%*	*6%*		

Total revenue generated in North America decreased $3.5 million, and total revenue generated outside North America increased $1.9 million, in the third quarter of fiscal year 2018 as compared to the same quarter last year. Total revenue generated in North America decreased $2.8 million, and total revenue generated outside North America increased $7.1 million, in the first nine months of fiscal year 2018 as compared to the same period last year. The decrease in North America in the third quarter of fiscal year 2018 was primarily due to license and professional services revenue decreases in our OpenEdge segment and a decline in license revenue in our Data Connectivity and Integration segment. The decrease in North America in the first nine months of fiscal year 2018 was primarily due to a decrease in license revenue in our Data Connectivity and Integration and Application Development and Deployment segments and professional services revenue in our OpenEdge segment. This decrease was partially offset by an increase in maintenance revenue in our OpenEdge segment. The increase in revenue generated in EMEA in all periods was primarily due to an increase in OpenEdge maintenance and license revenue which was further impacted by favorable exchange rates as described above. Revenue generated in Latin America decreased in the third quarter and first nine months of fiscal year 2018. The decrease in the third quarter was primarily due to a negative impact of exchange rate fluctuations, while the decrease in the first nine months of fiscal year 2018 was a result of decreases in license and maintenance revenue in our OpenEdge segment and the negative impact of exchange rate fluctuations. The revenue generated in Asia Pacific increased in all periods primarily due to higher license revenue in our OpenEdge segment.

Total revenue generated in markets outside North America represented 46% of total revenue in the first nine months of fiscal year 2018 and 44% of total revenue in the same period last year. If exchange rates had remained constant in the first nine months of fiscal year 2018 as compared to the exchange rates in effect in the same period of fiscal year 2017, total revenue generated in markets outside North America would have been 45% of total revenue.

Revenue by Segment

(In thousands)	Three Months Ended		Percentage Change	
	August 31, 2018	August 31, 2017	As Reported	Constant Currency
OpenEdge segment	$ 68,029	$ 68,135	— %	1 %
Data Connectivity and Integration segment	7,597	8,987	(15)%	(16)%
Application Development and Deployment segment	20,057	20,188	(1)%	(1)%
Total revenue	$ 95,683	$ 97,310	(2)%	(1)%

(In thousands)	Nine Months Ended		Percentage Change	
	August 31, 2018	August 31, 2017	As Reported	Constant Currency
OpenEdge segment	$ 204,404	$ 198,533	3 %	1 %
Data Connectivity and Integration segment	20,989	22,911	(8)%	(9)%
Application Development and Deployment segment	60,439	60,049	1 %	1 %
Total revenue	$ 285,832	$ 281,493	2 %	— %

Revenue in the OpenEdge segment decreased in the third quarter of fiscal year 2018, largely due to the negative impact of exchange rate fluctuations, offset by an increase in license revenue. Revenue in the OpenEdge segment increased in the first nine months of fiscal year 2018 primarily due to the favorable impact from exchange rate fluctuations and an increase in license and maintenance revenue, partially offset by a decrease in professional services revenue. Data Connectivity and Integration revenue decreased in all periods primarily due to the timing of certain renewals by original equipment manufacturers ("OEMs"). Application Development and Deployment stayed approximately flat in all periods, primarily due to lower license revenue offset by an increase in maintenance revenue.

Cost of Software Licenses

(In thousands)	Three Months Ended			Nine Months Ended		
	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Cost of software licenses	$ 1,077	$ 1,337	(19)%	$ 3,571	$ 4,347	(18)%
As a percentage of software license revenue	*4%*	*5%*		*5%*	*6%*	
As a percentage of total revenue	*1%*	*1%*		*1%*	*2%*	

Cost of software licenses consists primarily of costs of royalties, electronic software distribution, duplication, and packaging. Cost of software licenses as a percentage of software license revenue varies from period to period depending upon the relative product mix. The decrease in all periods was a result of lower payments of royalties to third parties as compared to the same period in the prior year.

Cost of Maintenance and Services

(In thousands)	Three Months Ended			Nine Months Ended		
	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Cost of maintenance and services	$ 10,110	$ 10,970	(8)%	$ 29,445	$ 32,724	(10)%
As a percentage of maintenance and services revenue	*15%*	*16%*		*14%*	*16%*	
As a percentage of total revenue	*11%*	*11%*		*10%*	*12%*	

Cost of maintenance and services consists primarily of costs of providing customer support, consulting, and education. The decrease in both periods was primarily due to lowered compensation-related costs resulting from a decrease in headcount and lower stock-based compensation expense as a result of forfeitures during the quarter, partially offset by higher professional services expense.

Amortization of Acquired Intangibles

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Amortization of acquired intangibles	$ 5,509	$ 5,768	(4)%	$ 17,226	$ 14,129	22%
As a percentage of total revenue	*6%*	*6%*		*6%*	*5%*	

Amortization of acquired intangibles included in costs of revenue primarily represents the amortization of the value assigned to technology-related intangible assets obtained in business combinations. Amortization of acquired intangibles decreased in the third quarter of fiscal year 2018 as compared to the same quarter last year. The decrease was due to the completion of amortization of certain intangible assets acquired in prior years. Amortization of acquired intangibles increased in the first nine months of fiscal year 2018 compared to the same period last year, primarily due to the addition of intangible assets associated with the technologies obtained in connection with the acquisitions of DataRPM in the second quarter of fiscal year 2017 and Kinvey in the third quarter of fiscal year 2017.

Gross Profit

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Gross profit	$ 78,987	$ 79,235	— %	$ 235,590	$ 230,293	2%
As a percentage of total revenue	*83%*	*81%*		*82%*	*82%*	

Our gross profit decreased in the third quarter as compared to the same quarter last year due to the decrease in license and services revenue, offset by lower cost of revenue as described above. In addition, gross profit increased in the first nine months of fiscal year 2018 compared to the same period in the prior year, primarily due to the increases of license and maintenance revenue and the decrease in cost of maintenance and services and cost of software licenses as described above, offset slightly by the increase of amortization of acquired intangibles.

Sales and Marketing

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Sales and marketing	$ 21,752	$ 23,159	(6)%	$ 64,838	$ 70,116	(8)%
As a percentage of total revenue	*23%*	*24%*		*23%*	*25%*	

Sales and marketing expenses decreased in all periods as compared to the same periods last year primarily due to lower compensation-related expense as a result of the headcount reduction actions which occurred in the first quarter of fiscal year 2017. The decrease was partially offset by higher marketing programs costs related to the go-to-market efforts for Kinvey and DataRPM.

Product Development

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Product development costs	$ 19,338	$ 19,620	(1)%	$ 59,405	$ 55,745	7%
As a percentage of total revenue	*20%*	*20%*		*21%*	*20%*	

Product development expenses decreased in the third quarter of fiscal year 2018 primarily due to lower compensation-related costs as a result of the headcount reductions actions which occurred in the first quarter of fiscal year 2017. The increase in the first nine months of fiscal year 2018 as compared to the same period last year is primarily due to higher stock-based compensation expenses, partially offset by lower compensation-related costs. During the first quarter of fiscal year 2017, there were significant forfeitures due to our restructuring action, which significantly reduced stock-based compensation expense in the first nine months of fiscal year 2017 as compared to the same periods in the current fiscal year.

General and Administrative

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
General and administrative	$ 12,218	$ 11,164	9%	$ 35,670	$ 33,338	7%
As a percentage of total revenue	*13%*	*11%*		*12%*	*12%*	

General and administrative expenses include the costs of our finance, human resources, legal, information systems and administrative departments. General and administrative expenses increased in the third quarter and first nine months of fiscal year 2018 as compared to the same periods last year primarily due to increased stock-based compensation expense, as well as higher professional services expense, partially offset by lower compensation-related expenses. During the first quarter of fiscal year 2017, there were significant forfeitures due to our restructuring action, which significantly reduced stock-based compensation expense in the third quarter and first nine months of fiscal year 2017 as compared to the same periods in the current fiscal year.

Amortization of Acquired Intangibles

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Amortization of acquired intangibles	$ 3,319	$ 3,319	—%	$ 9,956	$ 9,721	2%
As a percentage of total revenue	*3%*	*3%*		*3%*	*3%*	

Amortization of acquired intangibles included in operating expenses primarily represents the amortization of value assigned to intangible assets obtained in business combinations other than assets identified as purchased technology. Amortization of acquired intangibles stayed flat in the third quarter as compared to the same period last year. Amortization of acquired intangibles increased in the first nine months of fiscal year 2018 compared to the same period last year due to the addition of intangible assets obtained in connection with the acquisitions of DataRPM and Kinvey, which occurred in the second and third quarters of fiscal year 2017, respectively.

Fees Related to Shareholder Activist

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Fees related to shareholder activist	$ —	$ —	*	$ 1,472	$ —	*
As a percentage of total revenue	*—%*	*—%*		*1%*	*—%*	

** Not meaningful*

In September 2017, Praesidium Investment Management publicly announced in a Schedule 13D filed with the SEC its disagreement with our strategy and stated that it was seeking changes in the composition of our Board of Directors. We incurred professional and other fees relating to Praesidium’s actions. As of June 2018, Praesidium Investment Management had sold all of the shares of Company common stock that it previously held. We do not expect to incur additional professional and other fees related to this matter.

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Restructuring Expenses

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Restructuring expenses	$ 135	$ 923	(85)%	$ 2,382	$ 18,724	(87)%
As a percentage of total revenue	*—%*	*1%*		*1%*	*7%*	

Restructuring expenses recorded in the third quarter and first nine months of fiscal year 2018 relate to the restructuring activities that occurred in fiscal year 2017. See Note 11 to the condensed consolidated financial statements for additional details, including types of expenses incurred and the timing of future expenses and cash payments. See also the Liquidity and Capital Resources section of this Item 2, Management's Discussion and Analysis of Financial Condition and Results of Operations.

Acquisition-Related Expenses

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Acquisition-related expenses	$ 42	$ 751	(94)%	$ 128	$ 844	(85)%
As a percentage of total revenue	*—%*	*1%*		*—%*	*—%*	

Acquisition-related expenses in the third quarter and first nine months of fiscal year 2018 were minimal. Acquisition-related expenses in the third quarter and first nine months of fiscal year 2017 related to the acquisitions of DataRPM and Kinvey, which occurred in the second and third quarters of fiscal year 2017, respectively.

Income from Operations

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Income from operations	$ 22,183	$ 20,299	9%	$ 61,739	$ 41,805	48%
As a percentage of total revenue	*23%*	*21%*		*22%*	*15%*	

Income from operations increased in the third quarter and first nine months of fiscal year 2018 as compared to the same periods last year. As discussed above, the increase in both periods was primarily the result of the headcount reduction actions that occurred in fiscal year 2017 and higher revenue during the first nine months of fiscal year 2018 compared to the same period last year.

Income from Operations by Segment

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
OpenEdge segment	$ 51,610	$ 49,761	4 %	$ 157,210	$ 145,995	8 %
Data Connectivity and Integration segment	6,077	6,787	(10)%	16,166	16,380	(1)%
Application Development and Deployment segment	12,986	13,819	(6)%	40,371	40,153	1 %
Other unallocated expenses (1)	(48,490)	(50,068)	(3)%	(152,008)	(160,723)	(5)%
Income from operations	$ 22,183	$ 20,299	9 %	$ 61,739	$ 41,805	48 %

(1) Note that the following expenses are not allocated to our segments as we manage and report our business in these functional areas on a consolidated basis only: certain product development and corporate sales and marketing expenses, customer support, administration, amortization of acquired intangibles, stock-based compensation, fees related to shareholder activist, restructuring, and acquisition-related expenses.

Other (Expense) Income, Net

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Interest expense	$ (1,337)	$ (1,221)	(10)%	$ (3,774)	$ (3,455)	(9)%
Interest income and other, net	322	239	35 %	961	717	34 %
Foreign currency (loss) gain, net	(946)	(418)	(126)%	(2,017)	(1,561)	(29)%
Total other (expense) income, net	$ (1,961)	$ (1,400)	(40)%	$ (4,830)	$ (4,299)	(12)%
As a percentage of total revenue	*(2)%*	*(1)%*		*(2)%*	*(2)%*	

Other (expense) income, net decreased in the third quarter and first nine months of fiscal year 2018 as compared to the same periods last year primarily due to an increase in foreign currency losses and higher interest expense. The change in foreign currency gains and losses is a result of movements in exchange rates and the impact in the third quarter and first nine months of fiscal year 2018 on our intercompany receivables and payables denominated in currencies other than local currencies.

Provision for Income Taxes

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Provision for income taxes	$ 3,476	$ 7,727	(55)%	$ 11,848	$ 16,518	(28)%
As a percentage of total revenue	*4%*	*8%*		*4%*	*6%*	

Our effective tax rate was 17% in the third quarter of fiscal year 2018 compared to 41% in the third quarter of fiscal year 2017, and 21% in the first nine months of fiscal year 2018 compared to 44% in the same period last year. The primary reason for the decrease in the effective rate was due to the enactment of tax reform in the United States and our federal tax rate in fiscal year 2018 is 22.2% as compared to 35% in fiscal year 2017. In addition, in the third quarter of fiscal year 2018 we recorded an additional $0.6 million discrete income tax benefit for the re-measurement of our U.S. deferred tax balances. We had previously recognized a $1.4 million discrete income tax benefit in the first quarter of fiscal year 2018 from the re-measurement of our U.S. deferred tax balances. Finally, we recognized a $0.9 million discrete tax benefit in the third quarter of 2018 related to incremental tax credits and tax deductions on our fiscal year 2017 U.S. income tax return.

Net Income

	Three Months Ended			Nine Months Ended		
(In thousands)	August 31, 2018	August 31, 2017	Percentage Change	August 31, 2018	August 31, 2017	Percentage Change
Net income	$ 16,746	$ 11,172	50%	$ 45,061	$ 20,988	115%
As a percentage of total revenue	*18%*	*11%*		*16%*	*7%*	

Liquidity and Capital Resources

Cash, Cash Equivalents and Short-Term Investments

(In thousands)	August 31, 2018	November 30, 2017
Cash and cash equivalents	$ 98,697	$ 133,464
Short-term investments	39,184	50,145
Total cash, cash equivalents and short-term investments	$ 137,881	$ 183,609

The decrease in cash, cash equivalents and short-term investments of $45.7 million from the end of fiscal year 2017 was due to repurchases of common stock of $110.0 million, dividend payments of $19.5 million, the effect of exchange rates on cash of $7.9 million, payments of capital expenditures of $6.0 million, and payments of debt obligations in the amount of $4.6 million. These cash outflows were partially offset by cash inflows from operations of $97.0 million and $7.9 million in cash received from the issuance of common stock. Except as described below, there are no limitations on our ability to access our cash, cash equivalents and short-term investments.

As of August 31, 2018, $36.8 million of our cash, cash equivalents and short-term investments was held by our foreign subsidiaries. If these funds are needed for U.S. operations, we would be required to accrue withholding tax liabilities to repatriate these funds. As a result of recent changes in U.S. tax legislation, any repatriation in the future would not result in U.S. federal income tax. Our intent is to permanently reinvest these funds outside the U.S. and our current operating plans do not require us to repatriate these funds for our U.S. operations.

Share Repurchase Program

In September 2017, our Board of Directors increased our total share repurchase authorization to $250.0 million. In fiscal year 2017, we repurchased and retired 2.2 million shares of our common stock for $73.9 million. We repurchased and retired 0.5 million shares of our common stock for $20.0 million in the three months ended August 31, 2018 and 2.6 million shares for $110.0 million in the nine months ended August 31, 2018. As of August 31, 2018, there was $110.0 million remaining under this current authorization. We expect to continue repurchasing shares of our common stock under this authorization consistent with our capital allocation strategy. However, we may terminate this program at any time.

Dividends

On September 21, 2018, our Board of Directors approved an 11% increase to our quarterly cash dividend from $0.14 to $0.155 per share of common stock, which will be paid on December 17, 2018 to shareholders of record as of the close of business on December 3, 2018. We began paying quarterly cash dividends of $0.125 per share of common stock to Progress shareholders in December 2016 and increased the quarterly cash dividend to $0.14 per share in September 2017. We expect to continue paying quarterly cash dividends in subsequent quarters consistent with our capital allocation strategy. However, we may terminate or modify this program at any time.

Restructuring Activities

During fiscal year 2017, we undertook certain operational restructuring initiatives intended to significantly reduce annual costs. As part of this action, management committed to a new strategic plan highlighted by a new product strategy and a streamlined operating approach. To execute these operational restructuring initiatives, we reduced our global workforce by over 20%. These workforce reductions occurred in substantially all functional units and across all geographies in which we operate. We also consolidated offices in various locations during fiscal year 2017 and the first half of fiscal year 2018. We expect to incur additional expenses related to the facilities closed as part of the fiscal year 2017 restructuring through fiscal year 2019, but we do not expect these additional costs to be material.

As part of this fiscal year 2017 restructuring, for the three and nine months ended August 31, 2018, we incurred expenses of $0.1 million and $2.4 million, respectively, which are recorded in restructuring expenses on the condensed consolidated statements of operations.

Credit Facility

On November 20, 2017, we entered into an amended and restated credit agreement, which provides for a $123.8 million secured term loan and a $150.0 million secured revolving credit facility. The revolving credit facility may be made available in U.S. Dollars and certain other currencies and may be increased by up to an additional $125.0 million if the existing or additional lenders are willing to make such increased commitments.

Interest rates for the term loan and revolving credit facility are based upon our leverage ratio and determined based on an index selected at our option. The rates would range from 1.50% to 2.00% above the Eurodollar rate for Eurodollar-based borrowings or from 0.50% to 1.00% above the defined base rate for base rate borrowings. Additionally, we may borrow certain foreign currencies at rates set in the same respective range above the London interbank offered interest rates ("LIBOR") for those currencies. A quarterly commitment fee on the undrawn portion of the revolving credit facility is required and ranges from 0.25% to 0.35% per annum based on our leverage ratio. The interest rate of the credit facility as of August 31, 2018 was 3.63%.

The credit facility matures on November 20, 2022, when all amounts outstanding will be due and payable in full. The revolving credit facility does not require amortization of principal. The outstanding balance of the term loan as of August 31, 2018 was $119.1 million, with $6.2 million due in the next 12 months. The term loan requires repayment of principal at the end of each fiscal quarter, beginning with the fiscal quarter ended February 28, 2018. The principal repayment amounts are in accordance with the following schedule: (i) eight payments of $1.5 million each, (ii) four payments of $2.3 million each, (iii) four payments of $3.1 million each, (iv) three payments of $3.9 million each, and (v) the last payment is of the remaining principal amount. Any amounts outstanding under the term loan thereafter would be due on the maturity date. The term loan may be prepaid before maturity in whole or in part at our option without penalty or premium. As of August 31, 2018, the carrying value of the term loan approximates the fair value, based on Level 2 inputs (observable market prices in less than active markets), as the interest rate is variable over the selected interest period and is similar to current rates at which we can borrow funds.

Revolving loans may be borrowed, repaid and reborrowed until November 20, 2022, at which time all amounts outstanding must be repaid. As of August 31, 2018, there were no amounts outstanding under the revolving line and $1.3 million of letters of credit.

The credit facility contains customary affirmative and negative covenants, including covenants that limit or restrict our ability to, among other things, grant liens, make investments, make acquisitions, incur indebtedness, merge or consolidate, dispose of assets, pay dividends or make distributions, repurchase stock, change the nature of the business, enter into certain transactions with affiliates and enter into burdensome agreements, in each case subject to customary exceptions for a credit facility of this size and type. We are also required to maintain compliance with a consolidated fixed charge coverage ratio, a consolidated total leverage ratio and a consolidated senior secured leverage ratio. We are in compliance with these financial covenants as of August 31, 2018.

Cash Flows from Operating Activities

	Nine Months Ended	
(In thousands)	August 31, 2018	August 31, 2017
Net income	$ 45,061	$ 20,988
Non-cash reconciling items included in net income	47,217	44,237
Changes in operating assets and liabilities	4,747	7,946
Net cash flows from operating activities	$ 97,025	$ 73,171

The increase in cash generated from operations in the first nine months of fiscal year 2018 as compared to the first nine months of fiscal year 2017 was primarily due to higher operating income. Our gross accounts receivable as of August 31, 2018 decreased by $15.4 million from the end of fiscal year 2017, which is primarily due to higher collections during the period. Days sales outstanding (DSO) in accounts receivable decreased to 43 days from 48 days in the fiscal third quarter of 2017 due to higher collections in the quarter. In addition, our total deferred revenue as of August 31, 2018 increased by $2.5 million from the end of fiscal year 2017.

Cash Flows used in Investing Activities

(In thousands)	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017
Net investment activity	$ 10,237	$ (4,578)
Purchases of property and equipment	(5,968)	(865)
Proceeds from sale of property, plant and equipment, net	—	1,557
Payments for acquisitions, net of cash acquired	—	(77,149)
Net cash flows from (used in) investing activities	$ 4,269	$ (81,035)

Net cash outflows and inflows of our net investment activity are generally a result of the timing of our purchases and maturities of securities, which are classified as cash equivalents or short-term securities. In addition, we purchased $6.0 million of property and equipment in the first nine months of fiscal year 2018, as compared to $0.9 million in the first nine months of fiscal year 2017. Most significantly, however, we acquired DataRPM and Kinvey during the second and third quarters of fiscal year 2017, respectively, for a net cash amount of $77.1 million and did not complete any acquisitions during the first nine months of fiscal year 2018.

Cash Flows used in Financing Activities

(In thousands)	Nine Months Ended August 31, 2018	Nine Months Ended August 31, 2017
Proceeds from stock-based compensation plans	$ 7,943	$ 7,245
Repurchases of common stock	(110,000)	(43,936)
Payment of long-term debt	(4,641)	(11,250)
Dividend payments to shareholders	(19,472)	(18,151)
Other financing activities	(1,942)	(1,966)
Net cash flows used in financing activities	$ (128,112)	$ (68,058)

During the first nine months of fiscal year 2018, we received $7.9 million from the exercise of stock options and the issuance of shares under our employee stock purchase plan as compared to $7.2 million in the first nine months of fiscal year 2017. Significantly, in the first nine months of fiscal year 2018, we repurchased $110.0 million of our common stock under our share repurchase plan compared to $43.9 million in the same period of the prior year. In addition, we made principal payments of our long-term debt of $4.6 million in the first nine months of fiscal year 2018 compared to $11.3 million in the same period of the prior year. We also made dividend payments of $19.5 million to our shareholders during the first nine months of fiscal year 2018, as compared to $18.2 million in the first nine months of fiscal year 2017, which was the result of the increase in the dividend as described above.

Indemnification Obligations

We include standard intellectual property indemnification provisions in our licensing agreements in the ordinary course of business. Pursuant to our product license agreements, we will indemnify, hold harmless, and agree to reimburse the indemnified party for losses suffered or incurred by the indemnified party, generally business partners or customers, in connection with certain patent, copyright or other intellectual property infringement claims by third parties with respect to our products. Other agreements with our customers provide indemnification for claims relating to property damage or personal injury resulting from the performance of services by us or our subcontractors. Historically, our costs to defend lawsuits or settle claims relating to such indemnity agreements have been insignificant. Accordingly, the estimated fair value of these indemnification provisions is immaterial.

Liquidity Outlook

We believe that existing cash balances, together with funds generated from operations and amounts available under our credit facility, will be sufficient to finance our operations and meet our foreseeable cash requirements through at least the next twelve months. We do not contemplate a need for any foreign repatriation of the earnings which are deemed permanently reinvested. Our foreseeable cash needs include our planned capital expenditures, debt repayment, quarterly cash dividends, share repurchases, acquisitions, if any, lease commitments, restructuring obligations and other long-term obligations.

Revenue Backlog

(In thousands)	August 31, 2018	August 31, 2017
Deferred revenue, primarily related to unexpired maintenance and support contracts	$ 144,829	$ 140,706
Multi-year licensing arrangements (1)	13,684	19,834
Total revenue backlog	$ 158,513	$ 160,540

(1) Our backlog of orders not included on the balance sheet is not subject to our normal accounting controls for information that is either reported in or derived from our basic financial statements. Note that approximately $12.3 million and $18.1 million of the multi-year licensing arrangements as of August 31, 2018 and August 31, 2017, respectively, relate to DataDirect OEM arrangements, while the remaining amount relates to arrangements in our OpenEdge business unit.

We typically fulfill most of our software license orders within 30 days of acceptance of a purchase order. Assuming all other revenue recognition criteria have been met, we recognize software license revenue upon shipment of the product, or if delivered electronically, when the customer has the right to access the software. Because there are many elements governing when revenue is recognized, including when orders are shipped, credit approval obtained, completion of internal control processes over revenue recognition and other factors, management has some control in determining the period in which certain revenue is recognized. In addition, there is no industry standard for the definition of backlog and there may be an element of estimation in determining the amount. As such, direct comparisons with other companies may be difficult or potentially misleading.

Legal and Other Regulatory Matters

See discussion regarding legal and other regulatory matters in Part II, Item 1. Legal Proceedings.

Off-Balance Sheet Arrangements

Our only significant off-balance sheet commitments relate to operating lease obligations. Future annual minimum rental lease payments are detailed in Note 9 of the Notes to Consolidated Financial Statements in our Annual Report. We have no “off-balance sheet arrangements” within the meaning of Item 303(a)(4) of Regulation S-K.

Contractual Obligations

There have been no material changes to our contractual obligations disclosed in tabular format in our Annual Report.

Recent Accounting Pronouncements

Refer to Note 1 - Nature of Business and Basis of Presentation (Part I, Item 1 of this Form 10-Q) for further discussion.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

During the third quarter of fiscal year 2018, there were no significant changes to our quantitative and qualitative disclosures about market risk. Please refer to Part II, Item 7A. Quantitative and Qualitative Disclosures about Market Risk included in our Annual Report for a more complete discussion of the market risks we encounter.

Item 4. Controls and Procedures

(a) Evaluation of disclosure controls and procedures

Our management maintains disclosure controls and procedures as defined in Rule 13a-15(e) and 15d-15(e) under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”) that are designed to provide reasonable assurance that information required to be disclosed in our reports filed or submitted under the Exchange Act is processed, recorded, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer (our principal executive officer and principal financial officer, respectively), as appropriate, to allow for timely decisions regarding required disclosure.

Our management, including our Chief Executive Officer and Chief Financial Officer, carried out an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective to ensure that the information required to be disclosed in the reports filed or submitted by us under the Securities Exchange Act of 1934 was recorded, processed, summarized and reported within the requisite time periods and that such information was accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow for timely decisions regarding required disclosure.

(b) Changes in internal control over financial reporting

Our management, including our Chief Executive Officer and Chief Financial Officer, evaluated our “internal control over financial reporting” as defined in Exchange Act Rule 13a-15(f) to determine whether any changes in our internal control over financial reporting occurred during the fiscal quarter ended August 31, 2018 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, there were no changes in our internal control over financial reporting during the fiscal quarter ended August 31, 2018 that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We are subject to various legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. While the outcome of these claims cannot be predicted with certainty, management does not believe that the outcome of any of these legal matters will have a material effect on our financial position, results of operations or cash flows.

Item 1A. Risk Factors

We operate in a rapidly changing environment that involves certain risks and uncertainties, some of which are beyond our control. There have been no material changes in our assessment of our risk factors from those set forth in our Annual Report. For convenience, such risk factors are included below. The risks discussed below could materially affect our business, financial condition and future results. The risks described below are not the only risks facing us. Additional risks and uncertainties not currently known to us or that we currently deem to be insignificant also may materially and adversely affect our business, financial condition or operating results in the future.

Our revenue and quarterly results may fluctuate, which could adversely affect our stock price. We have experienced, and may in the future experience, significant fluctuations in our quarterly operating results that may be caused by many factors. These factors include:

- changes in demand for our products;
- introduction, enhancement or announcement of products by us or our competitors;
- market acceptance of our new products;
- the growth rates of certain market segments in which we compete;
- size and timing of significant orders;
- a high percentage of our revenue is generated in the third month of each fiscal quarter and any failure to receive, complete or process orders at the end of any quarter could cause us to fall short of our revenue targets;
- budgeting cycles of customers;
- mix of distribution channels;
- mix of products and services sold;
- mix of international and North American revenues;
- fluctuations in currency exchange rates;
- changes in the level of operating expenses;
- changes in management;
- restructuring programs;
- changes in our sales force;
- completion or announcement of acquisitions by us or our competitors;
- customer order deferrals in anticipation of new products announced by us or our competitors; and
- general economic conditions in regions in which we conduct business.

Revenue forecasting is uncertain, and the failure to meet our forecasts could result in a decline in our stock price. Our revenues, particularly new software license revenues, are difficult to forecast. We use a pipeline system to forecast revenues and trends in our business. Our pipeline estimates may prove to be unreliable either in a particular quarter or over a longer period of time, in part because the conversion rate of the pipeline into contracts can be difficult to estimate and requires management judgment. A variation in the conversion rate could cause us to plan or budget incorrectly and materially adversely impact our business or our planned results of operations. Furthermore, most of our expenses are relatively fixed, including costs of personnel and facilities. Thus, an unexpected reduction in our revenue, or failure to achieve the anticipated rate of growth, would have a material adverse effect on our profitability. If our operating results do not meet our publicly stated guidance or the expectations of investors, our stock price may decline.

The addition of a subscription model to augment our traditional perpetual licensing model may negatively impact our license growth in the near term. Under a subscription model, downturns or upturns in sales may not be immediately reflected in our results of operations. Subscription pricing allows customers to use our products at a lower initial cost when compared to the sale of a perpetual license. Although the subscription model is designed to increase the number of customers who purchase our products and services and create a recurring revenue stream that is more predictable, it creates certain risks related to the timing of revenue recognition and reduced cash flows. A decline in new or renewed subscriptions in any period may not be immediately reflected in our results for that period, but may result in a decline in our revenue in future quarters. If we were to experience significant downturns in subscription sales and renewal rates, our results of operations might not reflect such downturns until future periods. Further, any increases in sales under our subscription sales model could result in decreased revenues over the short term if they are offset by a decline in sales from perpetual license customers.

We recognize a substantial portion of our revenue from sales made through third parties, including our application partners, distributors/resellers, and OEMs, and adverse developments in the businesses of these third parties or in our relationships with them could harm our revenues and results of operations. Our future results depend upon our continued successful distribution of our products through our application partner, distributor/reseller, and OEM channels. The activities of these third parties are not within our direct control. Our failure to manage our relationships with these third parties effectively could impair the success of our sales, marketing and support activities. A reduction in the sales efforts, technical capabilities or financial viability of these parties, a misalignment of interest between us and them, or a termination of our relationship with a major application partner, distributor/reseller, or OEM could have a negative effect on our sales and financial results. Any adverse effect on the application partners', distributors'/resellers', or OEMs' businesses related to competition, pricing and other factors could also have a material adverse effect on our business, financial condition and operating results.

Weakness in the U.S. and international economies may result in fewer sales of our products and may otherwise harm our business. We are subject to the risks arising from adverse changes in global economic conditions, especially those in the U.S., Europe and Latin America. If global economic conditions weaken, credit markets tighten and/or financial markets are unstable, customers may delay, reduce or forego technology purchases, both directly and through our application partners and OEMs. This could result in reductions in sales of our products, longer sales cycles, slower adoption of new technologies and increased price competition. Further, deteriorating economic conditions could adversely affect our customers and their ability to pay amounts owed to us. Any of these events would likely harm our business, results of operations, financial condition or cash flows.

Our international operations expose us to additional risks, and changes in global economic and political conditions could adversely affect our international operations, our revenue and our net income. Approximately 45% of our total revenue is generated from sales outside North America. Political and/or financial instability, oil price shocks and armed conflict in various regions of the world can lead to economic uncertainty and may adversely impact our business. For example, the announcement of the Referendum of the United Kingdom's Membership of the European Union ("EU") (referred to as "Brexit"), advising for the exit of the United Kingdom from the EU, resulted in significant volatility in global stock markets and currency exchange rate fluctuations. If customers' buying patterns, decision-making processes, timing of expected deliveries and timing of new projects unfavorably change due to economic or political conditions, there would be a material adverse effect on our business, financial condition and operating results.

Other potential risks inherent in our international business include:

- longer payment cycles;
- credit risk and higher levels of payment fraud;
- greater difficulties in accounts receivable collection;
- varying regulatory requirements;
- compliance with international and local trade, labor and export control laws;
- compliance with U.S. laws such as the Foreign Corrupt Practices Act, and local laws prohibiting bribery and corrupt payments to government officials;
- restrictions on the transfer of funds;
- difficulties in developing, staffing, and simultaneously managing a large number of varying foreign operations as a result of distance, language, and cultural differences;
- reduced or minimal protection of intellectual property rights in some countries;
- laws and business practices that favor local competitors or prohibit foreign ownership of certain businesses;
- seasonal reductions in business activity during the summer months in Europe and certain other parts of the world;
- economic instability in emerging markets; and
- potentially adverse tax consequences.

Any one or more of these factors could have a material adverse effect on our international operations, and, consequently, on our business, financial condition and operating results.

Fluctuations in foreign currency exchange rates could have an adverse impact on our financial condition and results of operations. Changes in the value of foreign currencies relative to the U.S. dollar have adversely affected our results of operations and financial position. For example, during periods in which the value of the U.S. dollar strengthens in comparison to certain foreign currencies, particularly in Europe, Brazil and Australia, our reported international revenue is reduced because foreign currencies translate into fewer U.S. dollars. As approximately one-third of our revenue is denominated in foreign currencies, our revenue results have been impacted, and we expect will continue to be impacted, by fluctuations in foreign currency exchange rates.

We seek to reduce our exposure to fluctuations in exchange rates by entering into foreign exchange forward contracts to hedge certain actual and forecasted transactions of selected currencies (mainly in Europe, Brazil, India and Australia). Our currency hedging transactions may not be effective in reducing any adverse impact of fluctuations in foreign currency exchange rates. Further, the imposition of exchange or price controls or other restrictions on the conversion of foreign currencies could have a material adverse effect on our business.

Technology and customer requirements evolve rapidly in our industry, and if we do not continue to develop new products and enhance our existing products in response to these changes, our business could be harmed. Ongoing enhancements to our product sets will be required to enable us to maintain our competitive position and the competitive position of our application partners, distributors/resellers, and OEMs. We may not be successful in developing and marketing enhancements to our products on a timely basis, and any enhancements we develop may not adequately address the changing needs of the marketplace. Overlaying the risks associated with our existing products and enhancements are ongoing technological developments and rapid changes in customer and partner requirements. Our future success will depend upon our ability to develop and introduce in a timely manner new products that take advantage of technological advances and respond to new customer and partner requirements. We may not be successful in developing new products incorporating new technology on a timely basis, and any new products may not adequately address the changing needs of the marketplace. Failure to develop new products and product enhancements that meet market needs in a timely manner could have a material adverse effect on our business, financial condition and operating results.

We are substantially dependent on our Progress OpenEdge products. We derive a significant portion of our revenue from software license and maintenance revenue attributable to our Progress OpenEdge product set. Accordingly, our future results depend on continued market acceptance of OpenEdge. If new technologies emerge that are superior to, or more responsive to customer requirements, than OpenEdge such that we are unable to maintain OpenEdge’s competitive position within its marketplace, this will have a material adverse effect on our business, financial condition and operating results.

We have made significant investments in furtherance of our Cognitive Applications strategy and these investments may not generate the revenues we expect, which could adversely affect our business and financial results. In 2017, we made significant investments in furtherance of our Cognitive Applications strategy, including two acquisitions. Under our Cognitive Applications strategy, we provide the platform and tools enterprises need to build next generation applications that drive their businesses, known as “Cognitive First Applications.” This consists of frontend UI tools for creating interfaces across any device, a modern serverless cloud backend application platform, cognitive services that can be built into any application, a business rules engine, and data connectivity to any data source (Big Data, IoT, systems of record and more). While our platform is horizontal, we also are offering vertically focused solutions. Our initial vertical focus areas are predictive maintenance for the industrial IoT ("IIoT") and healthcare applications.

IIoT is a relatively new market and there are a significant number of competitors in the market. If the market does not expand as rapidly as we or others expect or if customers adopt competitors' solutions rather than our solutions, our IIoT business may not generate the revenues we expect. Further, our customers and potential customers often begin the process of implementing IIoT with a proof-of-concept evaluation, in some cases with multiple different technology vendors. Our offering for building healthcare applications is relatively new and thus is also subject to uncertainties in near-term revenue generation. Our pace of growth in these markets will depend on our ability to attract customers and engage with them to ensure that their investment yields value at their desired speed and expected costs.

The increased emphasis on a cloud strategy may give rise to risks that could harm our business. We are devoting significant resources to the development of cloud-based technologies and service offerings where we have a limited operating history. Our cloud strategy requires continued investment in product development and cloud operations as well as a change in the way we price and deliver our products. Many of our competitors may have advantages over us due to their larger presence, larger developer network, deeper experience in the cloud-based computing market, and greater sales and marketing resources. It is uncertain whether these strategies will prove successful or whether we will be able to develop the infrastructure and business models more quickly than our competitors. Our cloud strategy may give rise to a number of risks, including the following:

- if new or current customers desire only perpetual licenses, we may not be successful in selling subscriptions;
- although we intend to support our perpetual license business, the increased emphasis on a cloud strategy may raise concerns among our installed customer base;
- we may be unsuccessful in achieving our target pricing;
- our revenues might decline over the short or long term as a result of this strategy;
- our relationships with existing partners that resell perpetual licenses may be damaged; and
- we may incur costs at a higher than forecasted rate as we enhance and expand our cloud operations.

We may make additional acquisitions or investments in new businesses, products or technologies that involve additional risks, which could disrupt our business or harm our financial condition, results of operations or cash flows. We may make acquisitions of businesses or investments in companies that offer complementary products, services and technologies. Any acquisitions that we do complete involve a number of risks, including the risks of assimilating the operations and personnel of acquired companies, realizing the value of the acquired assets relative to the price paid, distraction of management from our ongoing businesses and potential product disruptions associated with the sale of the acquired company's products. In addition, an acquisition may not further our business strategy as we expected, we may not integrate an acquired company or technology as successfully as we expected or we may otherwise not realize the expected return on our investments, which could adversely affect our business or operating results and potentially cause impairment to assets that we recorded as a part of an acquisition including intangible assets and goodwill. These factors could have a material adverse effect on our business, financial condition, operating results and cash flows. The consideration we pay for any future acquisitions could include our stock. As a result, future acquisitions could cause dilution to existing shareholders and to earnings per share.

The segments of the software industry in which we participate are intensely competitive, and our inability to compete effectively could harm our business. We experience significant competition from a variety of sources with respect to the marketing and distribution of our products. Many of our competitors have greater financial, marketing or technical resources than we do and may be able to adapt more quickly to new or emerging technologies and changes in customer requirements or to devote greater resources to the promotion and sale of their products than we can. Increased competition could make it more difficult for us to maintain our market presence or lead to downward pricing pressure.

In addition, the marketplace for new products is intensely competitive and characterized by low barriers to entry. For example, an increase in market acceptance of open source software may cause downward pricing pressures. As a result, new competitors possessing technological, marketing or other competitive advantages may emerge and rapidly acquire market share. In addition, current and potential competitors may make strategic acquisitions or establish cooperative relationships among themselves or with third parties, thereby increasing their ability to deliver products that better address the needs of our prospective customers. Current and potential competitors may also be more successful than we are in having their products or technologies widely accepted. We may be unable to compete successfully against current and future competitors, and our failure to do so could have a material adverse effect on our business, prospects, financial condition and operating results.

We rely on the experience and expertise of our skilled employees, and must continue to attract and retain qualified technical, marketing and managerial personnel in order to succeed. Our future success will depend in a large part upon our ability to attract and retain highly skilled technical, managerial, sales and marketing personnel. There is significant competition for such personnel in the software industry. We may not continue to be successful in attracting and retaining the personnel we require to develop new and enhanced products and to continue to grow and operate profitably.

Our periodic workforce restructurings can be disruptive. We have in the past restructured or made other adjustments to our workforce in response to management changes, product changes, performance issues, change in strategies, acquisitions and other internal and external considerations. In the past, these types of restructurings have resulted in increased restructuring costs and temporary reduced productivity. In addition, we may not achieve or sustain the expected growth or cost savings benefits of these restructurings, or do so within the expected timeframe. These effects could recur in connection with future restructurings and our revenues and other results of operations could be negatively affected.

The loss of technology licensed from third parties could adversely affect our ability to deliver our products. We utilize certain technology that we license from third parties, including software that is integrated with internally developed software and used in our products to perform key functions. This technology, or functionally similar technology, may not continue to be available on commercially reasonable terms in the future, or at all. The loss of any significant third-party technology license could cause delays in our ability to deliver our products or services until equivalent technology is developed internally or equivalent third-party technology, if available, is identified, licensed and integrated.

Our business practices with respect to the collection, use and management of personal information could give rise to operational interruption, liabilities or reputational harm as a result of governmental regulation, legal requirements or

industry standards relating to consumer privacy and data protection. As regulatory focus on privacy issues continues to increase and worldwide laws and regulations concerning the handling of personal information expand and become more complex, potential risks related to data collection and use within our business will intensify. For example, the EU and the U.S. formally entered into a new framework in July 2016 that provides a mechanism for companies to transfer data from EU member states to the U.S. This new framework, called the Privacy Shield, is intended to address shortcomings identified by the Court of Justice of the EU in the previous EU-U.S. Safe Harbor Framework, which the Court of Justice invalidated in October 2015. The Privacy Shield and other data transfer mechanisms are likely to be reviewed by the European courts, which may lead to uncertainty about the legal basis for data transfers to the U.S. or interruption of such transfers. In the event any court blocks transfers to or from a particular jurisdiction on the basis that no transfer mechanisms are legally adequate, this could give rise to operational interruption in the performance of services for customers and internal processing of employee information, regulatory liabilities or reputational harm. In addition, U.S. and foreign governments have enacted or are considering enacting legislation or regulations, or may in the near future interpret existing legislation or regulations, in a manner that could significantly impact our ability and the ability of our customers and data partners to collect, augment, analyze, use, transfer and share personal and other information that is integral to certain services we provide.

Regulators globally are also imposing greater monetary fines for privacy violations. For example, in 2016, the EU adopted a new law governing data practices and privacy called the General Data Protection Regulation ("GDPR"), which became effective in May 2018. The law establishes new requirements regarding the handling of personal data. Non-compliance with the GDPR may result in monetary penalties of up to 4% of worldwide revenue. The GDPR and other changes in laws or regulations associated with the enhanced protection of certain types of sensitive data, such as healthcare data or other personal information, could greatly increase our cost of providing our products and services or even prevent us from offering certain services in jurisdictions that we operate.

Additionally, public perception and standards related to the privacy of personal information can shift rapidly, in ways that may affect our reputation or influence regulators to enact regulations and laws that may limit our ability to provide certain products. Any failure, or perceived failure, by us to comply with U.S. federal, state, or foreign laws and regulations, including laws and regulations regulating privacy, data security, or consumer protection, or other policies, public perception, standards, self-regulatory requirements or legal obligations, could result in lost or restricted business, proceedings, actions or fines brought against us or levied by governmental entities or others, or could adversely affect our business and harm our reputation.

If our products contain software defects or security flaws, it could harm our revenues and expose us to litigation. Our products, despite extensive testing and quality control, may contain defects or security flaws, especially when we first introduce them or when new versions are released. We may need to issue corrective releases of our software products to fix any defects or errors. The detection and correction of any security flaws can be time consuming and costly. Errors in our software products could affect the ability of our products to work with other hardware or software products, delay the development or release of new products or new versions of products, adversely affect market acceptance of our products and expose us to potential litigation. If we experience errors or delays in releasing new products or new versions of products, such errors or delays could have a material adverse effect on our revenue.

We could incur substantial cost in protecting our proprietary software technology or if we fail to protect our technology, which would harm our business. We rely principally on a combination of contract provisions and copyright, trademark, patent and trade secret laws to protect our proprietary technology. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Policing unauthorized use of our products is difficult. Litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets or to determine the validity and scope of the proprietary rights of others. This litigation could result in substantial costs and diversion of resources, whether or not we ultimately prevail on the merits. The steps we take to protect our proprietary rights may be inadequate to prevent misappropriation of our technology; moreover, others could independently develop similar technology.

We could be subject to claims that we infringe intellectual property rights of others, which could harm our business, financial condition, results of operations or cash flows. Third parties could assert infringement claims in the future with respect to our products and technology, and such claims might be successful. This litigation could result in substantial costs and diversion of resources, whether or not we ultimately prevail on the merits. This litigation could also lead to our being prohibited from selling one or more of our products, cause reluctance by potential customers to purchase our products, or result in liability to our customers and could have a material adverse effect on our business, financial condition, operating results and cash flows.

If our security measures are breached, our products and services may be perceived as not being secure, customers may curtail or stop using our products and services, and we may incur significant legal and financial exposure. Our products and services involve the storage and transmission of our customers' proprietary information, and security breaches could expose us to a risk of loss of this information, litigation, and potential liability. Our security measures may be breached due to the actions of outside parties, employee error, malfeasance, or otherwise, and, as a result, an unauthorized party may obtain access to our data or our customers' data. Any such breach or unauthorized access could result in significant legal and financial exposure, increased costs to defend litigation or damage to our reputation, and a loss of confidence in the security of our products and services that could potentially have an adverse effect on our business. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or to implement adequate preventative measures. If an actual or perceived breach of our security occurs, the market perception of the effectiveness of our security measures could be harmed and we could lose customers.

***We may have exposure to additional tax liabilities*.** As a multinational corporation, we are subject to income taxes in the U.S. and various foreign jurisdictions. Significant judgment is required in determining our global provision for income taxes and other tax liabilities. In the ordinary course of a global business, there are many intercompany transactions and calculations where the ultimate tax determination is uncertain. Our income tax returns are routinely subject to audits by tax authorities. Although we regularly assess the likelihood of adverse outcomes resulting from these examinations to determine our tax estimates, a final determination of tax audits or tax disputes could have an adverse effect on our financial condition, results of operations and cash flows.

We are also subject to non-income taxes, such as payroll, sales, use, value-added, net worth, property and goods and services taxes in the U.S. and various foreign jurisdictions. We are regularly under audit by tax authorities with respect to these non-income taxes and may have exposure to additional non-income tax liabilities, which could have an adverse effect on our results of operations, financial condition and cash flows.

In addition, our future effective tax rates could be favorably or unfavorably affected by changes in tax rates, changes in the valuation of our deferred tax assets or liabilities, or changes in tax laws or their interpretation. Such changes could have a material adverse impact on our financial results.

We are required to comply with certain financial and operating covenants under our credit facility and to make scheduled debt payments as they become due; any failure to comply with those covenants or to make scheduled payments could cause amounts borrowed under the facility to become immediately due and payable or prevent us from borrowing under the facility. In November 2017, we entered into an amended and restated credit agreement, which consists of a $123.8 million term loan and a $150.0 million revolving loan (and may be increased by an additional $125.0 million if the existing or additional lenders are willing to make such increased commitments). This facility matures in November 2022, at which time any amounts outstanding will be due and payable in full. We may wish to borrow additional amounts under the facility in the future to support our operations, including for strategic acquisitions and share repurchases.

We are required to comply with specified financial and operating covenants and to make scheduled repayments of our term loan, which may limit our ability to operate our business as we otherwise might operate it. Our failure to comply with any of these covenants or to meet any payment obligations under the facility could result in an event of default which, if not cured or waived, would result in any amounts outstanding, including any accrued interest and unpaid fees, becoming immediately due and payable. We might not have sufficient working capital or liquidity to satisfy any repayment obligations in the event of an acceleration of those obligations. In addition, if we are not in compliance with the financial and operating covenants at the time we wish to borrow funds, we will be unable to borrow funds.

Our annual operating cash flows may not be sufficient to enable us to meet our targeted capital allocation policy, which could decrease your expected return on investment in Progress stock. In September 2018, we increased our quarterly dividend by 11% and in September 2017 we announced a new capital allocation strategy in which we are targeting to return approximately 50% of annual cash flows from operations to stockholders through share repurchases and 25-30% through dividends. Meeting these targets requires us to generate consistent cash flow and have available capital in an amount sufficient to enable us to continue investing in our business. We may not meet these targets if we do not generate the operating cash flows we expect, if we use our available cash to satisfy other priorities, if we have insufficient funds available to make such repurchases and/or dividends or if we are unable to borrow funds under our credit facility.

Our common stock price may continue to be volatile, which could result in losses for investors. The market price of our common stock, like that of other technology companies, is volatile and is subject to wide fluctuations in response to quarterly variations in operating results, announcements of technological innovations or new products by us or our competitors, changes in financial estimates by securities analysts or other events or factors. Our stock price may also be affected by broader market trends unrelated to our performance. As a result, purchasers of our common stock may be unable at any given time to sell their shares at or above the price they paid for them.

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

Items 2(a) and 2(b) are not applicable.

(c) Stock Repurchases

Information related to the repurchases of our common stock by month in the third quarter of fiscal year 2018 is as follows (in thousands, except per share and share data):

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs (1)
June 2018	513,308	$ 38.94	513,308	$ 110,000
July 2018	—	—	—	110,000
August 2018	—	—	—	110,000
Total	513,308	$ 38.94	513,308	$ 110,000

(1) In September 2017, our Board of Directors increased our total share repurchase authorization to $250.0 million. As of August 31, 2018, there was $110.0 million remaining under this authorization, which expires at the end of fiscal year 2019.

Item 5. Other Information

On September 21, 2018, our Board of Directors formed an M&A Committee consisting of non-employee directors John R. Egan, Charles F. Kane and Samskriti Y. King to evaluate potential acquisitions. Ms. King will serve as Chair of the M&A Committee. In addition to the compensation paid to non-employee directors generally, committee members will be paid a fee of $10,000, and the Chair will be paid a fee of $12,500, for service on the M&A Committee, as further described in Exhibit 10.1 of this Quarterly Report on Form 10-Q.

Item 6. Exhibits

The following exhibits are filed or furnished as part of this Quarterly Report on Form 10-Q:

Exhibit No.	Description
10.1*	2018 Fiscal Year Compensation Program for Non-Employee Directors, as amended September 21, 2018
31.1*	Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act – Yogesh K. Gupta
31.2*	Certification of the Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act – Paul A. Jalbert
32.1**	Certification Pursuant to Section 906 of the Sarbanes-Oxley Act
101	The following materials from Progress Software Corporation's Quarterly Report on Form 10-Q for the three and nine months ended August 31, 2018, formatted in XBRL (eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets as of August 31, 2018 and November 30, 2017; (ii) Condensed Consolidated Statements of Income for the three and nine months ended August 31, 2018 and 2017; (iii) Condensed Consolidated Statements of Comprehensive Income for the three and nine months ended August 31, 2018 and 2017; (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended August 31, 2018 and 2017; and (v) Notes to Condensed Consolidated Financial Statements.

* Filed herewith
** Furnished herewith

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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.

PROGRESS SOFTWARE CORPORATION
(Registrant)

Dated:	October 5, 2018	/s/ YOGESH K. GUPTA
		Yogesh K. Gupta
		President and Chief Executive Officer
		(Principal Executive Officer)
Dated:	October 5, 2018	/s/ PAUL A. JALBERT
		Paul A. Jalbert
		Chief Financial Officer
		(Principal Financial Officer and Principal Accounting Officer)

Exhibit 10.1

PROGRESS SOFTWARE CORPORATION

2018 FISCAL YEAR COMPENSATION PROGRAM

FOR NON-EMPLOYEE DIRECTORS

Amended September 21, 2018

A. Amounts of 2018 Fiscal Year Compensation

- Annual Board Retainer (cash): $50,000

- Additional Annual Non-Executive Chairman Retainer (cash): $50,000

- Committee fees (cash):

  Audit Committee: $25,000 for Chair
  $20,000 for Members

  Nominating and Corporate Governance Committee: $12,500 for Chair
  $10,000 for Members

  Compensation Committee: $25,000 for Chair
  $15,000 for Members

  M&A Committee: $12,500 for Chair
  $10,000 for Members

Equity Component:

- $200,000 to be delivered in one installment (as set forth below under "Timing"), consisting of Deferred Stock Units ("DSUs").

- The number of DSUs to be issued will be determined by dividing $200,000 by the fair market value of Company common stock on the date of issuance. The DSUs will vest in a single installment on the date of the 2019 Annual Meeting, subject to continued service on the Board through such date, with full acceleration upon a change in control.

- DSUs will be settled upon a Director's separation from service from the Board of Directors or change in control, if earlier, and not upon vesting.

Timing

- Annual fiscal year cash compensation will be paid in one installment at the Compensation Committee meeting in June or, promptly following the date of the 2018 Annual Meeting, whichever is earlier, or such other date as determined by the Compensation Committee. Amounts paid will be pro-rated for partial year service, with a fractional month of service rounded to a whole month. A Director who joins the Board other than on the first day of the fiscal year will be paid a pro-rated amount of the annual fiscal year compensation. The same proration rule will also apply to any partial year service on any committee.

B. Initial Director Appointment Grant

Each newly elected Director shall receive an Initial Director Appointment Grant of $300,000 of Deferred Stock Units ("DSUs"). The precise number of DSUs to be issued to the newly elected Director will be determined by dividing $300,000 by the fair market value of Company common stock on the date of issuance.

DSUs will vest over a 60-month period, beginning on the first day of the month following the month the Director joins the Board, with full acceleration upon a change in control. DSUs will be settled upon a Director's separation from service from the Board of Directors or change in control, if earlier, and not upon vesting.

C. Stock Retention Guidelines

All non-employee Directors must hold a number of shares of the Corporation's common stock having a fair market value equal to at least five times the Annual Cash Retainer, which for purposes of this requirement shall include vested DSUs. Directors have five years to attain this guideline from the date of election to the Board.

D. Miscellaneous

Employee Directors shall not be entitled to participate in the 2018 Director Compensation Plan.

Exhibit 31.1

CERTIFICATION

I, Yogesh K. Gupta, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Progress Software Corporation;

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 control and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer 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 registrant's board of directors (or persons performing the equivalent function):

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: October 5, 2018

/s/ YOGESH K. GUPTA

Yogesh K. Gupta
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Paul A. Jalbert, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Progress Software Corporation;

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 control and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer 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 registrant’s board of directors (or persons performing the equivalent function):

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: October 5, 2018

/s/ PAUL A. JALBERT

Paul A. Jalbert
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification Pursuant To 18 U.S.C. Section 1350, As Adopted Pursuant To Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Quarterly Report on Form 10-Q of Progress Software Corporation (the Company) for the three months ended August 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the Report), each of the undersigned, Yogesh K. Gupta, President and Chief Executive Officer, and Paul A. Jalbert, Chief Financial Officer, of the Company, certifies, to the best knowledge and belief of the signatory, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

/s/ YOGESH K. GUPTA	/s/ PAUL A. JALBERT
President and Chief Executive Officer	Chief Financial Officer
Date: October 5, 2018	Date: October 5, 2018