# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION

**Washington, D.C. 20549**

# FORM 10-Q

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

**For the quarterly reporting period ended March 31, 2020**

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

**For the transition period from to**

**Commission file number 001-38467**

# Ceridian HCM Holding Inc.

**(Exact name of registrant as specified in its charter)**

| | |
|---|---|
| **Delaware** | **46-3231686** |
| **(State or Other Jurisdiction of Incorporation or Organization)** | **(I.R.S. Employer Identification Number)** |

**3311 East Old Shakopee Road**
**Minneapolis, Minnesota 55425**
**(952) 853-8100**
**(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)**

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

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| Common stock, $0.01 par value | CDAY | New York Stock Exchange |

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 | ☒ | Accelerated filer | ☐ |
| Non-accelerated filer | ☐ | Smaller reporting company | ☐ |
| | | Emerging growth company | ☐ |

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as the latest practicable date: 145,020,556 shares of Common Stock, $0.01 par value per share, as of May 4, 2020.

Ceridian HCM Holding Inc.

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## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q ("Form 10-Q") contains, or incorporates by reference, not only historical information, but also forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended ("Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended ("Exchange Act") and that are subject to the safe harbor created by those sections. Forward-looking statements, including, without limitation, statements concerning the conditions of the human capital management solutions industry and our operations, performance, and financial condition, including, in particular, statements relating to our business, growth strategies, product development efforts, and future expenses. Forward-looking statements can be identified by words such as "anticipates," "intends," "plans," "seeks," "believes," "estimates," "expects," "assumes," "projects," "could," "may," "will," "should," and similar references to future periods, or by the inclusion of forecasts or projections.

Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy, and other future conditions. Because forward-looking statements relate to the future, by their nature, they are subject to inherent uncertainties, risks, and changes in circumstances that are difficult to predict. As a result, our actual results may differ materially from those contemplated by the forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include regional, national, or global political, economic, business, competitive, market, and regulatory conditions and the following:

- the impact of the Coronavirus disease 2019 ("COVID-19") pandemic on our business, operations, and financial results;
- our inability to attain or to maintain profitability;
- significant competition for our solutions;
- our inability to continue to develop or to sell our existing Cloud solutions;
- our inability to manage our growth effectively;
- the risk that we may not be able to successfully migrate our Bureau customers to our Cloud solutions or to offset the decline in Bureau revenue with Cloud revenue;
- the decline or slower than expected development of the market for enterprise cloud computing;
- failure of our efforts to increase use of our Cloud solutions and our other applications may not succeed;
- our failure to provide enhancements and new features and modifications to our solutions;
- failure to comply the Federal Trade Commission's ("FTC") ongoing consent order regarding data protection;
- system interruptions or failures, including cyber-security breaches, identity theft, or other disruptions that could compromise our information;
- our failure to comply with applicable privacy, security, data, and financial services laws, regulations and standards;
- changes in regulations governing financial services, privacy concerns, and laws or other domestic or foreign data protection regulations;
- the risk of loss caused by customer failure to repay distribution of earned net wages and associated tax amounts made on behalf of our customers for our Dayforce Wallet or other services;
- our inability to successfully expand our current offerings into new markets or further penetrate existing markets;
- our inability to meet the more complex configuration and integration demands of our large customers;
- reductions in our customers' employment levels or other overall declines in the financial viability of our current and prospective customers;
- the risk of our customers declining to renew their agreements with us or renewing at lower performance fee levels;
- our failure to manage our technical operations infrastructure;
- our inability to maintain necessary third party relationships, and third party software licenses or there are errors in the software we license;
- our inability to protect our intellectual property rights, proprietary technology, information, processes, and know-how;
- our failure to keep pace with rapid technological changes and evolving industry standards;
- general economic, political and market forces beyond our control; or
- changes in laws and regulations related to the Internet or changes in the Internet infrastructure itself.

Please refer to Part II, Item IA, “Risk Factors” of this Form 10-Q and Part I, Item IA, “Risk Factors” of our most recently filed Annual Report on Form 10-K, for the year ended December 31, 2019 (“2019 Form 10-K”), for a further description of these and other factors. Although we have attempted to identify important risk factors, there may be other risk factors not presently known to us or that we presently believe are not material that could cause actual results and developments to differ materially from those made in or suggested by the forward-looking statements contained in this Form 10-Q. If any of these risks materialize, or if any of the above assumptions underlying forward-looking statements prove incorrect, actual results and developments may differ materially from those made in or suggested by the forward-looking statements contained in this Form 10-Q. For the reasons described above, we caution you against relying on any forward-looking statements. Any forward-looking statement made by us in this Form 10-Q speaks only as of the date on which we make it. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update or to revise any forward-looking statement, whether as a result of new information, future developments, or otherwise, except as may be required by law. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should be viewed as historical data.

**PART I. FINANCIAL INFORMATION**

**ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**

**Ceridian HCM Holding Inc.**

**Condensed Consolidated Balance Sheets**

**(Dollars in millions, except share data)**

| | March 31, 2020 (unaudited) | December 31, 2019 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and equivalents | $ 255.3 | $ 281.3 |
| Trade and other receivables, net | 82.8 | 80.4 |
| Prepaid expenses and other current assets | 68.9 | 57.9 |
| Total current assets before customer trust funds | 407.0 | 419.6 |
| Customer trust funds | 3,649.5 | 3,204.1 |
| Total current assets | 4,056.5 | 3,623.7 |
| Right of use lease asset | 34.8 | 32.0 |
| Property, plant, and equipment, net | 124.6 | 128.3 |
| Goodwill | 1,939.5 | 1,973.5 |
| Other intangible assets, net | 176.5 | 177.9 |
| Other assets | 138.2 | 150.3 |
| Total assets | $ 6,470.1 | $ 6,085.7 |
| **LIABILITIES AND EQUITY** | | |
| Current liabilities: | | |
| Current portion of long-term debt | $ 9.7 | $ 10.8 |
| Current portion of long-term lease liabilities | 8.4 | 8.8 |
| Accounts payable | 34.9 | 43.2 |
| Deferred revenue | 26.8 | 25.5 |
| Employee compensation and benefits | 49.3 | 75.9 |
| Other accrued expenses | 18.4 | 13.9 |
| Total current liabilities before customer trust funds obligations | 147.5 | 178.1 |
| Customer trust funds obligations | 3,605.2 | 3,193.6 |
| Total current liabilities | 3,752.7 | 3,371.7 |
| Long-term debt, less current portion | 665.0 | 666.3 |
| Employee benefit plans | 113.9 | 117.2 |
| Long-term lease liabilities, less current portion | 32.8 | 30.1 |
| Other liabilities | 20.1 | 18.1 |
| Total liabilities | 4,584.5 | 4,203.4 |
| Commitments and contingencies (Note 13) | | |
| Stockholders' equity: | | |
| Common stock, $0.01 par, 500,000,000 shares authorized, 144,937,946 and 144,386,618 shares issued and outstanding as of March 31, 2020, and December 31, 2019, respectively | 1.4 | 1.4 |
| Additional paid in capital | 2,473.0 | 2,449.1 |
| Accumulated deficit | (221.2) | (229.8) |
| Accumulated other comprehensive loss | (367.6) | (338.4) |
| Total stockholders' equity | 1,885.6 | 1,882.3 |
| Total liabilities and equity | $ 6,470.1 | $ 6,085.7 |

See accompanying notes to condensed consolidated financial statements.

**Ceridian HCM Holding Inc.**

**Condensed Consolidated Statements of Operations**

**(Unaudited, dollars in millions, except share and per share data)**

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| Revenue: | | |
| Recurring services | $ 181.5 | $ 172.8 |
| Professional services and other | 41.2 | 30.9 |
| Total revenue | 222.7 | 203.7 |
| Cost of revenue: | | |
| Recurring services | 52.2 | 50.9 |
| Professional services and other | 42.6 | 35.3 |
| Product development and management | 17.6 | 15.2 |
| Depreciation and amortization | 9.8 | 8.7 |
| Total cost of revenue | 122.2 | 110.1 |
| Gross profit | 100.5 | 93.6 |
| Selling, general, and administrative | 74.2 | 66.2 |
| Operating profit | 26.3 | 27.4 |
| Interest expense, net | 6.9 | 8.9 |
| Other expense, net | 2.6 | 1.6 |
| Income before income taxes | 16.8 | 16.9 |
| Income tax expense | 8.2 | 5.7 |
| Net income | $ 8.6 | $ 11.2 |
| Net income per share: | | |
| Basic | $ 0.06 | $ 0.08 |
| Diluted | $ 0.06 | $ 0.08 |
| Weighted-average shares outstanding: | | |
| Basic | 144,645,325 | 140,149,271 |
| Diluted | 151,178,498 | 147,042,228 |

See accompanying notes to condensed consolidated financial statements.

**Ceridian HCM Holding Inc.**

**Condensed Consolidated Statements of Comprehensive Income (Loss)**

**(Unaudited, dollars in millions)**

| | Three Months Ended March 31, | |
|---|---|---|
| | **2020** | **2019** |
| Net income | $ 8.6 | $ 11.2 |
| Items of other comprehensive income (loss) before income taxes: | | |
| Change in foreign currency translation adjustment | (49.1) | 12.3 |
| Change in unrealized gain from invested customer trust funds | 23.4 | 21.9 |
| Change in pension liability adjustment (1) | 3.3 | 2.5 |
| Other comprehensive (loss) income before income taxes | (22.4) | 36.7 |
| Income tax expense, net | 6.8 | 2.7 |
| Other comprehensive (loss) income after income taxes | (29.2) | 34.0 |
| Comprehensive (loss) income | $ (20.6) | $ 45.2 |

(1) The amount of the pension liability adjustment recognized in the condensed consolidated statements of operations within other expense, net was $3.2 million and $2.6 million during the three months ended March 31, 2020, and 2019, respectively.

See accompanying notes to condensed consolidated financial statements.

## Ceridian HCM Holding Inc.

## Condensed Consolidated Statements of Stockholders' Equity

## (Unaudited, dollars in millions, except share data)

| | Common Stock | | Additional Paid In Capital | Accumulated Deficit | Accumulated Other Comprehensive Loss | Total Stockholders Equity |
|---|---|---|---|---|---|---|
| | Shares | $ | | | | |
| **Balance as of December 31, 2019** | 144,386,618 | $ 1.4 | $ 2,449.1 | $ (229.8) | $ (338.4) | $ 1,882.3 |
| Net income | — | — | — | 8.6 | — | 8.6 |
| Issuance of common stock under share-based compensation plans | 551,328 | — | 11.4 | — | — | 11.4 |
| Share-based compensation | — | — | 12.5 | — | — | 12.5 |
| Foreign currency translation | — | — | — | — | (49.1) | (49.1) |
| Change in unrealized gain, net of tax of $6.0 | — | — | — | — | 17.4 | 17.4 |
| Change in pension liability adjustment, net of tax of $0.8 | — | — | — | — | 2.5 | 2.5 |
| **Balance as of March 31, 2020** | 144,937,946 | $ 1.4 | $ 2,473.0 | $ (221.2) | $ (367.6) | $ 1,885.6 |

| | Common Stock | | Additional Paid In Capital | Accumulated Deficit | Accumulated Other Comprehensive Loss | Total Stockholders Equity |
|---|---|---|---|---|---|---|
| | Shares | $ | | | | |
| **Balance as of December 31, 2018** | 139,453,710 | $ 1.4 | $ 2,325.6 | $ (335.6) | $ (375.9) | $ 1,615.5 |
| Cumulative-effect adjustment to accumulated deficit related to the adoption of ASU 2018-02 | — | — | — | 27.1 | (27.1) | — |
| Net income | — | — | — | 11.2 | — | 11.2 |
| Issuance of common stock under share-based compensation plans | 1,221,622 | — | 20.1 | — | — | 20.1 |
| Share-based compensation | — | — | 6.0 | — | — | 6.0 |
| Foreign currency translation | — | — | — | — | 12.3 | 12.3 |
| Change in unrealized gain, net of tax of $2.7 | — | — | — | — | 19.2 | 19.2 |
| Change in pension liability adjustment, net of tax of $0.0 | — | — | — | — | 2.5 | 2.5 |
| **Balance as of March 31, 2019** | 140,675,332 | $ 1.4 | $ 2,351.7 | $ (297.3) | $ (369.0) | $ 1,686.8 |

See accompanying notes to condensed consolidated financial statements.

**Ceridian HCM Holding Inc.**

**Condensed Consolidated Statements of Cash Flows**

**(Unaudited, dollars in millions)**

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| Net income | $ 8.6 | $ 11.2 |
| Adjustments to reconcile net income to net cash provided by (used in) operating activities: | | |
| Deferred income tax expense (benefit) | 4.1 | (1.9) |
| Depreciation and amortization | 11.8 | 14.4 |
| Amortization of debt issuance costs and debt discount | 0.3 | 0.3 |
| Net periodic pension and postretirement cost | 0.8 | 1.3 |
| Non-cash share-based compensation | 12.5 | 6.0 |
| Other | 0.8 | 0.5 |
| Changes in operating assets and liabilities excluding effects of acquisitions and divestitures: | | |
| Trade and other receivables | (4.5) | (3.8) |
| Prepaid expenses and other current assets | (7.5) | (7.0) |
| Accounts payable and other accrued expenses | (2.0) | (5.8) |
| Deferred revenue | 2.1 | (0.2) |
| Employee compensation and benefits | (26.4) | (16.9) |
| Accrued interest | — | 3.4 |
| Accrued taxes | 0.9 | (8.1) |
| Other assets and liabilities | (0.1) | (2.2) |
| Net cash provided by (used in) operating activities | 1.4 | (8.8) |
| **Cash Flows from Investing Activities** | | |
| Purchase of customer trust funds marketable securities | (24.6) | (143.3) |
| Proceeds from sale and maturity of customer trust funds marketable securities | 49.5 | 49.8 |
| Expenditures for property, plant, and equipment | (4.9) | (4.0) |
| Expenditures for software and technology | (10.7) | (9.9) |
| Acquisition costs, net of cash acquired | — | (10.2) |
| Net cash provided by (used in) investing activities | 9.3 | (117.6) |
| **Cash Flows from Financing Activities** | | |
| Increase in customer trust funds obligations, net | 480.8 | 1,916.1 |
| Proceeds from issuance of common stock under share-based compensation plans | 11.4 | 20.1 |
| Repayment of long-term debt obligations | (2.7) | (1.7) |
| Net cash provided by financing activities | 489.5 | 1,934.5 |
| **Effect of exchange rate changes on cash, restricted cash, and equivalents** | (14.5) | 3.9 |
| Net increase in cash, restricted cash, and equivalents | 485.7 | 1,812.0 |
| Cash, restricted cash, and equivalents at beginning of period | 1,658.6 | 1,106.3 |
| Cash, restricted cash, and equivalents at end of period | $ 2,144.3 | $ 2,918.3 |
| **Reconciliation of cash, restricted cash, and equivalents to the condensed consolidated balance sheets** | | |
| Cash and equivalents | $ 255.3 | $ 206.3 |
| Restricted cash and equivalents included in customer trust funds | 1,889.0 | 2,712.0 |
| Total cash, restricted cash, and equivalents | $ 2,144.3 | $ 2,918.3 |

See accompanying notes to condensed consolidated financial statements.

## 1. Organization

Ceridian HCM Holding Inc. and its subsidiaries (also referred to in this report as “Ceridian,” “we,” “our,” “us,” or the “Company”) offer a broad range of services and software designed to help employers more effectively manage employment processes, such as payroll, payroll-related tax filing, human resource information systems, employee self-service, time and labor management, employee assistance programs, and recruitment and applicant screening. Our technology-based services are typically provided through long-term customer relationships that result in a high level of recurring revenue. Our operations are primarily located in the United States and Canada.

## 2. Summary of Significant Accounting Policies

***Basis of Presentation***

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) for interim financial information. Accordingly, the unaudited condensed consolidated financial statements do not include all of the information and notes required by GAAP for complete financial statements. The accounting policies we follow are set forth in Note 2, “Summary of Significant Accounting Policies,” to our audited consolidated financial statements in our 2019 Form 10-K. The following notes should be read in conjunction with these policies and other disclosures in our 2019 Form 10-K.

In the opinion of management, the unaudited condensed consolidated financial statements contained herein reflect all adjustments (consisting only of normal recurring adjustments, except as set forth in these notes to condensed consolidated financial statements) necessary to present fairly in all material aspects the financial position, results of operations, comprehensive income (loss), and cash flows from all periods presented. Interim results are not necessarily indicative of results for a full year.

***Internally Developed Software Costs***

In accordance with ASC Topic 350, we capitalize costs associated with software developed or obtained for internal use when both the preliminary project stage is completed and our management has authorized further funding for the project, which it deems probable of completion. Capitalized software costs include only: (1) external direct costs of materials and services consumed in developing or obtaining the software; (2) payroll and payroll-related costs for employees who are directly associated with and who devote time to the project; and (3) interest costs incurred while developing the software. Capitalization of these costs ceases no later than the point at which the project is substantially complete and ready for its intended purpose. We do not include general and administrative costs and overhead costs in capitalizable costs. We charge research and development costs and other software maintenance costs related to software development to earnings as incurred.

***Deferred Costs***

Deferred costs, which primarily consist of deferred sales commissions, included within Other assets on our condensed consolidated balance sheets were $101.0 million and $106.4 million as of March 31, 2020, and December 31, 2019, respectively. Amortization expense for the deferred costs was $9.0 million and $7.7 million for the three months ended March 31, 2020, and 2019, respectively.

***Recently Issued Accounting Pronouncements***

In August 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2018-14, “Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans,” which modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. This update removes disclosures that are no longer considered cost beneficial, adds disclosures identified as relevant, and clarifies certain specific requirements of disclosures to improve the effectiveness of disclosures in the notes to financial statements. The amendments in this update are effective for public business entities for fiscal years ending after December 15, 2020. The amendments in this update should be applied on a retrospective basis to all periods presented. The adoption of this guidance will not have a significant impact on our annual defined benefit plan and other postretirement plan disclosures.

In March 2020, the FASB issued ASU No. 2020-04, "Reference Rate Reform," which provides guidance for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The amendments in this guidance apply only to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. The amendments in this guidance provide for an optional method in which modifications of contracts within the scope of ASC Topic 310, Receivables, and ASC Topic 470, Debt, should be accounted for by prospectively adjusting the effective interest rate, in addition to several other optional methods and exceptions. The amendments in this update are effective for all entities as of March 12, 2020 through December 31, 2022. We have not yet determined the impact of the adoption of this guidance on our Senior Secured Credit Facility.

**3. Fair Value Measurements**

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

As of March 31, 2020, our financial assets and liabilities measured at fair value on a recurring basis were categorized as follows:

| | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| | (Dollars in millions) | | | |
| **Assets** | | | | |
| Available for sale customer trust funds assets | $ 1,760.5 | $ — | $ 1,760.5 (a) | $ — |
| Total assets measured at fair value | $ 1,760.5 | $ — | $ 1,760.5 | $ — |

As of December 31, 2019, our financial assets and liabilities measured at fair value on a recurring basis were categorized as follows:

| | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| | (Dollars in millions) | | | |
| **Assets** | | | | |
| Available for sale customer trust funds assets | $ 1,826.8 | $ — | $ 1,826.8 (a) | $ — |
| Total assets measured at fair value | $ 1,826.8 | $ — | $ 1,826.8 | $ — |

(a) Fair value is based on inputs that are observable for the asset or liability, other than quoted prices.

***Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis***

During the three months ended March 31, 2020, we did not re-measure any financial assets or liabilities at fair value on a nonrecurring basis. During the year ended December 31, 2019, we completed a business combination which requires the assets acquired and liabilities assumed to be measured at fair value on a nonrecurring basis.

**4. Customer Trust Funds**

Investment income from invested customer trust funds, also referred to as float revenue or float, is a component of our compensation for providing services under agreements with our customers. Investment income from invested customer trust funds included in revenue was $19.6 million and $24.3 million for the three months ended March 31, 2020, and 2019, respectively. Investment income includes interest income, realized gains and losses from sales of customer trust funds' investments, and unrealized credit losses determined to be unrecoverable.

The amortized cost of customer trust funds as of March 31, 2020, and December 31, 2019, is the original cost of assets acquired. The amortized cost and fair values of investments of customer trust funds available for sale as of March 31, 2020, and December 31, 2019, were as follows:

**Investments of Customer Trust Funds at March 31, 2020**

| | Amortized Cost | Gross Unrealized Gain | Gross Unrealized Loss | Fair Value |
|---|---|---|---|---|
| | (Dollars in millions) | | | |
| Money market securities, investments carried at cost and other cash equivalents | $ 1,872.4 | $ — | $ — | $ 1,872.4 |
| Available for sale investments: | | | | |
| U.S. government and agency securities | 542.3 | 22.9 | — | 565.2 |
| Canadian and provincial government securities | 375.2 | 11.3 | — | 386.5 |
| Corporate debt securities | 529.8 | 9.3 | (0.5) | 538.6 |
| Asset-backed securities | 247.0 | 1.8 | (0.8) | 248.0 |
| Mortgage-backed securities | 17.9 | 0.3 | — | 18.2 |
| Other securities | 4.0 | — | — | 4.0 |
| Total available for sale investments | 1,716.2 | 45.6 | (1.3) | 1,760.5 |
| Invested customer trust funds | 3,588.6 | $ 45.6 | $ (1.3) | 3,632.9 |
| Trust receivables | 16.6 | | | 16.6 |
| Total customer trust funds | $ 3,605.2 | | | $ 3,649.5 |

**Investments of Customer Trust Funds at December 31, 2019**

| | Amortized Cost | Gross Unrealized Gain | Gross Unrealized Loss | Fair Value |
|---|---|---|---|---|
| | (Dollars in millions) | | | |
| Money market securities, investments carried at cost and other cash equivalents | $ 1,348.1 | $ — | $ — | $ 1,348.1 |
| Available for sale investments: | | | | |
| U.S. government and agency securities | 542.4 | 7.1 | (0.3) | 549.2 |
| Canadian and provincial government securities | 406.7 | 5.4 | (0.7) | 411.4 |
| Corporate debt securities | 562.2 | 9.0 | (0.3) | 570.9 |
| Asset-backed securities | 270.0 | 1.7 | (0.3) | 271.4 |
| Mortgage-backed securities | 19.8 | 0.2 | (0.1) | 19.9 |
| Other securities | 4.0 | — | — | 4.0 |
| Total available for sale investments | 1,805.1 | 23.4 | (1.7) | 1,826.8 |
| Invested customer trust funds | 3,153.2 | $ 23.4 | $ (1.7) | 3,174.9 |
| Trust receivables (a) | 40.4 | | | 29.2 |
| Total customer trust funds | $ 3,193.6 | | | $ 3,204.1 |

(a) The fair value of trust receivables as of December 31, 2019, includes a loss of $11.2 million related to unrecovered duplicate payments resulting from the September 26, 2019, isolated service incident. Ceridian is liable for these unrecovered duplicate payments and has reimbursed the customer trust for the resulting losses as of March 31, 2020. Please refer to Note 13, “Commitments and Contingencies,” for further discussion of the September 26, 2019, isolated service incident.

The following represents the gross unrealized losses and the related fair value of the investments of customer trust funds available for sale, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position at March 31, 2020.

| | Less than 12 months | | 12 months or more | | Total | |
|---|---|---|---|---|---|---|
| | Unrealized Losses | Fair Value | Unrealized Losses | Fair Value | Unrealized Losses | Fair Value |
| | (Dollars in millions) | | | | | |
| Corporate debt securities | $ (0.5) | $ 86.6 | (a) | $ 31.2 | $ (0.5) | $ 117.8 |
| Asset-backed securities | (0.8) | 114.0 | — | — | (0.8) | 114.0 |
| Total available for sale investments | $ (1.3) | $ 200.6 | $ — | $ 31.2 | $ (1.3) | $ 231.8 |

(a) These investments have been in an unrealized loss position; however, the amount of unrealized loss is less than $0.05 million.

Management does not believe that any individual unrealized loss was unrecoverable as of March 31, 2020. The unrealized losses are primarily attributable to changes in interest rates and not to credit deterioration. We currently do not intend to sell or expect to be required to sell the securities before the time required to recover the amortized cost.

The amortized cost and fair value of investment securities available for sale at March 31, 2020, by contractual maturity are shown below. Expected maturities will differ from contractual maturities because borrowers may have the right to call or to prepay obligations with or without call or prepayment penalties.

| | March 31, 2020 | |
|---|---|---|
| | Cost | Fair Value |
| | (Dollars in millions) | |
| Due in one year or less | $ 2,221.1 | $ 2,222.1 |
| Due in one to three years | 711.9 | 725.0 |
| Due in three to five years | 494.5 | 513.4 |
| Due after five years | 161.1 | 172.4 |
| Invested customer trust funds | $ 3,588.6 | $ 3,632.9 |

## 5. Goodwill and Intangible Assets

***Goodwill***

Goodwill and changes therein were as follows for the three months ended March 31, 2020, and the year ended December 31, 2019 (Dollars in millions):

| | |
|---|---|
| Balance at December 31, 2018 | $ 1,927.4 |
| Acquisitions | 25.7 |
| Translation | 20.4 |
| Balance at December 31, 2019 | 1,973.5 |
| Translation | (34.0) |
| Balance at March 31, 2020 | $ 1,939.5 |

***Intangible Assets***

Other intangible assets consisted of the following as of March 31, 2020:

| | Gross Carrying Amount | Accumulated Amortization | Net | Estimated Life Range (Years) |
|---|---|---|---|---|
| | (Dollars in millions) | | | |
| Customer lists and relationships | $ 207.5 | $ (204.0) | $ 3.5 | 5-15 |
| Trade name | 173.5 | (1.9) | 171.6 | 3 and Indefinite |
| Technology | 152.4 | (151.0) | 1.4 | 3-4 |
| Total other intangible assets | $ 533.4 | $ (356.9) | $ 176.5 | |

We perform an impairment assessment of our trade name intangible assets as of October 1 of each year. We continue to evaluate the use of our trade names and branding in our sales and marketing efforts. If there is a fundamental shift in the method of our branding in the future, we will assess the impact on the carrying amount of our trade name intangible assets and determine whether an impairment exists. If it is determined that an impairment has occurred, it would be recognized during the period in which the decision was made to make the fundamental shift.

Other intangible assets consisted of the following as of December 31, 2019:

| | Gross Carrying Amount | Accumulated Amortization | Net | Estimated Life Range (Years) |
|---|---|---|---|---|
| | (Dollars in millions) | | | |
| Customer lists and relationships | $ 212.5 | $ (208.2) | $ 4.3 | 5-15 |
| Trade name | 174.0 | (2.1) | 171.9 | 3 and Indefinite |
| Technology | 156.1 | (154.4) | 1.7 | 3-4 |
| Total other intangible assets | $ 542.6 | $ (364.7) | $ 177.9 | |

Amortization expense related to definite-lived intangible assets was $0.4 million and $4.7 million for the three months ended March 31, 2020, and 2019, respectively.

## 6. Debt

***Overview***

Our debt obligations consisted of the following as of the periods presented:

| | March 31, 2020 | December 31, 2019 |
|---|---|---|
| | (Dollars in millions) | |
| Term Debt, interest rate of 3.5% and 4.8% as of March 31, 2020, and December 31, 2019, respectively | $ 669.8 | $ 671.5 |
| Revolving Credit Facility ($300.0 million available capacity less amounts reserved for letters of credit, which were $1.9 million and $1.9 million as of March 31, 2020, and December 31, 2019, respectively) | — | — |
| Canada Line of Credit (CDN $7.0 million letter of credit capacity as of March 31, 2020, and December 31, 2019, which was fully utilized; USD $5.0 million as of March 31, 2020, and USD $5.4 million as of December 31, 2019) | — | — |
| Financing lease liabilities (Please refer to Note 12) | 11.4 | 12.4 |
| Total debt | 681.2 | 683.9 |
| Less unamortized discount on Term Debt | 1.4 | 1.4 |
| Less unamortized debt issuance costs on Term Debt | 5.1 | 5.4 |
| Less current portion of long-term debt | 9.7 | 10.8 |
| Long-term debt, less current portion | $ 665.0 | $ 666.3 |

***Senior Secured Credit Facility***

On April 30, 2018, Ceridian completed the refinancing of its debt by entering into a new credit agreement. Pursuant to the terms of the new credit agreement, Ceridian became borrower of (i) a $680.0 million term loan debt facility (the "2018 Term Debt") and (ii) a $300.0 million revolving credit facility (the "2018 Revolving Credit Facility") (the 2018 Term Debt and the 2018 Revolving Credit Facility are together referred to as the "2018 Senior Secured Credit Facility"). The 2018 Senior Secured Credit Facility is secured by substantially all assets of Ceridian. The 2018 Term Debt has a maturity date of April 30, 2025, and the 2018 Revolving Credit Facility has a maturity date of April 30, 2023. The 2018 Term Debt was initially subject to an interest rate of LIBOR plus 3.25%. As a result of a ratings upgrade on March 26, 2019, of our senior secured credit facilities by Moody's Investors Service, from B3 to B2, the Company's floating rate term debt interest rate has been reduced from LIBOR plus 3.25% to LIBOR plus 3.00%, so long as the rating is maintained. On February 19, 2020, Ceridian completed the first amendment to the 2018 Senior Secured Credit Facility in which the 2018 Term Debt interest rate was reduced from LIBOR plus 3.00% to LIBOR plus 2.50%. Further, the interest rate trigger under the applicable rating by Moody's Investor Service was removed by the first amendment. Accrued interest related to the 2018 Senior Secured Credit Facility was $0.1 million and $0.1 million as of March 31, 2020, and December 31, 2019, respectively, and is included within Other accrued expenses in our condensed consolidated balance sheets.

On April 2, 2020, in light of the current uncertainty and volatility in the global financial markets resulting from the COVID-19 pandemic, Ceridian elected to borrow $295.0 million under the 2018 Revolving Credit Facility as a precautionary measure to increase our cash position and to preserve financial flexibility. We may use a portion of the proceeds from the borrowing for general corporate purposes.

***Future Payments and Maturities of Debt***

The future principal payments and maturities of our indebtedness, excluding financing lease obligations, are as follows:

| Years Ending December 31, | Amount (Dollars in millions) |
|---|---|
| 2020 | $ 5.1 |
| 2021 | 6.8 |
| 2022 | 6.8 |
| 2023 | 6.8 |
| 2024 | 6.8 |
| Thereafter | 637.5 |
| | $ 669.8 |

***Fair Value of Debt***

Our debt does not trade in active markets. Based on the borrowing rates currently available to us for bank loans with similar terms and average maturities and the limited trades of our debt, the fair value of our debt was estimated to be $636.3 million and $675.1 million as of March 31, 2020, and December 31, 2019, respectively.

**7. Employee Benefit Plans**

The components of net periodic cost for our defined benefit pension plan and for our postretirement benefit plan are included in the following tables:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| **Net Periodic Pension Cost** | (Dollars in millions) | |
| Interest cost | $ 3.2 | $ 4.5 |
| Actuarial loss amortization | 3.9 | 3.2 |
| Less: Expected return on plan assets | (5.7) | (5.9) |
| Net periodic pension cost | $ 1.4 | $ 1.8 |

| Net Periodic Postretirement Benefit | Three Months Ended March 31, 2020 | 2019 |
|---|---|---|
| | (Dollars in millions) | |
| Service benefit | $ — | $ — |
| Interest cost | 0.1 | 0.1 |
| Actuarial gain amortization | (0.6) | (0.6) |
| Prior service credit amortization | (0.1) | — |
| Net periodic postretirement benefit gain | $ (0.6) | $ (0.5) |

**8. Share-Based Compensation**

Prior to November 1, 2013, Ceridian employees participated in a share-based compensation plan of the former ultimate parent of Ceridian, the 2007 Stock Incentive Plan ("2007 SIP"). Effective November 1, 2013, although most participants who held stock options under the 2007 SIP converted their options to a newly created option plan, the 2013 Ceridian HCM Holding Inc. Stock Incentive Plan, as amended ("2013 SIP"), a small number of participants maintained their stock options in the 2007 SIP. Concurrent with the IPO and legal reorganization, all outstanding stock options under the 2007 SIP were converted into options to purchase common stock of Ceridian. As of March 31, 2020, there were 2,500 stock options outstanding under the 2007 SIP.

Stock options awarded under the 2013 SIP vest either annually on a pro rata basis over a four- or five-year period or on a specific date if certain performance criteria are satisfied and certain equity values are attained. In addition, upon termination of service, all vested options must be exercised generally within 90 days after termination, or these awards will be forfeited. The stock option awards have a 10-year contractual term and have an exercise price that is not less than the fair market value of the underlying stock on the date of grant. As of March 31, 2020, there were 4,657,548 stock options and restricted stock units outstanding under the 2013 SIP. We do not intend to grant any additional awards under the 2007 SIP or the 2013 SIP.

On April 24, 2018, in connection with the IPO, the Board of Directors approved the Ceridian HCM Holding Inc. 2018 Equity Incentive Plan ("2018 EIP"), which authorizes the issuance of up to 13,500,000 shares of common stock to eligible participants through equity awards. (the "Share Reserve"). The Share Reserve may be increased on March 31 of each of the first ten calendar years during the term of the 2018 EIP, by the lesser of (i) three percent of the number of shares of our common stock outstanding on each January 31 immediately prior to the date of increase or (ii) such number of shares of our common stock determined by the Board of Directors. On March 31, 2020, the Share Reserve was increased by three percent of the number of shares of common stock outstanding on January 31, 2020, or 4,335,286 shares.

Equity awards under the 2018 EIP vest annually on a pro rata basis, generally over a four-year period. In addition, upon termination of service, all vested awards must be exercised within 90 days after termination, or these awards will be forfeited. The equity awards have a 10-year contractual term and have an exercise price that is not less than the fair market value of the underlying stock on the date of the grant. As of March 31, 2020, there were 9,164,882 stock options, restricted stock units, and performance stock units outstanding and 12,866,597 shares available for future grants of equity awards under the 2018 EIP.

On November 9, 2018, the Board of Directors approved the Ceridian HCM Holding Inc. Global Employee Stock Purchase Plan (the "GESPP"), and the Company's stockholders approved the GESPP on May 1, 2019. The GESPP authorizes the issuance of up to 2,500,000 shares of common stock to eligible participants through purchases via payroll deductions. The purchase price is the lower of (i) 85% of the fair market value of a share of common stock on the offering date (the first trading day of the offering period commencing on January 1 and concluding on December 31) or (ii) 85% of the fair market value of a share of common stock on the purchase date. The GESPP shall continue for ten years, unless terminated sooner as provided under the GESPP. During 2020 and subsequent years, quarterly purchase periods will commence on January 1, April 1, July 1, and October 1. Shares will be purchased on the last trading day of the respective purchase periods. The first GESPP purchase period of 2020 ended on March 31, 2020, resulting in the issuance of 49,802 shares of our common stock at a purchase price of $42.56.

Total share-based compensation expense was $12.5 million and $6.0 million for the three months ended March 31, 2020, and 2019, respectively.

***Performance-Based Stock Options***

Performance-based option activity under the 2007 SIP and the 2013 SIP for the period was as follows:

| | Shares | Weighted Average Exercise Price (per share) | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value (in millions) |
|---|---|---|---|---|
| Performance-based options outstanding at December 31, 2019 | 68,281 | $ 13.58 | 2.6 | $ 3.7 |
| Granted | — | — | — | — |
| Exercised | (13,417) | (13.46) | — | — |
| Forfeited or expired | — | — | — | — |
| Performance-based options outstanding at March 31, 2020 | 54,864 | $ 13.61 | 2.4 | $ 2.0 |
| Performance-based options exercisable at March 31, 2020 | 54,864 | $ 13.61 | 2.4 | $ 2.0 |

The performance criteria for all outstanding performance-based stock options was met on June 7, 2018, resulting in the vesting of all outstanding performance-based stock options on this date. As of March 31, 2020, there was no share-based compensation expense related to unvested performance-based stock options not yet recognized.

***Term-Based Stock Options***

Term-based option activity, including stock options under the 2007 SIP, the 2013 SIP, and the 2018 EIP, for the period was as follows:

| | Shares | Weighted Average Exercise Price (per share) | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value (in millions) |
|---|---|---|---|---|
| Term-based options outstanding at December 31, 2019 | 13,144,937 | $ 29.74 | 7.8 | $ 501.3 |
| Granted | 140,447 | 70.73 | — | — |
| Exercised | (476,489) | (18.84) | — | — |
| Forfeited or expired | (51,324) | (29.34) | — | — |
| Term-based options outstanding at March 31, 2020 | 12,757,571 | $ 30.60 | 7.6 | $ 251.6 |
| Term-based options exercisable at March 31, 2020 | 4,668,339 | $ 25.02 | 6.5 | $ 116.9 |

As of March 31, 2020, there was $75.9 million of share-based compensation expense related to unvested term-based awards not yet recognized, which is expected to be recognized over a weighted average period of 1.9 years.

***Restricted Stock Units***

Restricted stock units (“RSUs”) activity, including RSUs under the 2013 SIP and the 2018 EIP, for the period was as follows:

| | Shares |
|---|---|
| RSUs outstanding at December 31, 2019 | 819,818 |
| Granted | 60,325 |
| Shares issued upon vesting of RSUs | (12,500) |
| Forfeited or canceled | (54) |
| RSUs outstanding at March 31, 2020 | 867,589 |
| RSUs releasable at March 31, 2020 | 395,338 |

During the three months ended March 31, 2020, 138,687 RSUs vested. As of March 31, 2020, there were 472,251 unvested RSUs outstanding and 395,338 vested RSUs outstanding. RSUs generally vest annually over a one-, three-, or four-year period. As of March 31, 2020, there was $16.5 million of share-based compensation expense related to unvested RSUs not yet recognized, which is expected to be recognized over a weighted average period of 1.7 years.

***Performance Stock Units***

During the three months ended March 31, 2020, 145,017 performance stock units ("PSUs") were granted under the 2018 EIP and had a weighted average grant date fair value per share of $70.73. During the three months ended March 31, 2020, 111 PSUs were forfeited and cancelled.

The vesting conditions for the PSUs are based on the Company's performance against Cloud revenue and adjusted EBITDA margin goals under the Company's 2020 Management Incentive Plan (the "2020 MIP") for the incentive period of January 1, 2020 through December 31, 2020. The maximum incentive vesting of PSUs may not exceed 125% under the 2020 MIP. Both the Cloud revenue and adjusted EBITDA margin goals are calculated based on the Company's operating results, adjusted for foreign currency and interest rate impacts plus other unique impacts as approved by the Compensation Committee or the Board. Upon vesting of a PSU, a participant will receive shares of common stock of the Company. The probability of vesting of PSUs will continue to be evaluated throughout the period, and share-based compensation expense will be recognized in accordance with that probability. As of March 31, 2020, there was $10.3 million of share-based compensation expense related to unvested PSUs not yet recognized.

**9. Revenue**

***Our Solutions***

We categorize our solutions into two categories: Cloud and Bureau offerings.

- Cloud revenue is generated from solutions that are delivered via two cloud offerings, Dayforce and Powerpay. The Dayforce offering is differentiated from our market competition as being a single application with continuous calculation that offers a comprehensive range of functionality, including global HR, payroll, benefits, workforce management, and talent management on web and native iOS and Android platforms. Dayforce recurring revenue is primarily generated from monthly recurring fees charged on a per-employee, per-month ("PEPM") basis and the allocation of investment income generated from holding Dayforce customer funds in trust before funds are remitted to taxing authorities, Dayforce customer employees, or other third parties. Dayforce professional services and other revenue is primarily generated from implementation and post go-live professional services revenue. Other sources of Dayforce revenues include revenue from the sale, rental and maintenance of time clocks; revenue from the sale of third-party services; and billable travel expenses for Dayforce customers. The Powerpay offering is our solution designed primarily for small market Canadian customers, which typically have fewer than 20 employees. Powerpay recurring revenue is primarily generated from recurring fees charged on a per-employee, per-process basis and the allocation of investment income generated from holding Powerpay customer funds in trust before funds are remitted to taxing authorities, Powerpay customer employees, or other third parties. Typical processes include the customer's payroll runs, year-end tax packages, and delivery of customers' remittance advices or checks. Powerpay professional services revenue is primarily generated from the setup of the Powerpay customer on their platform.
- Bureau revenue is generated primarily from solutions delivered via a service-bureau model. These solutions are delivered via three primary service lines: payroll, payroll-related tax filing services, and outsourced human resource solutions. Revenue from payroll services is generated from recurring fees charged on a per-process basis. Typical processes include the customer's payroll runs, year-end tax packages, and delivery of customers' remittance advices or checks. In addition to customers who use our payroll services, certain customers use our tax filing services on a stand-alone basis. Our outsourced human resource solutions are tailored to meet the needs of individual customers, and entail our contracting to perform many of the duties of a customer's human resources department, including payroll processing, time and labor management, performance management, and recruiting. We also perform individual services for customers, such as check printing, wage attachment and disbursement, and Affordable Care Act ("ACA") management. Additional items included in Bureau revenue are fees for custom professional services to Bureau customers; the allocation of investment income generated from holding Bureau customer funds in trust before funds are remitted to taxing authorities, Bureau customer employees, or other third parties; consulting services related to Bureau offerings; and revenue from the sale of third party services to Bureau customers.

***Disaggregation of Revenue***

| | Three Months Ended March 31, 2020 | Three Months Ended March 31, 2019 |
|---|---|---|
| | (Dollars in millions) | |
| Revenue: | | |
| Cloud | | |
| Dayforce | | |
| Recurring services | $ 128.1 | $ 102.9 |
| Professional services and other | 40.7 | 29.9 |
| Total Dayforce revenue | 168.8 | 132.8 |
| Powerpay | | |
| Recurring services | 21.8 | 21.5 |
| Professional services and other | 0.3 | 0.3 |
| Total Powerpay revenue | 22.1 | 21.8 |
| Total Cloud revenue | 190.9 | 154.6 |
| Bureau | | |
| Recurring services | 31.6 | 48.4 |
| Professional services and other | 0.2 | 0.7 |
| Total Bureau revenue | 31.8 | 49.1 |
| Total revenue | $ 222.7 | $ 203.7 |

Recurring services revenue includes float revenue of $19.6 million and $24.3 million for the three months ended March 31, 2020, and 2019, respectively.

***Contract Balances***

The Company records a contract asset when revenue recognized for professional service performance obligations exceed the contractual amount of billings for implementation related professional services. Contract assets were $47.3 million and $43.2 million as of March 31, 2020, and December 31, 2019, respectively. Contract assets expected to be recognized in revenue within twelve months are included within Prepaid expenses and other current assets, with the remaining contract assets included within Other assets on our condensed consolidated balance sheets.

***Deferred Revenue***

Deferred revenue primarily consists of payments received in advance of revenue recognition. The changes in deferred revenue were as follows:

| | Three Months Ended March 31, 2020 | Three Months Ended March 31, 2019 |
|---|---|---|
| | (Dollars in millions) | |
| Deferred revenue, beginning of period | $ 25.5 | $ 23.2 |
| New billings | 85.7 | 63.6 |
| Revenue recognized | (83.6) | (63.8) |
| Effect of exchange rate | (0.8) | — |
| Deferred revenue, end of period | $ 26.8 | $ 23.0 |

### *Transaction Price for Remaining Performance Obligations*

In accordance with ASC Topic 606, the following represents the aggregate amount of transaction price allocated to the remaining performance obligations that are unsatisfied as of the end of the reporting period. As of March 31, 2020, approximately $908.3 million of revenue is expected to be recognized over the next three years from remaining performance obligations, which represents contracted revenue for recurring services and fixed price professional services, primarily implementation services, that has not yet been recognized, including deferred revenue and unbilled amounts that will be recognized as revenue in future periods. In accordance with the practical expedient provided in ASC Topic 606, performance obligations that are billed and recognized as they are delivered, primarily professional services contracts that are on a time and materials basis, are excluded from the transaction price for remaining performance obligations disclosed above.

## 10. Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss were as follows:

| | Foreign Currency Translation Adjustment | Unrealized Gain (Loss) from Invested Customer Trust Funds | Pension Liability Adjustment | Total |
|---|---|---|---|---|
| | | (Dollars in millions) | | |
| Balance as of December 31, 2019 | $ (178.4) | $ 10.2 | $ (170.2) | $ (338.4) |
| Other comprehensive income (loss) before income taxes and reclassifications | (49.1) | 23.4 | 0.1 | (25.6) |
| Income tax expense | — | (6.0) | (0.8) | (6.8) |
| Reclassifications to earnings | — | — | 3.2 | 3.2 |
| Other comprehensive (loss) income | (49.1) | 17.4 | 2.5 | (29.2) |
| Balance as of March 31, 2020 | $ (227.5) | $ 27.6 | $ (167.7) | $ (367.6) |

## 11. Income Taxes

Our income tax provision represents federal, state, and international taxes on our income recognized for financial statement purposes and includes the effects of temporary differences between financial statement income and income recognized for tax return purposes. Deferred tax assets and liabilities are recorded for temporary differences between the financial reporting basis and the tax basis of assets and liabilities as adjusted for the expected benefits of utilizing net operating loss carryforwards. We record a valuation allowance to reduce our deferred tax assets to reflect the net deferred tax assets that we believe will be realized. In assessing the likelihood that we will be able to recover our deferred tax assets and the need for a valuation allowance, we consider all available evidence, both positive and negative, including historical levels of pre-tax book income, expiration of net operating losses, expectations and risks associated with estimates of future taxable income, and ongoing prudent and feasible tax planning strategies, as well as current tax laws. As of March 31, 2020, we continue to record a valuation allowance of $12.0 million against deferred tax assets attributable to state net operating loss carryovers.

We recorded an income tax expense of $8.2 million during the three months ended March 31, 2020, consisting primarily of $3.6 million from US and foreign operations, $2.1 million of state taxes in the U.S., $1.3 million attributable to stock-based compensation, and $1.2 million of base erosion anti-abuse tax ("BEAT") in the U.S.

The total amount of unrecognized tax benefits as of March 31, 2020, and December 31, 2019, were $1.6 million, including $0.2 million of accrued interest, and $1.5 million, including $0.2 million of accrued interest, respectively. Of the total amount of unrecognized tax benefits as of March 31, 2020, $1.6 million represents the amount that, if recognized, would favorably impact our effective income tax rate. It is reasonable to expect that the amount of unrecognized tax benefits will change in the next twelve months; however, we do not expect the change to have a significant impact on our results of operations or financial condition.

We file income tax returns in the U.S. federal jurisdiction, various states, and foreign jurisdictions. With a few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 2015.

## 12. Leases

Supplemental balance sheet information related to leases were as follows:

| Lease Type | Balance Sheet Classification | March 31, 2020 | December 31, 2019 |
|---|---|---|---|
| | | (Dollars in millions) | |
| **ASSETS** | | | |
| Operating lease assets | Trade and other receivables, net | $ 5.2 | $ 5.5 |
| Operating lease assets | Prepaid expenses and other current assets | 1.9 | 1.2 |
| Operating lease assets | Right of use lease asset | 34.8 | 32.0 |
| Financing lease assets | Property, plant, and equipment, net | 8.6 | 8.8 |
| Total lease assets | | $ 50.5 | $ 47.5 |
| **LIABILITIES** | | | |
| Current | | | |
| Financing lease liabilities | Current portion of long-term debt | $ 2.9 | $ 4.0 |
| Operating lease liabilities | Current portion of long-term lease liabilities | 8.4 | 8.8 |
| Noncurrent | | | |
| Financing lease liabilities | Long-term debt, less current portion | 8.5 | 8.4 |
| Operating lease liabilities | Long-term lease liabilities, less current portion | 32.8 | 30.1 |
| Total lease liabilities | | $ 52.6 | $ 51.3 |

The components of lease expense were as follows:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| Lease Cost | (Dollars in millions) | |
| Operating lease cost | $ 2.3 | $ 4.0 |
| Financing lease cost: | | |
| Depreciation of lease assets | 0.2 | — |
| Interest on lease liabilities | 0.1 | — |
| Sublease income | (1.0) | (1.2) |
| Total lease cost, net | $ 1.6 | $ 2.8 |

## 13. Commitments and Contingencies

***Legal Matters***

We are subject to claims and a number of judicial and administrative proceedings considered normal in the course of our current and past operations, including employment-related disputes, contract disputes, disputes with our competitors, intellectual property disputes, government audits and proceedings, customer disputes, and tort claims. In some proceedings, the claimant seeks damages as well as other relief, which, if granted, would require substantial expenditures on our part.

Our general terms and conditions in customer contracts frequently include a provision indicating that we will indemnify and hold our customers harmless from and against any and all claims alleging that the services and materials furnished by us violate any third party’s patent, trade secret, copyright or other intellectual property right. We are not aware of any material pending litigation concerning these indemnifications.

Some of these matters raise difficult and complex factual and legal issues and are subject to many uncertainties, including the facts and circumstances of each particular action, and the jurisdiction, forum, and law under which each action is proceeding. Because of these complexities, final disposition of some of these proceedings may not occur for several years. As such, we are not always able to estimate the amount of our possible future liabilities, if any.

There can be no certainty that we may not ultimately incur charges in excess of presently established or future financial accruals or insurance coverage. Although occasional adverse decisions or settlements may occur, it is management’s opinion that the final disposition of these proceedings will not, considering the merits of the claims and available resources or reserves and insurance, and based upon the facts and circumstances currently known, have a material adverse effect on our financial position or results of operations.

*Unrecovered Duplicate Payments*

We identified an isolated service incident on September 26, 2019, that resulted in duplicate payments for certain of our U.S. payroll customers totaling $18.8 million. During the year ended December 31, 2019, we recorded a loss of $11.2 million for the amount unrecovered, within selling, general, and administrative expense in our consolidated statement of operations. Our recovery efforts continued into 2020, resulting in collection of $0.3 million during the three months ended March 31, 2020, which was recognized as a reduction to selling, general, and administrative expense.

**14. Related Party Transactions**

Ronald F. Clarke is a member of our Board of Directors. Mr. Clarke has been the chief executive officer of FleetCor Technologies Inc. ("FleetCor Technologies") since August 2000 and its chairman of the board of directors since March 2003. We provide services to FleetCor Technologies or one of its wholly owned affiliates through certain commercial arrangements entered into in the ordinary course of business, which include provision of Dayforce HCM services and other administrative services. For these services, we have recorded revenue of $0.3 million and $0.2 million for the three months ended March 31, 2020, and 2019, respectively.

We provide Dayforce and related services to The Stronach Group, for which we recorded revenue of $0.1 million and $0.1 million for the three months ended March 31, 2020, and 2019, respectively. Alon Ossip, the brother of our chief executive officer, David Ossip, is the chief executive officer, and is currently a minority shareholder, of The Stronach Group.

We provide payroll-related tax filings services to Fidelity National Financial, Inc., a related party until August 2019 due to certain shared board members, for which we recorded revenue of $0.1 million for the three months ended March 31, 2019.

We provide Dayforce and related services to certain investment portfolio companies of THL Managers VI, LLC and Cannae Holdings, Inc., which are considered related parties due to certain shared board members. Revenue from these related parties was as follows:

| | Three Months Ended March 31, 2020 | Three Months Ended March 31, 2019 |
|---|---|---|
| | (Dollars in millions) | |
| American Blue Ribbon Holdings, LLC | $ 0.5 | $ 0.5 |
| Essex Technology Group, LLC | 0.1 | 0.1 |
| Guaranteed Rate, Inc. | 0.2 | 0.3 |

**15. Net Income per Share**

We compute net income per share of common stock using the treasury stock method. The numerators and denominators of the basic and diluted net income per share computations were calculated as follows:

| | Three Months Ended March 31, 2020 | Three Months Ended March 31, 2019 |
|---|---|---|
| | (Dollars in millions, except share and per share data) | |
| Numerator: | | |
| Net income | $ 8.6 | $ 11.2 |
| | | |
| Denominator: | | |
| Weighted-average shares outstanding - basic | 144,645,325 | 140,149,271 |
| Effect of dilutive equity instruments | 6,533,173 | 6,892,957 |
| Weighted-average shares outstanding - diluted | 151,178,498 | 147,042,228 |
| | | |
| Net income per share - basic | $ 0.06 | $ 0.08 |
| Net income per share - diluted | $ 0.06 | $ 0.08 |

The following potentially dilutive weighted-average shares were excluded from the calculation of diluted net income per share because their effect would have been anti-dilutive:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| Stock options | 121,381 | 1,059,230 |
| Restricted stock units | 21,869 | — |

**16. Subsequent Events**

On May 6, 2020, we entered into a share purchase agreement with Everstone Capital Partners II LLC and Arunasalam Jeyakumar to purchase 100% of the outstanding shares of Excelity Global Solutions Pte. Ltd. (“Excelity”). Excelity is a human capital management service provider in the Asia-Pacific region. We expect this transaction will close in the second quarter of 2020.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The following is a discussion and analysis of our financial condition and results of operations as of, and for, the periods presented. You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited condensed consolidated financial statements and notes thereto included elsewhere in report and in conjunction with our audited consolidated financial statements and notes thereto for the year ended December 31, 2019, in our Annual Report on Form 10-K for the year ended December 31, 2019, filed with the Securities and Exchange Commission ("SEC") on February 28, 2020 (our "2019 Form 10-K"). This discussion and analysis contains forward-looking statements, including statement regarding industry outlook, our expectations for the future of our business, and our liquidity and capital resources as well as other non-historical statements. These statements are based on current expectations and are subject to numerous risks and uncertainties, including but not limited to the risks and uncertainties described in Part II, Item 1A, "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements." Our actual results may differ materially from those contained in or implied by these forward-looking statements. Any reference to a "Note" in this discussion relates to the accompanying notes to the unaudited condensed consolidated financial statements included elsewhere in this report unless otherwise indicated.*

### Overview

Ceridian is a global human capital management ("HCM") software company. We categorize our solutions into two categories: Cloud and Bureau solutions. Cloud revenue is generated from HCM solutions that are delivered via two cloud offerings: Dayforce, our flagship cloud HCM platform, and Powerpay, a cloud HR and payroll solution for the Canadian small business market. We also continue to support customers using our Bureau solutions, which we generally stopped actively selling to new customers following the acquisition of Dayforce in 2012. Revenue from our Cloud and Bureau solutions include an allocation of investment income generated from holding customer funds in trust before funds are remitted to taxing authorities, also referred to as float revenue or float. We invest in maintenance and necessary updates to support our Bureau customers and continue to migrate them to Dayforce.

Dayforce provides HR, payroll, benefits, workforce management, and talent management functionality. Our platform is used by organizations, regardless of industry or size, to optimize management of the entire employee lifecycle, including attracting, engaging, paying, deploying, and developing their people. Dayforce was built as a single application from the ground up that combines a modern, consumer-grade user experience with proprietary application architecture, including a single employee record and a rules engine spanning all areas of HCM. Dayforce provides continuous real-time calculations across all modules to enable, for example, payroll administrators access to data through the entire pay period, and managers access to real-time data to optimize work schedules. Our platform is designed to make work life better for our customers and their employees by improving HCM decision-making processes, streamlining workflows, exposing strategic organizational insights, and simplifying legislative compliance. The platform is designed to ease administrative work for both employees and managers, creating opportunities for companies to increase employee engagement. We are a founder-led organization, and our culture combines the agility and innovation of a start-up with a history of deep domain and operational expertise.

In 2020, we launched the Dayforce Wallet, which gives our customers' employees greater control over their financial well-being by providing them with instant access to their earnings. This on-demand pay feature allows employees more choice over when they get paid by making any day payday. Dayforce Wallet enables workers to access their already-earned wages anytime during the pay period, net of taxes, withholdings and other payroll deductions. Leveraging Dayforce's continuous pay calculations, Dayforce Wallet processes a same-day payroll each time a worker requests their pay. The solution is compliant with federal, state, and local remittances and requires no changes to payroll processing including the funding, timing, and close-out of pay.

We sell Dayforce through our direct sales force on a subscription per-employee, per-month ("PEPM") basis. Our subscriptions are typically structured with an initial fixed term of between three and five years, with evergreen renewal thereafter. Dayforce can serve customers of all sizes, ranging from 100 to over 100,000 employees. We have rapidly grown the Dayforce platform to 4,480 live Dayforce customers as of March 31, 2020. For the three months ended March 31, 2020, we added 117 net new live Dayforce customers.

### Our Business Model

Our business model focuses on supporting the rapid growth of Dayforce and maximizing the lifetime value of our Dayforce customer relationships. Due to our subscription model, where we recognize subscription revenues ratably over the term of the subscription period, and high customer retention rates, we have historically had a high level of visibility into our future revenues. The profitability of a customer depends, in large part, on how long they have been a customer. Because in our business model, PEPM subscription fees are not charged until the customer goes live, and because we incur costs in advance of receiving PEPM revenue that are not fully offset by our implementation fees, we estimate that it takes an average of 2 years before we are able to recover our implementation, customer acquisition, and other direct costs on a new Dayforce customer contract. As the proportion of Dayforce customers who have been live for two or more years increases, our related profitability increases.

Over the lifetime of the customer relationship, we have the opportunity to realize additional PEPM revenue, both as the customer grows or rolls out the Dayforce solution to additional employees, and also by selling additional functionality. We incur on-going costs to manage the account, to support customers, and to sell additional functionality. These costs, however, are significantly less than the costs initially incurred to acquire and to implement the customer.

During the remainder of 2020, we anticipate adverse effects to our revenue streams, primarily as a result of declining employment levels at our customers in certain sectors, such as retail and hospitality, due to the effects of the COVID-19 pandemic. Additionally, the federal funds rate cuts by the U.S. Federal Reserve have had and will continue to have negative effects on our float revenue.

**How We Assess Our Performance**

In assessing our performance, we consider a variety of performance indicators in addition to revenue and net income. Set forth below is a description of our key performance measures.

***Live Dayforce Customers***

We use the number of customers live on Dayforce as an indicator of future revenue and the overall performance of the business and to assess the performance of our implementation services. We had 4,480 customers live on Dayforce as of March 31, 2020, compared to 3,851 customers live on Dayforce as of March 31, 2019.

***Constant Currency Revenue***

We present revenue on a constant currency basis to assess how our underlying business performed, excluding the effect of foreign currency rate fluctuations. We believe this non-GAAP financial measure is useful to management and investors. We have calculated revenue on a constant currency basis by applying the average foreign exchange rate in effect during the comparable prior period.

***Adjusted EBITDA and Adjusted EBITDA margin***

We believe that Adjusted EBITDA and Adjusted EBITDA margin, non-GAAP financial measures, are useful to management and investors as supplemental measures to evaluate our overall operating performance. Adjusted EBITDA and Adjusted EBITDA margin are components of our management incentive plan and are used by management to assess performance and to compare our operating performance to our competitors. We define Adjusted EBITDA as net income or loss before interest, taxes, depreciation, and amortization, as adjusted to exclude gains or losses on assets and liabilities held in a foreign currency other than the functional currency of a company subsidiary, share-based compensation expense and related employer taxes, severance charges, restructuring consulting fees, and certain other non-recurring charges. Adjusted EBITDA margin is determined by calculating the percentage that Adjusted EBITDA is of total revenue. Management believes that Adjusted EBITDA and Adjusted EBITDA margin are helpful in highlighting management performance trends because Adjusted EBITDA and Adjusted EBITDA margin exclude the results of decisions that are outside the normal course of our business operations. Please refer to the “Results of Operations” section below for a discussion of Adjusted EBITDA and Adjusted EBITDA margin.

**Results of Operations**

***Three Months Ended March 31, 2020 Compared With Three Months Ended March 31, 2019***

| | Three Months Ended March 31, | | Increase/ (Decrease) | | % of Revenue | |
|---|---|---|---|---|---|---|
| | 2020 | 2019 | Amount | % | 2020 | 2019 |
| | (Dollars in millions) | | | | | |
| Revenue: | | | | | | |
| Recurring services | | | | | | |
| Cloud | $ 149.9 | $ 124.4 | $ 25.5 | 20.5% | 67.3% | 61.1% |
| Bureau | 31.6 | 48.4 | (16.8) | (34.7)% | 14.2% | 23.8% |
| Total recurring services | 181.5 | 172.8 | 8.7 | 5.0% | 81.5% | 84.8% |
| Professional services and other | 41.2 | 30.9 | 10.3 | 33.3% | 18.5% | 15.2% |
| Total revenue | 222.7 | 203.7 | 19.0 | 9.3% | 100.0% | 100.0% |
| Cost of revenue: | | | | | | |
| Recurring services | | | | | | |
| Cloud | 41.0 | 37.2 | 3.8 | 10.2% | 18.4% | 18.3% |
| Bureau | 11.2 | 13.7 | (2.5) | (18.2)% | 5.0% | 6.7% |
| Total recurring services | 52.2 | 50.9 | 1.3 | 2.6% | 23.4% | 25.0% |
| Professional services and other | 42.6 | 35.3 | 7.3 | 20.7% | 19.1% | 17.3% |
| Product development and management | 17.6 | 15.2 | 2.4 | 15.8% | 7.9% | 7.5% |
| Depreciation and amortization | 9.8 | 8.7 | 1.1 | 12.6% | 4.4% | 4.3% |
| Total cost of revenue | 122.2 | 110.1 | 12.1 | 11.0% | 54.9% | 54.1% |
| Gross profit | 100.5 | 93.6 | 6.9 | 7.4% | 45.1% | 45.9% |
| Selling, general, and administrative | 74.2 | 66.2 | 8.0 | 12.1% | 33.3% | 32.5% |
| Operating profit | 26.3 | 27.4 | (1.1) | (4.0)% | 11.8% | 13.5% |
| Interest expense, net | 6.9 | 8.9 | (2.0) | (22.5)% | 3.1% | 4.4% |
| Other expense, net | 2.6 | 1.6 | 1.0 | 62.5% | 1.2% | 0.8% |
| Income before income taxes | 16.8 | 16.9 | (0.1) | (0.6)% | 7.5% | 8.3% |
| Income tax expense | 8.2 | 5.7 | 2.5 | 43.9% | 3.7% | 2.8% |
| Net income | $ 8.6 | $ 11.2 | $ (2.6) | (23.2)% | 3.9% | 5.5% |
| Adjusted EBITDA (a) | $ 55.2 | $ 49.8 | $ 5.4 | 10.8% | 24.8% | 24.4% |
| Adjusted EBITDA margin (a) | 24.8% | 24.4% | 0.4% | 1.6% | | |

(a) Please refer to the “Non-GAAP Measures” section for a discussion and reconciliation of Adjusted EBITDA and Adjusted EBITDA margin, non-GAAP financial measures.

Revenue. The following table sets forth certain information regarding our revenues for the three months ended March 31, 2020, compared with the three months ended March 31, 2019.

| | Three Months Ended March 31, 2020 | Three Months Ended March 31, 2019 | Percentage change in revenue as reported 2020 vs. 2019 | Impact of changes in foreign currency (a) | Percentage change in revenue on constant currency basis (a) 2020 vs. 2019 |
|---|---|---|---|---|---|
| | (Dollars in millions) | | | | |
| Revenue: | | | | | |
| Dayforce recurring services, excluding float | $ 114.0 | $ 87.6 | 30.1% | (0.3)% | 30.4% |
| Dayforce float | 14.1 | 15.3 | (7.8)% | (—)% | (7.8)% |
| Total Dayforce recurring services | 128.1 | 102.9 | 24.5% | (0.2)% | 24.7% |
| Powerpay recurring services, excluding float | 19.0 | 18.3 | 3.8% | (—)% | 3.8% |
| Powerpay float | 2.8 | 3.2 | (12.5)% | (—)% | (12.5)% |
| Total Powerpay recurring services | 21.8 | 21.5 | 1.4% | (—)% | 1.4% |
| Total Cloud recurring services | 149.9 | 124.4 | 20.5% | (0.2)% | 20.7% |
| Dayforce professional services and other | 40.7 | 29.9 | 36.1% | (0.4)% | 36.5% |
| Powerpay professional services and other | 0.3 | 0.3 | (—)% | (—)% | (—)% |
| Total Cloud professional services and other | 41.0 | 30.2 | 35.8% | (0.3)% | 36.1% |
| Total Cloud revenue | 190.9 | 154.6 | 23.5% | (0.2)% | 23.7% |
| Bureau recurring services, excluding float | 28.9 | 42.6 | (32.2)% | (0.3)% | (31.9)% |
| Bureau float | 2.7 | 5.8 | (53.4)% | (—)% | (53.4)% |
| Total Bureau recurring services | 31.6 | 48.4 | (34.7)% | (0.2)% | (34.5)% |
| Bureau professional services and other | 0.2 | 0.7 | (71.4)% | (—)% | (71.4)% |
| Total Bureau revenue | 31.8 | 49.1 | (35.2)% | (0.2)% | (35.0)% |
| Total revenue | $ 222.7 | $ 203.7 | 9.3% | (0.2)% | 9.5% |
| | | | | | |
| Dayforce | $ 168.8 | $ 132.8 | 27.1% | (0.2)% | 27.3% |
| Powerpay | 22.1 | 21.8 | 1.4% | (—)% | 1.4% |
| Total Cloud revenue | $ 190.9 | $ 154.6 | 23.5% | (0.2)% | 23.7% |
| | | | | | |
| Dayforce, excluding float | $ 154.7 | $ 117.5 | 31.7% | (0.2)% | 31.9% |
| Powerpay, excluding float | 19.3 | 18.6 | 3.8% | (—)% | 3.8% |
| Cloud revenue, excluding float | 174.0 | 136.1 | 27.8% | (0.3)% | 28.1% |
| Cloud float | 16.9 | 18.5 | (8.6)% | (—)% | (8.6)% |
| Total Cloud revenue | $ 190.9 | $ 154.6 | 23.5% | (0.2)% | 23.7% |

(a) We have calculated revenue on a constant currency basis by applying the average foreign exchange rate in effect during the comparable prior period.

Total revenue increased $19.0 million, or 9.3%, to $222.7 million for the three months ended March 31, 2020, compared to $203.7 million for the three months ended March 31, 2019. This increase was primarily attributable to an increase in Cloud revenue of $36.3 million, or 23.5%, from $154.6 million for the three months ended March 31, 2019, to $190.9 million for the three months ended March 31, 2020. The Cloud revenue increase was driven by an increase of $25.5 million, or 20.5%, in Cloud recurring services revenue, and $10.8 million, or 35.8%, in Cloud professional services and other revenue. The increase in Cloud recurring services revenue of $25.5 million was due to $21.3 million from new customers, add-ons, and revenue uplift from migrations of Bureau customers, net of customer losses; $5.8 million from the migration of Bureau customers; partially offset by a $1.6 million decline in float revenue related to Cloud recurring services revenue.

Cloud revenue was $190.9 million for the three months ended March 31, 2020, an increase of $36.3 million, or 23.5%, compared to the three months ended March 31, 2019. Dayforce revenue increased 27.1%, and Powerpay revenue increased 1.4% for the three months ended March 31, 2020, as compared to the three months ended March 31, 2019. Our new business sales to Dayforce and Powerpay customers comprised approximately 84% of our increase in Cloud revenue for the three months ended March 31, 2020, and approximately 16% consisted primarily of customer migrations to Dayforce from our Bureau solutions. As we migrate our Bureau customers to Dayforce, we typically experience a revenue increase from such customers driven by increased product density on the Dayforce platform.

Bureau revenue declined $17.3 million, or 35.2%, for the three months ended March 31, 2020. Of the $17.3 million decline, approximately 34% was attributable to customer migrations to Dayforce. Excluding the impact of migrations to Dayforce, Bureau revenue declined by $11.5 million, or 23.4%.

Excluding float revenue and on a constant currency basis, total revenue grew 13.4%, reflecting a 28.1% increase in Cloud revenue, partially offset by a 32.6% decline in Bureau revenue. Excluding float revenue and on a constant currency basis, Cloud revenue growth reflected a 25.8% increase in Cloud recurring services revenue and a 36.1% increase in Cloud professional services and other revenue. Excluding float revenue and on a constant currency basis, Dayforce revenue increased 31.9%, reflecting a 30.4% increase in Dayforce recurring service revenue and a 36.5% increase in Dayforce professional services and other revenue. Excluding float revenue and on a constant currency basis, Powerpay revenue increased 3.8%, reflecting a 3.8% increase in Powerpay recurring service revenue.

Float revenue included in recurring services revenue was $19.6 million and $24.3 million for the three months ended March 31, 2020, and 2019, respectively. Float revenue allocated to Cloud revenue and Dayforce revenue was $16.9 million and $14.1 million, respectively, for the three months ended March 31, 2020. The average float balance for our customer trust funds for the three months ended March 31, 2020, was $4,093.3 million, compared to $4,075.4 million for the three months ended March 31, 2019. On a constant currency basis, the average float balance for our customer trust funds for the three months ended March 31, 2020, was consistent with the three months ended March 31, 2019. The average yield was 1.93% during the three months ended March 31, 2020, a decline of 49 basis points compared to the average yield during the three months ended March 31, 2019, primarily due to reductions in the U.S. Federal Reserve federal funds rate and the Bank of Canada overnight rate target. For the three months ended March 31, 2020, approximately 31% of our average float balance consisted of Canadian customer trust funds, compared to approximately 33% for the three months ended March 31, 2019. Based on current market conditions, portfolio composition and investment practices, a 100 basis point change in market investment rates would result in approximately $18 million of change in float revenue over the ensuing twelve month period. There are no incremental costs of revenue associated with changes in float revenue.

Cost of revenue. Total cost of revenue for the three months ended March 31, 2020, was $122.2 million, an increase of $12.1 million, or 11.0%, compared to the three months ended March 31, 2019. Recurring services cost of revenue for the three months ended March 31, 2020, increased $1.3 million, or 2.6% compared with the three months ended March 31, 2019, primarily due to additional costs incurred to support the growing Dayforce customer base, partially offset by reductions in Bureau costs. Professional services and other cost of revenue increased $7.3 million, or 20.7%, for the three months ended March 31, 2020, compared to the three months ended March 31, 2019, primarily due to additional costs incurred to implement new customers.

Product development and management expense increased $2.4 million for the three months ended March 31, 2020, compared to the three months ended March 31, 2019, reflecting increases in Dayforce product development efforts, including costs to build out the Dayforce Wallet and our international offerings that are not eligible for capitalization; and increases in product management labor costs. For the three months ended March 31, 2020, and 2019, our investment in software development was $17.2 million and $15.1 million, respectively, consisting of $8.1 million and $7.8 million, of research and development expense, which is included within product development and management expense, and $9.1 million and $7.3 million in capitalized software development costs, respectively.

Depreciation and amortization expense associated with cost of revenue increased by $1.1 million for the three months ended March 31, 2020, compared to the three months ended March 31, 2019, as we continue to capitalize Dayforce related and other development costs and subsequently amortize these costs.

Gross profit. The following table presents total gross margin and solution gross margins for the periods presented:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| Total gross margin | 45.1% | 45.9% |
| Gross margin by solution: | | |
| Cloud recurring services | 72.6% | 70.1% |
| Bureau recurring services | 64.6% | 71.7% |
| Professional services and other | (3.4)% | (14.2)% |

Total gross margin is defined as total gross profit as a percentage of total revenue, inclusive of product development and management costs, as well as depreciation and amortization associated with cost of revenue. Gross margin for each solution in the table above is defined as total revenue less cost of revenue for the applicable solution as a percentage of total revenue for that related solution, exclusive of any product development and management or depreciation and amortization cost allocations.

Total gross margin for the three months ended March 31, 2020, was consistent with total gross margin for the three months ended March 31, 2019, and gross profit increased by $6.9 million, or 7.4%, as we continued to leverage our investment in people and processes to realize economies of scale, while also developing and expanding our service offerings.

Cloud recurring services gross margin was 72.6% for the three months ended March 31, 2020, compared to 70.1% for the three months ended March 31, 2019. The increase in Cloud recurring services gross margin reflects an increase in the proportion of Dayforce customers live for more than two years, which increased from 64% as of March 31, 2019, to 70% as of March 31, 2020, and was also attributable to consistent configuration that has enabled us to continue to realize economies of scale in hosting and customer support. Bureau recurring services gross margin declined from 71.7% for the three months ended March 31, 2019, to 64.6% for the three months ended March 31, 2020, reflecting lower allocated float revenue and a higher proportion of customer support costs to support the end-of-life process of our Bureau payroll products. Professional services and other gross margin was (3.4)% for the three months ended March 31, 2020, improving from (14.2)% for the three months ended March 31, 2019, reflecting continued productivity improvements in implementing new customers.

Selling, general, and administrative expense. Selling, general, and administrative expense increased $8.0 million for the three months ended March 31, 2020, compared to the three months ended March 31, 2019. Excluding the impact of share-based compensation and related employer taxes, restructuring consulting fees, severance expense, and certain other non-recurring charges; selling, general, and administrative expenses would have increased $1.9 million. This adjusted increase reflects a $4.5 million increase in sales and marketing, primarily employee related costs, partially offset by a reduction of $2.6 million in general and administrative expense, primarily customer list amortization expense. Please refer to the "Non-GAAP Measures" section for additional information on the excluded items.

Operating profit. We realized operating profit of $26.3 million for the three months ended March 31, 2020, compared to $27.4 million for the three months ended March 31, 2019. Excluding the impact of share-based compensation and related employer taxes, restructuring consulting fees, severance expense, and certain other non-recurring charges; operating profit would have been $44.2 million and $36.7 million for the three months ended March 31, 2020, and 2019, respectively. This $7.5 million adjusted increase was primarily due to an increase in gross profit.

Interest expense, net. Interest expense, net was $6.9 million and $8.9 million for the three months ended March 31, 2020, and 2019, respectively, which declined primarily due to a reduction in our term debt interest rate. A 100 basis point change in LIBOR rates would result in an approximately $7 million change in our interest expense, net over the ensuing twelve-month period.

Other expense, net. For the three months ended March 31, 2020, and 2019, we incurred other expense, net of $2.6 million and $1.6 million, respectively, which was comprised of foreign currency translation loss and net periodic pension expense.

Income tax expense. For the three months ended March 31, 2020, and 2019, we recorded an income tax expense of $8.2 million, and $5.7 million, respectively. The $2.5 million increase in income tax expense was primarily due to a $4.6 million tax benefit recognized during the three months ended March 31, 2019, that was not repeated during the three months ended March 31, 2020 and a $4.4 million increase in tax expense attributable to share-based compensation, partially offset by a $4.6 million reduction in tax expense attributable to the Global Intangible Low Tax Income tax ("GILTI"), and a $2.4 million reduction in the tax expense attributable to the base erosion anti-abuse tax ("BEAT").

Net income. We realized net income of $8.6 million for the three months ended March 31, 2020, compared to $11.2 million for the three months ended March 31, 2019.

Adjusted EBITDA. Adjusted EBITDA increased by $5.4 million to $55.2 million, for the three months ended March 31, 2020, compared to the three months ended March 31, 2019, and Adjusted EBITDA margin was 24.8% for the three months ended March 31, 2020, compared with Adjusted EBITDA margin of 24.4% for the three months ended March 31, 2019.

**Liquidity and Capital Resources**

Our primary sources of liquidity are our existing cash and equivalents, cash provided by operating activities, borrowings under our credit facilities, and proceeds from equity offerings. As of March 31, 2020, we had cash and equivalents of $255.3 million and availability under our revolving credit facility of $300.0 million. No cash amounts were drawn on the revolving credit facility as of March 31, 2020. Our total debt balance was $681.2 million as of March 31, 2020. Please refer to Note 6, “Debt,” to our condensed consolidated financial statements, for further information on our debt.

Our primary liquidity needs are related to funding of general business requirements, including the payment of interest and principal on our debt, capital expenditures, pension contributions, and product development.

On February 19, 2020, Ceridian completed the first amendment to the 2018 Senior Secured Credit Facility, in which the 2018 Term Debt interest rate was reduced from LIBOR plus 3.00% to LIBOR plus 2.50%. Further, the interest rate trigger under the applicable rating by Moody’s Investor Service was removed by the first amendment. The 50 basis point rate reduction will result in savings of approximately $3.4 million over the ensuing twelve-month period. Please refer to Note 6, “Debt,” to our condensed consolidated financial statements, for further information on our debt.

On April 2, 2020, in light of the current uncertainty in the global capital markets resulting from the COVID-19 pandemic, Ceridian elected to borrow $295.0 million under the 2018 Revolving Credit Facility as a precautionary measure to increase our cash position and to preserve financial flexibility. We may use a portion of the proceeds from the borrowing for general corporate purposes.

Our customer trust funds are held and invested with the primary objectives being to protect the principal balance and to ensure adequate liquidity to meet cash flow requirements. In accordance with these objectives, we maintain approximately 47% of customer trust funds in liquidity portfolios with maturities ranging from one to 120 days, consisting of high-quality bank deposits, money market mutual funds, commercial paper, or collateralized short-term investments; and we maintain approximately 53% of customer trust funds in fixed income portfolios with maturities ranging from 120 days to 10 years, consisting of U.S. Treasury and agency securities, Canada government and provincial securities, as well as highly rated asset-backed, mortgage-backed, municipal, corporate and bank securities. To maintain sufficient liquidity in the trust to meet payment obligations, we also have financing arrangements and may pledge fixed income securities for short-term financing. The assets held in trust are intended for the specific purpose of satisfying client fund obligations and therefore are not freely available for our general business use.

We believe that our cash flow from operations, availability under our revolving credit facility, and available cash and equivalents will be sufficient to meet our liquidity needs for the foreseeable future. We anticipate that to the extent that we require additional liquidity, it will be funded through the issuance of equity, the incurrence of additional debt, or a combination thereof. We cannot assure you that we will be able to obtain this additional liquidity on reasonable terms, or at all. Additionally, our liquidity and our ability to meet our obligations and to fund our capital requirements are also dependent on our future financial performance, which is subject to general economic, financial, and other factors that are beyond our control. Accordingly, we cannot assure you that our business will generate sufficient cash flow from operations or that future borrowings will be available from additional debt or otherwise to meet our liquidity needs. Although we have no specific current plans to do so, if we decide to pursue one or more significant acquisitions, we may incur additional debt or sell additional equity to finance such acquisitions, which would result in additional expenses or dilution.

***Statements of Cash Flows***

Changes in cash flows due to purchases of customer trust fund marketable securities and proceeds from the sale or maturity of customer trust fund marketable securities, as well as the carrying value of customer trust fund accounts as of period end dates can vary significantly due to several factors, including the specific day of the week the period ends, which impacts the timing of funds collected from customers and payments made to satisfy customer obligations to employees, taxing authorities, and others. The customer trust funds are fully segregated from our operating cash accounts and are evaluated and tracked separately by management. Therefore, we have provided the table below excluding the cash flows and restricted cash and equivalents held within our customer trust funds to provide supplemental information regarding the cash flows related to our core business.

| | Three Months Ended March 31, | |
|---|---|---|
| | **2020** | **2019** |
| | **(Dollars in millions)** | |
| Net cash used in operating activities, excluding customer trust funds | $ (9.8) | $ (8.8) |
| Net cash used in investing activities, excluding customer trust funds | (15.6) | (24.1) |
| Net cash provided by financing activities, excluding customer trust funds | 8.7 | 18.4 |
| Effect of exchange rate changes on cash and equivalents | (9.3) | 3.0 |
| Net decrease in cash and equivalents | (26.0) | (11.5) |
| Cash and equivalents at beginning of period | 281.3 | 217.8 |
| Cash and equivalents at end of period | 255.3 | 206.3 |
| | | |
| Net customer trust funds restricted cash provided by operating activities | 11.2 | — |
| Net customer trust funds restricted cash provided by (used in) investing activities | 24.9 | (93.5) |
| Net customer trust funds restricted cash provided by financing activities | 480.8 | 1,916.1 |
| Effect of exchange rate changes on restricted cash and equivalents | (5.2) | 0.9 |
| Net increase in restricted cash and equivalents | 511.7 | 1,823.5 |
| Restricted cash and equivalents included in customer trust funds at beginning of period | 1,377.3 | 888.5 |
| Restricted cash and equivalents included in customer trust funds at end of period | 1,889.0 | 2,712.0 |
| | | |
| Net increase in cash, restricted cash, and equivalents | 485.7 | 1,812.0 |
| Cash, restricted cash, and equivalents at beginning of period | 1,658.6 | 1,106.3 |
| Cash, restricted cash, and equivalents at end of period | $ 2,144.3 | $ 2,918.3 |

*Operating Activities*

Net cash provided by operating activities, was $1.4 million during the three months ended March 31, 2020, primarily attributable to net income of $8.6 million and the net impact of adjustments for certain non-cash items of $30.3 million, including $12.5 million of non-cash share-based compensation expense and $11.8 million of depreciation and amortization. These items were partially offset by a $26.4 million reduction in liabilities for employee compensation and benefits due to payments of accrued incentive and compensation and a $7.5 million increase in assets for prepaid expenses and other current assets, primarily due to annual maintenance contracts. Included within net cash flows provided by operating activities for the three months ended March 31, 2020, was $7.8 million in cash interest payments on our long-term debt and $2.9 million in cash tax payments.

Net cash used in operating activities of $8.8 million during the three months ended March 31, 2019, was primarily attributable to a net reduction in cash as a result of changes in working capital of $40.6 million, partially offset by net income of $11.2 million and certain non-cash items, primarily $14.4 million of depreciation and amortization and $6.0 million of non-cash share-based compensation expense. The net $40.6 million change in working capital included reductions of $16.9 million in liabilities for employee compensation and benefits, primarily due to payments of accrued incentive compensation; $8.1 million in liabilities for accrued taxes, primarily due to cash tax payments of $15.5 million; and $7.0 million of increases in prepaid expenses and other assets, primarily due to annual maintenance contracts. Included within net cash flows used in operating activities for the three months ended March 31, 2019, was $6.6 million in cash interest payments on our long-term debt.

*Investing Activities*

During the three months ended March 31, 2020, net cash used in investing activities, excluding customer trust fund activity, was $15.6 million, related to capital expenditures. Our capital expenditures included $10.7 million for software and technology and $4.9 million for property and equipment.

During the three months ended March 31, 2019, net cash used in investing activities, excluding customer trust fund activity, was $24.1 million, related to capital expenditures of $13.9 million and acquisition costs, net of cash acquired of $10.2 million. Our capital expenditures included $9.9 million for software and technology and $4.0 million for property and equipment.

*Financing Activities*

Net cash provided by financing activities, excluding the change in customer trust fund obligations, was $8.7 million during the three months ended March 31, 2020. This cash inflow is primarily attributable to proceeds from the issuance of common stock under share-based compensation plans of $11.4 million, partially offset by payments on our long-term debt obligations of $2.7 million. The payments on our long-term debt obligations included $1.7 million in payments towards our Senior Term Loan and $1.0 million in payments towards our financing lease obligations.

Net cash provided by financing activities, excluding the change in customer trust fund obligations, was $18.4 million during the three months ended March 31, 2019. This cash inflow is primarily attributable to proceeds from the issuance of common stock upon exercise of stock options of $20.1 million, partially offset by principal payments on our long-term debt obligations of $1.7 million.

**Backlog**

Backlog is equivalent to our remaining performance obligations, which represents contracted revenue for recurring services and fixed price professional services, primarily implementation services, that has not yet been recognized, including deferred revenue and unbilled amounts that will be recognized as revenue in future periods. Please refer to Note 9, “Revenue,” to our condensed consolidated financial statements for further discussion of our remaining performance obligations.

**Off-Balance Sheet Arrangements**

As of March 31, 2020, we did not have any “off-balance sheet arrangements” (as such term is defined in Item 303 of Regulation S-K).

**Critical Accounting Policies and Estimates**

During the three months ended March 31, 2020, there were no significant changes to our critical accounting policies and estimates as described in the consolidated financial statements contained in our 2019 Form 10-K.

**Non-GAAP Measures**

***Adjusted EBITDA and Adjusted EBITDA Margin***

We believe that Adjusted EBITDA and Adjusted EBITDA margin, non-GAAP financial measures, are useful to management and investors as supplemental measures to evaluate our overall operating performance. Adjusted EBITDA and Adjusted EBITDA margin are components of our management incentive plan and are used by management to assess performance and to compare our operating performance to our competitors. We define Adjusted EBITDA as net income before interest, taxes, depreciation, and amortization, as adjusted to exclude gain (loss) on assets and liabilities held in a foreign currency other than the functional currency of a company subsidiary, share-based compensation expense and related employer taxes, severance charges, restructuring consulting fees, and certain other non-recurring charges. Adjusted EBITDA margin is determined by calculating the percentage Adjusted EBITDA is of total revenue. Management believes that Adjusted EBITDA and Adjusted EBITDA margin are helpful in highlighting management performance trends because Adjusted EBITDA and Adjusted EBITDA margin exclude the results of decisions that are outside the control of operating management.

Our presentation of Adjusted EBITDA and Adjusted EBITDA margin are intended as supplemental measures of our performance that are not required by, or presented in accordance with, GAAP. Adjusted EBITDA and Adjusted EBITDA margin should not be considered as alternatives to operating profit, net income, earnings per share, or any other performance measures derived in accordance with GAAP, or as measures of operating cash flows or liquidity. Our presentation of Adjusted EBITDA and Adjusted EBITDA margin should not be construed to imply that our future results will be unaffected by these items. Adjusted EBITDA and Adjusted EBITDA margin are included in this discussion because they are key metrics used by management to assess our operating performance.

Adjusted EBITDA and Adjusted EBITDA margin are not defined under GAAP, are not measures of net income, operating profit, or any other performance measures derived in accordance with GAAP, and are subject to important limitations. Our use of the terms Adjusted EBITDA and Adjusted EBITDA margin may not be comparable to similarly titled measures of other companies in our industry and are not measures of performance calculated in accordance with GAAP.

Adjusted EBITDA and Adjusted EBITDA margin have important limitations as analytical tools, and you should not consider them in isolation or as substitutes for analysis of our results as reported under GAAP. Some of these limitations are:

- Adjusted EBITDA and Adjusted EBITDA margin do not reflect our cash expenditures or future requirements for capital expenditures or contractual commitments;
- Adjusted EBITDA and Adjusted EBITDA margin do not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA and Adjusted EBITDA margin do not reflect any charges for the assets being depreciated and amortized that may need to be replaced in the future;
- Adjusted EBITDA and Adjusted EBITDA margin do not reflect the impact of share-based compensation and related employer taxes upon our results of operations;
- Adjusted EBITDA and Adjusted EBITDA margin do not reflect the significant interest expense or the cash requirements necessary to service interest or principal payments on our debt;
- Adjusted EBITDA and Adjusted EBITDA margin do not reflect our income tax expense or the cash requirements to pay our income taxes; and
- Adjusted EBITDA and Adjusted EBITDA margin do not reflect certain other non-recurring charges.

In evaluating Adjusted EBITDA and Adjusted EBITDA margin, you should be aware that in the future we may incur expenses similar to those eliminated in this presentation.

The following table reconciles operating profit to Adjusted EBITDA for the periods presented:

| | Three Months Ended March 31, 2020 | Three Months Ended March 31, 2019 |
|---|---|---|
| | (Dollars in millions) | |
| Operating profit | $ 26.3 | $ 27.4 |
| Other expense, net | (2.6) | (1.6) |
| Depreciation and amortization | 11.8 | 14.4 |
| EBITDA (a) | 35.5 | 40.2 |
| Intercompany foreign exchange loss | 1.8 | 0.3 |
| Share-based compensation (b) | 12.7 | 6.0 |
| Severance charges (c) | 4.0 | 2.1 |
| Restructuring consulting fees (d) | 1.5 | 1.2 |
| Other non-recurring charges (e) | (0.3) | — |
| Adjusted EBITDA | $ 55.2 | $ 49.8 |
| Adjusted EBITDA margin | 24.8% | 24.4% |

(a) We define EBITDA as net income before interest, taxes, and depreciation and amortization.
(b) Represents share-based compensation expense and related employer taxes.
(c) Represents costs for severance compensation paid to employees whose positions have been eliminated or who have been terminated not for cause.
(d) Represents consulting fees and expenses incurred during the periods presented in connection with any acquisition, investment, disposition, recapitalization, equity offering, issuance or repayment of debt, issuance of equity interests, or refinancing.
(e) Represents gain on unrecovered duplicate payments associated with our isolated service incident. Please refer to Note 13, “Commitments and Contingencies,” for further discussion.

The following tables present a reconciliation of our reported results to our non-GAAP Adjusted EBITDA basis for all periods presented:

| | Three Months Ended March 31, 2020 | | | | |
|---|---|---|---|---|---|
| | As Reported | Share-based compensation | Severance charges | Other operating expenses (a) | Adjusted |
| | (Dollars in millions) | | | | |
| Cost of revenue: | | | | | |
| Recurring services | $ 52.2 | $ 0.8 | $ 0.8 | $ — | $ 50.6 |
| Professional services and other | 42.6 | 0.5 | 0.8 | — | 41.3 |
| Product development and management | 17.6 | 0.9 | 0.3 | — | 16.4 |
| Depreciation and amortization | 9.8 | — | — | — | 9.8 |
| Total cost of revenue | 122.2 | 2.2 | 1.9 | — | 118.1 |
| Sales and marketing | 40.7 | 2.2 | 0.8 | — | 37.7 |
| General and administrative | 33.5 | 8.3 | 1.3 | 1.2 | 22.7 |
| Operating profit | 26.3 | 12.7 | 4.0 | 1.2 | 44.2 |
| Other expense, net | 2.6 | — | — | 1.8 | 0.8 |
| Depreciation and amortization | 11.8 | — | — | — | 11.8 |
| EBITDA | $ 35.5 | $ 12.7 | $ 4.0 | $ 3.0 | $ 55.2 |

(a) Other operating expenses includes intercompany foreign exchange loss, restructuring consulting fees, and other non-recurring charges.

| | Three Months Ended March 31, 2019 | | | | |
|---|---|---|---|---|---|
| | As Reported | Share-based compensation | Severance charges | Other operating expenses (a) | Adjusted |
| | (Dollars in millions) | | | | |
| Cost of revenue: | | | | | |
| Recurring services | $ 50.9 | $ 0.4 | $ 0.2 | $ — | $ 50.3 |
| Professional services and other | 35.3 | 0.2 | 0.2 | — | 34.9 |
| Product development and management | 15.2 | 0.5 | 0.1 | — | 14.6 |
| Depreciation and amortization | 8.7 | — | — | — | 8.7 |
| Total cost of revenue | 110.1 | 1.1 | 0.5 | — | 108.5 |
| Sales and marketing | 35.2 | 1.0 | 1.0 | — | 33.2 |
| General and administrative | 31.0 | 3.9 | 0.6 | 1.2 | 25.3 |
| Operating profit | 27.4 | 6.0 | 2.1 | 1.2 | 36.7 |
| Other expense, net | 1.6 | — | — | 0.3 | 1.3 |
| Depreciation and amortization | 14.4 | — | — | — | 14.4 |
| EBITDA | $ 40.2 | $ 6.0 | $ 2.1 | $ 1.5 | $ 49.8 |

(a) Other operating expenses includes intercompany foreign exchange loss and restructuring consulting fees.

## ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks related to foreign currency exchange rates, interest rates, and pension obligations. We seek to minimize or to manage these market risks through normal operating and financing activities. These market risks may be amplified by events and factors surrounding the COVID-19 pandemic. We do not trade or use instruments with the objective of earning financial gains on the market fluctuations, nor do we use instruments where there are not underlying exposures.

*Foreign Currency Risk*. Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Canadian Dollar. Due to the relative size of our international operations to date, we have not instituted an active hedging program. We expect our international operations to continue to grow in the near term, and we are monitoring the foreign currency exposure to determine if we should begin a hedging program.

*Interest Rate Risk*. In connection with our U.S. and Canadian payroll and tax filing services, we collect funds for payment of payroll and taxes; temporarily hold such funds in trust until payment is due; remit the funds to the customers' employees and appropriate taxing authority; file federal, state and local tax returns; and handle related regulatory correspondence and amendments. We invest the U.S. customer trust funds in high- quality bank deposits, money market mutual funds, or collateralized short-term investments. We also invest these funds in U.S. Treasury and agency securities, as well as highly rated asset-backed, mortgage-backed, municipal, and corporate securities. Our Canadian customer trust funds are invested in securities issued by the government and provinces of Canada, highly rated Canadian banks and corporations, asset-backed trusts, and mortgages.

We do not enter into investments for trading or speculative purposes. Our cash equivalents and our portfolio of marketable securities are subject to market risk due to changes in interest rates. Fixed rate securities may have their market value adversely affected due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectation due to changes in interest rates or we may suffer losses in principal if we are forced to sell securities that decline in market value due to changes in interest rates. However, because we classify our securities as "available for sale," no gains or losses are recognized due to changes in interest rates unless such securities are sold prior to maturity or declines in fair value are determined to be unrecoverable.

We do not believe that an increase or decrease in interest rates of 100 basis points would have a material effect on our operating results or financial condition. Fluctuations in the value of our investment securities caused by a change in interest rates (gains or losses on the carrying value) are recorded in other comprehensive income, and are realized only if we sell the underlying securities.

*Pension Obligation Risk*. We provide a pension plan for certain current and former U.S. employees that closed to new participants on January 2, 1995. In 2007, the U.S. pension plan was amended (1) to exclude from further participation any participant or former participant who was not employed by the company or another participating employer on January 1, 2008, (2) to discontinue participant contributions, and (3) to freeze the accrual of additional benefits as of December 31, 2007. In applying relevant accounting policies, we have made critical estimates related to actuarial assumptions, including assumptions of expected returns on plan assets, discount rates, and health care cost trends. The cost of pension benefits in future periods will depend on actual returns on plan assets, assumptions for future periods, contributions, and benefit experience. In 2019, we contributed $18.0 million to our pension plan. The effective discount rate used in accounting for pension and other benefit obligations in 2019 ranged from 2.52% to 2.81%. The expected rate of return on plan assets for qualified pension benefits in 2020 is 5.70%.

## ITEM 4. CONTROLS AND PROCEDURES

***Evaluation of Disclosure Controls and Procedures***

Disclosure controls and procedures, as defined in Rule 13(a)-15(e) of the Exchange Act, are controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is (1) recorded, processed, summarized and reported in a timely manner and (2) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Our management has evaluated, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Form 10-Q pursuant to Rule 13a-15(b) of the Exchange Act. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures as of the end of the period covered by this Form 10-Q are effective. While our disclosure controls and procedures are designed to provide reasonable assurance of their effectiveness, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the company have been detected.

***Changes in Internal Control over Financial Reporting***

Due to the COVID-19 pandemic, we now have more employees working from home. While our internal controls over financial reporting are designed to allow for remote execution, we continue to evaluate and may make changes that may materially affect our internal controls over financial reporting. There were no changes to our internal controls over financial reporting during the three months ended March 31, 2020, that have materially affected, or that are reasonably likely to materially affect, our internal controls over financial reporting.

## PART II. OTHER INFORMATION

## ITEM 1. LEGAL PROCEEDINGS

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, if determined adversely to us, we believe would individually or taken together have a material adverse effect on our business, financial condition or liquidity. Discussion of Legal Matters is incorporated by reference from Part I, Item 1, Note 13, "Commitments and Contingencies," of this Form 10-Q and should be considered an integral part of Part II, Item 1, "Legal Proceedings".

## ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Quarterly Report on Form 10-Q, the reader should carefully consider the factors discussed in Part I, "Item 1A. Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. There have been no material changes in the Company's risk factors from those disclosed in Part I, Item 1A, of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 with the exception of the items listed below.

***Our business has been adversely affected and will likely continue to be adversely affected by the COVID-19 pandemic.***

The global spread of the COVID-19 pandemic has created significant global volatility, uncertainty, and economic disruption. The COVID-19 pandemic began to adversely affect our operations in March 2020. The extent to which the COVID-19 pandemic will continue to adversely affect our business, operations, and financial results will depend on numerous evolving factors that we may not be able to accurately predict, including but not limited to:

- the duration and scope of the pandemic;
- governmental, business, and individuals' actions that have been and continue to be taken in response to the pandemic;
- the impact of the pandemic on economic activity and actions taken in response;
- the declining employment levels of our customers;
- the effect on our customers' demand for or the delays in implementing our services;
- our ability to sell and to provide our services to our current and future customers, including as a result of travel restrictions and people working from home;
- the ability of our customers to pay for our services or to make us whole for advances of earned net wages and associated tax amounts made on their behalf by us; and
- our ability to safely and efficiently navigate our employees' return to the workplace and adapt to the evolving business environment resulting from the COVID-19 pandemic.

Existing or potential customers have and may continue to reduce employee headcount, to slow down decision-making, to delay planned work, or to seek to modify existing agreements, especially those customers significantly adversely affected by the pandemic's economic impact in areas where we have significant concentrations, including the retail and hospitality sectors.

Further, the effects of the pandemic have and may continue to reduce our float revenue as our customers employ fewer employees and as governments take actions to stimulate the global economy, such as the U.S. Federal Reserve and Bank of Canada lowering interest rates. A sustained downturn in the financial markets and asset values may have the effect of reducing our float revenue, or limiting our ability to liquidate securities held in our customer trust funds. The effects of the pandemic, including remote working arrangements for employees, may also impact our financial reporting systems and internal control over financial reporting, including our ability to ensure information required to be disclosed in our reports under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is 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.

Any of these consequences of the pandemic could cause or contribute to the risks and uncertainties enumerated in the Form 10-K. As we cannot predict the duration or scope of the COVID-19 pandemic, the anticipated negative financial impact to our business, financial condition, results of operations and/or stock price cannot be reasonably estimated, but could be material and could last for an extended period of time.

***Our quarterly results of operations may fluctuate significantly and may not fully reflect the underlying performance of our business.***

Our quarterly results of operations, including the levels of our revenues, gross margin, profitability, cash flow, and deferred revenue, may vary significantly in the future, and period-to-period comparisons of our results of operations may not be meaningful. Accordingly, the results of any one quarter should not be relied upon as an indication of future performance. Our quarterly financial results may fluctuate as a result of a variety of factors, many of which are outside of our control, and as a result, may not fully reflect the underlying performance of our business. Fluctuation in quarterly results may negatively impact the value of our common stock. Factors that may cause fluctuations in our quarterly financial results include, without limitation:

- our ability to attract new Cloud customers;
- our ability to replace declining Bureau revenue with Cloud revenue;
- the addition or loss of large Cloud customers, including through acquisitions or consolidations;
- the addition or loss of employees by our Cloud customers;
- the timing and number of paydays in a period;
- the adoption of the Dayforce Wallet by customers and their employees;
- the losses, if any, caused by customer failure to repay advances we make on their behalf for our Dayforce Wallet or other services;
- the timing of recognition of revenues;
- the tenure of our Cloud customers during that period;
- the amount and timing of operating expenses related to the maintenance and expansion of our business, operations, and infrastructure;
- network outages or security breaches;
- general economic, industry, and market conditions;
- customer renewal rates;
- increases or decreases in the number of elements of our services or pricing changes upon any renewals of customer agreements;
- changes in our pricing policies or those of our competitors;
- the mix of applications sold during a period;
- seasonal variations in sales of our applications, which has historically been highest in the fourth quarter of a calendar year;
- fluctuation in market interest rates, which impacts debt interest expense as well as float revenue;
- the timing and success of new application and service introductions by us or our competitors or any other change in the competitive dynamics of our industry, including consolidation among competitors, customers, or strategic partners; and
- the impact of new accounting rules.

***Our Dayforce Wallet program presents the potential for our employer customers or employee customers to become the victim of fraud or other similar illegal behavior.***

As part of the Dayforce Wallet program, our third-party financial institution partner will issue payroll cards and execute transactions for each Dayforce Wallet account. These transactions give rise to the potential for fraud against our employer customers or employee customers when they are used for bill payments, purchases and peer-to-peer transfers. Our third-party financial institution partner has responsibility for managing potential payment fraud to which the Dayforce Wallet users are subject. If any of our employer customers or employee customers become victims of fraud or similar illegal behavior, we might face legal liabilities and other losses that could have a material adverse effect on our business, financial condition, and results of operations.

***Our solutions and our business are subject to a variety of U.S. and international laws and regulations, including those regarding privacy, data protection, and information security. Any failure by us or our third party service providers, as well as the failure of our platform or services, to comply with applicable laws and regulations could have a material adverse effect on our business, financial condition, and results of operations.***

We are subject to a variety of U.S. and international laws and regulations, including regulation by various federal government agencies, including the FTC, and state and local agencies.

*Privacy and Data Protection Laws*

The United States and various state and foreign governments have adopted or proposed limitations on, or requirements regarding, the collection, distribution, use, security, and storage of personal identifiable information (“PII”) of individuals; and the FTC and many state attorneys general are applying federal and state consumer protection laws to impose standards on the online collection, use and dissemination of data. Self-regulatory obligations, other industry standards, policies, and other legal obligations may apply to our collection, distribution, use, security, or storage of PII or other data relating to individuals. In addition, most states and some foreign governments have enacted laws requiring companies to notify individuals of data security breaches involving certain types of PII. These obligations may be interpreted and applied in an inconsistent manner from one jurisdiction to another and may conflict with one another, other regulatory requirements, or our internal practices. Any failure or perceived failure by us to comply with U.S., E.U., or other foreign privacy or security laws, regulations, policies, industry standards, or legal obligations, or any security incident that results in the unauthorized access to, or acquisition, release, or transfer of, PII may result in governmental enforcement actions, litigation, fines and penalties, or adverse publicity and could cause our customers to lose trust in us, which could harm our reputation and have a material adverse effect on our business, financial condition, and results of operations.

We expect that there will continue to be new proposed laws, regulations, and industry standards concerning privacy, data protection and information security in the United States, Canada, the European Union, and other jurisdictions, and we cannot yet determine the impact such future laws, regulations, and standards may have on our business. For example, in May 2018, the General Data Protection Regulation came into force, bringing with it a complete overhaul of E.U. data protection laws: the new rules supersede E.U. data protection legislation, impose more stringent E.U. data protection requirements, and provide for greater penalties for non-compliance. Changing definitions of what constitutes PII may also limit or inhibit our ability to operate or to expand our business, including limiting strategic partnerships that may involve the sharing of data. Also, some jurisdictions require that certain types of data be retained on servers within these jurisdictions. Our failure to comply with applicable laws, directives, and regulations may result in enforcement action against us, including fines and imprisonment, and damage to our reputation, any of which may have an adverse effect on our business and operating results. Further, the E.U. requires that certain data transfer mechanisms be put in place before PII can be transferred from the E.U. to another jurisdiction. These validity of these mechanisms- namely the Privacy Shield, which permits US-based participating companies such as Ceridian to move PII from the E.U. to the US; and the EU Standard Contractual Clauses, which Ceridian uses extensively- continue to be challenged by civil society before E.U. regulators and courts of law. Should these mechanisms be invalidated, Ceridian may not be able to transfer customers’ PII and its own from Europe to the U.S. and other jurisdictions to run its business and deliver services to customers.

If our service is perceived to cause, or is otherwise unfavorably associated with, violations of privacy or data security requirements, it may subject us or our customers to public criticism and potential legal liability. Public concerns regarding PII processing, privacy and security may cause some of our customers’ end users to be less likely to visit their websites or otherwise interact with them. If enough end users choose not to visit our customers’ websites or otherwise interact with them, our customers could stop using our platform. This, in turn, may reduce the value of our services and slow or eliminate the growth of our business. Existing and potential privacy laws and regulations concerning privacy and data security and increasing sensitivity of consumers to unauthorized processing of PII may create negative public reactions to technologies, products, and services such as ours.

Evolving and changing definitions of what constitutes PII and / or “Personal Data” within the United States, Canada, the European Union, and elsewhere, especially relating to the classification of internet protocol, or IP addresses, machine or device identification numbers, location data and other information, may limit or inhibit our ability to operate or to expand our business. Future laws, regulations, standards and other obligations could impair our ability to collect or to use information that we utilize to provide email delivery and marketing services to our customers, thereby impairing our ability to maintain and to grow our customer base and to increase revenue. Future restrictions on the collection, use, sharing, or disclosure of our customers’ data or additional requirements for express or implied consent of customers for the use and disclosure of such information may limit our ability to develop new services and features.

*Financial Services Laws*

The United States and various state and foreign governments have adopted regulations which may be applicable to our Dayforce Wallet or other services with which we and/or or our third-party providers must comply. The obligations include undertakings imposed, for example, by state money transmission laws, commercial lending laws, the Office of Foreign Asset Control, the Bank Secrecy Act, Gramm-Leach-Bliley Act and the National Automated Clearing House Association. Any failure or perceived failure by us or one of our third party providers to comply with financial services laws, regulations, policies, industry standards, or legal obligations, may result in governmental enforcement actions, litigation, fines and penalties, or adverse publicity, and could cause our customers to lose trust in us, which could harm our reputation and have a material adverse effect on our business, financial condition, and results of operations.

***We rely on third party service providers for many aspects of our business, including, but not limited to, the operation of data centers; the execution of Automated Clearing House, or ACH, and wire transfers to support our customer payroll and tax services; the monitoring of applicable laws; the printing and delivery of checks; serving as an independent trustee of our U.S. client funds trust; and providing program management and other financial related services for our Dayforce Wallet program. If any third-party service providers on which we rely experience a disruption, go out of business, experience a decline in quality, or terminate their relationship with us, we could experience a material adverse effect on our business, financial condition, and results of operation.***

We rely on third party service providers for many integral aspects of our business. A failure on the part of any of our third-party service providers to fulfill their contracts with us could result in a material adverse effect on our business, financial condition, and results of operation. We depend on our third parties for many services, including, but not limited to:

*Upkeep of data centers*

We host Dayforce and Powerpay applications and serve all of our customers from data centers operated by third party providers, primarily NaviSite, in Boston, Massachusetts; Redhill, England; Santa Clara, California; Toronto, Canada; Vancouver, Canada; Woking, England; Sydney, Australia; London, England; and Oregon. We also host Dayforce Australia in Microsoft Azure in Melbourne, Australia and Sydney, Australia. While we control and have access to our servers and all of the components of our network that are located in our external data centers, we do not control the operation of these facilities. The owners of our data center facilities have no obligation to renew their agreements with us on commercially reasonable terms, or at all. These parties may also seek to cap their maximum contractual liability resulting in us being financially responsible for losses caused by their actions or omissions. Additionally, we host our internal systems through data centers that we operate and lease or own in Atlanta, Georgia; Fountain Valley, California; Louisville, Kentucky; and St. Petersburg, Florida. If we are unable to renew our agreements with our third party providers or to renew our leases on commercially reasonable terms, or if one of our data center operators is acquired, we may be required to transfer our servers and other infrastructure to new data center facilities, and we may incur significant costs and possible service interruption in connection with any such transfer. Both our third party data centers and data centers that we lease and operate are subject to break-ins, sabotage, intentional acts of vandalism, and other misconduct. Any such acts could result in a breach of the security of our or our customers' data.

Problems faced by our third party data center locations, with the telecommunications network providers with whom we or they contract, or with the systems by which our telecommunications providers allocate capacity among their customers, including us, could adversely affect the experience of our customers. Our third party data centers operators could decide to close their facilities without adequate notice. In addition, any financial difficulties, such as bankruptcy, faced by our third party data centers operators or any of the service providers with whom we or they contract may have negative effects on our business, the nature and extent of which are difficult to predict. Additionally, if our data centers are unable to keep up with our growing needs for capacity, this could adversely affect the growth of our business. Any changes in third party service levels at our data centers or any security breaches, errors, defects, disruptions, or other performance problems with our applications could adversely affect our reputation, damage our customers' stored files, result in lengthy interruptions in our services, or otherwise result in damage or losses to our customers for which they may seek compensation from us. Interruptions in our services might reduce our revenues, cause us to issue refunds to customers for prepaid and unused subscription services, subject us to potential liability, or adversely affect our renewal rates.

*Processing of electronic funds transfers*

We currently have agreements with four banks in the United States, two banks in Canada, and one financial payments company in the United Kingdom to execute electronic funds transfers to support our customer payroll and tax services in the United States, Canada, and the United Kingdom. If one or more of these parties fails to process electronic funds transfers on a timely basis, or at all, then our relationship with our customers could be harmed and we could be subject to claims by a customer with respect to the failed transfers, with little or no recourse to the banks. In addition, these parties have no obligation to renew their agreements with us on commercially reasonable terms, or at all, and transferring to alternative providers could prove time-consuming and costly. If these parties terminate their relationships with us, restrict or fail to increase the dollar amounts of funds that they will process on behalf of our customers, their doing so may impede our ability to process funds and could have a material adverse effect on our business, financial condition, and results of operations.

*Check printing and delivery*

In Canada, we rely on a third party vendor to print payroll checks, and in Canada and the United States we rely on third party couriers, such as Federal Express and Purolator, to ship printed reports, year-end slips, and pay checks to our customers. Relying on third party check printers and couriers puts us at risk from disruptions in their operations, such as employee strikes, inclement weather, and their ability to perform tasks on our behalf. If these vendors fail to perform their tasks, we could incur liability or suffer damages to our reputation, or both. If we are forced to use other third party couriers, transferring to these competitor couriers could prove time-consuming, our costs could increase and we may not be able to meet shipment deadlines. Moreover, we may not be able to obtain terms as favorable as those we currently use, which could further increase our costs.

*Monitoring of changes to applicable laws*

We and our third party providers must monitor for any changes or updates in laws that are applicable to the solutions that we or our third party providers provide to our customers. In addition, we are reliant on our third party providers to modify the solutions that they provide to our customers to enable our clients to comply with changes to such laws and regulations. If our third party providers fail to reflect changes or updates in applicable laws in the solutions that they provide to our customers, we could be subject to negative customer experiences, harm to our reputation, loss of customers, claims for any fines, penalties or other damages suffered by our customers, and other financial harm.

*Trustee of U.S. client funds trust*

In the United States, we rely on a state-chartered trust company to serve as the independent trustee of our clients' funds trust. Our client funds are held in accounts in the name of the clients' fund trust and our independent trustee, in order to maintain bankruptcy remoteness of those funds from us. We rely on our independent trustee to maintain regulatory compliance with all applicable laws. It may be difficult to find a replacement trustee for our clients' funds trust in the event the trustee terminates its relationship with us or fails to perform under our agreement with the trustee. If that were to occur, we may be unable to provide the Dayforce Wallet or our standard payroll services to our customers and their employees, which could harm our relationship with our customers and their employees, could subject us to claims by a customer, their employees, and regulatory sanctions with respect to the failure, and could result in a material adverse effect on our business, financial condition, and results of operations.

*Program manager of our U.S. Dayforce Wallet program*

We rely on a third party financial institution to serve as the issuing bank, the program manager and perform other financial related services with respect to our Dayforce Wallet product. In that regard, the third party financial institution, among other things, maintains our omnibus wallet funds account and performs the necessary regulatory and payments processing activity required by the Dayforce Wallet platform. We do not have the necessary regulatory approvals to hold wallet funds in or move funds from an account, nor do we have access to the payment systems needed to move the funds from the omnibus wallet funds account and the omnibus card holder account. As a result, if our third party financial institution partner fails to perform under our agreement with it, or terminates its agreement with us, we may be unable to provide the Dayforce Wallet service to our customers until we enter into a new relationship with a new third party financial institution, which could harm our relationship with our customers and their employees, could subject us to claims by a customer, their employees, and regulatory sanctions with respect to the failure, and could result in a material adverse effect on our business, financial condition, and results of operations.

A failure on the part of any of our third party service providers could result in a material adverse effect on our business, financial condition, and results of operations.

***For our Dayforce Wallet service, we advance earned net wages and associated tax amounts on behalf of customers in connection with the "on demand pay" payroll feature of the service in order to provide their employees access to earned wages in advance of their standard payroll cycles. A customer may fail to satisfy its obligation to repay us for those advanced monies which could have a material adverse effect on our business, financial condition, and results of operations.***

In contrast to our standard payroll processing business where a customer's account is generally debited prior to any disbursement on its behalf, in the case of our "on demand pay" service, credit is provided to our customers and funds are advanced on the customers' behalf in order to fund the customers' employees' interim earned net wage payroll demands (including associated source and other deductions) with the requirement that the customers will repay the advance on the date of their ordinary payroll run. These advances may or may not have priority over other creditors of our customers, and our security interest and/or other credit protection measures may be inadequate to make us whole. There is, therefore, a risk that our customers do not pay back the amounts we have already paid on their behalf, and in that event, we may possess limited legal recourse to recoup those funds from our customers. In the event of a customer's failure to repay us, we may be required to seek additional sources of short-term liquidity, which may not be available on reasonable terms, or suffer credit losses, which could have a material adverse effect on our business, financial condition, and results of operations.

***Regulatory requirements placed on our software and services could impose increased costs on us, delay or prevent our introduction of new products and services, and impair the function or value of our existing products and services.***

Our existing products and services may become subject to increasing regulatory requirements, or our new products and services may subject us to increased regulatory requirements, and as these requirements proliferate, we may be required to change or adapt our products and services to comply. Changing regulatory requirements might render our products and services obsolete or might block us from developing new products and services. New products or services, such as the Dayforce Wallet, in turn subject us to incrementally new regulatory requirements, such as the need to obtain, maintain and comply with commercial lending licenses or other requirements in certain jurisdictions. These increased regulatory demands might in turn impose additional costs upon us to comply or to further develop our products and services. It might also make introduction of new products and services more costly or more time-consuming than we currently anticipate and could even prevent introduction by us of new products or services or cause the continuation of our existing products or services to become more costly. Accordingly, such regulatory requirements could have a material adverse effect on our business, financial condition, and results of operations.

***Catastrophic events may disrupt our business.***

Our data centers are located in Atlanta, Georgia; Fountain Valley, California; Louisville, Kentucky; St. Petersburg, Florida. Additionally, our data centers hosted by third parties and our corporate offices are located in Boston, Massachusetts; Melbourne, Australia; Minneapolis, Minnesota; Redhill, England; Santa Clara, California; Sydney, Australia; Toronto, Canada; Vancouver, Canada; Woking, England; London, England; and Oregon. Any location in any part of the world is susceptible to natural disasters or other risks beyond our control and its third party contractors that could impact operations. For example, the west coast of the United States contains active earthquake zones, the Midwest is subject to periodic tornadoes, and the east coast is subject to seasonal hurricanes and snowstorms. Additionally, we employ a substantial number of employees located in the Republic of Mauritius, which is subject to seasonal hurricanes, and the geographic remoteness of the location may create additional delays in recovery from any catastrophic event. Additionally, we rely on our network and third party infrastructure and enterprise applications, internal technology systems, and our website for our development, marketing, operational support, hosted services and sales activities. In the event of a major earthquake, tornado, hurricane, pandemic or other public health emergency or catastrophic event, such as fire, power loss, telecommunications failure, cyber-attack, war, or terrorist attack in any of our domestic or international locations, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in our application development, lengthy interruptions in our services, breaches of data security and loss of critical data, all of which could have a material adverse effect on our business, financial condition, and results of operations.

***Customer funds and wage funds of their employees that our trustees and third-party financial institution partners hold in trust are subject to market, interest rate, credit, and liquidity risks. The loss of these funds could have a material adverse effect on our business, financial condition, and results of operations.***

Both our trustees (in the case of customer funds held in our U.S. clients' funds trust and our Canada payroll trust) and our third party financial institution partner (in the case of employee wage funds held on their behalf as part of the U.S. Dayforce Wallet program) may invest funds in one of more of the following high-quality bank deposits, money market mutual funds, commercial paper, collateralized short-term investments, U.S. Treasury and agency securities, Canada government and provincial securities, as well as highly rated asset-backed, mortgage-backed, municipal, corporate, and bank securities. Nevertheless, these assets are subject to general market, interest rate, credit, and liquidity risks. These risks may be exacerbated, individually or in unison, during periods of unusual financial market volatility. We are required to fund the payroll and wage funds of our customers and their employees regardless of any loss realized on those investments affecting the principal funds held. In the event of a global financial crisis, such as that experienced in 2008, we could be faced with a severe constriction of the availability of liquidity, which could impact our ability to fund payrolls. Any loss of principal, or inability to access customer funds could have an adverse impact on our cash position and results of operations and could require us to obtain additional sources of liquidity, and could have a material adverse effect on our business, financial condition, and results of operations.

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

None.

## ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

## ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

## ITEM 5. OTHER INFORMATION

None.

**ITEM 6. EXHIBITS**

(a) Exhibits

The following exhibits are filed or furnished as a part of this report:

| Exhibit No. | Description |
|---|---|
| 10.1* | Second Amendment to Employment Agreement, effective February 3, 2020, between Christopher R. Armstrong and Ceridian HCM, Inc. (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Company on February 5, 2020). |
| 10.2* | Amendment to Employment Agreement, effective February 3, 2020, between Leagh R. Turner and Ceridian Canada Ltd. (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed by the Company on February 5, 2020). |
| 10.3* | Form of Restricted Stock Unit Award Agreement (February 9, 2020) (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Company on February 10, 2020). |
| 10.4** | First Amendment to Senior Secured Credit Agreement, dated February 19, 2020, between Ceridian HCM Holding Inc., as borrowers, the lenders party thereto, Deutsche Bank AG New York Branch (as administrative agent and collateral agent). |
| 10.5 | Waiver Agreement, dated February 27, 2020, by and among Ceridian HCM Holding Inc., Cannae Holdings, LLC and certain funds affiliated with Thomas H. Lee Partners, L.P. (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Company on March 2, 2020). |
| 10.6 | Letter Agreement by and among Ceridian HCM Holding Inc. and Cannae Holdings, Inc. (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by the Company on April 3, 2020). |
| 10.7* | Form of Performance Stock Unit Award Agreement (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed by the Company on March 2, 2020). |
| 10.8* | Ceridian HCM Holding Inc. 2020 Management Incentive Plan (incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed by the Company on March 2, 2020). |
| 31.1** | Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 |
| 31.2** | Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 |
| 32.1** | Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 32.2** | Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 101.INS** | Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document) |
| 101.SCH** | Inline XBRL Taxonomy Extension Schema Document |
| 101.CAL** | Inline XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF** | Inline XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB** | Inline XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRE** | Inline XBRL Taxonomy Extension Presentation Linkbase Document |
| 104** | Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101) |

* Management compensatory plan or arrangement.
** Filed herewith.

## 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.

**CERIDIAN HCM HOLDING INC.**

| | |
|---|---|
| Date: May 6, 2020 | By: /s/ David D. Ossip<br>Name: David D. Ossip<br>Title: Chief Executive Officer<br>(Principal Executive Officer) |
| Date: May 6, 2020 | By: /s/ Arthur Gitajn<br>Name: Arthur Gitajn<br>Title: Executive Vice President and Chief Financial Officer<br>(Principal Financial Officer) |

**Exhibit 10.4**

FIRST AMENDMENT TO CREDIT AGREEMENT

This FIRST AMENDMENT TO CREDIT AGREEMENT, dated as of February 19, 2020 (this "First Amendment"), is entered into by and among CERIDIAN HCM HOLDING INC., a Delaware corporation (the "Borrower"), the Subsidiary Guarantors party hereto, the Lenders party hereto and DEUTSCHE BANK AG NEW YORK BRANCH, as administrative agent for the Lenders (in such capacity, together with its successors and permitted assigns in such capacity, the "Administrative Agent") and collateral agent for the Secured Parties (in such capacity, together with its successors and permitted assigns in such capacity, the "Collateral Agent"), and is made with reference to the Credit Agreement referred to below. Unless otherwise defined herein, capitalized terms used herein which are defined in the Credit Agreement, as amended by this First Amendment, are used herein as therein defined.

W I T N E S S E T H:

WHEREAS, the Borrower, each Lender party thereto and the Administrative Agent have entered into that certain Credit Agreement, dated as of April 30, 2018, (as amended, restated, supplemented and/or otherwise modified prior to the date hereof, the "Credit Agreement");

WHEREAS, the parties hereto wish to amend the Credit Agreement to decrease the interest rate applicable to the Initial Term Loans and to make certain other changes as herein provided, in each case subject to the terms and conditions set forth herein;

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is agreed as follows:

SECTION 1. Amendments to Credit Agreement. Subject to the satisfaction of the conditions set forth in Section 3, the Credit Agreement is hereby amended as follows:

(a) The definition of "Applicable Percentage" in Section 1.01 of the Credit Agreement is hereby amended by amending and restating clause (a) thereof in its entirety as follows:

"(a) with respect to any Initial Term Loan, a percentage per annum equal to (i) at any date from the most recent Interest Payment Date prior to the First Amendment Effective Date to, but not including, the First Amendment Effective Date, (x) in the case of a Eurodollar Term Loan, 3.00% and (y) in the case of an ABR Term Loan, 2.00% and (ii) at any date on and after the First Amendment Effective Date, (x) in the case of a Eurodollar Term Loan, 2.50% and (y) in the case of an ABR Term Loan, 1.50%.".

(b) The definition of "Arrangers" in Section 1.01 of the Credit Agreement is hereby amended by amending and restating it in its entirety as follows:

""Arrangers" shall mean, as the context may require, (x) with respect to the Initial Term Loans made on the Effective Date and the Revolving Credit Commitments, Deutsche Bank Securities Inc., Credit Suisse Securities (USA) LLC, Goldman Sachs Bank USA, JPMorgan Chase Bank, N.A., Barclays Bank PLC, Canadian Imperial Bank of Commerce, Citigroup Global Markets Inc., Wells Fargo Securities, LLC, Jefferies Finance LLC, MUFG Union Bank, N.A., Merrill, Lynch, Pierce, Fenner & Smith Incorporated and PNC Capital Markets LLC, in their capacity as joint lead arrangers for the Credit Facilities and (y) with respect to the First Amendment and the transactions contemplated thereby, Deutsche Bank Securities Inc., in its capacity as sole lead arranger and sole bookrunner.".

(c) The definition of "Asset Sale" is hereby amended by amending and restating clause (x) thereof in its entirety to read as follows:

"(x) sales of receivables or similar assets, or participations therein, in connection with any Receivables Facility;".

(d) The definition of "Current Assets" is hereby amended by amending clause (b) of the definition thereof to replace the text "accounts receivable" with the text "receivables or similar assets".

(e) The definition of "Loan Documents" in Section 1.01 of the Credit Agreement is hereby amended by inserting the text ", the First Amendment" immediately after the text "this Agreement" appearing therein.

(f) The definition of "Permitted Liens" is hereby amended by replacing the text "accounts receivable" appearing in clause (q) thereof with the text "receivables".

(g) The definition of "Receivables Facility" in Section 1.01 of the Credit Agreement is hereby amended by amending and restating it in its entirety as follows:

> ""Receivables Facility" shall mean any of one or more receivables financing facilities as amended, supplemented, modified, extended, renewed, restated or refunded from time to time, the obligations of which are non-recourse (except for customary representations, warranties, guarantees, Liens, performance undertakings, covenants and indemnities made in connection with such facilities) to the Borrower or any of its Restricted Subsidiaries (other than a Receivables Subsidiary) pursuant to which the Borrower or any of its Restricted Subsidiaries sells or contributes their receivables or similar assets to either (A) a Person that is not a Restricted Subsidiary or (B) a Receivables Subsidiary that in turn sells its receivables or similar assets to a Person that is not a Restricted Subsidiary. The "amount" of any Receivables Facility shall be deemed at any time to be the aggregate principal, or stated amount, of the "indebtedness", fractional undivided interests (which stated amount may be described as a "net investment" or similar term reflecting the amount invested in such undivided interest) or other securities incurred or issued pursuant to such Receivables Facility, in each case outstanding at such time. Each Lender authorizes each of the Administrative Agent and Collateral Agent to enter into an intercreditor agreement in respect of each Receivables Facility from time to time in effect and to take all actions it deems appropriate or necessary in connection with any such intercreditor agreement.".

(h) Section 1.01 of the Credit Agreement is hereby further amended by adding the following definitions in appropriate alphabetical order as follows:

> "First Amendment" means the First Amendment to Credit Agreement, dated as of February 19, 2020, by and among the Borrower, the Subsidiary Guarantors party thereto, the Lenders party thereto, the Administrative Agent and the Collateral Agent.
>
> "First Amendment Effective Date" has the meaning specified in the First Amendment.

(i) Section 2.05(d) of the Credit Agreement is hereby amended by inserting the text "First Amendment" immediately before the text "Effective Date" appearing therein.

(j) Section 5.04(c)(y) of the Credit Agreement is hereby amended by inserting the text "; provided that such calculation shall not be required under this clause (y) to the extent no prepayment would be required under Section 2.13(c) with respect to the Fiscal Year to which such financial statements relate" immediately before the semi-colon (";") appearing therein.

(k) Section 6.03(a) of the Credit Agreement is hereby amended by inserting the text "pursuant to this clause (a)" immediately before the text "by the Borrower and its Restricted Subsidiaries" appearing therein.

(l) Section 6.03(b)(ix) of the Credit Agreement is hereby amended by replacing the text "the declaration and payment of dividends on the Borrower's common stock (or a Restricted Payment to any direct or indirect parent entity to fund a payment of dividends on such entity's common stock)" with the text "the declaration and making of Restricted Dividend Payments on the Borrower's common stock (or a Restricted Payment to any direct or indirect parent entity to fund a Restricted Dividend Payment on such entity's common stock)".

(m) Section 6.06(c)(xiv) of the Credit Agreement is hereby amended by replacing the text "accounts receivable" with the text "receivables or similar assets".

SECTION 2. Replacement of Non-Consenting Lenders. The parties hereto agree that (i) the Initial Term Loans outstanding on the date hereof after giving effect to this First Amendment shall continue to constitute Initial Term Loans under the Credit Agreement (as amended hereby), (ii) the Interest Periods applicable to the outstanding Initial Term Loans as of the First Amendment Effective Date shall not be affected by this First Amendment and (iii) the Borrower is exercising its rights under Section 2.22(a) of the Credit Agreement in connection with this First Amendment (and this First Amendment serves as notice thereof to the Administrative Agent and each First Amendment Non-Consenting Lender (as defined below)) to require any First Amendment Non-Consenting Lender to assign its outstanding Initial Term Loans (and all interests, right and obligations in connection therewith) to Deutsche Bank AG New York Branch (the "Replacement Lender"), and the Administrative Agent shall coordinate the transfer of all such Initial Term Loans of each such First Amendment Non-Consenting Lender to the Replacement Lender (such transfers, the "Replacement Assignments"), which transfers shall be effected in accordance with Section 2.22(a) of the Credit Agreement and shall be effective as of the First Amendment Effective Date.

SECTION 3. Conditions of Effectiveness of this First Amendment. This First Amendment shall become effective on the date when the following conditions shall have been satisfied (such date, the "First Amendment Effective Date"):

(a) the Borrower, the Subsidiary Guarantors, each Lender with outstanding Initial Term Loans (other than any First Amendment Non-Consenting Lender (as defined below), but including the Replacement Lender) and the Required Lenders (determined immediately prior to giving effect to this First Amendment) shall have duly executed a counterpart hereof (whether the same or different counterparts) and shall have delivered the same to jordan.barbaro@db.com, jake.fuerst@db.com and WCCeridian2020@whitecase.com;

(b) the Borrower shall have paid (or shall pay substantially concurrently with the effectiveness of this First Amendment), by wire transfer of immediately available funds, all fees and expenses required to be paid by the Borrower to the Administrative Agent and Deutsche Bank Securities Inc., as sole lead arranger hereof (the "First Amendment Arranger"), including, without limitation, all fees and expenses payable pursuant to Section 9.05 of the Credit Agreement, the Engagement Letter, dated as of February 13, 2020, among the Borrower and the First Amendment Arranger and the Fee Letter, dated as of February 13, 2020, among the Borrower and the First Amendment Arranger;

(c) the representations and warranties of the Loan Parties contained in Section 4 of this First Amendment are true and correct in all material respects on and as of the First Amendment Effective Date, except to the extent such representations and warranties expressly relate to an earlier date, in which case they shall be true and correct in all material respects as of such earlier date;

(d) the Borrower a certificate executed by a Responsible Officer of the Borrower, certifying compliance with the requirements of preceding clause (c);

(e) the Administrative Agent shall have received (i) either (x) a copy of the certificate or articles of incorporation or equivalent organizational document, including all amendments thereto, of each Loan Party, certified as of a recent date by the Secretary of State of the state of its organization or (y) a certification from such Loan Party that there has been no change to such organizational documents since last delivered to the Administrative Agent, (ii) a certificate of the Secretary or Assistant Secretary of each Loan Party dated the First Amendment Effective Date and certifying (A) that (x) attached thereto is a true and complete copy of the by-laws, operating agreement or similar governing document of such Loan Party as in effect on the First Amendment Effective Date and at all times since a date prior to the date of the resolutions described in clause (B) below or (y) there has been no change to such governing documents since last delivered to the Administrative Agent, (B) that attached thereto is a true and complete copy of resolutions duly adopted by the board of directors or other equivalent governing body of such Loan Party authorizing the execution, delivery and performance of this First Amendment and that such resolutions have not been modified, rescinded or amended and are in full force and effect, (C) that any attached certificate or articles of incorporation, equivalent organizational document, by-laws, operating agreement or similar governing document of such Loan Party have not been amended (in the case of the articles of incorporation (or equivalent governing document) of each such Loan Party, since the date of the last amendment thereto shown on the certificate of good standing furnished pursuant to clause (iii) below) and (D) to the extent not previously delivered to the Administrative Agent, as to the incumbency and specimen signature of each officer executing this First Amendment or any other document delivered in connection herewith on behalf of such Loan Party, (iii) good standing certificates for each Loan Party from the jurisdiction in which it is organized, each dated a recent date prior to the First Amendment Effective Date; and (iv) a certificate of another officer as to the incumbency and specimen signature of the Secretary or Assistant Secretary executing the certificate delivered pursuant to clause (ii) above;

(f) the Administrative Agent shall have received all documentation and other information about the Loan Parties reasonably requested in writing by it at least ten (10) Business Days prior to the First Amendment Effective Date in order to comply with applicable "know your customer" and anti-money laundering rules and regulations, including the USA PATRIOT Act, Title III of Pub. L. 107-56 (signed into law on October 26, 2001) and a certificate regarding beneficial ownership as required by 31 C.F.R. § 1010.230; and

(g) (x) the Initial Term Loans held by each Term Lender that has not executed and delivered a counterpart of this First Amendment to the Administrative Agent on or prior to 5:00 P.M. (New York City time) on February 13, 2020 (each, a "First Amendment Non-Consenting Lender") shall have been assigned to the Replacement Lender in accordance with Sections 2.22(a) and 9.04 of the Credit Agreement, and (y) any fees, costs and any other expenses in connection with such assignment under Sections 2.15, 2.17, 2.21 or 2.22 of the Credit Agreement shall have been paid in full.

SECTION 4. Representations and Warranties. In order to induce the Administrative Agent and the Lenders to enter into this First Amendment, each Loan Party party hereto represents and warrants that, immediately prior to and immediately after giving effect to this First Amendment:

(a) the execution, delivery and performance of this First Amendment and the Credit Agreement (as amended hereby) has been duly authorized by all necessary corporate, limited liability company or limited partnership (as applicable) action on the part of each Loan Party that is a party thereto;

(b) this First Amendment has been duly executed and delivered by each Loan Party that is a party hereto and each of this First Amendment and the Credit Agreement (as amended hereby) to which it is a party constitutes a legal, valid and binding obligation of such Loan Party enforceable against such Loan Party in accordance with its terms, except as may be limited by bankruptcy, insolvency, fraudulent transfer, reorganization, receivership, moratorium or similar laws of general applicability relating to or limiting creditors' rights generally or by general equity principles;

(c) the representations and warranties of the Loan Parties contained in each Loan Document to which they are a party are true and correct in all material respects on and as of such date, with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, in which case they shall be true and correct in all material respects as of such earlier date; and

(d) no Default or Event of Default has occurred and is continuing.

SECTION 5. Consents and Authorizations.

(a) The Borrower hereby consents, for purposes of Section 9.04(b)(i) of the Credit Agreement, to the assignment of any Initial Term Loans by (x) any First Amendment Non-Consenting Lender to the Replacement Lender and (y) the Replacement Lender to (i) any Person that was a Lender or an Affiliate (or related fund) of a Lender on the First Amendment Effective Date (immediately prior to giving effect thereto) and (ii) any other Person notified in writing by the Administrative Agent to the Borrower prior to the First Amendment Effective Date as part of the arrangement and syndication process for the First Amendment (so long as the Borrower has not objected thereto prior to the First Amendment Effective Date).

(b) Each Lender party hereto (on behalf of itself and its permitted assignees) hereby consents to, and authorizes the Administrative Agent to enter into, an amendment to the Credit Agreement to (i) add benchmark rate replacement provisions to the definitions of "CDOR Rate", "EURIBO Rate" and "Sterling LIBO Rate" appearing in Section 1.01 of the Credit Agreement on terms substantially similar to those applicable to the "LIBO Rate", with such adjustments thereto as may be reasonably requested by the Administrative Agent and the Borrower in light of prevailing market conventions for replacement of such benchmark rates and (ii) modify Section 9.08(h) of the Credit Agreement to add amendment provisions with respect to "CDOR Rate", "EURIBO Rate" and "Sterling LIBO Rate" corresponding to those applicable to the "LIBO Rate", in each case without any further consent (other than the consents of the Revolving Credit Lenders, the Borrower and the Administrative Agent).

SECTION 6. Reference to and Effect on the Credit Agreement and the Loan Documents; Miscellaneous.

(a) On and after the First Amendment Effective Date, (i) this First Amendment shall constitute a "Loan Document" for all purposes of the Credit Agreement (as amended hereby) and the other Loan Documents and (ii) each reference in the Credit Agreement to "this Agreement," "hereunder," "hereof" or words of like import referring to the Credit Agreement shall mean and be a reference to the Credit Agreement (as amended hereby).

(b) The Credit Agreement and each of the other Loan Documents (in each case, as amended hereby) are and shall continue to be in full force and effect and are hereby in all respects ratified and confirmed. Without limiting the generality of the foregoing, the Collateral Documents and all of the Collateral described therein do and shall continue to secure, and the Guarantee and Collateral Agreement by the Subsidiary Guarantors do and shall continue to guarantee, the payment of all Obligations of the applicable Loan Parties under the Loan Documents (in each case, as amended hereby).

(c) The execution, delivery and effectiveness of this First Amendment shall not, except as expressly provided herein, operate as a waiver of any right, power or remedy of any Lender or the Administrative Agent under any of the Loan Documents, nor constitute a waiver of any provision of any of the Loan Documents.

SECTION 7. Reaffirmation. By executing and delivering a counterpart hereof, (i) each Loan Party hereby agrees that, as of the First Amendment Effective Date and after giving effect to this First Amendment, all Obligations shall be guaranteed pursuant to the Guarantee and Collateral Agreement in accordance with the terms and provisions thereof and shall be secured pursuant to the Collateral Documents in accordance with the terms and provisions thereof; and (ii) each Loan Party hereby (A) agrees that, notwithstanding the effectiveness of this First Amendment, as of the First Amendment Effective Date and after giving effect to this First Amendment, the Collateral Documents continue to be in full force and effect and (B) agrees as of the First Amendment Effective Date that all of the Liens and security interests created and arising under each Collateral Document remain in full force and effect on a continuous basis, and the perfected status and priority of each such Lien and security interest continues in full force and effect on a continuous basis, unimpaired, uninterrupted and undischarged, as collateral security for its Obligations under the Loan Documents (as modified hereby) to which it is a party, in each case, to the extent provided in, and subject to the limitations and qualifications set forth in, such Loan Documents (as amended by this First Amendment).

SECTION 8. Governing Law. THIS FIRST AMENDMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK. The provisions of Sections 9.11 and 9.15 of the Credit Agreement are hereby incorporated by reference, *mutatis mutandis*, and shall apply with like effect to this First Amendment as if fully set forth herein.

SECTION 9. Counterparts. This First Amendment may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract, and shall become effective as provided in Section 3 above. Delivery by facsimile or other electronic imaging means (including ".pdf" or ".tif" format) of an executed counterpart of a signature page to this First Amendment shall be effective as delivery of an original executed counterpart of this First Amendment.

SECTION 10. Section Headings. Section headings herein are included for convenience of reference only, are not part of this First Amendment and are not to affect the construction of, or to be taken into consideration in interpreting, this First Amendment.

SECTION 11. Severability. In the event any one or more of the provisions contained in this First Amendment should be held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby (it being understood that the invalidity of a particular provision in a particular jurisdiction shall not in and of itself affect the validity of such provision in any other jurisdiction).

[*The remainder of this page is intentionally left blank.*]

IN WITNESS WHEREOF, the parties hereto have caused their duly authorized officers to execute and deliver this First Amendment as of the date first above written.

**BORROWER:**

**CERIDIAN HCM HOLDING INC.**

By: ________________________________________
Name:
Title:

**SUBSIDIARY GUARANTORS:**

**CERIDIAN HCM, INC.**

By: ________________________________________
Name:
Title:

**CERIDIAN TAX SERVICES, INC.**

By: ________________________________________
Name:
Title:

**CERIDIAN GLOBAL HOLDINGS COMPANY, INC.**

By: ________________________________________
Name:
Title:

**ABR PROPERTIES LLC**

By: ________________________________________
Name:
Title:

**DAYFORCE TALENT LLC**

By: ________________________________________
Name:
Title:

**DEUTSCHE BANK AG NEW YORK BRANCH**, as Administrative Agent, Collateral Agent and as Replacement Lender

By: ______________________________
Name:
Title:

By: ______________________________
Name:
Title:

[Signature Page to Ceridian First Amendment to Credit Agreement]

SIGNATURE PAGE TO THE FIRST AMENDMENT, DATED AS OF THE DATE FIRST WRITTEN ABOVE (THE "FIRST AMENDMENT"), TO THE CREDIT AGREEMENT (THE "CREDIT AGREEMENT"), DATED AS OF APRIL 30, 2018 (AS AMENDED, RESTATED, SUPPLEMENTED AND/OR OTHERWISE MODIFIED PRIOR TO THE DATE HEREOF), AMONG CERIDIAN HCM HOLDING INC., A DELAWARE CORPORATION (THE "BORROWER"), DEUTSCHE BANK AG NEW YORK BRANCH, AS ADMINISTRATIVE AGENT AND COLLATERAL AGENT AND EACH LENDER PARTY THERETO.

By executing this signature page as an existing Initial Term Lender (a "Consenting Lender"), the undersigned institution agrees to the terms of the First Amendment and the Credit Agreement (as amended by the First Amendment).

**NAME OF LENDER:**

Executing as a **CONSENTING LENDER:**

By: ______________________________
Name:
Title:

For any Lender requiring a second signature line:

By: ______________________________
Name:
Title:

**Exhibit 31.1**

**CERTIFICATIONS**

I, David D. Ossip, certify that:

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

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

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

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

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

(b) [omitted];

(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 functions):

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

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

Date: May 6, 2020

By: /s/ David D. Ossip
David D. Ossip
Chief Executive Officer

**Exhibit 31.2**

## CERTIFICATIONS

I, Arthur Gitajn, certify that:

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

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

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

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

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

(b) [omitted];

(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 functions):

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

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

Date: May 6, 2020

By: /s/ Arthur Gitajn
Arthur Gitajn
Executive Vice President and
Chief Financial Officer

**Exhibit 32.1**

**CERTIFICATION OF PERIODIC FINANCIAL REPORTS PURSUANT TO 18 U.S.C. §1350**

The undersigned hereby certifies that he is the duly appointed and acting Chief Executive Officer of Ceridian HCM Holding Inc., a Delaware corporation (the “Company”), and hereby further certifies as follows.

1. The periodic report containing financial statements to which this certificate is an exhibit fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934.

2. The information contained in the periodic report to which this certificate is an exhibit fairly presents, in all material respects, the financial condition and results of operations of the Company.

In witness whereof, the undersigned has executed and delivered this certificate as of the date set forth opposite his signature below.

Date: May 6, 2020

By: /s/ David D. Ossip
David D. Ossip
Chief Executive Officer

**Exhibit 32.2**

**CERTIFICATION OF PERIODIC FINANCIAL REPORTS PURSUANT TO 18 U.S.C. §1350**

The undersigned hereby certifies that he is the duly appointed and acting Executive Vice President and Chief Financial Officer of Ceridian HCM Holding Inc., a Delaware corporation (the "Company"), and hereby further certifies as follows.

1. The periodic report containing financial statements to which this certificate is an exhibit fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934.

2. The information contained in the periodic report to which this certificate is an exhibit fairly presents, in all material respects, the financial condition and results of operations of the Company.

In witness whereof, the undersigned has executed and delivered this certificate as of the date set forth opposite his signature below.

Date: May 6, 2020

By: /s/ Arthur Gitajn
Arthur Gitajn
Executive Vice President and Chief Financial Officer