PROS Holdings, Inc.
Form 10-Q
May 01, 2018
Table of Contents

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

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FORM 10-Q

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

For the quarterly period ended March 31, 2018

OR

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

For the transition period from to .

Commission File Number: 001-33554

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PROS HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

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| Delaware | 76-0168604 |
|---|---|
| (State of Incorporation) | (I.R.S. Employer Identification No.) |

| 3100 Main Street, Suite 900<br>Houston TX | 77002 |
|---|---|
| (Address of Principal Executive Offices) | (Zip Code) |

(713) 335-5151
(Registrant's telephone number, including area code)

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(Former Name, Former Address and Former Fiscal Year, if changed Since Last Report)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

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

| Large Accelerated Filer | o | Accelerated Filer | x |
|---|---|---|---|

Non-Accelerated Filer o (do not check if a smaller reporting company) Smaller Reporting Company o
Emerging Growth Company o

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

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

The number of shares outstanding of the registrant's Common Stock, $0.001 par value, was 32,600,099 as of April 23, 2018.

Table of Contents

PROS Holdings, Inc.
Form 10-Q
For the Quarterly Period Ended March 31, 2018

Table of Contents


| | | Page |
|---|---|---|
| PART I. FINANCIAL INFORMATION | | |
| Item 1. | Interim Condensed Consolidated Financial Statements (Unaudited) | |
| | Condensed Consolidated Balance Sheets | 4 |
| | Condensed Consolidated Statements of Comprehensive Income (Loss) | 5 |
| | Condensed Consolidated Statements of Cash Flows | 6 |
| | Notes to Condensed Consolidated Financial Statements | 7 |
| Item 2. | Management's Discussion and Analysis of Financial Condition and Results of Operations | 21 |
| Item 3. | Quantitative and Qualitative Disclosures about Market Risk | 29 |
| Item 4. | Controls and Procedures | 29 |
| PART II. OTHER INFORMATION | | |
| Item 1. | Legal Proceedings | 30 |
| Item 1A. | Risk Factors | 30 |
| Item 2. | Unregistered Sales of Equity Securities and Use of Proceeds | 30 |
| Item 3. | Defaults Upon Senior Securities | 30 |
| Item 4. | Mine Safety Disclosure | 30 |
| Item 5. | Other Information | 30 |
| Item 6. | Exhibits | 30 |
| Signatures | | 31 |


CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended ("Exchange Act"). Forward-looking statements relate to future events or our future financial performance. These forward-looking statements regarding future events and our future results are based on current expectations, estimates, forecasts and projections, and the beliefs and assumptions of our management including, without limitation, our expectations regarding the following: our ability to execute on our revenue strategy shift to cloud-first, the license and subscription revenues generated by our software products and services; the impact of our revenue recognition policies; our belief that our current assets, including cash, cash equivalents, short-term investments, and expected cash flows from operating activities, will be sufficient to fund our operations; our belief that we will successfully integrate our acquisitions; our anticipated additions to property, plant and equipment; our belief that our facilities are suitable and adequate to meet our current operating needs; and our belief that we do not have any material exposure to changes in the fair value of our investment portfolio as a result of changes in foreign currency exchange rates or interest rates. Words such as, but not limited to, “we expect,” “anticipate,” “target,” “project,” “believe,” “goals,” “estimate,” “potential,” “predict,” “may,” “might,” “could,” “would,” “intend,” and vari types of words and similar expressions are intended to identify these forward-looking statements.

Table of Contents

PART I. FINANCIAL INFORMATION
ITEM 1. INTERIM CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

PROS Holdings, Inc.
Condensed Consolidated Balance Sheets
(In thousands, except share and per share amounts)
(Unaudited)

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Assets: | | |
| Current assets: | | |
| Cash and cash equivalents | $148,146 | $ 160,505 |
| Trade and other receivables, net of allowance of $760 and $760, respectively | 29,031 | 32,484 |
| Deferred costs | 2,704 | 3,137 |
| Prepaid and other current assets | 7,294 | 5,930 |
| Total current assets | 187,175 | 202,056 |
| Property and equipment, net | 14,799 | 14,007 |
| Long-term deferred costs | 10,435 | 3,194 |
| Intangibles, net | 25,057 | 26,929 |
| Goodwill | 38,764 | 38,458 |
| Other long-term assets | 4,239 | 4,039 |
| Total assets | $280,469 | $ 288,683 |
| Liabilities and Stockholders' Equity: | | |
| Current liabilities: | | |
| Accounts payable and other liabilities | $3,606 | $ 2,976 |
| Accrued liabilities | 5,329 | 6,733 |
| Accrued payroll and other employee benefits | 8,530 | 16,712 |
| Deferred revenue | 83,682 | 75,604 |
| Total current liabilities | 101,147 | 102,025 |
| Long-term deferred revenue | 17,477 | 19,591 |
| Convertible debt, net | 216,131 | 213,203 |
| Other long-term liabilities | 853 | 843 |
| Total liabilities | 335,608 | 335,662 |
| Commitments and contingencies (see Note 10) | | |
| Stockholders' equity: | | |
| Preferred stock, $0.001 par value, 5,000,000 shares authorized; none issued | — | — |
| Common stock, $0.001 par value, 75,000,000 shares authorized; 37,006,509 and 36,356,760 shares issued, respectively; 32,588,924 and 31,939,175 shares outstanding, respectively | 37 | 36 |
| Additional paid-in capital | 208,368 | 207,924 |
| Treasury stock, 4,417,585 common shares, at cost | (13,938) | (13,938) |
| Accumulated deficit | (247,317) | (238,185) |
| Accumulated other comprehensive loss | (2,289) | (2,816) |
| Total stockholders' equity | (55,139) | (46,979) |
| Total liabilities and stockholders' equity | $280,469 | $ 288,683 |

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

Table of Contents

PROS Holdings, Inc.
Condensed Consolidated Statements of Comprehensive Income (Loss)
(In thousands, except per share data)
(Unaudited)

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Revenue: | | |
| Subscription | $20,950 | $12,214 |
| Maintenance and support | 16,574 | 18,076 |
| Total subscription, maintenance and support | 37,524 | 30,290 |
| License | 1,066 | 2,190 |
| Services | 9,320 | 7,649 |
| Total revenue | 47,910 | 40,129 |
| Cost of revenue: | | |
| Subscription | 8,764 | 5,937 |
| Maintenance and support | 2,957 | 3,146 |
| Total cost of subscription, maintenance and support | 11,721 | 9,083 |
| License | 73 | 65 |
| Services | 7,727 | 7,461 |
| Total cost of revenue | 19,521 | 16,609 |
| Gross profit | 28,389 | 23,520 |
| Operating expenses: | | |
| Selling and marketing | 17,568 | 16,473 |
| General and administrative | 10,689 | 10,408 |
| Research and development | 14,784 | 14,307 |
| Acquisition-related | 95 | — |
| Loss from operations | (14,747) | (17,668) |
| Convertible debt interest and amortization | (4,179) | (2,394) |
| Other income (expense), net | 202 | 32 |
| Loss before income tax provision | (18,724) | (20,030) |
| Income tax provision | 132 | 177 |
| Net loss | $(18,856) | $(20,207) |
| | | |
| Net loss per share: | | |
| Basic and diluted | $(0.58) | $(0.65) |
| Weighted average number of shares: | | |
| Basic and diluted | 32,378 | 31,099 |
| Other comprehensive income (loss), net of tax: | | |
| Foreign currency translation adjustment | $527 | $260 |
| Unrealized gain (loss) on available-for-sale securities | — | (13) |
| Other comprehensive income (loss), net of tax | 527 | 247 |
| Comprehensive loss | $(18,329) | $(19,960) |

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

Table of Contents

PROS Holdings, Inc.
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Operating activities: | | |
| Net loss | $(18,856) | $(20,207) |
| Adjustments to reconcile net loss to net cash provided by operating activities: | | |
| Depreciation and amortization | 3,364 | 2,033 |
| Amortization of debt discount and issuance costs | 2,941 | 1,675 |
| Share-based compensation | 5,936 | 6,162 |
| Deferred income tax, net | — | 33 |
| Loss on disposal of assets | 35 | — |
| Changes in operating assets and liabilities: | | |
| Accounts and unbilled receivables | 3,454 | 543 |
| Deferred costs | 238 | — |
| Prepaid expenses and other assets | (1,575) | (666) |
| Accounts payable and other liabilities | 690 | 3,631 |
| Accrued liabilities | (1,415) | 434 |
| Accrued payroll and other employee benefits | (8,181) | (10,957) |
| Deferred revenue | 8,637 | 5,126 |
| Net cash used in operating activities | (4,732) | (12,193) |
| Investing activities: | | |
| Purchases of property and equipment | (778) | (484) |
| Capitalized internal-use software development costs | (1,316) | (572) |
| Proceeds from maturities of short-term investments | — | 9,983 |
| Net cash (used in) provided by investing activities | (2,094) | 8,927 |
| Financing activities: | | |
| Exercise of stock options | 875 | 2,198 |
| Proceeds from employee stock plans | 834 | 776 |
| Tax withholding related to net share settlement of stock awards | (7,255) | (5,665) |
| Payments of notes payable | (58) | (50) |
| Debt issuance costs related to Revolver | — | (125) |
| Net cash used in financing activities | (5,604) | (2,866) |
| Effect of foreign currency rates on cash | 71 | (39) |
| Net change in cash and cash equivalents | (12,359) | (6,171) |
| Cash and cash equivalents: | | |
| Beginning of period | 160,505 | 118,039 |
| End of period | $148,146 | $111,868 |

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

Table of Contents

PROS Holdings, Inc.
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Organization and Nature of Operations

PROS Holdings, Inc., a Delaware corporation, through its operating subsidiaries (collectively, the "Company"), provides cloud-based solutions to power the shift to modern commerce by helping companies create personalized and frictionless buying experiences for their customers. Fueled by artificial intelligence, machine learning and proven science, the Company's solutions make it possible for companies to price, configure and sell their products and services in an omnichannel environment with speed, precision and consistency. The Company's customers benefit from decades of data science expertise infused into its purpose-built industry solutions. The Company provides its solutions to enterprises across the manufacturing, distribution and services industries, including automotive and industrial, business-to-business ("B2B") services, cargo, chemicals and energy, consumer goods, insurance, food and beverage, healthcare, high tech, and travel. The Company also provides professional services to implement its software applications. In addition, the Company provides product maintenance and support to its customers through which they receive unspecified upgrades, maintenance releases and bug fixes during the term of the support period on a when-and-if-available basis.

2. Summary of Significant Accounting Policies

The accompanying unaudited condensed consolidated financial statements reflect the application of significant accounting policies as described below and elsewhere in these notes to the condensed consolidated financial statements.

Basis of presentation

The accompanying unaudited condensed consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States ("GAAP") for interim financial reporting and applicable quarterly reporting regulations of the Securities and Exchange Commission ("SEC"). In management's opinion, the accompanying interim unaudited condensed consolidated financial statements include all adjustments necessary for a fair statement of the financial position of the Company as of March 31, 2018, the results of operations for the three months ended March 31, 2018 and 2017, and cash flows for the three months ended March 31, 2018 and 2017.

Certain information and disclosures normally included in the notes to the annual financial statements prepared in accordance with GAAP have been omitted from these interim unaudited condensed consolidated financial statements pursuant to the rules and regulations of the SEC. Accordingly, these unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 ("Annual Report") filed with the SEC. The condensed consolidated balance sheet as of December 31, 2017 was derived from the Company's audited consolidated financial statements but does not include all disclosures required under GAAP.

Changes in accounting policies

The Company has consistently applied these accounting policies to all periods presented in these consolidated financial statements, except for the Company's adoption of certain accounting standards described in more detail under "Recently adopted accounting pronouncements" in this Note 2 below.

Basis of consolidation

The unaudited condensed consolidated financial statements include the accounts of the Company, its wholly owned subsidiaries and a subsidiary where the Company exercises control. All intercompany transactions and balances have been eliminated in consolidation. The functional currency of PROS France SAS ("PROS France") is the euro. The financial statements of this subsidiary are translated into U.S. dollars using period-end rates of exchange for assets and liabilities, historical rates of exchange for equity, and average rates of exchange for the period for revenue and expenses. Translation gains (losses) are recorded in accumulated other comprehensive loss as a component of stockholders' equity.

Dollar amounts

The dollar amounts presented in the tabular data within these footnote disclosures are stated in thousands of dollars, except per share amounts, or as noted within the context of each footnote disclosure.

Table of Contents

Use of estimates

The Company makes estimates and assumptions in the preparation of its unaudited condensed consolidated financial statements, and its estimates and assumptions may affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements, and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates. The complexity and judgment required in the Company's estimation process, as well as issues related to the assumptions, risks and uncertainties inherent in the application of the percentage-of-completion method of accounting, affect the amounts of revenue, expenses, unbilled receivables and deferred revenue. Estimates are also used for, but not limited to, receivables, allowance for doubtful accounts, useful lives of assets, depreciation and amortization, income taxes and deferred tax asset valuation, valuation of stock options, other current liabilities and accrued liabilities. Numerous internal and external factors can affect estimates. The critical accounting policies related to estimates and judgments are discussed in the Annual Report under management's discussion and analysis of financial condition and results of operations and are also discussed under Item 2 "Management's discussion and analysis of financial condition and results of operations".

Revenue recognition

The Company derives its revenues primarily from subscription services, professional services, perpetual licensing of its software products and associated software maintenance and support services.

The Company determines revenue recognition through the following steps:
- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the customer contract(s);
- Determination of the transaction price;
- Allocation of the transaction price to each performance obligation in the customer contract(s); and
- Recognition of revenue when, or as, the Company satisfies a performance obligation.

Subscription services revenue

Subscription services revenue primarily consists of fees that give customers access to one or more of the Company's cloud applications with routine customer support. Subscription services revenue is generally recognized ratably over the contractual term of the arrangement beginning on the date that the Company's service is made available to the customer. The Company's subscription contracts do not provide customers with the right to take possession of the software supporting the applications and, as a result, are accounted for as service contracts. The Company's subscription contracts are generally two to five years in length, billed annually in advance, and are non-cancelable.

Maintenance and support revenue

Maintenance and support revenue includes post-implementation customer support and the right to unspecified software updates and enhancements. The Company recognizes revenue from maintenance arrangements ratably over the period in which the services are provided. The Company's maintenance and support contracts are generally one to three years in length, billed annually in advance, and non-cancelable.

License revenue

Licenses for on-premise software provide the customer with a right to use the software as it exists when made available to the customer. License revenue from distinct on-premises licenses is recognized at the point in time when

the software is made available to the customer. For customer contracts that contain license and professional services that are not considered distinct, the license and professional services are determined to be a single performance obligation and recognized over time based upon the Company's efforts to satisfy the performance obligation.

Professional services revenue

Professional services revenue primarily consists of fees for deployment and configuration services, as well as training. Professional services revenues are generally recognized as the services are rendered for time and material contracts, or on a

Table of Contents

proportional performance basis for fixed price contracts. The majority of the Company's professional services contracts are on a time and materials basis. Training revenues are recognized as the services are rendered.

Significant judgments are required in determining whether professional services that are contained in customer subscription services contracts are considered distinct, including whether the professional services are capable of being distinct and whether they are separately identifiable in the customer contract. Professional services that are deemed to be distinct are accounted for as a separate performance obligation and revenue is recognized as the services are performed. If determined that the professional services are not considered distinct, the professional services and the subscription services are determined to be a single performance obligation and revenue is recognized over the contractual term of the subscription beginning on the date that subscription services are made available to the customer.

Customer Contracts with Multiple Performance Obligations

A portion of the Company's customer contracts contain multiple performance obligations. Significant judgment is required in determining whether multiple performance obligations contained in customer contracts are capable of being distinct and whether they are separately identifiable in customer contracts. If the obligations are determined to be distinct, each separate performance obligation is recognized when, or as, the Company satisfies the performance obligation. If the obligations are not determined to be distinct, they are recognized as a single combined performance obligation. The transaction price is allocated to each performance obligation on a relative standalone selling price basis.

Business combinations

The Company records tangible and intangible assets acquired and liabilities assumed in business combinations under the acquisition method of accounting. Amounts paid for each acquisition are allocated to the assets acquired and liabilities assumed based on their fair values at the date of acquisition. Significant management judgments and assumptions are required in determining the fair value of acquired assets and liabilities, particularly acquired intangible assets. The valuation of purchased intangible assets is based upon estimates of the future performance and cash flows from the acquired business. Each asset is measured at fair value from the perspective of a market participant.

The Company uses its best estimates and assumptions to accurately assign fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date. The Company's estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the fair value of these tangible and intangible assets acquired and liabilities assumed, with the corresponding offset to goodwill. Uncertain tax positions and tax-related valuation allowances are initially established in connection with a business combination as of the acquisition date. During the measurement period, the Company reevaluates these estimates and assumptions quarterly and records any adjustments to the Company's preliminary estimates to goodwill. Any subsequent adjustments are recorded to the Company’s condensed consolidated statements of operations upon the earlier of the conclusion of the measurement period and final determination of the fair value of assets acquired or liabilities assumed.

Internal-use software

Costs incurred to develop internal-use software during the development stage are capitalized, stated at cost, and depreciated using the straight-line method over the estimated useful lives of the assets. Development stage costs generally include salaries and personnel costs and third-party contractor expenses associated with internal-use software configuration, coding, installation and testing. For the three months ended March 31, 2018 and 2017, the

Company capitalized $1.4 million and $0.6 million, respectively, of internal-use software development costs related to cloud-based offerings. Capitalized internal-use software development costs related to cloud-based offerings are amortized using the straight-line method over the useful life of the asset. For the three months ended March 31, 2018 and 2017, the Company amortized $0.2 million and zero, respectively, of capitalized internal-use software development costs. Capitalized software for internal use is included in property and equipment, net in the unaudited condensed consolidated balance sheets. Amortization of capitalized internal-use software development costs, once it commences, is included in cost of subscription revenues in the accompanying unaudited condensed consolidated statements of comprehensive income (loss).

Impairment of long-lived assets

Long-lived assets are reviewed for impairment whenever an event or change in circumstances indicates that the carrying amount of an asset or group of assets may not be recoverable. The impairment review includes comparison of future cash flows expected to be generated by the asset or group of assets with the associated assets' carrying value. If the carrying value of the asset or group of assets exceeds its expected future cash flows (undiscounted and without interest charges), an impairment loss is

Table of Contents

recognized to the extent that the carrying amount of the asset exceeds its fair value. The Company recorded no impairment charges during the three months ended March 31, 2018 and 2017.

Noncash share-based compensation

The Company measures all share-based payments to its employees based on the grant date fair value of the awards and recognizes expenses in the Company's unaudited consolidated statement of comprehensive income (loss) on a straight-line basis over the periods during which the recipient is required to perform services (generally over the vesting period of the awards). To date, the Company has granted stock options, Restricted Stock Units ("RSUs"), stock settled Stock Appreciation Rights ("SARs"), and Market Stock Units ("MSUs"). RSUs include (i) time-based awards, and (ii) market-based awards in which the number of shares that vest are based upon attainment of target average per share closing price over a requisite trading period. MSUs are performance-based awards in which the number of shares that vest are based upon the Company's relative stockholder return.

The following table presents the number of shares or units outstanding for each award type as of March 31, 2018 and December 31, 2017, respectively, (in thousands):

| Award type | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Stock options | 45 | 135 |
| Restricted stock units (time-based) | 2,109 | 2,133 |
| Restricted stock units (market-based) | 345 | 345 |
| Stock appreciation rights | 303 | 356 |
| Market stock units | 419 | 387 |

Stock options, time-based RSUs and SARs vest ratably between one and four years. Market-based RSUs vest if the average trailing closing price of the Company's Common Stock meets certain minimum performance hurdles for at least 105 calendar days prior to September 9, 2020, with 25% vesting at $27, an additional 25% vesting at $33, and the remaining 50% vesting at $41. The actual number of MSUs that will be eligible to vest is based on the total stockholder return of the Company relative to the total stockholder return of the Russell 2000 Index ("Index") over their respective performance periods, as defined by each award's plan documents. The Company did not grant any stock options or SARs during the three months ended March 31, 2018 or 2017.

The fair value of the time-based RSUs is based on the closing price of the Company's stock on the date of grant.

The Company estimates the fair value and the derived service period of the market-based RSUs on the date of grant using a 'Monte Carlo' simulation model. The model requires the use of a number of assumptions including the expected volatility of the Company's stock, its risk-free interest rate and expected dividends. The Company's expected volatility at the date of grant was based on the historical volatility of the Company over the performance period.

The fair value of the market-based RSUs is expensed over the derived service period for each separate vesting tranche. The derived service period for the vesting tranches of the market-based RSUs ranges between 1.01 and 1.98 years.

The Company estimates the fair value of MSUs on the date of grant using a 'Monte Carlo' simulation model. The determination of fair value of the MSUs is affected by the Company's stock price and a number of assumptions including the expected volatilities of the Company's stock and the Index, its risk-free interest rate and expected dividends. The Company's expected volatility at the date of grant was based on the historical volatilities of the Company and the Index over the performance period.

The weighted average assumptions used to value the MSUs granted during the three months ended March 31, 2018 were as follows:

| | March 31, 2018 |
|---|---|
| Volatility | 43.67% |
| Risk-free interest rate | 2.12% |
| Expected option life in years | 2.97 |
| Dividend yield | — |

Table of Contents

Earnings per share

The Company computes basic earnings (loss) per share by dividing net income (loss) attributable to common stockholders by the weighted average number of common shares outstanding. Diluted earnings (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the weighted average number of common shares and dilutive potential common shares then outstanding. Diluted earnings per share reflect the assumed conversion of all dilutive securities, using the treasury stock method. Dilutive potential common shares consist of shares issuable upon the exercise of stock options, shares of unvested restricted stock units, and settlement of stock appreciation rights. When the Company incurs a net loss, the effect of the Company's outstanding stock options, stock appreciation rights and restricted stock units are not included in the calculation of diluted earnings (loss) per share as the effect would be anti-dilutive. Accordingly, basic and diluted net loss per share are identical.

Cost method investment

Investments in equity securities of privately held companies without readily determinable fair value, where the Company does not exercise significant influence over the investee, are recorded using the cost method of accounting, carrying the investment at historical cost. If there are no identified events or changes in circumstances that might have an adverse effect on the cost method investments, the Company does not estimate the investments' fair value. For all investments, if a decline in the fair value of an investment below the carrying value is determined to be other-than-temporary, such investment is written down to its estimated fair value with a charge to current earnings.

At both March 31, 2018 and December 31, 2017, the Company held $2.0 million of equity securities in a privately held company. This investment is accounted for under the cost method and the Company measures it at fair value on a nonrecurring basis when it is deemed to be other-than-temporarily impaired. The Company estimates fair value of its cost method investment considering available information such as pricing in recent rounds of financing, current cash positions, earnings and cash flow forecasts, recent operational performance and any other readily available market data, which represents level 3 in the fair value hierarchy as defined by Accounting Standard Codification ("ASC") 820, "Fair Value Measurement and Disclosure" ("ASC 820"). As of March 31, 2018, the Company determined there were no other-than-temporary impairments on its cost method investment.

Fair value measurement

The Company's financial assets that are included in cash and cash equivalents and that are measured at fair value on a recurring basis consisted of $135.9 million and $131.4 million at March 31, 2018 and December 31, 2017, respectively, and were invested in treasury money market funds. The fair value of the treasury money market funds is determined based on quoted market prices, which represents level 1 in the fair value hierarchy as defined by ASC 820.

Trade and other receivables

Trade and other receivables are primarily comprised of trade receivables, net of allowance for doubtful accounts, contract assets and unbilled receivables. The Company records trade accounts receivable for its unconditional rights to consideration arising from the Company's performance under contracts with customers. The Company's standard billing terms are that payment is due upon receipt of invoice, payable generally within 30 to 60 days. The carrying value of such receivables, net of the allowance for doubtful accounts, represents their estimated net realizable value. The Company estimates its allowance for doubtful accounts for specific trade receivable balances based on historical collection trends, the age of outstanding trade receivables, existing economic conditions, and any financial security associated with the receivables.

Contract assets represent conditional rights to consideration that have been recognized as revenue in advance of billing the customer. Unbilled receivables represent unconditional rights to consideration arising from contingent

revenue, that have been recognized as revenue in advance of billing the customer.

Deferred costs

Sales commissions earned by the Company's sales representatives are considered incremental and recoverable costs of obtaining a customer contract. Sales commissions are deferred and amortized on a straight-line basis over the period of benefit which the Company has determined to be five to eight years. The Company determined the period of benefit by taking into consideration its customer contracts, expected renewals as the Company currently does not pay an incremental sales commission, the Company's technology and other factors. The Company also defers amounts earned by employees other than sales representatives who earn incentive payments under compensation plans that are also tied to the value of customer contracts acquired.

Table of Contents

Deferred costs were $13.1 million and $6.3 million as of March 31, 2018 and December 31, 2017, respectively. Amortization expense for the deferred costs was $0.7 million and $0.3 million for the three months ended March 31, 2018 and 2017, respectively.

Deferred revenue

Deferred revenue primarily consists of customer invoicing in advance of revenues being recognized. The Company generally invoices its customers annually in advance for subscription services and maintenance and support services. Deferred revenue that is anticipated to be recognized during the next twelve-month period is recorded as current deferred revenue and the remaining portion is recorded as long-term.

Credit facility

As of March 31, 2018, the Company had no outstanding borrowings under its $50.0 million secured Credit Agreement ("Revolver") with the lenders party thereto and Wells Fargo Bank, National Association as agent for the lenders party thereto. The Company included $0.2 million of unamortized debt issuance costs related to the Revolver in prepaid and other current assets and other long-term assets in the condensed consolidated balance sheets. For the three months ended March 31, 2018 and 2017, the Company recorded an immaterial amount of amortization of debt issuance cost which is included in other income (expense), net in the unaudited condensed consolidated statements of comprehensive income (loss).

Income taxes

The Company recorded an income tax provision of $0.1 million and $0.2 million for the three months ended March 31, 2018 and 2017, respectively, primarily related to foreign income taxes and state taxes not based on income. The effective tax rate for both the three months ended March 31, 2018 and 2017 was (1)%. The income tax rates vary from the federal and state statutory rates primarily due to the valuation allowances on the Company’s deferred tax assets, the limitation on deductibility of certain officers’ compensation, and foreign and state taxes not based on income. The Company estimates its annual effective tax rate at the end of each quarterly period. Jurisdictions with a projected loss for the year where no tax benefit can be recognized due to the valuation allowances on the Company’s deferred tax assets are excluded from the estimated annual effective tax rate. The impact of such an exclusion could result in a higher or lower effective tax rate during a particular quarter depending on the mix and timing of actual earnings versus annual projections.

Recently adopted accounting pronouncements

Topic 606

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, "Revenue from Contracts with Customers (Topic 606)" ("Topic 606"). Topic 606 replaces the prior revenue recognition requirements in ASC 605, "Revenue Recognition" ("Topic 605" or "Prior Guidance") with a comprehensive revenue measurement and recognition standard, and expanded disclosure requirements. The new standard also provides guidance on the recognition of costs related to obtaining customer contracts. Topic 606 took effect in the first quarter of 2018, including interim periods within that reporting period. The Company adopted Topic 606 and applied Topic 606 to those contracts which were not complete as of January 1, 2018 using the modified retrospective method by recognizing the cumulative effect of initially applying the new standard as an adjustment to the opening balance of accumulated deficit, while prior period amounts are not adjusted and continue to be reported in accordance with the Company's historic accounting under the Prior Guidance.

The most significant impact of Topic 606 relates to the Company's accounting for arrangements that include term-based software licenses bundled with maintenance and support, the deferral of incremental costs of obtaining a contract with a customer, including the period of amortization of such costs, and additional disclosures. Under the Prior Guidance, revenue attributable to term-based software licenses was recognized ratably over the term of the arrangement when vendor-specific objective evidence ("VSOE") did not exist for the undelivered maintenance and support element because it was not sold separately. Topic 606 does not require VSOE for undelivered elements to separate revenue for the delivered software licenses. Accordingly, under the new standard, the Company is required to recognize as revenue a portion of the arrangement fee upon delivery of the software license. The adjustment to the opening balance sheet of the accumulated deficit for all revenue related items was a decrease of approximately $2.7 million.

Topic 606 also requires the Company to capitalize and amortize the costs to obtain a contract over the expected period of customer benefit. The Company previously capitalized and amortized only direct and incremental commission costs over the term of the related contract. The expected period of customer benefit determined under Topic 606 is longer than the typical two to five year term of the Company's contracts as required under the Prior Guidance. As a result of applying Topic 606, the Company

Table of Contents

recorded a decrease to the opening balance sheet of the accumulated deficit for costs to obtain a contract of approximately $7.0 million.

Topic 230

In August 2016, the FASB issued ASU 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments" which is intended to reduce the diversity in practice on classification of certain transactions in the statement of cash flows. The Company adopted this standard on January 1, 2018 and the adoption had no impact on its condensed consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU 2016-18, "Statement of Cash Flows (Topic 230): Restricted Cash (a consensus of the FASB Emerging Issues Task Force" which is intended to define the presentation and related disclosures of restricted cash balances. The Company adopted this standard on January 1, 2018 and the adoption had no impact on its condensed consolidated financial statements and related disclosures.

Recently issued accounting pronouncements not yet adopted

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)" ("Topic 842") which requires the lessee to recognize most leases on the balance sheet thereby resulting in the recognition of lease assets and liabilities for those leases currently classified as operating leases. Lessor accounting remains largely unchanged from current guidance, however, Topic 842 provides improvements that are intended to align lessor accounting with the lessee model and with updated revenue recognition guidance. This standard is effective for interim and annual reporting periods beginning after December 15, 2018. The Company is currently assessing the impact of Topic 842 on its condensed consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" ("Topic 350"), which eliminates step two from the goodwill impairment test. Under the amendments in this standard, an entity should recognize an impairment charge for the amount by which the carrying amount of a reporting unit exceeds its fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The standard is effective for interim and annual reporting periods beginning after December 15, 2019; earlier adoption is permitted for goodwill impairment tests performed after January 1, 2017. The Company is currently assessing the impact of Topic 350 on its condensed consolidated financial statements.

With the exception of the new standards discussed above, there have been no other recent accounting pronouncements or changes in accounting pronouncements during the three months ended March 31, 2018, as compared to the recent accounting pronouncements described in the Company's Annual Report, that are of significance or potential significance to the Company.

3. Deferred Revenue and Performance Obligations

Deferred Revenue

For the three months ended March 31, 2018 and 2017, the Company recognized approximately $30.2 million and $27.7 million, respectively, of revenue that was included in the deferred revenue balances at the beginning of the respective periods and primarily related to subscription services, maintenance and services.

Performance Obligations

As of March 31, 2018, the Company expects to recognize approximately $285.6 million of revenue from remaining performance obligations. The Company expects to recognize revenue on approximately $132.3 million of these performance obligations over the next 12 months, with the balance recognized thereafter.

4. Disaggregation of Revenue

Revenue by Geography

The geographic information in the table below is presented for the three months ended March 31, 2018 and 2017. The Company categorizes geographic revenues based on the location of the customer's headquarters. Because the Company's contracts are predominately denominated in U.S. dollars, it has limited exposure to foreign currency exchange risk as discussed under "Foreign Currency Exchange Risk" of Part I, Item 3 below.

Table of Contents

| | Three Months Ended March 31, | | | | | |
|---|---|---|---|---|---|---|
| | 2018 | | | 2017 | | |
| | Revenue | Percent | | Revenue | Revenue | |
| United States of America | $17,362 | 36 | % | $15,830 | 39 | % |
| Europe | 15,283 | 32 | % | 11,406 | 29 | % |
| The rest of the world | 15,265 | 32 | % | 12,893 | 32 | % |
| Total revenue | $47,910 | 100 | % | $40,129 | 100 | % |

5. Impact on Financial Statements of Changes in Accounting Policies

The Company applied Topic 606 using the modified retrospective method by recognizing the cumulative effect of initially applying Topic 606 as an adjustment to the opening balance sheet at January 1, 2018. Therefore, the comparative information has not been adjusted and continues to be reported under Topic 605. The differences between balances under Topic 606 and Topic 605 are detailed below:

| | March 31, 2018 | | |
|---|---|---|---|
| (in thousands) | As Reported | Adjustments | Balances Under Topic 605 |
| Balance Sheets | | | |
| Trade and other receivables, net of allowance | $29,031 | $ (643) | $28,388 |
| Deferred costs, current | 2,704 | 251 | 2,955 |
| Long-term deferred costs | 10,435 | (7,442) | 2,993 |
| Deferred revenue, current | 83,682 | 949 | 84,631 |
| Long-term deferred revenue | 17,477 | 1,471 | 18,948 |
| Accumulated deficit | $(247,317) | $ (10,254) | $(257,571) |

| | Three Months Ended March 31, 2018 | | |
|---|---|---|---|
| (in thousands, except per share amounts) | As Reported | Adjustments | Balances Under Topic 605 |
| Income Statements | | | |
| Total revenue | $47,910 | $ (385) | $47,525 |
| Total cost of revenue | 19,521 | (40) | 19,481 |
| Selling and marketing | 17,568 | 297 | 17,865 |
| General and administrative | 10,689 | (80) | 10,609 |
| Research and development | 14,784 | (59) | 14,725 |
| Net loss | (18,856) | (503) | (19,359) |
| Basic and diluted loss per share | $(0.58) | $ (0.02) | $(0.60) |

6. Business Combination

On August 3, 2017, the Company acquired PROS Travel Commerce, Inc. (formerly Vayant Travel Technologies, Inc.) ("Vayant"), a privately held company based in Sofia, Bulgaria, for total cash consideration, net of cash acquired, of approximately $34.1 million. Vayant is a cloud software company that provides advanced shopping, merchandising and inspirational travel solutions.

For the three months ended March 31, 2018, the Company has included $2.2 million of revenue and $1.2 million of net loss related to Vayant in its consolidated income statement. During the three months ended March 31, 2018, the Company incurred acquisition-related costs of $0.1 million consisting primarily of integration costs and retention of key employees.

All of the assets acquired and the liabilities assumed in the transaction have been recognized at their acquisition date fair values at August 3, 2017.

Table of Contents

The preliminary allocation of the total purchase price for Vayant is as follows (in thousands):

| | | |
|---|---|---|
| Cash | $ | 1,822 |
| Other current assets | | 1,235 |
| Noncurrent assets | | 86 |
| Intangibles | | 18,600 |
| Goodwill | | 17,052 |
| Accounts payable and accrued liabilities | | (1,668) |
| Deferred revenue | | (600) |
| Deferred tax liability | | (526) |
| Noncurrent liabilities | | (49) |
| Net assets acquired | $ | 35,952 |

The following are the identifiable intangible assets acquired (in thousands) with respect to the Vayant acquisition, and their respective useful lives:

| | Amount | Useful Life (years) |
|---|---|---|
| Developed technology | $11,600 | 7 |
| Customer relationships | 7,000 | 5 |
| Total | $18,600 | |

In performing the preliminary purchase price allocation, the Company considered, among other factors, its anticipated future use of the acquired assets, historical financial performance, and estimated cash flows from Vayant's products and services. The allocation resulted in acquired intangible assets of $18.6 million. The acquired intangible assets consisted of developed technology and customer relationships and were valued using the income approach in which the after-tax cash flows are discounted to present value. The cash flows are based on estimates used to price the transaction, and the discount rates applied were benchmarked with reference to the implied rate of return from the transaction model as well as the weighted average cost of capital. Additionally, the Company assumed certain liabilities in the acquisition, including deferred revenue with a fair value of $0.6 million as determined using a cost-plus profit approach.

The Company made a preliminary determination that $0.5 million of net deferred tax liabilities were assumed on the acquisition date. The deferred tax liability is comprised of the value of intangible assets partially offset by a deferred tax asset related to net operating losses.

The excess of the purchase price over the estimated amounts of net assets as of the effective date of the acquisition was allocated to goodwill. The factors contributing to the recognition of the amount of goodwill were based on several strategic and synergistic benefits that were expected to be realized from the Vayant acquisition. These benefits include the expectation that the combined company’s complementary products will strengthen the Company's modern commerce solutions for the travel industry. The Company believes the combined company will benefit from a broader global presence and, with the Company’s direct sales force and larger channel coverage, significant cross-selling opportunities. None of the goodwill is expected to be currently deductible for tax purposes. In accordance with applicable accounting standards, goodwill will not be amortized but instead will be tested for impairment at least annually, or more frequently if certain indicators are present. In the event that the management of the combined

company determines that the value of goodwill has become impaired, the combined company will incur an accounting charge for the amount of the impairment during the fiscal quarter in which the determination is made.

Pro Forma Financial Information

The unaudited financial information in the table below summarizes the combined results of operations of the Company and Vayant, on a pro forma basis, as though the Company had acquired Vayant on January 1, 2016. The pro forma information for all periods presented also includes the effect of business combination accounting resulting from the acquisition, including amortization charges from acquired intangible assets.

Table of Contents

| (in thousands, except earnings per share) | Three Months Ended March 31, 2017 |
|---|---|
| Total revenue | $42,182 |
| Net loss | (21,161) |
| Earnings per share - basic and diluted | $(0.68) |

7. Earnings per Share

The following table sets forth the computation of basic and diluted earnings per share for the three months ended March 31, 2018 and 2017:

| | Three Months Ended March 31, | |
|---|---|---|
| (in thousands, except per share data) | 2018 | 2017 |
| Numerator: | | |
| Net loss | $(18,856) | $(20,207) |
| Denominator: | | |
| Weighted average shares (basic) | 32,378 | 31,099 |
| Dilutive effect of potential common shares | — | — |
| Weighted average shares (diluted) | 32,378 | 31,099 |
| Basic loss per share | $(0.58) | $(0.65) |
| Diluted loss per share | $(0.58) | $(0.65) |

Dilutive potential common shares consist of shares issuable upon the exercise of stock options, settlement of SARs, and the vesting of RSUs and MSUs. Potential common shares determined to be antidilutive and excluded from diluted weighted average shares outstanding were approximately 2.1 million and 2.5 million for the three months ended March 31, 2018 and 2017, respectively.

Since the Company has the intention and ability to settle the principal amount of its Notes (as defined in Note 9 below) in cash, the treasury stock method is expected to be used for calculating any potential dilutive effect of the conversion spread on diluted net income per share, if applicable. The conversion spread will have a dilutive impact on diluted net income per share of common stock when the average market price of common stock for a given period exceeds the conversion price of $33.79 and $48.63 per share, for the 2019 Notes (as defined in Note 9 below) and 2047 Notes (as defined in Note 9 below), respectively.

8. Noncash Share-based Compensation

During the three months ended March 31, 2018, the Company granted 783,527 RSUs with a weighted average grant-date fair value of $27.17 per share. The Company also granted 116,899 MSUs with a weighted average grant-date fair value of $38.18 to certain executive employees during the three months ended March 31, 2018. These MSUs vest on January 10, 2021 and the actual number of MSUs that will be eligible to vest is based on the total stockholder return of the Company relative to the total stockholder return of the Index over the performance period, as defined by each award's plan documents or individual award agreements. The Company did not grant any stock options or SARs during the three months ended March 31, 2018.

Share-based compensation expense is allocated to expense categories on the unaudited condensed consolidated statements of comprehensive income (loss). The following table summarizes share-based compensation expense included in the Company's unaudited condensed consolidated statements of comprehensive income (loss) for the three months ended March 31, 2018 and 2017:

Table of Contents

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Share-based compensation: | | |
| Cost of revenue | $482 | $575 |
| Operating expenses: | | |
| Selling and marketing | 1,284 | 1,273 |
| General and administrative | 2,879 | 2,802 |
| Research and development | 1,291 | 1,512 |
| Total included in operating expenses | 5,454 | 5,587 |
| Total share-based compensation expense | $5,936 | $6,162 |

The Company's 2017 Equity Incentive Plan ("2017 Stock Plan") was approved by stockholders in May 2017 and reserved an aggregate amount of 2,500,000 shares for issuance. As of March 31, 2018, 1,341,617 shares remain available for issuance under the 2017 Stock Plan.

At March 31, 2018, the Company had an estimated $49.8 million of total unrecognized compensation costs related to share-based compensation arrangements. These costs will be recognized over a weighted average period of 2.8 years.

The Company's Employee Stock Purchase Plan ("ESPP") provides for eligible employees to purchase shares on an after-tax basis in an amount between 1% and 10% of their annual pay: (i) on June 30 of each year at a 15% discount of the fair market value of the Company's common stock on January 1 or June 30, whichever is lower, and (ii) on December 31 of each year at a 15% discount of the fair market value of the Company's common stock on July 1 or December 31, whichever is lower. An employee may not purchase more than $5,000 in either of the six-month measurement periods described above or more than $10,000 annually. During the three months ended March 31, 2018, the Company issued 37,115 shares under the ESPP. As of March 31, 2018, 253,986 shares remain authorized and available for issuance under the ESPP. As of March 31, 2018, the Company held approximately $0.5 million on behalf of employees for future purchases under the ESPP, and this amount was recorded in accrued payroll and other employee benefits in the Company's unaudited condensed consolidated balance sheet.

9. Convertible Senior Notes

The Company issued $143.8 million principal amount of convertible senior notes in December 2014 (the "2019 Notes") and $106.3 million principal amount of convertible senior notes in June 2017 (the "2047 Notes" and collectively with the 2019 Notes, the "Notes"). The interest rates for the Notes are fixed at 2.0% per annum. Interest is payable semi-annually in arrears on June 1 and December 1 of each year, commencing on June 1, 2015 for the 2019 Notes, and on December 1, 2017 for the 2047 Notes. The 2019 Notes mature on December 1, 2019, unless redeemed or converted in accordance with their terms prior to such date. The 2047 Notes mature on June 1, 2047, unless repurchased, redeemed or converted in accordance with their terms prior to such date.

Each $1,000 of principal of the 2019 Notes will initially be convertible into 29.5972 shares of the Company’s common stock, which is equivalent to an initial conversion price of approximately $33.79 per share. Each $1,000 of principal amount at maturity of the 2047 Notes had an issue price of $880, and will initially be convertible into 20.5624 shares of the Company’s common stock, which is equivalent to an initial conversion price of approximately $48.63 per share. The initial conversion price for each of the Notes is subject to adjustment upon the occurrence of certain specified events. An amount equal to the difference between the issue price and the principal amount at maturity will accrete to the 2047 Notes in accordance with the schedule set forth in the 2047 Notes. The issue price plus such accreted amount of the 2047 Notes is referred to herein as the “accreted principal amount.” On June 1, 2022, the accreted principal

amount will accrete to 100% of the principal amount at maturity.

The Notes are each general unsecured obligations and rank senior in right of payment to all of the Company's indebtedness that is expressly subordinated in right of payment to the Notes, rank equally in right of payment with all of the Company's existing and future liabilities that are not so subordinated, are effectively junior to any of the Company's secured indebtedness to the extent of the value of the assets securing such indebtedness and are structurally subordinated to all indebtedness and other liabilities (including trade payables but excluding intercompany obligations owed to the Company or its subsidiaries).

From September 1, 2019 through the end of the second scheduled trading day immediately prior to maturity, holders may convert all or any portion of their 2019 Notes regardless of the contingent conversion conditions described herein. Upon conversion, the Company will pay or deliver cash, shares of its common stock or a combination of cash and shares of its common stock, at its

Table of Contents

election, as described in the indenture governing the 2019 Notes.

On or before June 1, 2021, and subject to the satisfaction of certain conditions, the Company is entitled to elect to redeem all or any portion of the 2047 Notes at a redemption price equal to 100% of the accreted principal amount of the 2047 Notes, plus accrued and unpaid interest to, but excluding, the redemption date, if the daily volume weighted average price of the Company's common stock is greater than or equal to 130% of the conversion price for at least 20 trading days during any 30 consecutive trading day period. After June 1, 2021, the Company will be entitled to elect to redeem all or any portion of the 2047 Notes (without regard to the price of the Company's common stock) at a redemption price equal to the then current accreted principal amount of the 2047 Notes, plus accrued and unpaid interest to, but excluding, the redemption date.

Holders may convert their 2019 Notes at their option at any time prior to the close of business on the business day immediately preceding September 1, 2019 only under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending on March 31, 2015, if the last reported sale price of the common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- during the five consecutive business day period immediately following any five consecutive trading day period in which the trading price per $1,000 principal amount of 2019 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such trading day; or
- upon the occurrence of specified corporate events.

Holders may convert their 2047 Notes at their option on any day prior to the close of business on the business day immediately preceding March 1, 2047 under the following circumstances:

- during any calendar quarter commencing after the calendar quarter ending September 30, 2017, if the last reported sale price of the Company's common stock for 20 or more trading days (whether or not consecutive) in a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter exceeds 130% of the applicable conversion price in effect on each such trading day;

- during the five consecutive business day period immediately following any five consecutive trading day period (the "Measurement Period") in which the trading price per 2047 Note for each day of that Measurement Period was less than 98% of the product of the last reported sale price of the Company's common stock and the conversion rate on each such day; or

- upon the occurrence of specified corporate events.

The 2047 Notes will also be convertible, regardless of the foregoing circumstances, at any time from, and including, March 1, 2047 until the close of business on the second scheduled trading day immediately preceding the applicable maturity date. Each holder of the 2047 Notes has the right to require the Company to repurchase for cash all or any portion of such holder's 2047 Notes on June 1, 2022 at a price per $1,000 principal amount of the 2047 Notes equal to the accreted principal amount at maturity plus accrued and unpaid interest to, but excluding, the repurchase date.

If a fundamental change (as defined in the relevant indenture governing the applicable series of Notes) occurs prior to the maturity date, holders of each of the 2019 Notes and 2047 Notes may require the Company to repurchase all or a portion of their notes for cash at a repurchase price equal to 100% of the principal amount at maturity of the Notes, plus any accrued and unpaid interest to, but excluding, the repurchase date. If such a fundamental change occurs prior

to June 1, 2022, holders of the 2047 Notes may also require the Company to repurchase all or a portion of their notes for cash at a repurchase price equal to the then current accreted principal amount of the Notes, plus any accrued and unpaid interest to, but excluding, the repurchase date. In addition, if specific corporate events occur prior to the applicable maturity date, the Company will be required to increase the conversion rate for holders who elect to convert their notes in certain circumstances. Holders who convert their 2047 Notes in connection with a Make-Whole Fundamental Change (as defined in the indenture governing the 2047 Notes) or in connection with a redemption of such 2047 Notes on or prior to June 1, 2021 will, under certain circumstances, be entitled to a make-whole premium in the form of an increase in the conversion rate determined by reference to a make-whole table set forth in such indenture.

Table of Contents

As of March 31, 2018, the 2019 Notes and the 2047 Notes are not yet convertible.

In accordance with accounting guidance on embedded conversion features, the Company valued and bifurcated the conversion options associated with each of the 2019 Notes and 2047 Notes from the respective host debt instrument, which is referred to as debt discount and recorded the conversion option of each of the Notes in stockholders' equity. The equity component for each Note is not remeasured as long as such Note continues to meet the conditions for equity classification.

In accounting for the transaction costs for each of the notes issuance, the Company allocated the costs incurred to the liability and equity components in proportion to the allocation of the proceeds from issuance to the liability and equity components. Issuance costs attributable to the liability component, totaling $4.3 million for the 2019 Notes and $2.7 million for the 2047 Notes, are being amortized to expense over the expected life of each notes using the effective interest method. Issuance costs attributable to the equity component related to the conversion option, totaling $1.2 million for the 2019 Notes and $0.3 million for the 2047 Notes, were netted with the equity component in stockholders' equity.

The Notes consist of the following (in thousands):

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Liability component: | | |
| Principal | $250,000 | $250,000 |
| Less: debt discount and issuance cost, net of amortization | (33,869) | (36,797) |
| Net carrying amount | $216,131 | $213,203 |
| | | |
| Equity component[1] | $37,560 | $37,560 |

(1) Recorded within additional paid-in capital in the consolidated balance sheet. As of March 31, 2018, it included $28.7 million and $8.8 million related to the 2019 Notes and the 2047 Notes, respectively, net of $1.2 million and $0.3 million issuance cost in equity, respectively.

The following table sets forth total interest expense recognized related to the Notes (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| 2.0% coupon | $1,250 | $719 |
| Amortization of debt issuance costs | 349 | 214 |
| Amortization of debt discount | 2,580 | 1,461 |
| Total | $4,179 | $2,394 |

As of March 31, 2018 and December 31, 2017, the fair value of the principal amount of the Notes was $265.4 million and $246.6 million, respectively. The estimated fair value was determined based on inputs that are observable in the market or that could be derived from, or corroborated with, observable market data, including the Company's stock price and interest rates, which represents level 2 in the fair value hierarchy.

As of March 31, 2018, the remaining life of the 2019 Notes and the 2047 Notes is approximately 20 months and 50 months, respectively.

Note Hedge and Warrant Transactions

Concurrently with the offering of the 2019 Notes, the Company entered into separate convertible note hedge (the "Note Hedge") and warrant (the "Warrant") transactions. Taken together, the purchase of the Note Hedge and the sale of the Warrant are intended to offset any actual dilution from the conversion of the 2019 Notes and to effectively increase the overall conversion price of the 2019 Notes from $33.79 to $45.48 per share. The total cost of the Note Hedge transaction was $29.4 million. The Company received $17.1 million in cash proceeds from the sale of the Warrant.

Pursuant to the Warrants, if the average market value per share of the Company's common stock for the reporting period, as measured under the Warrant, exceeds the strike price of the Warrant, the Warrant will have a dilutive effect on the Company's earnings per share. Holders of the 2019 Notes and Note Hedge will not have any rights with respect to the Warrant, as the Note Hedge is not part of the 2019 Notes or the Warrant. The Warrant is not part of the 2019 Notes or Note Hedge. Both the Note Hedge and Warrant have been accounted for as part of additional paid-in capital.

Table of Contents

10. Commitments and Contingencies

Litigation

In the ordinary course of business, the Company regularly becomes involved in contract and other negotiations and, in more limited circumstances, becomes involved in legal proceedings, claims and litigation. The outcomes of these matters are inherently unpredictable. The Company is not currently involved in any outstanding litigation that it believes, individually or in the aggregate, will have a material adverse effect on its business, financial condition, results of operations or cash flows.

Purchase commitments

In the ordinary course of business, the Company enters in various purchase commitments for goods and services.

In June 2017, the Company entered in a noncancelable agreement with a computing infrastructure vendor that expires on June 30, 2020. The purchase commitment as of March 31, 2018 was $17.8 million for the remaining period under the three-year agreement.

Lease commitments

The Company leases office space and office equipment under noncancelable operating leases that expire at various dates.

As of March 31, 2018, the future minimum lease commitments related to lease agreements were as follows:

| Year Ending December 31, | Amount |
|---|---|
| Remaining 2018 | $ 2,985 |
| 2019 | 3,352 |
| 2020 | 1,725 |
| 2021 | 1,005 |
| 2022 | 707 |
| 2023 and thereafter | 46 |
| Total minimum lease payments | $ 9,820 |

Table of Contents

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

The terms “we,” “us,” “PROS“ and “our” refer to PROS Holdings, Inc. and all of its subsidiaries that are consolidated in conformity with generally accepted accounting principles in the United States.

This management's discussion and analysis of financial condition and results of operations should be read along with the unaudited condensed consolidated financial statements and unaudited notes to condensed consolidated financial statements included in Part I, Item 1 ("Interim Condensed Consolidated Financial Statements (Unaudited)"), as well as the audited consolidated financial statements and notes to consolidated financial statements and management's discussion and analysis of financial condition and results of operations set forth in our Annual Report.

Overview

PROS is a cloud software company powering the shift to modern commerce by helping companies create personalized and frictionless buying experiences for their customers. Fueled by artificial intelligence, machine learning and proven science, our solutions make it possible for companies to price, configure and sell their products and services in an omnichannel environment with speed, precision and consistency. Our customers benefit from decades of data science expertise infused into our industry solutions. We also provide professional services to implement our software solutions.

Q1 2018 Financial Overview

In the first quarter of 2018, we continued to make substantial progress in the execution of our cloud-first strategy, leading to an increase in our subscription revenue of 72% for the three months ended March 31, 2018 as compared to the same period in 2017. That ongoing shift to a subscription-based revenue model also led to a growth of recurring revenue (which consists of subscription revenue and maintenance and support revenue) by 24% as compared to the first quarter of 2017, and accounted for 78% of total revenue for the three months ended March 31, 2018.

Cash used in operating activities was $4.7 million for the three months ended March 31, 2018, as compared to $12.2 million for the three months ended March 31, 2017. The improvement in net cash used in operating activities was primarily due to the net impact of working capital changes and a slight improvement in our operating results. The change in the working capital was mainly attributable to higher recurring deferred revenue driven by our subscription-based sales and an increase in operating cash provided by accounts receivable due to strong collections in the period.

Free cash flow is a key metric to assess the strength of our business. Free cash flow is a non-GAAP financial measure defined as net cash provided or used by operating activities, less additions to property, plant and equipment, purchases of other (non-acquisition-related) intangible assets and capitalized internal-use software development costs. We believe free cash flow may be useful to investors and others in evaluating the amount of cash generated by our business operations. Free cash flow used during the three months ended March 31, 2018 improved to $6.8 million, compared to $13.2 million for the three months ended March 31, 2017. The improvement was primarily attributable to a $7.5 million decrease in operating cash outflow due to our business performance following our shift to a subscription-based revenue model and strong collections in the period. The following is a reconciliation of free cash flow to the most comparable GAAP measure, net cash used in operating activities:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Net cash used in operating activities | $(4,732) | $(12,193) |

| | | |
|---|---|---|
| Purchase of property and equipment | (778 ) | (484 ) |
| Capitalized internal-use software development costs | (1,316 ) | (572 ) |
| Free Cash Flow | $(6,826) | $(13,249) |

Total deferred revenue was $101.2 million as of March 31, 2018, as compared to $95.2 million as of December 31, 2017, an increase of $6.0 million, or 6%, primarily due to an increase in subscription deferred revenue.

Factors Affecting Our Performance

Key factors and trends that have affected and we believe will continue to affect our operating results include:

Table of Contents

- Cloud Transition. In 2015, we began our transition to a cloud business to help accelerate adoption of our solutions and drive recurring revenue. The implementation of this cloud strategy has resulted in more sales of subscription-based solutions and very few on-premise licenses since that time, and we expect this trend to continue. This increase in the sales of subscription-based solutions has resulted in an increase in our subscription revenue, and deferred more of our revenue recognition to later periods than we experienced prior to 2015. We also expect that over time, additional sales of our cloud-based solutions will result in a decrease in our maintenance and support revenue, particularly as existing customers migrate from our licensed solutions to our cloud solutions.

- B2B Buying Preferences Driving Technology Adoption. B2B buyers are increasingly demanding the same type of buying experience that they enjoy as consumers. For example, buyers increasingly prefer to buy online when they have already decided what to buy, and often prefer not to interact with a sales representative as their primary source of research. In response, we believe that businesses are increasingly looking to modernize their sales process by adopting technologies which provide frictionless, real-time, and personalized experiences across sales channels. We believe we are uniquely positioned to help power these B2B experiences with our machine learning and data science solutions that help provide dynamic, personalized offers and pricing with consistency across sales channels.

- Continued Investments. We are focused on creating awareness for our solutions, expanding our customer base and growing our recurring revenues. While we incurred losses in the first quarter of 2018, we believe our market is large and underpenetrated and therefore we intend to continue investing to grow our recurring revenue and support our long-term initiatives. We plan to continue to invest in product development to enhance our existing technologies and develop new applications and technologies. In addition, we plan to continue to expand our ability to sell our subscription offerings globally through investments in sales, marketing, cloud support, security and infrastructure.

- Sales Mix Impacts Revenue Recognition Timing. The mix of subscription services and professional services can create revenue variability in given periods based on the nature and scope of services sold together. Professional services that are deemed to be distinct from the subscription services are accounted for as a separate performance obligation and revenue is recognized as the services are performed. If determined that the professional services are not considered distinct, the professional services and the subscription services are determined to be a single performance obligation and all revenue is recognized over the contractual term of the subscription beginning on the date that subscription services are made available to the customer, resulting in a deferral of revenue and revenue recognized over a longer period of time, which would have a negative near-term financial impact.

Table of Contents

Results of Operations

The following table sets forth certain items in our Condensed Consolidated Statements of Comprehensive Income (Loss) as a percentage of total revenues for the three months ended March 31, 2018 and 2017:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Revenue: | | |
| Subscription | 44 % | 30 % |
| Maintenance and support | 35 | 45 |
| Total subscription, maintenance and support | 78 | 75 |
| License | 2 | 5 |
| Services | 19 | 19 |
| Total revenue | 100 | 100 |
| Cost of revenue: | | |
| Subscription | 18 | 15 |
| Maintenance and support | 6 | 8 |
| Total cost of subscription, maintenance and support | 24 | 23 |
| License | — | — |
| Services | 16 | 19 |
| Total cost of revenue | 41 | 41 |
| Gross profit | 59 | 59 |
| Operating Expenses: | | |
| Selling and marketing | 37 | 41 |
| General and administrative | 22 | 26 |
| Research and development | 31 | 36 |
| Acquisition-related | — | — |
| Total operating expenses | 90 | 103 |
| Convertible debt interest and amortization | (9 ) | (6 ) |
| Other income (expense), net | — | — |
| Loss before income tax provision | (39 ) | (50 ) |
| Income tax provision | — | — |
| Net loss | (39 )% | (50 )% |

Revenue:

| | Three Months Ended March 31, | | Variance | |
|---|---|---|---|---|
| (Dollars in thousands) | 2018 | 2017 | $ | % |
| Subscription | $20,950 | $12,214 | $8,736 | 72 % |
| Maintenance and support | 16,574 | 18,076 | (1,502 ) | (8 )% |
| Total subscription, maintenance and support | 37,524 | 30,290 | 7,234 | 24 % |
| License | 1,066 | 2,190 | (1,124 ) | (51)% |
| Services | 9,320 | 7,649 | 1,671 | 22 % |
| Total revenue | $47,910 | $40,129 | $7,781 | 19 % |

Subscription revenue. Subscription revenue increased primarily due to an increase in the number of subscriptions purchased by new and existing customers, with the total number of customers generating subscription revenue increasing by 32% for the three months ended March 31, 2018. The increase in subscription revenue also included

$2.2 million from our acquisition of Vayant. We expect our subscription revenue will continue to increase as we focus on subscription-based sales. We continued to invest in customer programs and initiatives which helped keep our attrition rate fairly consistent as compared to the prior year.

Table of Contents

Our ability to maintain consistent customer subscription renewal rates will play a role in our ability to continue to grow our subscription revenue.

Maintenance and support revenue. The decrease in maintenance and support revenue was principally a result of the timing
of certain cash collections during the three months ended March 31, 2017. These cash collections related to maintenance contracts recognized on a cash basis which creates some variability from quarter to quarter when such collections occur. As a result of our cloud strategy, we expect maintenance revenue to decline over time as we sell fewer licenses, sell more subscription services, and convert existing maintenance contracts to the cloud.

License revenue. License revenue decreased primarily due to the completion of several large perpetual license projects where license revenue was recognized on a percentage of completion method, and our strategy to sell fewer licenses and more subscription services, resulting in lower future license revenue and higher subscription services revenue.

Services revenue. Services revenue increased primarily as a result of our increased sales of subscription services to both new and existing customers. The increase was also attributable to higher additional professional services revenue from existing customers in the three months ended March 31, 2018 as compared to the same period in prior year. Services revenue varies from period to period depending on different factors, including the level of professional services required to implement our solutions, the timing of services revenue recognition on certain subscription contracts and any additional professional services requested by our customers during a particular period.

Cost of revenue and gross profit:

| | Three Months Ended March 31, | | Variance | |
|---|---|---|---|---|
| (Dollars in thousands) | 2018 | 2017 | $ | % |
| Cost of subscription | $8,764 | $5,937 | $2,827 | 48 % |
| Cost of maintenance and support | 2,957 | 3,146 | (189) | (6)% |
| Total cost of subscription, maintenance and support | 11,721 | 9,083 | 2,638 | 29 % |
| Cost of license | 73 | 65 | 8 | 12 % |
| Cost of services | 7,727 | 7,461 | 266 | 4 % |
| Total cost of revenue | 19,521 | 16,609 | 2,912 | 18 % |
| Gross profit | $28,389 | $23,520 | $4,869 | 21 % |

Cost of subscription. The increase in cost of subscription was primarily attributable to an increase in infrastructure cost of $1.1 million to support our current and anticipated subscription customer base and $1.6 million associated with the acquisition of Vayant. The remaining $0.1 million increase was related to personnel cost associated with the acquisition of Vayant. The subscription gross profit percentage for the three months ended March 31, 2018 and 2017, was 58% and 51%, respectively. The increase in gross profit percentage was primarily attributable to a 72% increase in subscription revenue combined with a smaller increase in cost of subscription as we achieve efficiencies in our cloud infrastructure.

Cost of maintenance and support. The decrease in cost of maintenance and support was primarily attributable to a decrease in personnel costs as maintenance and support revenue decreased during the period. The maintenance and support gross profit percentage was 82% and 83% for the three months ended March 31, 2018 and 2017, respectively, due to the decline in maintenance revenue.

Cost of license. Cost of license consists of third-party fees for licensed software and remained consistent for the three months ended March 31, 2018 and 2017. License gross profit percentages for the three months ended March 31, 2018 and 2017, were 93% and 97%, respectively.

Cost of services. The increase in cost of services was primarily attributable to an increase in personnel cost for our customer implementations. Services gross profit percentages for the three months ended March 31, 2018 and 2017, were 17% and 2%, respectively. Services gross profit percentages vary from period to period depending on different factors, including the level of professional services required to implement our solutions, our effective man-day rates and the utilization of our professional services personnel.

Gross profit. The increase in overall gross profit for the three months ended March 31, 2018 was primarily attributable to an increase in total revenue of 19% as compared to the same period in 2017.

Table of Contents

Operating expenses:

| | Three Months Ended March 31, | | Variance | |
|---|---|---|---|---|
| (Dollars in thousands) | 2018 | 2017 | $ | % |
| Selling and marketing | $17,568 | $16,473 | $1,095 | 7 % |
| General and administrative | 10,689 | 10,408 | 281 | 3 % |
| Research and development | 14,784 | 14,307 | 477 | 3 % |
| Acquisition-related | 95 | — | 95 | nm |
| Total operating expenses | $43,136 | $41,188 | $1,948 | 5 % |

Selling and marketing expenses. Selling and marketing expenses increased primarily as a result of a $0.6 million increase in personnel cost as we continue our focus on adding new customers and increasing penetration within our existing customer base. In addition, there was an increase of $0.5 million in non-personnel cost, which was driven by the intangible amortization related to our acquisition of Vayant.

General and administrative expenses. General and administrative expenses increased $0.3 million for the three months ended March 31, 2018, as compared to the same period in 2017 as we added personnel to support our growth.

Research and development expenses. Research and development expense increased primarily as a result of an increase in personnel cost due to higher headcount associated with the Vayant acquisition.

Acquisition-related expenses. Acquisition-related expenses were $0.1 million for the three months ended March 31, 2018, consisting primarily of integration costs and retention bonuses related to our acquisition of Vayant.

Other income (expense), net:

| | Three Months Ended March 31, | | Variance | |
|---|---|---|---|---|
| (Dollars in thousands) | 2018 | 2017 | $ | % |
| Convertible debt interest and amortization | $(4,179) | $(2,394) | $(1,785) | 75 % |
| Other income (expense), net | $202 | $32 | $170 | 531% |

Convertible debt interest and amortization. The convertible debt expense for the three months ended March 31, 2018 and 2017 related to coupon interest and amortization of debt discount and issuance costs attributable to our 2019 Notes and 2047 Notes.

Other income (expense) net. Other income (expense), net change by $0.2 million for the three months ended March 31, 2018, primarily due to foreign currency exchange rate fluctuations during the period.

Income tax provision:

| | Three Months Ended March 31, | | Variance | |
|---|---|---|---|---|
| (Dollars in thousands) | 2018 | 2017 | $ | % |
| Effective tax rate | (1 )% | (1 )% | n/a | n/a |
| Income tax provision | $132 | $177 | $(45) | (25)% |

Income tax provision. The tax provision of $0.1 million for the three months ended March 31, 2018 included foreign taxes and state taxes not based on pre-tax income. No tax benefit was recognized on jurisdictions with a projected loss for the year due to the valuation allowances on our deferred tax assets.

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the "TCJA"). The TCJA significantly changes U.S. corporate income tax laws by, among other things, reducing the U.S. corporate income tax rate to 21% effective January 1, 2018. We continue to monitor tax reform and have reflected the impact of tax reform in our results for the three months ended March 31, 2018.

Our effective tax rate was (1)% for the three months ended March 31, 2018 and 2017. The income tax rate varies from the 21% federal statutory rate primarily due to the valuation allowances on our deferred tax assets and the limitation on deductibility

Table of Contents

of certain officers' compensation. While our expected tax rate would be 0% due to the full valuation on the deferred tax assets, the (1)% tax rate for the three months ended March 31, 2018 and 2017 is due to foreign and state taxes not based on pre-tax income.

Jurisdictions with a projected loss for the year where no tax benefit can be recognized due to the valuation allowances on our deferred tax assets are excluded from the estimated annual federal effective tax rate. The impact of such an exclusion could result in a higher or lower effective tax rate during a particular quarter depending on the mix and timing of actual earnings versus annual projections.

Liquidity and Capital Resources

At March 31, 2018, we had $148.1 million of cash and cash equivalents and $86.0 million of working capital as compared to $160.5 million of cash and cash equivalents and $100.0 million of working capital at December 31, 2017.

Our principal sources of liquidity are our cash and cash equivalents, cash flows generated from operations and potential borrowings under our Revolver. We issued the 2019 Notes in December 2014 and the 2047 Notes in June 2017 to supplement our overall liquidity position. Our material drivers or variants of operating cash flow are net income (loss), noncash expenses (principally share-based compensation, intangible amortization and amortization of debt discount and issuance costs) and the timing of periodic invoicing and cash collections related to licenses, subscriptions and support for our software and related services. Our operating cash flows are also impacted by the timing of payments to our vendors and the payments of our other liabilities. We generally pay our vendors in accordance with the invoice terms and conditions.

We believe our existing cash, cash equivalents, including funds provided by the issuance of our Notes, funds available under our Revolver and our current estimates of future operating cash flows, will provide adequate liquidity and capital resources to meet our operational requirements, anticipated capital expenditures and coupon payments for our Notes for the next twelve months. Our future working capital requirements will depend on many factors, including the operations of our existing business, potential growth of our subscription services, future acquisitions we might undertake, and expansion into complementary businesses. If such need arises, we may raise additional funds through equity or debt financings.

The following table presents key components of our unaudited condensed consolidated statements of cash flows for the three months ended March 31, 2018 and 2017:

| | Three Months Ended March 31, | |
|---|---|---|
| (Dollars in thousands) | 2018 | 2017 |
| Net cash used in operating activities | $(4,732) | $(12,193) |
| Net cash (used in) provided by investing activities | (2,094) | 8,927 |
| Net cash used in financing activities | (5,604) | (2,866) |
| Cash and cash equivalents (beginning of period) | 160,505 | 118,039 |
| Cash and cash equivalents (end of period) | $148,146 | $111,868 |

Net cash used in operating activities. The $7.5 million decrease in net cash used in operating activities was primarily due to to the net impact of working capital changes and a slight improvement in our operating results. The change in the working capital was mainly attributable to higher recurring deferred revenue driven by our subscription-based sales and an increase in operating cash provided by accounts receivable due to strong collections in the period.

Net cash (used in) provided by investing activities. The $11.0 million increase in net cash used in investing activities was primarily due to $10.0 million related to the timing of maturities of short-term investments. In addition, capitalized internal-use software and capital expenditures increased by $0.7 million and $0.3 million, respectively, in the three months ended March 31, 2018 as compared to the same period in 2017 as we continue to invest in our solutions to grow our recurring revenue.

Net cash used in financing activities. The increase of $2.7 million in net cash used in financing activities primarily consisted of an increase of $1.6 million in tax withholdings on vesting of employee share-based awards and lower proceeds from the exercise of stock options of $1.3 million. The increase was partially offset by lower proceeds from employee stock plans of $0.1 million and a payment of $0.1 million in debt issuance costs on the Revolver renewal in 2017.

Table of Contents

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material. We do not have any relationships with unconsolidated entities or financial partnerships, such as variable interest entities, that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Contractual Obligations and Commitments

Other than changes described in Note 10 above, there have been no material changes to our contractual obligations and commitments disclosed in our Annual Report.

Credit facility

In July 2012, we entered into the Revolver. In January 2017, we extended the maturity date of the Revolver through July 2022. There were no outstanding borrowings under the Revolver as of March 31, 2018. As of March 31, 2018, we had $0.2 million of unamortized debt issuance costs related to the Revolver included in prepaids and other current assets and other long-term assets in the unaudited condensed consolidated balance sheets. For the three months ended March 31, 2018 and 2017, we recorded an immaterial amount of amortization of debt issuance cost which is included in other expense, net in the unaudited condensed consolidated statements of comprehensive income (loss).

Recent Accounting Pronouncements

See "Recently adopted accounting pronouncements" in Note 2 above for discussion of recent accounting pronouncements including the respective expected dates of adoption.

Critical accounting policies and estimates

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, costs and expenses, and related disclosures. Actual results could differ from those estimates. The complexity and judgment of our estimation process and issues related to the assumptions, risks and uncertainties inherent in the application of the percentage-of-completion method of accounting could affect the amounts of revenue, expenses, unbilled receivables and deferred revenue. Estimates are also used for, but not limited to, receivables, allowance for doubtful accounts, useful lives of assets, depreciation, income taxes and deferred tax asset valuation, valuation of stock options, other current liabilities and accrued liabilities. Numerous internal and external factors can affect estimates. Our critical accounting policies related to the estimates and judgments are discussed in our Annual Report under management's discussion and analysis of financial condition and results of operations, except for the revenue recognition policy which has been updated in result of the adoption of the new revenue standard under Topic 606 and is included herein.

We believe the critical accounting policy listed below affects significant judgment and estimates used in the preparation of our accompanying interim unaudited condensed consolidated financial statements.

Revenue recognition

We derive our revenues primarily from subscription services, professional services, the perpetual licensing of our software products and associated software maintenance and support services.

We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer
- Identification of the performance obligations in the customer contract(s)
- Determination of the transaction price
- Allocation of the transaction price to each performance obligation in the customer contract(s)
- Recognition of revenue when, or as, we satisfy a performance obligation

Table of Contents

Subscription services revenue

Subscription services revenue primarily consists of fees that give customers access to one or more of our cloud applications with routine customer support. Subscription services revenue is generally recognized ratably over the contractual term of the arrangement beginning on the date that our service is made available to the customer. Our subscription contracts do not provide customers with the right to take possession of the software supporting the applications and, as a result, are accounted for as service contracts. Our subscription contracts are generally two to five years in length, billed annually in advance, and are non-cancelable.

Maintenance and support revenue

Maintenance and support revenue includes post-implementation customer support and the right to unspecified software updates and enhancements. We recognize revenue from maintenance arrangements ratably over the period in which the services are provided. Our maintenance and support contracts are generally one to three years in length, billed annually in advance, and non-cancelable.

License revenue

Licenses for on-premise software provide the customer with a right to use the software as it exists when made available to the customer. License revenue from distinct on-premises licenses is recognized at the point in time when the software is made available to the customer. For customer contracts that contain license and professional services that are not considered distinct, the license and professional services are determined to be a single performance obligation and recognized over time based upon our efforts to satisfy the performance obligation.

Professional services revenue

Professional services revenue primarily consists of fees for deployment and configuration services, as well as training. Professional services revenues are generally recognized as the services are rendered for time and material contracts, or on a proportional performance basis for fixed price contracts. The majority of our professional services contracts are on a time and materials basis. Training revenues are recognized as the services are rendered.

Significant judgments are required in determining whether professional services that are contained in customer subscription services contracts are considered distinct, including whether the professional services are capable of being distinct and whether they are separately identifiable in the customer contract. Professional services that are deemed to be distinct are accounted for as a separate performance obligation and revenue recognized as the services are performed. If determined that the professional services are not considered distinct, the professional services and the subscription services are determined to be a single performance obligation and revenue is recognized over the contractual term of the subscription beginning on the date that subscription services are made available to the customer.

Customer Contracts with Multiple Performance Obligations

A portion of our customer contracts contain multiple performance obligations. Significant judgment is required in determining whether multiple performance obligations contained in customer contracts are capable of being distinct and whether they are separately identifiable in the customer contract. If the obligations are determined to be distinct, each separate performance obligation is recognized when, or as, we satisfy the performance obligation. If the obligations are not determined to be distinct, they are recognized as a single combined performance obligation. The transaction price is allocated to each performance obligation on a relative standalone selling price basis.

28

Table of Contents

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

### Foreign Currency Exchange Risk

Although our contracts are predominately denominated in U.S. dollars, we are exposed to foreign currency exchange risk because we also have some contracts denominated in foreign currencies. The effect of a hypothetical 10% adverse change in exchange rates on our foreign denominated receivables as of March 31, 2018 would result in a loss of approximately $0.1 million. We are also exposed to foreign currency risk due to our operating subsidiaries in France, United Kingdom, Canada, Germany, Ireland, Australia, Bulgaria and United Arab Emirates. A hypothetical 10% adverse change in the value of the U.S. dollar in relation to the euro, which is our single most significant foreign currency exposure, would have decreased revenue for the three months ended March 31, 2018 by approximately $0.3 million. However, due to the relatively low volume of payments made and received by PROS through our foreign subsidiaries, we do not believe that we have significant exposure to foreign currency exchange risks. Fluctuations in foreign currency exchange rates could harm our financial results in the future.

We currently do not use derivative financial instruments to mitigate foreign currency exchange risks. We continue to review this matter and may consider hedging certain foreign exchange risks through the use of currency futures or options in future years.

### Interest Rate Risk

PROS is exposed to market risk for changes in interest rates related to the variable interest rate on borrowings under the Revolver. As of March 31, 2018, PROS had no borrowings under the Revolver.

As of March 31, 2018, we had outstanding principal amounts of $143.8 million and $106.3 million, respectively, of 2019 Notes and 2047 Notes, which are fixed rate instruments. Therefore, our results of operations are not subject to fluctuations in interest rates. The fair value of the Notes may change when the market price of our stock fluctuates.

We believe that we do not have any material exposure to changes in the fair value as a result of changes in interest rates due to the short term nature of our cash equivalents.

## ITEM 4. CONTROLS AND PROCEDURES

### Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Exchange Act) as of March 31, 2018. Based on our evaluation of our disclosure controls and procedures as of March 31, 2018, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures were effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

### Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the three months ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. We implemented internal controls to ensure we adequately evaluated our revenue contracts and properly

assessed the impact of our adoption of Topic 606 on January 1, 2018. There were no significant changes to our internal control over financial reporting due to the adoption of Topic 606.

Table of Contents

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we are a party to legal proceedings and claims arising in the ordinary course of business. We are not currently aware of any such proceedings or claims that we believe will have, individually or in the aggregate, a material adverse effect on our business, financial condition, results of operations or cash flows.

ITEM 1A. RISK FACTORS

There have been no material changes to the risk factors as presented in our Annual Report.

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

We have an ongoing authorization from our board of directors to repurchase up to $15.0 million in shares of our common stock in the open market or through privately negotiated transactions. As of March 31, 2018, $10.0 million remained available for repurchase under the existing repurchase authorization. We did not make any purchases of our common stock under this program for the three months ended March 31, 2018.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURE

None.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Index to Exhibits

| Exhibit No. | Description | Provided Herewith | Incorporated by Reference | | |
|---|---|---|---|---|---|
| | | | Form | SEC File No. | Filing Date |
| 31.1 | Certification of Chief Executive Officer Pursuant to Exchange Act Rule 13a-14(a)/15d-14(a). | X | | | |
| 31.2 | Certification of Chief Financial Officer Pursuant to Exchange Act Rule 13a-14(a)/ 15d-14(a). | X | | | |
| 32.1* | Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350. | X | | | |

| Exhibit No. | Description |
|---|---|
| 101.INS | XBRL Instance Document. |

101.SCH XBRL Taxonomy Extension Schema Document.

101.CAL XBRL Taxonomy Extension Calculation Linkbase Document.

101.DEF XBRL Taxonomy Extension Definition Linkbase Document.

101.LAB XBRL Taxonomy Extension Label Linkbase Document.

101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.

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

Table of Contents

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.

PROS HOLDINGS, INC.

May 1, 2018 By: /s/ Andres Reiner
Andres Reiner
President and Chief Executive Officer
(Principal Executive Officer)

May 1, 2018 By: /s/ Stefan Schulz
Stefan Schulz
Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)