PRA Health Sciences, Inc.
Form 10-Q
April 26, 2018
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)
T 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: 001-36732

PRA Health Sciences, Inc.
(Exact name of registrant as specified in its charter)

Delaware	46-3640387
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

4130 ParkLake Avenue, Suite 400, Raleigh, NC 27612
(Address of principal executive offices) (Zip Code)

(919) 786-8200
(Registrant's telephone number, including area code)

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

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

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

Large accelerated filer x Accelerated filer

Non-accelerated filer Smaller reporting company

(Do not check if a smaller reporting company) Emerging growth company

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Number of Shares Outstanding
Common Stock $0.01 par value	64,076,221 shares outstanding as of April 23, 2018

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PART I - FINANCIAL INFORMATION

Item 1. Financial Statements
PRA HEALTH SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED CONDENSED BALANCE SHEETS
(UNAUDITED)
(in thousands, except share amounts)

	March 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$129,901	$192,229
Restricted cash	717	661
Accounts receivable and unbilled services, net	593,618	627,003
Other current assets	70,639	57,131
Total current assets	794,875	877,024
Fixed assets, net	147,431	143,070
Goodwill	1,524,421	1,512,424
Intangible assets, net	770,584	783,836
Other assets	47,131	41,692
Total assets	$3,284,442	$3,358,046
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of borrowings under credit facilities	$91,500	$91,500
Current portion of long-term debt	28,789	28,789
Accounts payable	90,483	64,635
Accrued expenses and other current liabilities	304,859	317,481
Advanced billings	437,832	469,211
Total current liabilities	953,463	971,616
Long-term debt, net	1,218,616	1,225,397
Deferred tax liabilities	107,033	112,181
Other long-term liabilities	60,454	112,371
Total liabilities	2,339,566	2,421,565
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Preferred stock (100,000,000 authorized shares; $0.01 par value)		
Issued and outstanding -- none	—	—
Common stock (1,000,000,000 authorized shares; $0.01 par value)		
Issued and outstanding -- 64,059,766 and 63,623,950 at March 31, 2018 and December 31, 2017, respectively	641	636
Additional paid-in capital	913,106	905,423
Accumulated other comprehensive loss	(114,739)	(136,470)
Retained earnings	139,576	161,182
Equity attributable to PRA Health Sciences, Inc. stockholders	938,584	930,771
Noncontrolling interest	6,292	5,710
Total stockholders' equity	944,876	936,481
Total liabilities and stockholders' equity	$3,284,442	$3,358,046

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

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PRA HEALTH SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS
(UNAUDITED)
(in thousands, except per share amounts)

	Three Months Ended March 31,	
	2018	2017
Revenue	$701,837	$487,760
Operating expenses:		
Direct costs	381,432	287,512
Reimbursable out-of-pocket costs	76,441	60,680
Reimbursable investigator fees	64,567	—
Selling, general and administrative expenses	91,702	74,268
Transaction-related costs	(11,578)	40
Depreciation and amortization	27,339	15,192
(Gain) loss on disposal of fixed assets, net	(14)	82
Income from operations	71,948	49,986
Interest expense, net	(14,825)	(9,527)
Foreign currency losses, net	(83)	(7,254)
Other expense, net	(199)	(140)
Income before income taxes and equity in income of unconsolidated joint ventures	56,841	33,065
Provision for income taxes	17,654	7,883
Income before equity in income of unconsolidated joint ventures	39,187	25,182
Equity in income of unconsolidated joint ventures, net of tax	28	42
Net income	39,215	25,224
Net income attributable to noncontrolling interest	(234)	—
Net income attributable to PRA Health Sciences, Inc.	$38,981	$25,224
Net income per share attributable to common stockholders:		
Basic	$0.61	$0.41
Diluted	$0.59	$0.39
Weighted average common shares outstanding:		
Basic	63,530	61,578
Diluted	66,161	65,439

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

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PRA HEALTH SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED CONDENSED STATEMENTS OF COMPREHENSIVE INCOME
(UNAUDITED)
(in thousands)

	Three Months Ended March 31,	
	2018	2017
Net income	$ 39,215	$ 25,224
Other comprehensive income:		
Foreign currency translation adjustments	17,883	15,459
Unrealized gains on derivative instruments, net of income tax of $970 and $0	2,723	178
Reclassification adjustments:		
Losses on derivatives included in net income, net of income taxes of $525 and $0	1,473	1,691
Comprehensive income	61,294	42,552
Comprehensive income attributable to noncontrolling interest	(582)	—
Comprehensive income attributable to PRA Health Sciences, Inc.	$ 60,712	$ 42,552

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

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PRA HEALTH SCIENCES, INC. AND SUBSIDIARIES
CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(in thousands)

	Three Months Ended March 31,	
	2018	2017
Cash flows from operating activities:		
Net income	$39,215	$25,224
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation and amortization	27,339	15,192
Amortization of debt issuance costs and discount	534	482
Amortization of terminated interest rate swaps	1,774	1,528
Stock-based compensation expense	6,299	1,930
Change in acquisition-related contingent consideration	(11,578)	40
Unrealized foreign currency (gains) losses	(1,068)	6,067
Deferred income taxes	15,821	(3,614)
Other reconciling items	336	562
Changes in operating assets and liabilities:		
Accounts receivable, unbilled services and advanced billings	(24,520)	(63,659)
Other operating assets and liabilities	15,495	5,452
Payment of acquisition-related contingent consideration	(35,029)	—
Net cash provided by (used in) operating activities	34,618	(10,796)
Cash flows from investing activities:		
Purchase of fixed assets	(13,812)	(7,972)
Cash paid for interest on interest rate swap	(339)	(341)
Proceeds from the sale of fixed assets	—	24
Net cash used in investing activities	(14,151)	(8,289)
Cash flows from financing activities:		
Payment of acquisition-related contingent consideration	(79,663)	—
Repayments of long-term debt	(7,197)	(7,813)
Proceeds from stock option exercises	2,243	1,049
Net cash used in financing activities	(84,617)	(6,764)
Effects of foreign exchange changes on cash, cash equivalents, and restricted cash	1,878	1,584
Change in cash, cash equivalents, and restricted cash	(62,272)	(24,265)
Cash, cash equivalents, and restricted cash, beginning of period	192,890	149,338
Cash, cash equivalents, and restricted cash, end of period	$130,618	$125,073

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

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PRA HEALTH SCIENCES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS
(UNAUDITED)

(1) Basis of Presentation

The Company

PRA Health Sciences, Inc. and its subsidiaries, or the Company, is a full-service global contract research organization providing a broad range of product development and data solution services to pharmaceutical and biotechnology companies around the world. The Company's integrated services include data management, statistical analysis, clinical trial management, and regulatory and drug development consulting.

Unaudited Interim Financial Information

The interim consolidated condensed financial statements include the accounts of the Company and variable interest entities where the Company is the primary beneficiary. These financial statements are prepared in conformity with U.S. generally accepted accounting principles, or GAAP, and are unaudited. In the opinion of the Company's management, all adjustments of a normal recurring nature necessary for a fair presentation have been reflected. Certain financial information that is normally included in annual financial statements prepared in accordance with GAAP, but that is not required for interim reporting purposes, has been omitted. The accompanying interim consolidated condensed financial statements and related notes should be read in conjunction with the Company's consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

The preparation of the interim consolidated condensed financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the interim consolidated condensed financial statements and the reported amounts of revenues and claims and expenses during the reporting period. Actual results could differ from those estimates.

Reclassification

During the fourth quarter of 2017, the Company made an accounting policy election to present changes in the fair value of contingent consideration as part of income from operations within transaction-related costs on the consolidated condensed statements of operations. The Company recasted the change in fair value of contingent consideration for the three months ended March 31, 2017, totaling $0.1 million that was previously included in other expense, net on the consolidated condensed statements of operations.

Recently Implemented Accounting Pronouncements

On January 1, 2018, the Company adopted Accounting Standards Codification, or ASC, Topic 606, "Revenue from Contracts with Customers," or ASC 606 or the new revenue guidance, using the modified retrospective method for all contracts that were not completed as of January 1, 2018. Comparative prior period information continues to be reported under the accounting standards in effect for the period presented. The Company recorded a net decrease in opening retained earnings of $60.6 million as of January 1, 2018 due to the cumulative impact of adopting ASC 606. The Company decreased unbilled services by $67.4 million, increased deferred tax assets by $18.3 million, increased accrued expenses by $50.8 million, and decreased advanced billings by $39.3 million as of January 1, 2018. The adoption of ASC 606 had no net impact on the Company's consolidated condensed statement of cash flows.

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The impact of adoption to the Company's consolidated condensed statements of operations for the three months ended March 31, 2018 is as follows (in thousands):

	As Reported	Reclassification from adoption of ASC 606	Impact from adoption of ASC 606	Balances without adoption of ASC 606
Revenue:				
Revenue	$701,837	$ (636,362)	$(65,475)	$—
Service revenue	—	559,921	—	559,921
Reimbursement revenue	—	76,441	—	76,441
Total revenue	701,837	—	(65,475)	636,362
Operating expenses:				
Direct costs	381,432	—	—	381,432
Reimbursable out-of-pocket costs	76,441	—	—	76,441
Reimbursable investigator fees	64,567	—	(64,567)	—
Selling, general and administrative expenses	91,702	—	—	91,702
Transaction-related costs	(11,578)	—	—	(11,578)
Depreciation and amortization	27,339	—	—	27,339
Gain on disposal of fixed assets, net	(14)	—	—	(14)
Income from operations	$71,948	$ —	$(908)	$71,040

Periods presented prior to adoption have been recast to conform with the presentation of a single revenue total in the consolidated condensed statement of operations. Previously, the period ended March 31, 2017 included service revenue of $427.1 million, reimbursement revenue of $60.7 million, and excluded $55.5 million in investigator fees which were reported net of costs incurred.

In May 2017, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2017-09, “Compensation-Stock Compensation: Scope of Modification Accounting,” which provides guidance about what changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in accordance with ASC Topic 718, “Stock Compensation.” The amendments to ASU No. 2017-09 went into effect for reporting periods beginning after December 15, 2017. The adoption of ASU No. 2017-09 did not have a material impact on the Company's consolidated condensed financial statements.

In January 2017, the FASB issued ASU No. 2017-01, “Business Combinations: Clarifying the Definition of a Business,” which clarifies that when substantially all of the fair value of the gross assets acquired (or disposed of) is concentrated in a single identifiable asset or group of similar identifiable assets, it should be treated as an acquisition or disposal of an asset. The amendments to ASU No. 2017-01 went into effect for fiscal years beginning after December 15, 2017. The adoption of ASU No. 2017-01 did not have a material impact on the Company's consolidated condensed financial statements.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, “Leases,” which revises the accounting related to lessee accounting. Under the new guidance, lessees will be required to recognize a lease liability and a right-of-use asset for all leases with terms greater than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the statement of operations. The provisions of ASU No. 2016-02 are effective for fiscal years beginning after December 15, 2018 and should be applied through a modified

retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. Early adoption is permitted. The Company has established an implementation team to assist with the adoption of the new standard. The evaluation and implementation process is ongoing and is expected to continue through 2018 as the Company performs an analysis of its lease portfolio to identify potential differences from its current accounting policies, and as it reviews the business processes, systems and controls required to support recognition and disclosure under the new standard. The Company expects to recognize substantially all of its leases on the balance sheet by recording a right-to-use asset and a corresponding lease liability.

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In January 2017, the FASB issued ASU No. 2017-04, “ Intangibles-Goodwill and Other: Simplifying the Test for Goodwill Impairment,” in order to simplify the subsequent measurement of goodwill by eliminating the Step 2 goodwill impairment test. Under the amendments in this ASU, an entity should perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity will then recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value; however the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The amendments to ASU No. 2017-04 are effective for fiscal years beginning after December 15, 2019, with early adoption permitted. The adoption of ASU No. 2017-04 is not expected to have a material impact on the Company's consolidated financial statements.

In August 2017, the FASB issued ASU No. 2017-12, "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities," in order to simplify certain aspects of hedge accounting and improve disclosures of hedging arrangements. ASU No. 2017-12 eliminates the need to separately measure and report hedge ineffectiveness and generally requires the entire change in fair value of a hedging instrument to be presented in the same income statement line as the hedged item. Entities must apply the amendments to cash flow and net investment hedge relationships that exist on the date of adoption using a modified retrospective approach. The presentation and disclosure requirements must be applied prospectively. The amendments to ASU No. 2017-12 are effective for fiscal years beginning after December 15, 2018, with early adoption permitted. The adoption of ASU No. 2017-12 is not expected to have a material impact on the Company's consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, "Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." The amendments in this update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. The amendments in this update also require entities to disclose their accounting policy for releasing income tax effects from accumulated other comprehensive income. The Amendment to ASU No. 2018-02 are effective for the reporting period beginning after December 15, 2018, and interim periods therein. Early adoption is permitted. The Company is currently assessing the potential impact of ASU No. 2018-02 on the Company's consolidated financial statements.

(2) Significant Accounting Policies Update

Significant accounting policies are detailed in "Note 2: Significant Accounting Policies" of the Annual Report on Form 10-K for the year ended December 31, 2017. Significant changes to the Company's accounting policies as a result of adopting ASC 606 are discussed below:

Revenue Recognition

All revenue is generated from contracts with customers. Revenue is recognized when control of the performance obligation is transferred to the customer, in an amount that reflects the consideration the Company expects to be entitled to receive in exchange for those services. Revenue recognition is determined through the following steps:

- identification of the contract, or contracts, with a customer;
- identification of the performance obligations in the contract;
- determination of the transaction price;
- allocation of the transaction price to the performance obligations in the contract; and
- recognition of revenue when, or as, the Company satisfies a performance obligation.

Clinical Research

The Company generally enters into contracts with customers to provide clinical research services with payments based on either fixed fee, time and materials, or fee for service arrangements. The Company is also entitled to reimbursement for investigator fees and out-of-pocket costs associated with these services. At contract inception, the Company assesses the services promised in the contracts with customers to identify the performance obligations in the

arrangement. The Company's long term fixed-fee arrangements for clinical research services are considered a single performance obligation because the Company provides a highly-integrated service. A single performance obligation requires the inclusion of investigator fees and out-of-pocket costs in both the contract revenue value and in the cost used to measure progress in transferring control to the customer.

The inclusion of investigator fees and out-of-pocket costs in the measurement of progress under these long-term fixed-fee contracts as part of a single performance obligation can create a timing difference between amounts the Company is entitled

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to receive in reimbursement for costs incurred and the amount of revenue recognized related to such costs on individual projects, which is recognized as unbilled services. The magnitude of this timing difference compared to historical accounting is dependent on the relative size and progress of the direct service portion of the arrangement compared to the progress of the reimbursable investigator fees and reimbursable out-of-pocket costs relative to their respective forecasted costs over the life of the project.

Revenue is recognized for the single performance obligation over time due to the Company’s right to payment for work performed to date. The Company generally uses the cost-to-cost measure of progress for the Company's contracts because it best depicts the transfer of control to the customer as the performance obligation is fulfilled. For this method, the Company compares the contract costs incurred to date to the estimated total contract costs through completion. As part of the client proposal and contract negotiation process, the Company develops a detailed project budget for the direct costs and reimbursable costs based on the scope of the work, the complexity of the study, the geographical location involved and the Company’s historical experience.

The estimated total contract costs at the project level are reviewed and revised periodically throughout the lives of the contracts, with adjustments to revenue resulting from such revisions being recorded on a cumulative basis in the period in which the revisions are identified. Contract costs consist primarily of direct labor and other reimbursable project related costs such as travel, third-party vendor costs and investigator fees.

The Company establishes pricing based on the Company’s internal pricing guidelines, discount agreements, if any, and negotiations with the client. The transaction price is the contractually defined amount which includes adjustment for variable consideration such as reimbursable costs, discounts, and bonus or penalties, which are estimable.

A majority of the Company’s contracts undergo modifications over the contract period and the Company’s contracts provide for these modifications. During the modification process, the Company recognizes revenue to the extent it incurs costs, provided that a contractual understanding has been reached.
Fixed-fee arrangements for Phase I and Phase II(a) clinical services and bio-analytical services are short-term contracts for accounting purposes as these contracts are cancellable and the termination penalties for exiting these contracts are not substantive. The Company generally bills for services on a milestone basis. The transaction price, representing the value of the services to be provided over the entire contract inclusive of all costs for which the Company is a principal, is the contractually defined estimated amount that includes adjustment for variable consideration, such as reimbursable expenses and discounts, which are estimable. The transaction price is allocated to the performance obligations on a relative standalone selling price basis. Given the highly integrated nature of the services provided, most contracts represent a single performance obligation. Due to the Company's right to payment for work performed, revenue is recognized over time.

Clinical research services delivered under fee-for-service arrangements are recognized over time. The services are accounted for as a single performance obligation that is a series of distinct services with substantially the same pattern of transfer to the customer. Clinical research services provided in these types of arrangements are typically linked to the delivery of resources billed at contractual rates, such rates being dependent on the role and the tenure of the resource provided. The fee-for-service is typically billed one month in arrears, which generally results in an unbilled services asset at period-end. In addition, out-of-pocket costs are reimbursed by the customer. Fees are allocated to each distinct month of service using time elapsed as a measure of progress toward the satisfaction of the performance obligation and variable consideration is allocated to the period it is incurred.

Revenue from time and materials contracts is recognized as hours are incurred.

The Company often offers volume discounts to certain of its large customers based on annual volume thresholds, which is variable consideration that is considered in the contract value. The Company records an estimate of the

volume rebate as a reduction of the transaction price based on the estimated total rebates to be earned by the customers for the period.

Data Solutions

The Company provides data reports and analytics to customers based on agreed-upon specifications, including the timing of delivery, which is typically either weekly, monthly, or quarterly. If a customer requests more than one type of data report or series of data reports within a contract, each distinct type of data report is a separate performance obligation. The contracts provide for the Company to be compensated for the value of each deliverable. The transaction price is determined using list prices, discount agreements, if any, and negotiations with the customers, and generally includes any out-of-pocket expenses. Typically, the Company bills in advance of services being provided with the amount being recorded as advanced billings.

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The transaction price is allocated to performance obligations on a relative standalone selling price basis. In cases where the Company contracts to provide a series of data reports, or in some cases data, the Company recognizes revenue over time using the ‘units delivered’ output method. Expense reimbursements are recorded to revenue as the expenses are incurred as they relate directly to the services performed.

Certain Data Solutions arrangements include upfront customization or consultative services for customers; these arrangements often include payments based on the achievement of certain contractual milestones. Under these arrangements, the Company contracts with a customer to carry out a specific study, ultimately resulting in delivery of a custom report or data product. These arrangements are a single performance obligation given the integrated nature of the service being provided. The Company typically recognizes revenue under these contracts over time, using an output-based measure, generally time elapsed, to measure progress and transfer of control of the performance obligation to the customer. Expense reimbursements are recorded to revenue as the expenses are incurred as they relate directly to the service performed.

The Company's Data Solutions segment enters into contracts with some of its larger data suppliers that involve non-monetary terms. The Company will issue purchase credits to be used toward the data supplier's purchase of the Company's services. In exchange, the Company receives monetary discounts on the data received from the data suppliers. The fair value of the revenue earned from the customer purchases is determined based on similar product offerings to other customers. At the end of the contract year, any unused purchase credits may be forfeited or carried over to the next contract year based on the terms of the data supplier contract. For the three months ended March 31, 2018, the Company recognized service in kind revenue of $5.8 million from these transactions, which is included in revenue in the accompanying consolidated condensed statements of operations.

Significant Judgments and Estimates

Accounting for the Company’s long term contracts requires estimates of future costs to be incurred to fulfill the contract obligations.

Due to the nature of the work required to be performed by the Company to fulfill performance obligations, the estimation of total revenue and cost at completion is complex, subject to many variables and requires significant judgment. The Company's long-term contracts may contain incentive fees, penalties, or other provisions that can either increase or decrease the transaction price. The Company estimates variable consideration at the most likely amount to which the Company expects to be entitled. The Company includes estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. The Company's estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of the anticipated performance and information that is available to the Company. Judgment is also required to identify performance obligations and in determining the relative standalone selling price of those obligations, specifically for the Data Solutions segment. The estimates and assumptions are evaluated on an ongoing basis and adjusted, as needed, using historical experience and contract specific factors. Actual results could differ significantly from these estimates.

Performance Obligations

Revenue recognized in the current quarter from services completed in prior periods was $3.9 million. This primarily relates to adjustments attributable to changes in estimates such as estimated total contract costs, and from contract modifications on long-term fixed price contracts executed in the current period, which results in changes to the transaction price.

The Company does not disclose the value of the transaction price allocated to unsatisfied performance obligations on contracts that have an original contract term of less than one year. These contracts are short in duration and revenue recognition generally follows the delivery of the promised services. The total transaction price for the undelivered performance obligation on contracts with an original initial contract term greater than one year is $4.1 billion as of

March 31, 2018; this amount includes reimbursement revenue and investigator fees. The Company expects to recognize revenue over the remaining contract term of the individual projects, with contract terms generally ranging from one to five years.

Accounts Receivable and Unbilled Services

Accounts receivable represent amounts for which invoices have been sent to clients based upon contract terms. Unbilled services represent amounts earned for services that have been rendered but for which customers have not been billed. Unbilled services where the Company’s right to bill is conditioned on something other than the passage of time are contract assets and are separately disclosed in Note 6.

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Advanced Billings

Advanced billings, also referred to as contract liabilities, consist of advanced payments and billings on a contract in excess of revenue recognized; these amounts represent consideration received or unconditionally due from a customer prior to transferring services to the customer under the terms of the service contract. These balances are reported net of contract assets on a contract-by-contract basis at the end of each reporting period.

In order to determine revenue recognized in the period from advanced billings liabilities, the Company first allocates revenue to the individual advanced billings liability balance outstanding at the beginning of the period until the revenue exceeds that balance.

(3) Business Combinations

Symphony Health Solutions, Inc.

On September 6, 2017, the Company acquired all of the outstanding equity interest of Symphony Health, a provider of data and analytics to help professionals understand the full market lifecycle of products offered for sale by companies in the pharmaceutical industry, for $539.4 million in cash and contingent consideration, which was not capped, in the form of potential earn-out payments based on a multiple of future earnings for the twelve-month periods ending December 2017 and December 2018. With this acquisition, the Company expects to enhance its ability to serve customers throughout the clinical research and commercialization process with technologies that provide data and analytics.

The fair value of the contingent consideration was determined by using a Monte Carlo simulation that includes significant unobservable inputs such as a risk-adjusted discount rate and projected future earnings over the earn-out periods. As the fair value was based on significant inputs not observed in the market, the valuation represented a Level 3 measurement.

The Company reassesses the fair value of expected contingent consideration and the corresponding liability each reporting period using a Monte Carlo simulation reflecting updated assumptions as of the valuation date. Changes in the fair value of the contingent consideration are recognized in earnings in the period of such change. During February 2018, the Company made the year-end 2017 earn-out payment, which totaled $114.7 million that was recognized at December 31, 2017. The Company also recorded an $11.6 million reduction to the earn-out liability to transaction-related costs in the consolidated condensed statements of operations during the three months ended March 31, 2018, associated with changes in the fair value of the earn-out liability. As of March 31, 2018, the earn-out liability totaled $39.1 million, which is included in accrued expenses in the consolidated condensed balance sheet. The 2018 earn-out payment, which is based on 2018 earnings and is payable in the first quarter of 2019, could range from $0 to approximately $110.8 million.

The acquisition of Symphony Health was accounted for as a business combination and, accordingly, the assets acquired and the liabilities assumed have been recorded at their respective fair values as of the acquisition date. In connection with the acquisition, the Company recorded approximately $476.0 million of goodwill, which was assigned to the Data Solutions segment and is not deductible for income tax purposes. The goodwill is attributable to the workforce of the acquired business and expected synergies with the Company’s existing operations.

Due to the timing of the acquisition, the valuation of net assets acquired has not been finalized and is expected to be completed by the end of June 2018, and in any case, no later than one year from the acquisition date in accordance with GAAP.

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The Company's preliminary purchase price allocation is as follows (in thousands):

	Purchase Price Allocation	Weighted Amortization Period
Cash and cash equivalents	$26,297	
Accounts receivable and unbilled services	39,132	
Other current assets	23,726	
Fixed assets	12,340	
Customer relationships	190,100	10 years
Database	137,100	3 years
Tradename	2,000	2 years
Accounts payable and accrued expenses	(42,222)	
Advanced billings	(65,968)	
Deferred tax liabilities	(104,869)	
Other long-term liabilities	(6,740)	
Estimated fair value of net assets acquired	210,896	
Purchase price, including contingent consideration and working capital adjustment	686,877	
Total goodwill	$475,981	

Takeda Transactions

On June 1, 2017, the Company acquired all of the outstanding shares of Takeda Pharmaceutical Data Services, Ltd., or TDS, from Takeda Pharmaceutical Company Ltd., or Takeda, for $0.7 million in cash. The Company recorded approximately $1.0 million of goodwill, which is assigned to the Clinical Research segment and is not deductible for income tax purposes.

On June 1, 2017, the Company and Takeda also closed on a joint venture transaction that enables the Company to provide clinical trial delivery and pharmacovigilance services as a strategic partner of Takeda in Japan. The joint venture transaction was effectuated through the creation of a new legal entity, Takeda PRA Development Center KK, or TDC joint venture. The Company paid $5.4 million for a 50% equity interest in the TDC joint venture, which represents 50% of the fair value of the net assets and workforce that Takeda contributed to the joint venture. The joint venture provides services including clinical trial monitoring, project management, regulatory strategy and submissions, data management, biostatistics, drug safety reporting, and medical monitoring. The Company is required to buy-out Takeda's 50% interest in the TDC joint venture in two years. The Company also has an early buy-out option of Takeda's 50% interest in December 2018, if both parties agree.

The Company determined that the TDC joint venture is a variable interest entity, or VIE, in which the Company is the primary beneficiary. Accordingly, the Company accounted for the $5.4 million contribution to the TDC joint venture as a business combination and consolidated the VIE in its financial statements with a noncontrolling interest for the 50% portion owned by Takeda. The assets acquired and the liabilities assumed have been recorded at their respective estimated fair values as of June 1, 2017. The Company recorded approximately $2.7 million of goodwill, which is assigned to the Clinical Research segment and is not deductible for income tax purposes. The goodwill is primarily attributable to the assembled workforce.

The Company's fair value of the net assets acquired as part of the TDC joint venture transaction at the closing date of the business combination is as follows (in thousands):

Purchase Price Allocation
$ 8,120

Cash and cash equivalents	
Other current assets	1,671
Other non-current assets	799
Accounts payable and accrued expenses	(2,380)
Estimated fair value of net assets acquired	8,210
PRA purchase price	5,440
Fair value of Takeda's noncontrolling interest	5,440
Total goodwill	$ 2,670

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Parallel 6, Inc.

On May 10, 2017, the Company acquired all of the outstanding equity interest of Parallel 6, Inc., or Parallel 6, a developer of technologies for improving patient enrollment, engagement, and management of clinical trials, for $39.0 million in cash and contingent consideration in the form of a potential earn-out payment of up to $10.0 million. The earn-out payment was contingent upon the achievement of certain external software sales targets during the 18-month period following closing. With this acquisition, the Company expects to enhance its ability to serve customers throughout the clinical research process with technologies that provide improved efficiencies by reducing study durations and costs through integrated operational management.

The acquisition of Parallel 6 was accounted for as a business combination and, accordingly, the assets acquired and the liabilities assumed have been recorded at their respective fair values as of the acquisition date. In connection with the acquisition, the Company recorded approximately $32.5 million of goodwill, which was assigned to the Clinical Research segment and is not deductible for income tax purposes. The goodwill is attributable to the workforce of the acquired business and expected synergies with the Company's existing information technology operations.

The Company's purchase price allocation is as follows (in thousands):

	Purchase Price Allocation	Weighted Amortization Period
Cash and cash equivalents	$ 132	
Accounts receivable and unbilled services	929	
Other current assets	26	
Software intangible	15,500	5 years
Other intangibles	920	5 years
Accounts payable and accrued expenses	(780)	
Advanced billings	(692)	
Other long-term liabilities	(1,148)	
Estimated fair value of net assets acquired	14,887	
Purchase price, including contingent consideration	47,339	
Total goodwill	$ 32,452	

(4) Fair Value Measurements

The Company records certain assets and liabilities at fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A three-level fair value hierarchy that prioritizes the inputs used to measure fair value is described below. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

The carrying amount of financial instruments, including cash and cash equivalents, accounts receivable, unbilled services, contract assets, accounts payable and advanced billings, approximate fair value due to the short maturities of these instruments.

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Recurring Fair Value Measurements

The following table summarizes the fair value of the Company's financial assets and liabilities that are measured on a recurring basis as of March 31, 2018 (in thousands):

	Level 1	Level 2	Level 3	Total
Assets:				
Interest rate swaps	$—	$4,493	$—	$4,493
Marketable securities	191	—	—	191
Total	$191	$4,493	$—	$4,684
Liabilities:				
Contingent consideration	$—	$—	$39,066	$39,066
Total	$—	$—	$39,066	$39,066

The Company values contingent consideration using models that include significant unobservable Level 3 inputs, such as projected financial performance over the earn-out period along with estimates for market volatility and the discount rate applicable to potential cash payments. Interest rate swaps are measured at fair value using a market approach valuation technique. The valuation is based on an estimate of net present value of the expected cash flows using relevant mid-market observable data inputs and based on the assumption of no unusual market conditions or forced liquidation.

The following table summarizes the changes in Level 3 financial liabilities measured on a recurring basis for the three months ended March 31, 2018 (in thousands):

	Contingent Consideration - Accrued expenses and other current liabilities	Contingent Consideration - Other long-term liabilities
Balance at December 31, 2017	$ —	$ 50,644
Reclassification adjustment	50,644	(50,644)
Change in fair value recognized in transaction-related costs	(11,578)	—
Balance at March 31, 2018	$ 39,066	$ —

The $39.1 million balance at March 31, 2018, which was valued using a Monte Carlo simulation, relates to the 2018 earn-out payment to Symphony Health and is based on its future adjusted earnings before interest, taxes, depreciation and amortization, or Adjusted EBITDA. Key assumptions include (1) a discount rate of 8%, (2) a volatility rate of 33%, and (3) probability adjusted level of Adjusted EBITDA of $52.9 million for the year ended December 31, 2018. Refer to Note 3 for additional discussion of the Symphony Health acquisition.

Non-recurring Fair Value Measurements

Certain assets and liabilities are carried on the accompanying consolidated condensed balance sheets at cost and are not remeasured to fair value on a recurring basis. These assets include finite-lived intangible assets which are tested when a triggering event occurs and goodwill and identifiable indefinite-lived intangible assets which are tested for impairment annually on October 1 or when a triggering event occurs.

As of March 31, 2018, assets carried on the balance sheet and not remeasured to fair value on a recurring basis totaling approximately $2,295.0 million were identified as Level 3. These assets are comprised of goodwill of

$1,524.4 million and identifiable intangible assets, net of $770.6 million.

Refer to Note 8, Long-Term Debt, for additional information regarding the fair value of long-term debt balances.

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(5) Concentration of Credit Risk

Financial instruments that potentially subject the Company to credit risk consist of cash and cash equivalents, accounts receivable, unbilled services, contract assets and derivatives. As of March 31, 2018, substantially all of the Company's cash and cash equivalents and derivatives were held in or invested with large financial institutions. Accounts receivable include amounts due from pharmaceutical and biotechnology companies. The Company establishes an allowance for potentially uncollectible receivables. In management's opinion, there is no additional material credit risk beyond amounts provided for such losses.

Revenue from individual customers greater than 10% of consolidated revenue in the respective periods was as follows:

	Three Months Ended March 31,	
	2018	2017
Customer A	—%	11.3%

Accounts receivable and unbilled receivables from individual customers that were equal to or greater than 10% of consolidated accounts receivable and unbilled receivables at the respective dates were as follows:

	March 31, 2018	December 31, 2017
Customer A	10.0%	11.5 %

(6) Accounts Receivable, Unbilled Services and Advanced Billings

Accounts receivable and unbilled services were as follows (in thousands):

	March 31, 2018	December 31, 2017
Accounts receivable	$464,148	$457,676
Unbilled services	131,393	170,760
Total accounts receivable and unbilled services	595,541	628,436
Less allowance for doubtful accounts	(1,923)	(1,433)
Total accounts receivable and unbilled services, net	$593,618	$627,003

Unbilled services as of March 31, 2018 includes $52.6 million of contract assets where the Company's right to bill is conditioned on criteria other than the passage of time. Impairment losses on contract assets were immaterial in the first quarter of 2018.

Advanced billings were as follows (in thousands):

	March 31, 2018	December 31, 2017
Advanced billings	$437,832	$469,211

The $52.6 million increase in contract assets from December 31, 2017 to March 31, 2018 was due to the adoption of ASC 606. The $31.4 million decrease in advanced billings from December 31, 2017 to March 31, 2018 was primarily due to the adoption of ASC 606 and the timing of payments. In the first quarter of 2018, the Company recognized revenue of $230.5 million related to advanced billings recorded as of January 1, 2018.

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(7) Goodwill and Intangible Assets

Goodwill

The changes in the carrying amount of goodwill by reportable segment are as follows (in thousands):

	Clinical Research	Data Solutions	Consolidated
Balance at December 31, 2017	$1,036,443	$475,981	$1,512,424
Currency translation	11,997	—	11,997
Balance at March 31, 2018	$1,048,440	$475,981	$1,524,421

There are no accumulated impairment charges as of March 31, 2018 and December 31, 2017.

Intangible Assets

Intangible assets consist of the following (in thousands):

	March 31, 2018			December 31, 2017		
	Gross Amount	Accumulated Amortization	Net Amount	Gross Amount	Accumulated Amortization	Net Amount
Customer relationships	$571,371	$ (81,436)	$489,935	$565,638	$ (72,133)	$493,505
Customer backlog	125,742	(123,331)	2,411	123,746	(120,583)	3,163
Trade names (finite-lived)	28,560	(10,158)	18,402	28,558	(9,265)	19,293
Patient list and other intangibles	44,474	(25,950)	18,524	44,474	(24,226)	20,248
Database	137,100	(13,798)	123,302	137,100	(7,544)	129,556
Non-competition agreements	2,770	(2,770)	—	2,767	(2,706)	61
Total finite-lived intangible assets	910,017	(257,443)	652,574	902,283	(236,457)	665,826
Trade names (indefinite-lived)	118,010	—	118,010	118,010	—	118,010
Total intangible assets	$1,028,027	$ (257,443)	$770,584	$1,020,293	$ (236,457)	$783,836

Amortization expense was $18.1 million and $8.8 million for the three months ended March 31, 2018 and 2017, respectively.

The estimated future amortization expense of finite-lived intangible assets is expected to be as follows (in thousands):

2018 (remaining)	$53,999
2019	69,453
2020	69,814
2021	64,680
2022	50,269
2023 and thereafter	344,359
Total	$652,574

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(8) Revolving Credit Facilities and Long-Term Debt

Long-term debt consists of the following (in thousands):

	March 31, 2018	December 31, 2017
Term loans, first lien	$1,133,730	$1,140,927
Accounts receivable financing agreement	120,000	120,000
Total debt	1,253,730	1,260,927
Less current portion of long-term debt	(28,789)	(28,789)
Total long-term debt	1,224,941	1,232,138
Less debt issuance costs	(6,325)	(6,741)
Total long-term debt, net	$1,218,616	$1,225,397

Principal payments on long-term debt are due as follows (in thousands):

Current maturities of long-term debt:	
2018 (remaining)	$21,592
2019	148,789
2020	28,789
2021	1,054,560
Total	$1,253,730

2016 Credit Facilities

As collateral for borrowings under the senior secured credit facilities, or 2016 Credit Facilities, the Company granted a pledge on primarily all of its assets, and the stock of wholly-owned U.S. restricted subsidiaries. The Company is subject to certain financial covenants, which require the Company to maintain certain debt-to-EBITDA and interest expense-to-EBITDA ratios. The 2016 Credit Facilities also contain covenants that, among other things, restrict the Company's ability to create any liens, make investments and acquisitions, incur or guarantee additional indebtedness, enter into mergers or consolidations and other fundamental changes, conduct sales and other dispositions of property or assets, enter into sale-leaseback transactions or hedge agreements, prepay subordinated debt, pay dividends or make other payments in respect of capital stock, change the line of business, enter into transactions with affiliates, enter into burdensome agreements with negative pledge clauses, and make subsidiary distributions. After giving effect to the applicable restrictions on the payment of dividends under the 2016 Credit Facilities, subject to compliance with applicable law, as of March 31, 2018 and December 31, 2017, all amounts in retained earnings were free of restriction and were available for the payment of dividends. The Company does not expect to pay dividends in the foreseeable future. The Company does not expect these covenants to restrict its liquidity, financial condition or access to capital resources in the foreseeable future. The 2016 Credit Facilities also contains customary representations, warranties, affirmative covenants, and events of default. The variable interest rate is a rate equal to the London Interbank Offered Rate, or LIBOR, or the adjusted base rate, or ABR, at the election of the Company, plus a margin based on the ratio of total indebtedness to EBITDA. The margin ranges from 1.00% to 2.00%, in the case of LIBOR loans, and 0.00% to 1.00%, in the case of ABR loans. The Company has the option of 1, 2, 3 or 6 month base interest rates. For the three months ended March 31, 2018, the weighted average interest rate on the first lien term loan was 3.87%.

Revolving Credit Facilities

The Company's revolving credit facilities provide for $225.0 million of potential borrowings and expire on December 6, 2021. The interest rate on the revolving credit facilities is based on the LIBOR with a 0% LIBOR floor or ABR, at

the election of the Company, plus an applicable margin, based on the leverage ratio of the Company. The Company, at its discretion, may elect interest periods of 1, 2, 3 or 6 months. The Company is required to pay to the lenders a commitment fee for unused commitments of 0.2% to 0.4% based on the Company's debt-to-EBITDA ratio. At March 31, 2018 and December 31, 2017, the Company had $91.5 million outstanding borrowings under the revolving credit facilities. For the three months ended March 31, 2018, the weighted average interest rate on the revolving credit facilities was 3.88%. In addition, at March 31, 2018 and December 31, 2017, the Company had $5.5 million and $4.9 million, respectively, in letters of credit outstanding, which are secured by the revolving credit facilities.

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Accounts Receivable Financing Agreement

The Company has a $140.0 million accounts receivable financing agreement, of which $120.0 million was outstanding as of March 31, 2018 and December 31, 2017.

Loans under the accounts receivable financing agreement accrue interest at either a reserve-adjusted LIBOR or a base rate, plus 1.6%. The Company may prepay loans upon one business day's prior notice and may terminate the accounts receivable financing agreement with 15 days' prior notice. For the three months ended March 31, 2018, the weighted average interest rate on the accounts receivable financing agreement was 3.34%.

The accounts receivable financing agreement contains various customary representations and warranties and covenants, and default provisions which provide for the termination and acceleration of the commitments and loans under the agreement in circumstances including, but not limited to, failure to make payments when due, breach of representations, warranties or covenants, certain insolvency events or failure to maintain the security interest in the trade receivables, and defaults under other material indebtedness.

The accounts receivable financing agreement terminates on March 22, 2019, unless terminated earlier pursuant to its terms. At March 31, 2018 and December 31, 2017, there was $20.0 million of remaining capacity available under the accounts receivable financing agreement.

Fair Value of Debt

The estimated fair value of the Company's debt and outstanding borrowings under its revolving credit facilities was $1,345.2 million and $1,352.4 million at March 31, 2018 and December 31, 2017, respectively. The fair value of the term loans, borrowings under credit facilities, and accounts receivable financing agreement was determined based on Level 3 inputs, which is primarily based on rates at which the debt is traded among financial institutions adjusted for the Company's credit standing.

(9) Stockholders' Equity

Authorized Shares

The Company is authorized to issue up to one billion shares of common stock, with a par value of $0.01. The Company is authorized to issue up to one hundred million shares of preferred stock, with a par value of $0.01.

Noncontrolling Interest

Below is a summary of noncontrolling interest for the three months ended March 31 (in thousands):

	2018	2017
Balance as of January 1,	$5,710	$ —
Investment by noncontrolling interest	—	—
Comprehensive income		
Net income	234	—
Foreign currency adjustments, net of income tax	348	—
Balance as of March 31,	$6,292	$ —

(10) Stock-Based Compensation

Stock Option and RSA/RSU Activity

The Company granted 210,000 service-based options and 93,500 restricted stock awards and units, or RSAs/RSUs, with a total grant date fair value of $6.2 million and $8.1 million, respectively, during the three months ended March 31, 2018.

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Aggregated information regarding the Company's option plans is summarized below:

	Options	Wtd. Average Exercise Price	Wtd. Average Remaining Contractual Life (in years)	Intrinsic Value (millions)
Outstanding at December 31, 2017	5,245,625	$ 39.14	7.6	$ 272.4
Granted	210,000	85.15		
Exercised	(387,136)	13.33		
Expired or forfeited	(97,261)	53.33		
Outstanding at March 31, 2018	4,971,228	$ 42.67	7.5	$ 200.0
Exercisable at March 31, 2018	1,980,159	$ 15.54	5.8	$ 133.5

The Company's RSAs/RSUs activity in 2018 is as follows:

	Awards	Wtd. Average Grant-Date Fair Value	Intrinsic Value (millions)
Unvested at December 31, 2017	309,538	$ 46.76	$ 28.2
Granted	93,500	86.33	
Vested	(25,000)	40.65	
Unvested at March 31, 2018	378,038	$ 56.95	$ 31.4

Employee Stock Purchase Plan

In April 2017, the Board of Directors approved the PRA Health Sciences, Inc. 2017 Employee Stock Purchase Plan, or ESPP, which was approved by the Company's shareholders on June 1, 2017. The ESPP allows eligible employees to authorize payroll deductions of up to 15% of their base salary or wages to be applied toward the purchase of shares of the Company's common stock on the last trading day of the offering period. Participating employees will purchase shares of the Company's common stock at a discount of up to 15% on the lesser of the closing price of the Company's common stock on the NASDAQ Global Select Market (i) on the first trading day of the offering period or (ii) the last day of any offering period. Offering periods under the ESPP will generally be in six month increments, commencing on January 1 and July 1 of each calendar year with the compensation committee having the right to establish different offering periods. The Company recognized stock-based compensation expense of $0.8 million associated with the ESPP during the three months ended March 31, 2018. As of March 31, 2018, there have been no shares issued and 3,000,000 shares reserved for future issuance under the ESPP.

Stock-based Compensation Expense

Stock-based compensation expense related to employee stock plans are summarized below (in thousands):

	Three Months Ended March 31,	
	2018	2017
Direct costs	$2,122	$547
Selling, general and administrative	4,177	1,383
Total stock-based compensation expense	$6,299	$1,930

(11) Income Taxes

The Company’s effective income tax rate was 31.1% and 23.8% for the three months ended March 31, 2018 and 2017, respectively. The effective tax rate for the three months ended March 31, 2017 included the effect of a release of a valuation allowance on the Company’s net federal deferred tax assets, which was fully reversed within 2017. The variation between the Company’s effective income tax rate and the U.S. statutory rate of 21% for the three months ended March 31, 2018 is primarily due to (i) the U.S. inclusion of amounts related to the estimated tax on global intangible low-taxed income (GILTI), (ii) the U.S. inclusion of amounts related to the estimated base erosion anti abuse tax (BEAT), and (iii) permanent and other discrete adjustments.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the “Act”) was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21%

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effective for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a modified territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative untaxed foreign earnings as of December 31, 2017. The Company has calculated its best estimate of the impact of the Act at the date of enactment and additional measurement period adjustments related to the 2017 transition tax in our quarterly income tax provision in accordance with our understanding of the Act including recently-released guidance available as of the date of this filing. As a result, the Company has recorded $7.0 million as additional income tax expense in the first quarter of 2018 relating to the impact of adjustments to the Company's December 31, 2017 transition tax provisional amounts. The adjustment to the provisional amount related to opting to offset the one-time transition tax on the mandatory deemed repatriation of untaxed foreign earnings with current losses and prior year net operating losses in lieu of utilizing foreign tax credits. The Company is continuing to analyze the overall impact of the transition tax inclusion and will update the provisional estimate as it completes its analysis during the measurement period. Due to the complexity of the new law, the Company is still in the process of investigating the related accounting implications. Specifically, for the GILTI tax the Company intends to make an accounting policy decision around whether to account for GILTI as a period cost in the relevant period, or to record deferred taxes related to the basis in the Company's foreign subsidiaries once additional guidance is available for assessment. Anticipated amounts for GILTI have been included as a component of current tax expense in the Company's first quarter annual effective tax rate calculation. The Company is currently projecting to be subject to BEAT for 2018. Pursuant to relevant FASB guidance, the Company has accounted for BEAT as a current expense and recorded U.S. deferred tax assets and liabilities at the regular statutory rate for the period ending March 31, 2018. Adjustments to the provisional amounts recorded or changes as a result of the issuance of additional guidance will be reflected in the period of the adjustment.

GAAP requires a two-step approach when evaluating uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence demonstrates that it is more likely than not that the position will be sustained upon audit, including resolution of any related appeals or litigation processes. The second step is to quantify the amount of tax benefit to recognize as the amount that is cumulatively more than 50% likely to be realized upon ultimate settlement with the taxing authorities. There were no material changes to the unrecognized tax benefits during the quarter ended March 31, 2018.

(12) Commitments and Contingencies

Legal Proceedings

The Company is involved in legal proceedings from time to time in the ordinary course of its business, including employment claims and claims related to other business transactions. Although the outcome of such claims is uncertain, management believes that these legal proceedings will not have a material adverse effect on the financial condition or results of future operations of the Company.

The Company is currently a party to litigation with the City of Sao Paulo, Brazil. The dispute relates to whether the export of services provided by the Company is subject to a local tax on services. The Company has not recorded a liability associated with the claim, which totaled $5.4 million at March 31, 2018, given that it is not deemed probable the Company will incur a loss related to this case. However, a deposit totaling $5.4 million has been made to the Brazilian court in order to annul the potential tax obligation and to avoid the accrual of additional interest and penalties. This balance is recorded in other assets on the consolidated condensed balance sheet. In June 2015, the Judiciary Court of Justice of the State of Sao Paulo ruled in the favor of the Company, however, the judgment was appealed by the City of Sao Paulo. In September 2017, a judge from the Superior Court of Justice of Brazil denied relief to the City of Sao Paulo's appeal and upheld the lower court's ruling in the favor of the Company for the years 2005 to 2012, and in the period from January to October 2013. The judge from the Superior Court of Justice of Brazil also ruled that the Company must appeal the lower court's verdict for October 2013 and the subsequent periods as the

Judiciary Court of Justice of the State of Sao Paulo only reviewed the facts that pertained to the period before October 2013. The Company expects to recover the full amount of the deposit when the case is settled.

(13) Derivatives

The Company is exposed to certain risks relating to its ongoing business operations. The primary risk that the Company seeks to manage by using derivative instruments is interest rate risk arising from movement in market interest rates. Accordingly, the Company has instituted an interest rate hedging program that uses interest rate swaps designated as cash flow hedges to mitigate interest rate volatility. The Company swaps the difference between fixed and variable interest amounts calculated by reference to an agreed-upon notional principal amount, at specified intervals. The Company’s interest rate contracts are designated as hedging instruments.

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On January 5, 2018, the Company entered into two new interest rate swaps in order to manage its cash flow exposure to variable rate debt and also to replace an interest rate swap maturing in September 2018. The first interest rate swap has an aggregate notional amount of $375.0 million and a fixed payment rate of 2.2% offsetting a one month LIBOR variable rate with an effective date of January 8, 2018, and a maturity date of December 6, 2020. The second interest rate swap has an aggregate notional amount of $250.0 million and a fixed payment rate of 2.3% offsetting a one month LIBOR variable rate with an effective date of September 6, 2018, and a maturity date of September 6, 2020.

The following table presents the notional amounts and fair values (determined using Level 2 inputs) of the Company's derivatives as of March 31, 2018 and December 31, 2017 (in thousands):

		March 31, 2018		December 31, 2017	
	Balance Sheet Classification	Notional amount	Asset/ (Liability)	Notional amount	Asset/ (Liability)
Derivatives in an asset position:	Other current assets	$250,000	$ 758	$250,000	$ 428
	Other assets	375,000	3,735	—	—
		$625,000	$ 4,493	$250,000	$ 428

The Company records the effective portion of any change in the fair value of derivatives designated as hedging instruments under ASC 815 to other accumulated comprehensive loss in the Company's consolidated condensed balance sheet, net of deferred taxes, and will later reclassify into earnings when the hedged item affects earnings or is no longer expected to occur. Gains and losses from the ineffective portion of any hedge are recognized in earnings immediately. For other derivative contracts that do not qualify or no longer qualify for hedge accounting, changes in the fair value of the derivatives are recognized in earnings each period.

The table below presents the effect of the Company's derivatives on the consolidated condensed statements of operations and comprehensive income for the three months ended March 31, 2018 and 2017 (in thousands):

	Three Months Ended March 31,	
Derivatives in Cash Flow Hedging Relationships (Interest Rate Swaps)	2018	2017
Amount of pre-tax gain recognized in other comprehensive income	$3,693	$178
Amount of loss recognized in other expense, net on derivatives (ineffective portion)	—	(1)
Amount of loss reclassified from accumulated other comprehensive loss into interest expense, net	(1,998)	(1,691)

The Company expects that $6.1 million of unrealized losses will be reclassified out of accumulated other comprehensive loss and into interest expense, net over the next 12 months.

(14) Accumulated Other Comprehensive Loss

Below is a summary of the components of accumulated other comprehensive loss (in thousands):

	Foreign Currency Translation	Derivative Instruments, Net of Tax	Total
Balance at December 31, 2017	$(117,180)	$(19,290)	$(136,470)
Other comprehensive income before reclassifications	17,535	2,723	20,258
Reclassification adjustments	—	1,473	1,473
Balance at March 31, 2018	$(99,645)	$(15,094)	$(114,739)

Foreign Currency Translation

The change in the Company's foreign currency translation adjustment was due primarily to the movements in the British pound and Euro exchange rates against the U.S. dollar. The U.S. dollar weakened by 4.0% and 2.8% versus the British pound and Euro, respectively, between December 31, 2017 and March 31, 2018. The movement in the British pound and Euro represented $10.2 million and $7.8 million, respectively, out of the $17.5 million foreign currency translation adjustment during the three months ended March 31, 2018. The remaining foreign currency translation adjustment is primarily attributable to the U.S. dollar’s strengthening against the Canadian dollar.

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Accumulated earnings of the Company's U.K. subsidiary totaling $275.4 million have been previously taxed in the U.S. or were deemed to have been repatriated as part of the one-time transition tax under the U.S. Tax Cuts and Jobs Act enacted December 22, 2107. The Company has deemed a corresponding amount of intercompany accounts between its U.S. and U.K. subsidiaries to be of a long-term investment nature; these balances have been remeasured to foreign currency translation during the three months ended March 31, 2018.

Derivative Instruments

See Note 13 for further information on changes to accumulated other comprehensive income related to the derivative instruments.

(15) Net Income Per Share

Basic net income per share is calculated by dividing net income by the weighted average number of common shares outstanding for the applicable period. Diluted net income per share is calculated after adjusting the denominator of the basic net income per share calculation for the effect of all potentially dilutive common shares, which, in the Company's case, includes shares issuable under the stock option and incentive award plans.

The following table reconciles the basic to diluted weighted average shares outstanding (in thousands):

	Three Months Ended March 31,	
	2018	2017
Basic weighted average common shares outstanding	63,530	61,578
Effect of dilutive stock options and other awards under share-based compensation programs	2,631	3,861
Diluted weighted average common shares outstanding	66,161	65,439
Anti-dilutive shares	1,936	248

The anti-dilutive shares disclosed above were calculated using the treasury stock method. The treasury stock method calculates dilution assuming the exercise of all in-the-money options and vesting of RSAs/RSUs, reduced by the repurchase of shares with the proceeds from the assumed exercises, and unrecognized compensation expense for outstanding awards.

(16) Segments

Subsequent to the acquisition of Symphony Health, the Company is managed through two reportable segments, (i) the Clinical Research segment and (ii) the Data Solutions segment. In accordance with the provisions of ASC 280, "Segment Reporting", the Company's chief operating decision-maker has been identified as the Chief Executive Officer, who reviews operating results to make decisions about allocating resources and assessing performance for the entire company.

- Clinical Research Segment: The Clinical Research segment, which primarily serves biopharmaceutical clients, provides outsourced clinical research and clinical trial related services.

- Data Solutions Segment: The Data Solutions segment provides data and analytics, technology solutions and real-world insights and services primarily to the Company's life science customers.

The Company's chief operating decision maker uses gross profit as the primary measure of each segment's operating results in order to allocate resources and in assessing the Company's performance. Asset information by segment is not presented, as this measure is not used by the chief operating decision maker to assess the Company's performance.

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The Company's reportable segment information is presented below (in thousands):

	Three Months Ended March 31, 2018			Three Months Ended March 31, 2017
	Clinical Research	Data Solutions	Total	Total
Revenue	$645,074	$ 56,763	$701,837	$487,760
Direct costs	340,845	40,587	381,432	287,512
Reimbursable out-of-pocket costs	76,441	—	76,441	60,680
Reimbursable investigator fees	64,567	—	64,567	—
Gross profit	163,221	16,176	179,397	139,568
Less expenses not allocated to segments:				
Selling, general and administrative expenses			91,702	74,268
Transaction-related costs			(11,578)	40
Depreciation and amortization			27,339	15,192
(Gain) loss on disposal of fixed assets, net			(14)	82
Income from operations			71,948	49,986
Interest expense, net			(14,825)	(9,527)
Foreign currency losses, net			(83)	(7,254)
Other expense, net			(199)	(140)
Income before income taxes and equity in income of unconsolidated joint ventures			$56,841	$33,065

Revenue by geographic location for each segment is as follows (in thousands):

	Three Months Ended March 31, 2018		
	Clinical Research	Data Solutions	Total
Revenue			
Americas:			
United States	$416,266	$ 56,763	$473,029
Other	11,992	—	11,992
Total Americas	428,258	56,763	485,021
Europe, Africa, and Asia-Pacific			
United Kingdom	174,351	—	174,351
Netherlands	28,473	—	28,473
Other	13,992	—	13,992
Total Europe, Africa, and Asia-Pacific	216,816	—	216,816
Total revenue	$645,074	$ 56,763	$701,837

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated condensed financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q, with our audited consolidated financial statements and the notes thereto included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 and with the information under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

We use the terms "we," "us," "our," or the "Company" in this report to refer to PRA Health Sciences, Inc. and its subsidiaries.

Overview

We are one of the world's leading global contract ressearch organizations, or CROs, by revenue, providing outsourced clinical development services to the biotechnology and pharmaceutical industries. We believe we are one of a select group of CROs with the expertise and capability to conduct clinical trials across major therapeutic areas on a global basis. Our therapeutic expertise includes areas that are among the largest in pharmaceutical development, and we focus in particular on oncology, central nervous system inflammation, respiratory, cardiometabolic and infectious diseases. We believe that we further differentiate ourselves from our competitors through our investments in medical informatics and clinical technologies designed to enhance efficiencies, improve study predictability and provide better transparency for our clients throughout their clinical development processes. Our Data Solutions segment allows us to better serve our clients across their entire product lifecycle by (i) improving clinical trial design, recruitment, and execution; (ii) creating real-world data solutions based on the use of medicines by actual patients in normal situations; and (iii) increasing the efficiency of healthcare companies' commercial organizations through enhanced analytics and outsourcing services.

How We Assess the Performance of Our Business

The Company is managed through two reportable segments, (i) the Clinical Research segment and (ii) the Data Solutions segment. Our chief operating decision maker uses gross profit as the primary measure of each segment's operating results in order to allocate resources and in assessing the Company's performance. In addition to our GAAP financial measures, we review various financial and operational metrics. For our Clinical Research segment we review new business awards, cancellations, and backlog.

Our gross new business awards for our Clinical Research segment for the three months ended March 31, 2018 and 2017 were $744.1 million and $647.6 million, respectively. New business awards arise when a client selects us to execute its trial and is documented by written or electronic correspondence, or for our Strategic Solutions offering when the amount of revenue expected to be recognized is measurable. The number of new business awards can vary significantly from year to year, and awards can have terms ranging from several months to several years. For our Strategic Solutions offering, the value of a new business award is the anticipated revenue to be recognized in the corresponding quarter of the next fiscal year. For the remainder of our Clinical Research segment, the value of a new award is the anticipated revenue over the life of the contract, which does not include reimbursable out-of-pocket costs or reimbursable investigator fees.

In the normal course of business, we experience contract cancellations, which are reflected as cancellations when the client provides us with written or electronic correspondence that the work should cease. During the three months ended March 31, 2018 and 2017 we had $93.9 million and $82.8 million, respectively, of cancellations for which we received correspondence from the client for our Clinical Research segment. The number of cancellations can vary significantly from year to year. The value of the cancellation is the remaining amount of unrecognized service

revenue, less the estimated effort to transition the work back to the client.

Our backlog consists of anticipated revenue from new business awards that either have not started or are in process but have not been completed for our Clinical Research segment. Backlog varies from period to period depending upon new business awards and contract modifications, cancellations, and the amount of revenue recognized under existing contracts. Our backlog at March 31, 2018 and 2017 was $3.8 billion and $3.1 billion, respectively.

Sources of Revenue

Total revenues are comprised of revenues from the provision of our services and revenues from reimbursed expenses that are incurred while providing our services. We do not have any material product revenues.

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See Note 1, Basis of Presentation, and Note 2, Significant Account Policies Updates, to our consolidated condensed financial statements included elsewhere in this Form 10-Q for additional details regarding our sources of revenue.

Costs and Expenses

Our costs and expenses are comprised primarily of our direct costs, selling, general and administrative costs, depreciation and amortization and income taxes. In addition, we monitor and measure costs as a percentage of revenue, excluding reimbursement revenue from out-of-pocket costs and investigator fees, rather than total revenue as we believe this is a more meaningful comparison and better reflects the operations of our business.

Direct Costs

For our Clinical Research segment, direct costs consist primarily of labor related charges. They include elements such as salaries, benefits and incentive compensation for our employees. In addition, we utilize staffing agencies to procure primarily part time individuals to perform work on our contracts. Labor-related charges as a percentage of the Clinical Research segment's total direct costs were 96.2% and 96.4% for the three months ended March 31, 2018 and 2017, respectively. The cost of labor procured through staffing agencies is included in these percentages and represents 4.5% and 5.6% of the Clinical Research segment's total direct costs for the three months ended March 31, 2018 and 2017, respectively. Our remaining direct costs are items such as travel, meals, postage and freight, patient costs, medical waste and supplies. The total of all these items as a percentage of the Clinical Research segment's total direct costs were 3.8% and 3.6% for the three months ended March 31, 2018 and 2017, respectively.

For our Data Solutions segment, direct costs consist primarily of data costs. Data costs as a percentage of the Data Solutions segment's total direct costs were 73.6% for the three months ended March 31, 2018. Labor-related charges, such as salaries, benefits and incentive compensation for our employees, were 19.8% of the Data Solutions segment's total direct costs for the three months ended March 31, 2018. Our remaining direct costs are items such as travel, meals, and supplies and were 6.6% of the Data Solutions segment's total direct costs for the three months ended March 31, 2018.

Historically, direct costs have increased with an increase in revenues. The future relationship between direct costs and revenues may vary from historical relationships. Several factors will cause direct costs to decrease as a percentage of revenues. Deployment of our billable staff in an optimally efficient manner has the most impact on our ratio of direct cost to revenue. The most effective deployment of our staff is when they are fully engaged in billable work and are accomplishing contract related activities at a rate that meets or exceeds budgeted targets. We also seek to optimize our efficiency by performing work using the employee with the lowest cost. Generally, the following factors may cause direct costs to increase as a percentage of revenues: our staff are not fully deployed, as is the case when there are unforeseen cancellations or delays, or when our staff are accomplishing tasks at levels of effort that exceed budget, such as rework; as well as pricing pressure from increased competition.

Reimbursable Out-of-Pocket Costs and Reimbursable Investigator Fees

We incur out-of-pocket costs, which are reimbursable by our customers. We include these out-of-pocket costs as reimbursable out-of-pocket expenses in our consolidated condensed statement of operations.

As is customary in our industry, we also routinely enter into separate agreements on behalf of our clients with independent physician investigators in connection with clinical trials. We also receive funds from our clients for investigator fees. We are not obligated either to perform the service or to pay the investigator in the event of default by the client. In addition, we do not pay the independent physician investigator until funds are received from the client. We include these investigator fees as reimbursable investigator fees in our consolidated condensed statement of

operations.

Reimbursable costs and investigator fees are not included in our backlog because they are pass-through costs to our clients.

We believe that the fluctuations in reimbursement costs and the associated revenue are not meaningful to the economic performance given that such costs are passed through to the customer. The reimbursable costs are included in our measure of progress for our long-term contracts.

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Selling, General and Administrative Expenses

Selling, general and administrative expenses consist of administration payroll and benefits, marketing expenditures, and overhead costs such as information technology and facilities costs. These expenses also include central overhead costs that are not directly attributable to our operating business and include certain costs related to insurance, professional fees and property.

Transaction-related Costs

Transaction-related costs for the three months ended March 31, 2018 and 2017, includes the costs associated with earn-out liabilities that are charged to earnings, and includes the change in the fair value of acquisition-related contingent consideration.

Depreciation and Amortization

Depreciation represents the depreciation charged on our fixed assets. The charge is recorded on a straight-line method, based on estimated useful lives of three to seven years for computer hardware and software and five to seven years for furniture and equipment. Leasehold improvements are depreciated over the lesser of the life of the lease term or the useful life of the improvements.

Amortization expense consists of amortization recorded on acquisition-related intangible assets. Customer relationships, backlog and finite-lived trade names are amortized on an accelerated basis, which coincides with the period of economic benefit we expect to receive. All other finite-lived intangibles are amortized on a straight-line basis. In accordance with GAAP, we do not amortize goodwill and indefinite-lived intangible assets.

Income Taxes

Because we conduct operations on a global basis, our effective tax rate has and will continue to depend upon the geographic distribution of our pre tax earnings among several different taxing jurisdictions. Our effective tax rate can also vary based on changes in the tax rates of the different jurisdictions. Our effective tax rate is also impacted by tax credits and the establishment or release of deferred tax asset valuation allowances and tax reserves, as well as significant non deductible items such as portions of transaction related costs.

In addition, our effective income tax rate is influenced by U.S. tax law which has been substantially modified by the U.S. Tax Cuts and Jobs Act. The following provisions of the U.S. Tax Cuts and Jobs Act could have an adverse effect on our tax rate if it is determined that the provisions are applicable to the Company:

- global intangible low-taxed income;
- limitations on the U.S. deductions for net business interest;
- base erosion anti-abuse provisions; and
- performance-based compensation subject to $1 million limit.

Foreign subsidiaries are taxed separately in their respective jurisdictions. We have foreign net operating loss carryforwards in some jurisdictions. The carryforward periods for these losses vary from five years to an indefinite carryforward period depending on the jurisdiction. Our ability to offset future taxable income with the net operating loss carryforwards may be limited in certain instances, including changes in ownership.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the “Act”) was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21%

effective for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a modified territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative untaxed foreign earnings as of December 31, 2017. We have calculated our best estimate of the impact of the Act at the date of enactment and additional measurement period adjustments related to the 2017 transition tax in our quarterly income tax provision in accordance with our understanding of the Act including recently-released guidance available as of the date of this filing. As a result, we have recorded $7.0 million as additional income tax expense in the first quarter of 2018 relating to the impact of adjustments to our December 31, 2017 transition tax provisional amounts. The adjustment to the provisional amount related to opting to offset the one-time transition tax on the mandatory deemed repatriation of untaxed foreign earnings with current losses and prior year net operating losses in lieu of utilizing foreign tax credits. We are continuing to analyze the overall impact of the transition tax inclusion and will update the provisional estimate as we complete our analysis during the

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measurement period. Due to the complexity of the new law, we are still in the process of investigating the related accounting implications. Specifically, for the GILTI tax we intend to make an accounting policy decision around whether to account for GILTI as a period cost in the relevant period, or to record deferred taxes related to the basis in our foreign subsidiaries once additional guidance is available for assessment. Anticipated amounts for GILTI have been included as a component of current tax expense in our first quarter annual effective tax rate calculation. We are currently projecting to be subject to BEAT for 2018. Pursuant to relevant FASB guidance, we have accounted for BEAT as a current expense and recorded U.S. deferred tax assets and liabilities at the regular statutory rate for the period ending March 31, 2018. Adjustments to the provisional amounts recorded or changes as a result of the issuance of additional guidance will be reflected in the period of the adjustment.

Exchange Rate Fluctuations

The majority of our foreign operations transact in the Euro, or EUR, or British pound, or GBP. As a result, our revenue and expenses are subject to exchange rate fluctuations with respect to these currencies. We have translated these currencies into U.S. dollars using the following average exchange rates:

	Three Months Ended March 31,	
	2018	2017
U.S. dollars per:		
Euro	1.23	1.07
British pound	1.39	1.24

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Results of Operations

Consolidated Results of Operations for the Three Months Ended March 31, 2018 Compared to the Three Months Ended March 31, 2017

	Three Months Ended March 31, 2017	Change $ Change	Adoption of ASC 606 [1]	Three Months Ended March 31, 2018
(in thousands)				
Revenue				
Service revenue	$427,080	$132,841	$ —	
Reimbursement revenue - out-of-pocket costs	60,680	15,761	—	
Total revenue	487,760	148,602	65,475	$701,837
Operating expenses				
Direct costs	287,512	93,920	—	381,432
Reimbursable out-of-pocket costs	60,680	15,761	—	76,441
Reimbursable investigator fees	—	—	64,567	64,567
Selling, general and administrative	74,268	17,434	—	91,702
Transaction-related costs	40	(11,618)	—	(11,578)
Depreciation and amortization	15,192	12,147	—	27,339
Loss (gain) on disposal of fixed assets	82	(96)	—	(14)
Income from operations	49,986	21,054	908	71,948
Interest expense, net	(9,527)	(5,298)	—	(14,825)
Foreign currency losses, net	(7,254)	7,171	—	(83)
Other expense, net	(140)	(59)	—	(199)
Income before income taxes and equity in income of unconsolidated joint ventures	33,065	22,868	908	56,841
Provision for income taxes	7,883	9,489	282	17,654
Income before equity in income of unconsolidated joint ventures	25,182	13,379	626	39,187
Equity in income of unconsolidated joint ventures, net of tax	42	(14)	—	28
Net income	25,224	13,365	626	39,215
Net income attributable to noncontrolling interest	—	(234)		(234)
Net income attributable to PRA Health Sciences, Inc.	$25,224	$13,131	$ 626	$38,981

(1) See Note 1, Basis of Presentation, to our consolidated condensed financial statements for information about the adoption of ASC 606.

Revenue increased by $214.1 million, or 43.9%, from $487.8 million during the three months ended March 31, 2017 to $701.8 million during the three months ended March 31, 2018. Revenue for the three months ended March 31, 2018 includes $65.5 million in reimbursable investigator fees and adjustments to revenue as a result of the adoption of ASC 606. Excluding the impact of the adoption of ASC 606 and reimbursement revenue, revenue increased $132.8 million. Revenue for the three months ended March 31, 2018 benefited from an increase in billable hours, an increase in the effective rate of hours billed on our studies, a favorable impact of $11.2 million from foreign currency exchange rate fluctuations, and an increase of $56.8 million due to the acquisition of Symphony Health which was completed on September 6, 2017. The growth in revenue and the increase in billable hours were due largely to the increase in our backlog as we entered the year, the type of services we are providing on our active studies, which was driven by the life cycles of projects that were active during the period, the growth in new business awards as a result of higher demand for our services across the industries we serve, more effective sales efforts and the growth in the overall CRO

market. The increase in our effective rate of the hours billed on our studies is attributable to the contract pricing terms on our current mix of active studies and the mix of clients and services that we provide to those clients.

Direct costs increased by $93.9 million, or 32.7%, from $287.5 million during the three months ended March 31, 2017 to $381.4 million during the three months ended March 31, 2018. Salaries and related benefits in our Clinical Research segment

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increased $50.9 million as we continue to hire billable staff to ensure appropriate staffing levels for our current studies and future growth and an unfavorable impact of $14.0 million from foreign currency exchange rate fluctuations. The addition of our Data Solutions segment resulted in $40.6 million of incremental direct costs during the first quarter of 2018. Excluding the impact of the adoption of ASC 606 and reimbursement revenue, direct costs as a percentage of revenue were 68.1% and 67.3% during the three months ended March 31, 2018 and 2017, respectively. The increase in direct costs as a percentage of revenue was primarily due to the aforementioned increase in salaries and related benefits.

Reimbursable out-of-pocket costs increased by $15.8 million from $60.7 million during the three months ended March 31, 2017 to $76.4 million during the three months ended March 31, 2018. Reimbursable investigator fees were $64.6 million during the three months ended March 31, 2018. Reimbursable investigator fees were recorded on a net basis prior to our adoption of ASC 606, therefore we did not record any reimbursable investigator fees during the three months ended March 31, 2017. We believe that the fluctuations in reimbursable costs from period to period are not meaningful to our underlying performance over the full term of the contract.

Selling, general and administrative expenses increased by $17.4 million, or 23.5%, from $74.3 million during the three months ended March 31, 2017 to $91.7 million during the three months ended March 31, 2018. The increase in selling, general and administrative expenses is primarily due to an increase in salaries and related benefits as we continue to hire staff to support our growing business and increased facility costs related to additional office space needed for our growth. Excluding the impact of the adoption of ASC 606 and reimbursement revenue, selling, general and administrative expenses as a percentage of revenue were 16.4% and 17.4% during the three months ended March 31, 2018 and 2017, respectively. The decrease in selling, general and administrative expenses as a percentage of revenue is primarily related to our continued efforts to effectively leverage our selling and administrative functions.

Transaction-related costs represent changes in the fair value of contingent consideration related to our recent acquisitions. During the three months ended March 31, 2018, we recorded an $11.6 million reduction in the fair value of the earn-out liability associated with the Symphony Health acquisition, which reflects updates to the current estimate.

Depreciation and amortization expense increased by $12.1 million, or 80.0%, from $15.2 million during the three months ended March 31, 2017 to $27.3 million during the three months ended March 31, 2018. The increase in depreciation and amortization expense is primarily due to the continued amortization of our acquired intangibles, which increased as a result of the Symphony Health acquisition in September 2017, and the effect of accelecrated amortization of such assets.

Interest expense, net, increased by $5.3 million, or 55.6%, from $9.5 million during the three months ended March 31, 2017 to $14.8 million during the three months ended March 31, 2018. The $550.0 million incremental borrowing during September 2017 to fund the Symphony Health acquisition contributed to an increase of $4.9 million in interest expense.

Foreign currency losses, net, decreased by $7.2 million from $7.3 million during the three months ended March 31, 2017 to $0.1 million during the three months ended March 31, 2018. Foreign exchange gains and losses are due to fluctuations in the U.S. dollar, gains or losses that arise in connection with the revaluation of short-term inter-company balances between our domestic and international subsidiaries, and gains or losses from foreign currency transactions, such as those resulting from the settlement of third-party accounts receivables and payables denominated in a currency other than the local currency of the entity making the payment. During the three months ended March 31, 2018, foreign currency losses were primarily due to the U.S. dollar weakening against the GBP, EUR, and Russian ruble, or RUB, by 4.0%, 2.8%, and 0.7%, respectively, partially offset by a strengthening against the Canadian dollar, or CAD, and the reclassification of certain intercompany balances that were deemed to be of a

long-term investment nature. During the three months ended March 31, 2017, foreign currency losses were primarily due to the U.S. dollar weakening against the GBP, EUR, CAD, and RUB, by 1.6%, 1.5%, 1.0% and 8.6%, respectively.

Provision for income taxes increased by $9.8 million from $7.9 million during the three months ended March 31, 2017 to $17.7 million during the three months ended March 31, 2018. Our effective tax rate was 23.8% and 31.1% during the three months ended March 31, 2017 and 2018, respectively. The increase in the effective tax rate of 7.3% was primarily attributable to (i) the U.S. inclusion of amounts related to the estimated tax on GILTI, (ii) the U.S. inclusion of the estimated amounts related to BEAT, and (iii) discrete tax items that occurred in the quarter, including $7.0 million of additional income tax expense in the first quarter of 2018 relating to the impact of adjustments to the Company’s December 31, 2017 transition tax provisional amounts, offset by permanent differences and other discrete items.

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Segment Results of Operations for the Three Months Ended March 31, 2018 Compared to the Three Months Ended March 31, 2017

Clinical Research

	Three Months Ended March 31, 2017	Change $ Change	Adoption of ASC 606 (See Note 1)	Three Months Ended March 31, 2018
(in thousands)				
Service revenue	$427,080	$76,078	$ —	
Reimbursement revenue - out-of-pocket costs	60,680	15,761	—	
Total revenue	487,760	91,839	65,475	$645,074
Gross profit	$139,568	$22,745	$ 908	$163,221

Revenue increased by $157.3 million, or 32.3%, from $487.8 million during the three months ended March 31, 2017 to $645.1 million during the three months ended March 31, 2018. Revenue for the three months ended March 31, 2018 includes $65.5 million in reimbursement revenue as a result of the adoption of ASC 606. Excluding the impact of the adoption of ASC 606, revenue increased by $76.1 million. Revenue for the three months ended March 31, 2018 benefited from an increase in billable hours and an increase in the effective rate of hours billed on our studies. The growth in revenue and the increase in billable hours were due largely to the increase in our backlog as we entered the year, the type of services we are providing on our active studies, which was driven by the life cycles of projects that were active during the period, the growth in new business awards as a result of higher demand for our services across the industries we serve, and more effective sales efforts and the growth in the overall CRO market. The increase in our effective rate of the hours billed on our studies is attributable to the contract pricing terms on our current mix of active studies and the mix of clients and services that we provide to those clients.

Gross profit increased by $23.7 million, or 16.3%, from $139.6 million during the three months ended March 31, 2017 to $163.2 million during the three months ended March 31, 2018 primarily due to an increase in revenue. Excluding the impact of the adoption of ASC 606 and reimbursement revenue, gross profit as a percentage of revenue decreased from 32.7% during the three months ended March 31, 2017 to 32.3% for the same period in 2018.

Data Solutions

	Three Months Ended March 31, 2017	Change $ Change	Adoption of ASC 606 (See Note 1)	Three Months Ended March 31, 2018
(in thousands)				
Revenue	$ —	$56,763	$ —	$56,763
Gross profit	—	16,176	—	16,176

The Company acquired Symphony Health on September 6, 2017. The Company recognized $56.8 million of revenue and $40.6 million in direct costs during the three months ended March 31, 2018. See Note 3, Business Combinations, to our consolidated condensed financial statements for information about the acquisition.

Seasonality

Although our business is not generally seasonal, we typically experience a slight decrease in our revenue growth rate during the fourth quarter due to holiday vacations and a similar decrease in new business awards in the first quarter due to our clients' budgetary cycles and vacations during the year-end holiday period.

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Liquidity and Capital Resources

We assess our liquidity in terms of our ability to generate cash to fund our operating, investing and financing activities. Our principal source of liquidity is operating cash flows. As of March 31, 2018, we had approximately $129.9 million of cash and cash equivalents of which $59.7 million was held by our foreign subsidiaries. Our expected primary cash needs on both a short and long-term basis are for capital expenditures, expansion of services, geographic expansion, debt repayments, acquisitions and other strategic transactions, and other general corporate purposes. We have historically funded our operations and growth, including acquisitions, with cash flow from operations, borrowings, and issuances of equity securities. We expect to continue expanding our operations through internal growth and strategic acquisitions and investments. We expect these activities will be funded from existing cash, cash flow from operations and, if necessary or appropriate, borrowings under our existing or future credit facilities. Our sources of liquidity could be affected by our dependence on a small number of industries and clients, compliance with regulations, international risks, and personal injury, environmental or other material litigation claims.

Cash Collections

Cash collections from accounts receivable were $680.9 million during the three months ended March 31, 2018, including $67.1 million of funds received from customers to pay independent physician investigators, or investigators, as compared to $496.4 million during the three months ended March 31, 2017, including $62.7 million of funds received from customers to pay investigators. The increase in cash collections during the three months ended March 31, 2018 is related to our increase in revenue, driven by an increase in new business awards and an increase in our backlog.

Discussion of Cash Flows

Cash Flow from Operating Activities

During the three months ended March 31, 2018, net cash provided by operations was $34.6 million, compared to net cash used in operations of $10.8 million for the same period of 2017. Cash used in operating activities decreased over the prior year primarily due to increased cash flows from our operating performance, as well as a decrease in cash outflows from working capital, offset by the portion of the earn-out payment classified as an outflow from operating activities. The changes in working capital were driven by changes in our accounts receivable, unbilled services and advanced billings accounts, as a result of an improvement in our days sales outstanding as compared to the prior year.

Cash Flow from Investing Activities

Net cash used in investing activities was $14.2 million during the three months ended March 31, 2018, compared to $8.3 million for the same period of 2017. The net cash outflows from capital expenditures increased from $8.0 million during the three months ended March 31, 2017 to $13.8 million during the same period in 2018.

Cash Flow from Financing Activities

Net cash used in financing activities was $84.6 million during the three months ended March 31, 2018 compared to $6.8 million for the same period of 2017. The increase in cash outflows from financing activities is primarily attributable to the portion of the earn-out payment classified as financing activity.

Indebtedness

As of March 31, 2018, we had $1,253.7 million of total indebtedness. Additionally, our senior secured credit agreement provides for a $225.0 million revolving credit facilities. There was $91.5 million drawn on this revolving credit facilities as of March 31, 2018. In addition, at March 31, 2018, we had $5.5 million in letters of credit outstanding, which are secured by the revolving credit facilities. Our long-term debt arrangements contain usual and customary restrictive covenants, and, as of March 31, 2018, we were in compliance with these covenants.

See Note 8 to our consolidated condensed financial statements included in this report, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations— Liquidity and Capital Resources” and Note 9 to our audited consolidated financial statements, each included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, for additional details regarding our credit arrangements.

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Contractual Obligations and Commercial Commitments

We have various contractual obligations, which are recorded as liabilities in our consolidated condensed financial statements. Other items, such as operating lease obligations, are not recognized as liabilities in our consolidated condensed financial statements but are required to be disclosed.

There have been no material changes, outside of the ordinary course of business, to our contractual obligations as previously disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Critical Accounting Policies and Estimates

Other than the accounting policy changes noted in Note 2, Significant Accounting Policies Update, of the consolidated condensed financial statements in the Form 10-Q for the period ended March 31, 2018, there have been no material changes to our critical accounting policies as previously disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Disclosure 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. In addition to historical consolidated condensed financial information, this Quarterly Report on Form 10-Q contains forward-looking statements that reflect, among other things, our current expectations and anticipated results of operations, all of which are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements, market trends, or industry results to differ materially from those expressed or implied by such forward-looking statements. For this purpose, any statements contained herein that are not statements of historical fact may constitute forward-looking statements. Without limiting the foregoing, words such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “may,” “plans,” “projects,” “should,” “will” and the negative thereof and similar words and expressions are intended to identify forward-looking statements. Unless legally required, we assume no obligation to update any such forward-looking information to reflect actual results or changes in the factors affecting such forward-looking information.

We caution you that actual results may differ materially from our expectations due to a number of factors, including, that most of our contracts may be terminated on short notice, and we may be unable to maintain large customer contracts or to enter into new contracts; we may underprice our contracts, overrun our cost estimates or fail to receive approval or experience delays in documenting change orders; the historical indications of the relationship of our backlog to revenues may not be indicative of their future relationship; if we are unable to achieve operating efficiencies or grow revenues faster than expenses, operating margins will be adversely affected; if we are unable to attract investigators and patients for our clinical trials our clinical development business may suffer; we could be subject to employment liability with our embedded and functional outsourcing solutions as we place employees at the physical workplaces of our clients; we may be unable to recruit experienced personnel; changes in accounting standards may adversely affect our financial statements; our effective income tax rate may fluctuate which may adversely affect our operations, earnings, and earnings per share; we may be unable to maintain information systems or effectively update them; customer or therapeutic concentration could harm our business; our business is subject to risks associated with international operations, including economic, political and other risks, such as compliance with a myriad of laws and regulations, complications from conducting clinical trials in multiple countries simultaneously and changes in exchange rates; due to the global nature of our business, we may be exposed to liabilities under the Foreign Corrupt Practices Act and other similar non-U.S. laws; we may be unable to successfully develop and market new services or enter new markets; our failure to perform services in accordance with contractual requirements, regulatory standards and ethical considerations may subject us to significant costs or liability, damage our reputation and cause us to lose existing business or not receive new business; government regulators or customers may limit the scope of

prescription or withdraw products from the market, and government regulators may impose new regulations affecting the biopharmaceutical industry and our business; our services are related to treatment of human patients, and we could face liability if a patient is harmed; our insurance may not cover all of our indemnification obligations and other liabilities; we are subject to a number of additional risks associated with doing business outside of the United States, including foreign currency exchange fluctuations and restrictive regulations, as well as the risks and uncertainties associated with the United Kingdom's expected withdrawal from the European Union; if we do not keep pace with rapid technological changes, our services may become less competitive or obsolete; our relationships with existing or potential clients who are in competition with each other may adversely impact the degree to which other clients or potential clients use our services; we may be unable to successfully identify, acquire and integrate businesses, services and technologies; our balance sheet includes a significant amount of goodwill and intangible assets and our results of operations may be adversely affected if we fail to realize the full value of our goodwill and intangible assets; our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited; if we are unable to manage our growth effectively

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our business could be harmed; the Company's reliance on third parties for data, products, services and intellectual property licenses; the biopharmaceutical services industry is fragmented and highly competitive; biopharmaceutical industry outsourcing trends could change and adversely affect our operations and growth rate; current and proposed laws and regulations regarding the protection of personal data could result in increased risks of liability or increased cost or could limit our service offerings; patent and other intellectual property litigation; circumstances beyond our control could cause industry-wide reduction in demand for our services; we have substantial indebtedness and may incur additional indebtedness in the future, which could adversely affect our financial condition; and other factors that are set forth in our filings with the Securities and Exchange Commission, including our most recent Annual Report on Form 10-K filed on February 22, 2018 and this Quarterly Report on Form 10-Q.

Website and Social Media Disclosure

We use our website (www.prahs.com) as channel of distribution of company information. The information we post through this channel may be deemed material. Accordingly, investors should monitor this channel, in addition to following our press releases, Securities and Exchange Commission, or SEC, filings and public conference calls and webcasts. The contents of our website are not, however, a part of this report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to our quantitative and qualitative disclosures about market risk as compared to the quantitative and qualitative disclosures about market risk described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Item 4. Controls and Procedures

As of March 31, 2018, we carried out an evaluation under the supervision and with the participation of our management, including the principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Regulations under the Exchange Act require public companies, including us, to maintain “disclosure controls and procedures,” which are defined in Rule 13a-15(e) and Rule 15d-15(e) of the Exchange Act to mean a company’s controls and other procedures that are designed to ensure that information required to be disclosed in reports that it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms and that such information is accumulated and communicated to management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required or necessary disclosures. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. In accordance with the SEC’s published guidance, the internal control over financial reporting of Symphony Health Solutions Corporation, or Symphony Health, which was acquired on September 6, 2017 was excluded from our evaluation of the effectiveness of our disclosure controls and procedures as of March 31, 2018. Symphony Health, excluding acquired goodwill and intangible assets, represented 5% of our consolidated total assets and 8% of our consolidated revenue as of and for the quarter ended March 31, 2018. See a discussion of this acquisition in Note 3, Business Combinations, of the Notes to the Consolidated Condensed Financial Statements contained in Item 1 of this Quarterly Report on Form 10-Q. Based upon our evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective to accomplish their objective at a reasonable assurance level.

There were no changes in our internal control over financial reporting (as that term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended March 31, 2018 that have materially affected, or are

reasonably likely to materially affect, our internal control over financial reporting. We are in the process of reviewing the internal control structure of Symphony Health, if necessary, will make appropriate changes as we integrate Symphony Health into our overall internal control over financial reporting process.

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PART II—OTHER INFORMATION

Item 1. Legal Proceedings

The information required with respect to this item can be found under “Commitments and Contingencies” in Note 12 to our consolidated condensed financial statements included elsewhere in this Form 10-Q and is incorporated by reference into this Item 1.

Item 1A. Risk Factors

For a discussion of our potential risks and uncertainties, see the information under the heading “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, or Annual Report. There have been no significant changes from the risk factors previously disclosed in our Annual Report.

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

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

Exhibit Number	Description of Exhibit
31.1*	Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	The following financial information from PRA Health Sciences, Inc.’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 formatted in XBRL: (i) Consolidated Condensed Balance Sheets as of

March 31, 2018 and December 31, 2017, (ii) Consolidated Condensed Statements of Operations for the three months ended March 31. 2018 and 2017, (iii) Consolidated Condensed Statements of Comprehensive Income for the three months ended March 31, 2018 and 2017, (iv) Consolidated Condensed Statements of Cash Flows for the three months ended March 31, 2018 and 2017, and (v) Notes to Consolidated Condensed Financial Statements.

* Filed herewith

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SIGNATURES

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

PRA HEALTH SCIENCES, INC.

/s/ Linda Baddour
Linda Baddour
Executive Vice President and Chief Financial Officer
(Authorized Signatory)

Date: April 26, 2018