

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

FORM 10-Q

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

For the quarterly period ended September 30, 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 000-50194



HMS HOLDINGS CORP.

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

11-3656261

(I.R.S. Employer Identification No.)

5615 High Point Drive, Irving, TX

(Address of principal executive offices)

75038

(Zip Code)

(214) 453-3000

(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 No

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

As of November 2, 2018, there were approximately 83,907,132 shares of the registrant's common stock (par value \$0.01 per share) outstanding.



HMS HOLDINGS CORP. AND SUBSIDIARIES
QUARTERLY REPORT ON FORM 10-Q
FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2018
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Glossary of Terms and Abbreviations

Form 10-Q	HMS Holdings Corp. Quarterly Report on Form 10-Q For the Quarterly Period Ended September 30, 2018
2017 Form 10-K	HMS Holdings Corp. Annual Report on Form 10-K for the year ended December 31, 2017
ACA	Patient Protections and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act
ACO	Accountable Care Organization
ADR	Additional Documentation Request
ASC	Accounting Standards Codification
ASO	Administrative Service Only
ASU	Accounting Standards Update
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare & Medicaid Services
CMS NHE	CMS National Health Expenditures
COSO	Committee of Sponsoring Organizations of the Treadway Commission
Credit Agreement	The Amended and Restated Credit Agreement dated as of May 3, 2013, as amended by Amendment No. 1 to Amended and Restated Credit Agreement dated as of March 8, 2017, and as further amended by Amendment No. 2 to Amended and Restated Credit Agreement, dated as of December 19, 2017, by and among HMS Holdings Corp. the Guarantors party thereto, the Lenders party thereto and Citibank, N.A. as Administrative Agent
DRA	Deficit Reduction Act of 2005
DSO	Days Sales Outstanding
ERISA	Employment Retirement Income Security Act of 1974
Exchange Act	Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
HIPAA	Health Insurance Portability and Accountability Act of 1996
HITECH	Health Information Technology for Economic and Clinical Health Act
IRC	Internal Revenue Code
IRS	U.S Internal Revenue Service
LIBO Rate	Intercontinental Exchange London Interbank Offered Rate
MCO	Managed care organization
MMIS	Medicaid Management Information Systems
PBM	Pharmacy Benefit Manager
PHI	Protected health information
PI	Payment Integrity
PMPM	Per Member Per Month
PMPY	Per Member Per Year
R&D Credit	U.S. Research and Experimentation Tax Credit pursuant to IRC Section 41
RAC	Recovery Audit Contractor
RFP	Request for proposal
SEC	U.S. Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
Section 199 Deduction	U.S. Production Activities Deduction pursuant to IRC Section 199
SG&A	Selling, general and administrative
TPL	Third-party liability
U.S. GAAP	United States Generally Accepted Accounting Principles
VHA	Veterans Health Administration
2006 Stock Plan	HMS Holdings Corp. Fourth Amended and Restated 2006 Stock Plan, as amended by Amendment No. 1 to the HMS Holdings Corp. Fourth Amended and Restated 2006 Stock Plan dated as of February 16, 2017
2016 Omnibus Plan	HMS Holdings Corp. 2016 Omnibus Incentive Plan
2017 Tax Act	Tax Cuts and Jobs Act of 2017
401(k) Plan	HMS Holdings Corp. 401(k) Plan

Cautionary Note Regarding Forward-Looking Statements

For purposes of this Form 10-Q, the terms “HMS,” “Company,” “we,” “us,” and “our” refer to HMS Holdings Corp. and its consolidated subsidiaries unless the context clearly indicates otherwise. Included in this Form 10-Q are “forward-looking statements” within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. From time to time, we also provide forward-looking statements in other materials we release to the public, as well as oral forward-looking statements. Such statements relate to our current expectations, projections and assumptions about our business, the economy and future events or conditions. They do not relate strictly to historical or current facts.

We have tried to identify forward-looking statements by using words such as “aim,” “anticipate,” “believe,” “estimate,” “expect,” “forecast,” “future,” “intend,” “likely,” “may,” “plan,” “project,” “seek,” “strategy,” “target,” “will,” “would,” “could,” “should,” and similar expressions and references to guidance, although some forward-looking statements may be expressed differently. These statements include, among other things, information concerning our future growth, business strategy, strategic or operational initiatives, our future operating or financial performance, our ability to invest in and utilize our data and analytics capabilities to expand our solutions and services, the benefits and synergies to be obtained from completed and future acquisitions, the future performance of companies we have acquired, the future effect of different accounting determinations or remediation activities, the sufficiency of our sources of funding for working capital, capital expenditures, acquisitions, stock repurchases, debt repayments and other matters, our future expenses, interest rates, effective tax rates and financial results, the impact of changes to U.S. healthcare legislation or healthcare spending affecting Medicare, Medicaid or other publicly funded or subsidized health programs, and other statements regarding our possible future actions, business plans, objectives and prospects.

Forward-looking statements are not guarantees and involve risks, uncertainties and assumptions that are difficult to predict. Actual results may differ materially from past results and forward-looking statements if known or unknown risks or uncertainties materialize, or if underlying assumptions prove inaccurate. These risks and uncertainties include, among other things:

- our ability to execute our business plans or growth strategy;
- our ability to innovate, develop or implement new or enhanced solutions or services;
- the nature of investment and acquisition opportunities we are pursuing, and the successful execution of such investments and acquisitions;
- our ability to successfully integrate acquired businesses and realize synergies;
- variations in our results of operations;
- our ability to accurately forecast the revenue under our contracts and solutions;
- our ability to protect our systems from damage, interruption or breach, and to maintain effective information and technology systems and networks;
- our ability to protect our intellectual property rights, proprietary technology, information processes and know-how;
- significant competition relating to our solutions and services;
- our failure to maintain a high level of customer retention or the unexpected reduction in scope or termination of key contracts with major customers;
- customer dissatisfaction or our non-compliance with contractual provisions or regulatory requirements;
- our failure to meet performance standards triggering significant costs or liabilities under our contracts;
- our inability to manage our relationships with information and data sources and suppliers;
- our reliance on subcontractors and other third party providers and parties to perform services;
- our ability to continue to secure contracts and favorable contract terms through the competitive bidding process;
- pending or threatened litigation;
- unfavorable outcomes in legal proceedings;
- our success in attracting and retaining qualified employees and members of our management team;
- our ability to generate sufficient cash to cover our interest and principal payments under our credit facility, or to borrow or use credit;

- unexpected changes in tax laws, regulations or guidance and unexpected changes in our effective tax rate;
- unanticipated increases in the number or amount of claims for which we are self-insured;
- our ability to develop, implement and maintain effective internal control over financial reporting;
- changes in the U.S. healthcare environment or healthcare financing system, including regulatory, budgetary or political actions that affect healthcare spending or the practices and operations of healthcare organizations;
- our failure to comply with applicable laws and regulations governing individual privacy and information security or to protect such information from theft and misuse;
- our ability to comply with current and future legal and regulatory requirements;
- negative results of government or customer reviews, audits or investigations;
- state or federal limitations related to outsourcing of certain government programs or functions;
- restrictions on bidding or performing certain work due to perceived conflicts of interests;
- the market price of our common stock and lack of dividend payments; and
- anti-takeover provisions in our corporate governance documents.

These and other risks are discussed under the headings “Part I, Item 1. Business,” “Part I, Item 1A, Risk Factors,” “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk,” of our 2017 Form 10-K and in other documents we file with the SEC.

Any forward-looking statements made by us in this Form 10-Q speak only as of the date on which they are made. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by law. We caution readers not to place undue reliance upon any of these forward-looking statements. You are advised, however, to consult any further disclosures we make on related subjects in our Form 10-K, Form 10-Q and Form 8-K reports and our other filings with the SEC.

Market and Industry Data

This Form 10-Q contains market, industry and government data and forecasts that have been obtained from publicly available information, various industry publications and other published industry sources. We have not independently verified the information and cannot make any representation as to the accuracy or completeness of such information. None of the reports and other materials of third party sources referred to in this Form 10-Q were prepared for use in, or in connection with, this report.

Trademarks and Tradenames

We have a number of registered trademarks, including HMS[®], as well as the corresponding HMS + logo design mark, HMS IntegritySource[®], Eliza[®] and Essette[®]. These and other trademarks of ours appearing in this report are our property. Solely for convenience, trademarks and trade names of ours referred to in this Form 10-Q may appear without the [®] or [™] symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks and trade names. This report contains additional trade names and trademarks of other companies. We do not intend our use or display of other companies’ trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	September 30, 2018	December 31, 2017
Assets	(unaudited)	
Current assets:		
Cash and cash equivalents	\$ 124,297	\$ 83,313
Accounts receivable, net of allowance of \$16,239 and \$14,799, at September 30, 2018 and December 31, 2017, respectively	202,498	189,460
Prepaid expenses	16,826	16,589
Income tax receivable	4,597	1,892
Deferred financing costs, net	564	564
Other current assets	314	836
Total current assets	349,096	292,654
Property and equipment, net	93,145	98,581
Goodwill	487,617	487,617
Intangible assets, net	72,593	91,482
Deferred financing costs, net	1,814	2,237
Other assets	2,655	2,589
Total assets	\$ 1,006,920	\$ 975,160
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable, accrued expenses and other liabilities	\$ 64,295	\$ 61,900
Estimated liability for appeals	22,184	30,787
Total current liabilities	86,479	92,687
Long-term liabilities:		
Revolving credit facility	240,000	240,000
Net deferred tax liabilities	14,407	21,989
Deferred rent	4,329	4,852
Other liabilities	9,925	9,403
Total long-term liabilities	268,661	276,244
Total liabilities	355,140	368,931
Commitments and contingencies		
Shareholders' equity:		
Preferred stock -- \$0.01 par value; 5,000,000 shares authorized; none issued	—	—
Common stock -- \$0.01 par value; 175,000,000 shares authorized; 97,588,656 shares issued and 83,925,462 shares outstanding at September 30, 2018; 96,536,251 shares issued and 83,256,858 shares outstanding at December 31, 2017	975	965
Capital in excess of par value	397,192	368,721
Retained earnings	389,189	366,164
Treasury stock, at cost: 13,663,194 shares at September 30, 2018 and 13,279,393 shares at December 31, 2017	(135,576)	(129,621)
Total shareholders' equity	651,780	606,229
Total liabilities and shareholders' equity	\$ 1,006,920	\$ 975,160

See accompanying notes to the unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenue	\$ 154,246	\$ 125,673	\$ 442,462	\$ 372,719
Cost of services:				
Compensation	58,188	49,012	169,455	149,784
Information technology	12,979	12,067	39,482	33,131
Occupancy	3,500	4,332	11,897	12,109
Direct project expenses	10,661	9,548	31,652	30,092
Other operating expenses	8,567	7,446	22,183	21,212
Amortization of acquisition related software and intangible assets	7,942	8,167	25,695	21,825
Total cost of services	101,837	90,572	300,364	268,153
Selling, general and administrative expenses	28,178	22,240	86,708	73,400
Settlement expense	-	-	20,000	-
Total operating expenses	130,015	112,812	407,072	341,553
Operating income	24,231	12,861	35,390	31,166
Interest expense	(2,880)	(3,109)	(8,562)	(7,734)
Interest income	292	14	600	201
Income before income taxes	21,643	9,766	27,428	23,633
Income taxes	3,069	3,394	5,830	9,302
Net Income	\$ 18,574	\$ 6,372	\$ 21,598	\$ 14,331
Basic income per common share:				
Net income per common share -- basic	\$ 0.22	\$ 0.08	\$ 0.26	\$ 0.17
Diluted income per common share:				
Net income per common share -- diluted	\$ 0.22	\$ 0.07	\$ 0.25	\$ 0.17
Weighted average shares:				
Basic	83,509	83,923	83,373	83,778
Diluted	85,144	85,730	85,241	85,586

See accompanying notes to the unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF
SHAREHOLDERS' EQUITY
(in thousands, except share amounts)
(unaudited)

	<u>Common Stock</u>			Retained Earnings	<u>Treasury Stock</u>		Total Shareholders' Equity
	<u># of Shares Issued</u>	<u>Par Value</u>	<u>Capital in Excess of Par Value</u>		<u># of Shares</u>	<u>Amount</u>	
Balance at December 31, 2017	96,536,251	\$ 965	\$ 368,721	\$ 366,164	13,279,393	\$(129,621)	\$ 606,229
Adoption of accounting standard (Note 1 and 3)	-	-	-	1,427	-	-	1,427
Net income	-	-	-	21,598	-	-	21,598
Stock-based compensation expense	-	-	17,645	-	-	-	17,645
Purchase of treasury stock	-	-	-	-	383,801	(5,955)	(5,955)
Exercise of stock options	685,812	7	13,626	-	-	-	13,633
Vesting of restricted stock units, net of shares withheld for employee tax	366,593	3	(2,800)	-	-	-	(2,797)
Balance at September 30, 2018	97,588,656	\$ 975	\$ 397,192	\$ 389,189	13,663,194	\$(135,576)	\$ 651,780

See accompanying notes to the unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2018	2017
Operating activities:		
Net income	\$ 21,598	\$ 14,331
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization of property, equipment and software	24,331	20,599
Amortization of intangible assets	18,889	15,947
Amortization of deferred financing costs	423	1,563
Stock-based compensation expense	17,645	16,761
Deferred income taxes	(7,582)	(726)
Change in fair value of contingent consideration	(35)	(2,450)
Release of estimated liability for appeals	(8,436)	-
Changes in operating assets and liabilities:		
Accounts receivable	(13,038)	5,630
Prepaid expenses	(237)	757
Other current assets	522	712
Other assets	(66)	163
Income taxes receivable / (payable)	(2,705)	(2,731)
Accounts payable, accrued expenses and other liabilities	4,394	(15,457)
Estimated liability for appeals	(167)	(1)
Net cash provided by operating activities	55,536	55,098
Investing activities:		
Acquisition of a business, net of cash acquired	-	(171,174)
Purchases of property and equipment	(4,333)	(11,656)
Investment in capitalized software	(15,100)	(10,664)
Net cash used in investing activities	(19,433)	(193,494)
Financing activities:		
Proceeds from exercise of stock options	13,633	2,580
Payments of tax withholdings on behalf of employees for net-share settlement for stock-based compensation	(2,797)	(2,898)
Payments on capital lease obligations	-	(5)
Proceeds from credit facility	-	42,204
Purchases of treasury stock	(5,955)	-
Net cash provided by financing activities	4,881	41,881
Net increase (decrease) in cash and cash equivalents	40,984	(96,515)
Cash and Cash Equivalents		
Cash and cash equivalents at beginning of year	83,313	175,999
Cash and cash equivalents at end of period	\$ 124,297	\$ 79,484
Supplemental disclosure of cash flow information:		
Cash paid for income taxes, net of refunds	\$ 15,501	\$ 12,317
Cash paid for interest	\$ 7,769	\$ 5,819
Supplemental disclosure of non-cash activities:		
Change in balance of accrued property and equipment purchases	\$ 538	\$ (414)

See accompanying notes to the unaudited consolidated financial statements.

HMS HOLDINGS CORP. AND SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2018 and 2017
(unaudited)

1. Business and Summary of Significant Accounting Policies

(a) Business

HMS is a leading provider of cost containment solutions in the U.S. healthcare marketplace. We use innovative technology, extensive data services and powerful analytics to deliver coordination of benefits, payment integrity and care management and consumer engagement solutions to help healthcare payers improve financial performance and clinical outcomes. We provide coordination of benefits services to government and commercial healthcare payers and sponsors to ensure that the responsible party pays healthcare claims. Our payment integrity services ensure healthcare claims billed are accurate and appropriate, and our care management and consumer engagement technology helps risk-bearing organizations to better engage with and manage the care delivered to their members. Together these various services help customers recover erroneously paid amounts from liable third parties; prevent future improper payments; reduce fraud, waste and abuse; better manage the care their members receive; engage healthcare consumers to improve clinical outcomes while increasing member satisfaction and retention; and achieve regulatory compliance. We currently operate as one business segment with a single management team that reports to our Chief Executive Officer.

The accompanying consolidated financial statements and notes are unaudited. Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. These statements include all adjustments (which include only normal recurring adjustments, except as disclosed) that management considers necessary to present a fair statement of the Company's results of operations, financial position and cash flows. The results reported in these unaudited consolidated financial statements should not be regarded as necessarily indicative of results that may be expected for the entire year. It is suggested that these unaudited consolidated financial statements be read in conjunction with the Company's consolidated financial statements as of and for the year ended December 31, 2017 which were filed with the SEC as part of the 2017 Form 10-K. The consolidated balance sheet as of December 31, 2017 included herein was derived from audited financial statements, but does not include all disclosures required by U.S. GAAP.

The preparation of the Company's unaudited consolidated financial statements requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, primarily accounts receivable, intangible assets, fixed assets, accrued expenses, estimated liability for appeals, the disclosure of contingent liabilities at the date of the unaudited consolidated financial statements and the reported amounts of revenue and expenses during the reporting periods. The Company's actual results could differ from those estimates.

These unaudited consolidated financial statements include HMS accounts and transactions and those of the Company's wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

(b) Summary of Significant Accounting Policies

There have been no material changes to the Company's significant accounting policies that are referenced in the 2017 Form 10-K other than as described below with respect to revenue recognition.

Recently Adopted Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* (Topic 606) (“ASU 2014-09”), which is the new comprehensive revenue recognition standard that supersedes all existing revenue recognition guidance under U.S. GAAP. The Company adopted ASU 2014-09 on January 1, 2018 using the modified retrospective method and the Company recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the opening balance of retained earnings. The financial information for comparative prior periods has not been restated and continues to be reported under the accounting standards in effect for those periods. The effect of adopting ASU 2014-09 in the current annual reporting period as compared with the guidance that was in effect before the change is immaterial. The Company’s internal control framework did not materially change, but existing internal controls were modified due to certain changes to business processes and systems to support the new revenue recognition standard as necessary. The Company continues to expect the impact of the adoption of the new standard to be immaterial to its net income and its internal control framework on an ongoing basis.

In August 2016, the FASB issued ASU No. 2016-15, *Statements of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”). ASU 2016-15 clarifies where certain cash receipts and cash payments are presented and classified in the statement of cash flows. The amendments are effective for annual reporting periods beginning after December 15, 2017, and for interim reporting periods within such annual periods. The Company adopted this guidance on January 1, 2018. The adoption of this guidance did not have an effect on the Company’s consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-01, *Business Combinations (Topic 805) – Clarifying the Definition of a Business* (“ASU 2017-01”). ASU 2017-01 finalizes previous proposals regarding shareholder concerns that the definition of a business is applied too broadly. The guidance assists entities with evaluating whether transactions should be accounted for as acquisitions of assets or of businesses. The amendments are effective for annual periods beginning after December 15, 2017, including interim periods within those periods. The Company adopted this guidance on January 1, 2018. The adoption of this guidance did not have a material effect on the Company’s consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation – Stock Compensation (Topic 718) – Scope of Modification Accounting*, (“ASU 2017-09”). ASU 2017-09 requires entities to apply modification accounting to changes made to a share-based payment award. The new guidance specifies that entities will apply modification accounting to changes to a share-based payment award only if any of the following are not the same immediately before and after the change: 1) The award’s fair value (or calculated value or intrinsic value, if those measurement methods are used), 2) the award’s vesting conditions, and 3) the award’s classification as an equity or liability instrument. ASU 2017-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within such annual periods, with early adoption permitted. The Company adopted this guidance on January 1, 2018. The adoption of this guidance did not have a material effect on the Company’s consolidated financial statements.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* (“ASU 2016-02”). ASU 2016-02 will require most lessees to recognize a majority of the company’s leases on the balance sheet, which will increase reported assets and liabilities. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018 including interim periods within such annual reporting periods with early adoption permitted. The Company has not early adopted this guidance. The Company developed a preliminary implementation plan and has reviewed historical lease agreements in order to quantify the impact of adoption. Based upon the Company’s on-going analysis to date, the Company currently expects that there will be a material increase to total assets and total liabilities on the Company’s consolidated balance sheet upon adoption; however, the Company continues to perform the necessary additional reviews and other implementation considerations in order to appropriately quantify the changes. The Company has elected to use the FASB’s optional transition method. The Company expects to complete the on-going analysis and quantification by the end of the fourth quarter of 2018.

In January 2017, the FASB issued ASU No. 2017-04, *Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* ("ASU 2017-04"). This amendment simplifies the manner in which an entity is required to test for goodwill impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. The amendment simplifies this approach by having the entity (1) perform its annual or interim goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and (2) recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, with the understanding that the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. The amendment is effective for public entities that are SEC filers prospectively for their annual, or any interim, goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for all entities for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The Company is currently evaluating the impact on the Company's financial statements of adopting this guidance but this guidance is not expected to have a material impact on the Company's financial position, results of operations or internal control framework.

In June 2018, the FASB issued ASU No. 2018-07, *Compensation – Stock Compensation (Topic 718) – Improvements to Nonemployee Share-Based Payment Accounting*, ("ASU 2018-07"). ASU 2018-07 requires entities to apply similar accounting for share-based payment transactions with non-employees as with share-based payment transactions with employees. ASU 2018-07 is effective for public entities for fiscal year beginning after December 15, 2018, including interim periods within that fiscal year. Early adoption is permitted. The Company is currently evaluating the impact on the Company's financial statements of adopting this guidance but this guidance is not expected to have a material impact on the Company's financial position, results of operations or internal control framework.

On August 17, 2018 the SEC issued SEC Final Rule Release No. 33-10532, *Disclosure Update and Simplification* ("Final Rule"). The final rule amends certain disclosure requirements to facilitate the disclosure of information to investors and simplify compliance without significantly altering the total mix of information provided to investors. The final rule is effective for public entities that are SEC filers on November 5, 2018. The Company is currently evaluating the impact of adopting this guidance but this guidance is not expected to have a material impact on the Company's disclosures.

2. Fair Value of Financial Instruments

Financial instruments (principally cash and cash equivalents, accounts receivable, accounts payable and accrued expenses) are carried at cost, which approximates fair value due to the short-term maturity of these instruments. The Company's long-term credit facility is carried at cost, which, due to the variable interest rate associated with the revolving credit facility, approximates its fair value. The Company has no Level 1 or Level 2 financial instruments and there were no transfers between Level 1 or Level 2 financial instruments. The Company's contingent consideration liability of \$35,000 at June 30, 2018 was reduced to zero at September 30, 2018 and is included in Other liabilities on the unaudited Consolidated Balance Sheets. The liability is valued using a Monte Carlo simulation and includes unobservable inputs such as expected levels of revenues and discount rates. Changes in the unobservable inputs of this instrument could result in a significant change in the fair value measurement.

3. Revenue Recognition

The Company's revenue disaggregated by product for the three and nine months ended September 30 is as follows (*in thousands*):

	Three Months Ended September 30		Nine Months Ended September 30	
	2018	2017	2018	2017
Coordination of benefits	\$ 105,694	\$ 90,073	\$ 298,201	\$ 277,018
Analytical services	48,552	35,600	144,261	95,701
Total	\$ 154,246	\$ 125,673	\$ 442,462	\$ 372,719

Coordination of benefits

Coordination of benefits revenue is derived from contracts with state governments and Medicaid managed care plans that typically span 3 to 5 years with the option to renew. Types of service contracts could include: (a) the identification of erroneously paid claims; (b) the delivery of verified commercial insurance coverage information; (c) the identification of paid claims where another third party is liable; and (d) the identification and enrollment of Medicaid members who have access to affordable employer insurance. Most of these types of service contracts contain multiple promises, all of which are not distinct within the context of the contract. Therefore, the promises represent a single, distinct performance obligation for the types of services we offer. Revenue derived from these performance obligations is largely based on variable consideration where, based on the number of claims or amount of findings the Company identified, a contingent or fixed transaction price/recovery percentage is allocated to each distinct performance obligation. The Company utilizes the expected value method to estimate the variable consideration related to the transaction price for its service contracts. Key inputs and assumptions in determining variable consideration includes identified pricing and expected recoveries and/or savings. The expected recoveries and/or savings are based on historical experience of information received from our customers. Revenue is recognized at a point in time when our customers realize economic benefits from our services when our services are completed. Generally, coordination of benefit contract payment terms are not standardized within the respective contract; however, payment is typically due on demand and there is a clear and distinct history of customers making consistent payments.

Analytical services

The Company's analytical services revenue consists mostly of payment integrity services but also care management and consumer engagement services.

Payment integrity services revenue is derived from contracts with federal and state governments, commercial health plans and other at-risk entities that can span several years with the option to renew. Types of service contracts could include: (a) services designed to ensure that healthcare payments are accurate and appropriate; and (b) the identification of over/(under)payments or inaccurate charges based on a review of medical records. Most of these types of service contracts contain multiple promises, all of which are not distinct within the context of the contract. Therefore, the promises represent a single, distinct performance obligation for the types of services we offer. Revenue derived from these performance obligations is largely based on variable consideration where, based on the number of claims or amount of findings the Company identified, a contingent or fixed transaction price/recovery percentage is allocated to each distinct performance obligation. The Company utilizes the expected value method to estimate the variable consideration related to the transaction price for its service contracts. Key inputs and assumptions in determining variable consideration includes identified pricing and expected recoveries and/or savings. The expected recoveries and/or savings are based on historical experience of information received from our customers. Revenue is recognized at a point in time when our customers realize economic benefits from our services when our services are completed. Generally, payment integrity contract payment terms are not standardized within the respective contract; however, payment is typically due on demand and there is a clear and distinct history of customers making consistent payments.

Care management and consumer engagement services revenue is derived from contracts with health plans and other risk-bearing entities that can span several years with the option to renew. Types of service contracts could include: (a) programs designed to improve member engagement; and (b) outreach services designed to improve clinical outcomes. Most of these types of service contracts contain multiple promises, all of which are not distinct within the context of the contract. Therefore, the promises represent a single, distinct performance obligation for the types of services we offer. Revenue derived from these services is largely based on consideration associated with prices per order/transfer and PMPM/PMPY fees. The Company believes the output method is a reasonable measure of progress for the satisfaction of our performance obligations, which are satisfied over time, as it provides a faithful depiction of (1) our performance toward complete satisfaction of the performance obligation under the contract and (2) the value transferred to the customer of the services performed under the contract. The Company has elected the right to invoice practical expedient for recognition of revenue related to its performance obligations. Additionally, certain care management and consumer engagement services contracts have distinct performance obligations related to software license and implementation fees which have historically been recognized as revenue ratably over the life of the contract. However, upon adoption of ASC 606, revenue for software licenses is recognized at the beginning of the license period when control is transferred as the license is installed and revenue for implementation fees is recognized when control is transferred over time as the implementation is being performed. As the performance obligation is deemed to have been satisfied and control transferred to our customers for software licenses and implementation fees on or before December 31, 2017, the Company recorded a decrease to deferred revenue and an increase to opening retained earnings of \$1.4 million as of January 1, 2018 for the cumulative impact of adopting ASC 606. A portion of the Company's care management and consumer engagement services are deferred and revenue is recognized over time. Deferred revenue of this nature was approximately \$5.2 million and \$6.4 million as of September 30, 2018 and December 31, 2017, respectively, and is included in Accounts payable, accrued expenses and other liabilities in the Consolidated Balance Sheets. Generally, care management and consumer engagement contract payment terms are stated within the contract and are due within an explicitly stated time period (e.g., 30, 45, 60 days) from the date of invoice.

Contract modifications are routine in nature and often done to account for changes in the contract specifications or requirements. In most instances, contract modifications are for services that are not distinct, and, therefore, modifications are accounted for as part of the existing contract.

4. Accounts Receivable and Accounts Receivable Allowance

The Company's accounts receivable, net, consisted of the following (*in thousands*):

	September 30, 2018	December 31, 2017
Accounts receivable	\$ 218,737	\$ 204,259
Allowance	(16,239)	(14,799)
Accounts receivable, net	\$ 202,498	\$ 189,460

We record an accounts receivable allowance based on historical patterns of billing adjustments, length of operating and collection cycle and customer negotiations, behaviors and payment patterns. Changes in these estimates are recorded to revenue in the period of change. A summary of the activity in the accounts receivable allowance was as follows (*in thousands*):

	September 30, 2018	December 31, 2017
Balance—beginning of period	\$ 14,799	\$ 10,772
Provision	16,107	20,233
Charge-offs	(14,667)	(16,206)
Balance—end of period	\$ 16,239	\$ 14,799

5. Acquisition

On April 17, 2017, the Company completed the acquisition of 100% of the outstanding capital stock of Eliza Holding Corp. (“Eliza”), for a preliminary purchase price of \$171.6 million funded with available liquidity of approximately 75% cash on hand and 25% from the Company’s existing credit line.

The allocation of the purchase price to the fair value of the assets acquired and the liabilities assumed as of April 17, 2017, the effective date of the acquisition, is as follows (*in thousands*):

Cash and cash equivalents	\$ 435
Accounts receivable	8,902
Prepaid expenses	1,427
Property and equipment	1,146
Intangible assets	76,240
Goodwill	107,754
Other assets	63
Accounts payable	(2,620)
Deferred tax liability	(19,681)
Other liabilities	(2,057)
Total purchase price	\$ 171,609

The purchase price allocated to the intangibles acquired was as follows (*in thousands*):

	Useful Life (in years)	
Customer relationships	15	\$ 56,200
Intellectual property	6	19,600
Trade name	1.5	310
Restrictive covenants	1	130
Fair value of intangibles acquired		\$ 76,240

Acquisition costs recorded in the second quarter 2017 to selling, general and administrative expenses were as follows (*in thousands*):

Other operating expenses - consulting fees	\$ 3,515
Other operating expenses - legal fees	832
Other operating expenses - transaction costs	185
Acquisition-related costs	\$ 4,532

The financial results of Eliza have been included in the Company’s consolidated financial statements since the date of acquisition. Eliza contributed approximately \$37.4 million in revenue to HMS results of operations for the nine months ended September 30, 2018. Eliza contributed approximately \$17.5 million in revenue to HMS results of operations from the date of acquisition through September 30, 2017.

6. Intangible Assets and Goodwill

Intangible assets consisted of the following (in thousands, except for weighted average amortization period):

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Amortization Period (in years)
September 30, 2018				
Customer relationships	\$ 156,790	\$ (100,758)	\$ 56,032	12.4
Trade names	16,246	(15,724)	522	0.3
Intellectual property	21,700	(5,701)	15,999	4.3
Restrictive covenants	263	(223)	40	0.9
Total	\$ 194,999	\$ (122,406)	\$ 72,593	

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Weighted Average Amortization Period (in years)
December 31, 2017				
Customer relationships	\$ 159,290	\$ (89,106)	\$ 70,184	11.3
Trade names	16,246	(13,916)	2,330	1
Intellectual property	21,700	(2,874)	18,826	5.2
Restrictive covenants	263	(121)	142	1.3
Total	\$ 197,499	\$ (106,017)	\$ 91,482	

Amortization expense of intangible assets is expected to approximate the following (in thousands):

Year ending December 31,	
2018	\$ 5,452
2019	9,195
2020	7,664
2021	7,197
2022	7,197
Thereafter	35,888
Total	\$ 72,593

For the three months ended September 30, 2018 and 2017, amortization expense related to intangible assets was \$6.1 million and \$6.2 million, respectively. For the nine months ended September 30, 2018 and 2017, amortization expense related to intangible assets was \$18.9 million and \$15.9 million, respectively.

The Company assesses goodwill for impairment on an annual basis as of June 30th of each year or more frequently if an event occurs or changes in circumstances would more likely than not reduce the fair value of a reporting unit below its carrying amount. Assessment of goodwill impairment is at the HMS Holdings Corp. entity level as the Company operates as a single reporting unit. The Company completed the annual impairment test as of June 30, 2018 electing to perform the first step of the goodwill impairment test by comparing the fair value of the reporting unit with its carrying value, including goodwill. In calculating the fair value of the reporting unit, the Company utilized a weighting across three commonly accepted valuation approaches: an income approach, a guideline public company approach and a merger and acquisition approach. The income approach to determining fair value computes projections of the cash flows that the reporting unit is expected to generate converted into a present value equivalent through discounting. Significant assumptions in the income approach include income projections, a discount rate and a terminal growth value which are all level 3 inputs. The income projections include assumptions for revenue and expense growth which are based on internally developed business plans and largely reflect recent historical revenue and expense trends. The discount rate was based on a risk free rate plus a beta adjusted equity risk premium and specific company risk premium. The terminal growth value is Company specific and was determined analyzing inputs such as historical inflation and the GDP growth rate. The guideline public company approach and merger and acquisition approach are based on pricing multiples observed for similar publicly traded companies or similar market companies that were sold. The results of the annual impairment assessment provide that the fair value of the reporting unit was significantly in excess of the Company's carrying value; therefore, no impairment was indicated and step two was not performed. If actual results are not consistent with our estimates or assumptions, the Company may be exposed to an impairment charge that could materially adversely impact our consolidated financial position.

and results of operations.

There were no impairment charges related to goodwill during the years ended December 31, 2017, 2016 or 2015. There were no changes in the carrying amount of goodwill for the nine-months ended September 30, 2018.

7. Accounts Payable, Accrued Expenses and Other Liabilities

Accounts payable, accrued expenses and other liabilities consisted of the following (*in thousands*):

	September 30, 2018	December 31, 2017
Accounts payable, trade	\$ 13,850	\$ 19,330
Accrued compensation and other	32,372	24,072
Accrued operating expenses	18,073	18,498
Total accounts payable, accrued expenses and other liabilities	\$ 64,295	\$ 61,900

8. Income Taxes

The Company's effective tax rate decreased to 21.3% for the nine months ended September 30, 2018 from 39.4% for the nine months ended September 30, 2017. The nine months ended September 30, 2018 effective tax rate includes discrete tax expense items related to a previously disclosed legal settlement, interest on uncertain tax benefits, state tax refunds and net stock compensation in addition to a net federal tax reform benefit comprised of a federal tax rate decrease, net of state impact, offset by tax increases for officer compensation deduction limits and loss of the domestic manufacturing deduction. For the nine months ended September 30, 2018, the differences between the federal statutory rate and our effective tax rate are discrete tax expense items related to the previously disclosed legal settlement, state taxes, equity compensation impacts, unrecognized tax benefits, including interest, officer compensation deduction limits, research and development tax credits, and other permanent differences.

The effective tax rate for the nine months ended September 30, 2018 represents the Company's best estimate using information available to the Company as of November 5, 2018. The Company anticipates U.S. regulatory agencies will issue further regulations over the next three months which may alter this estimate. The Company is still evaluating, among other things, the application of limitations for executive compensation related to contracts existing prior to November 2, 2017. The Company will refine its estimates to incorporate new or better information as it becomes available through the filing date of its 2017 U.S. income tax returns in the fourth quarter of 2018.

Included in Other Liabilities on the Consolidated Balance Sheets, are the total amount of unrecognized tax benefits of approximately \$8.9 million and \$8.2 million, as of September 30, 2018 and December 31, 2017, respectively, (net of the federal benefit for state issues) that, if recognized, would favorably affect the Company's future effective tax rate. Also included in Other Liabilities on the Consolidated Balance Sheets, are accrued liabilities for interest expense and penalties related to unrecognized tax benefits of \$1.0 million and \$0.6 million as of September 30, 2018 and December 31, 2017, respectively. HMS includes interest expense and penalties in the provision for income taxes in the unaudited Consolidated Statements of Income. The amount of interest expense (net of federal and state income tax benefits) and penalties in the unaudited Consolidated Statements of Income for the nine months ended September 30, 2018 and 2017 was \$0.4 million and an immaterial amount, respectively. The Company believes it is reasonably possible that the amount of unrecognized tax benefits may decrease by \$3.5 million over the next twelve months, due to the expiration of the statute of limitations in federal and various state jurisdictions.

HMS files income tax returns with the U.S. Federal government and various state, territory, and local jurisdictions. HMS is no longer subject to U.S. Federal income tax examinations for years before 2012. The Company is currently under audit by the Internal Revenue Service for years 2013 and 2014 and no adjustments have been received to date. HMS operates in a number of state and local jurisdictions. Accordingly, HMS is subject to state and local income tax examinations based on the various statutes of limitations in each jurisdiction. Previously recognized state apportionment benefits were adjusted by the state resulting in additional benefits, net of federal tax, of \$0.5 million relating to the current period and \$2.4 million relating to prior periods.

9. Estimated Liability For Appeals

Under the Company's contracts with certain commercial health plan customers and its Medicare RAC contracts with CMS (included within the Company's analytical services product revenue), providers have the right to appeal HMS claim findings and to pursue additional appeals if the initial appeal is found in favor of HMS's customer. The appeal process established under the Medicare RAC contract with CMS includes five levels of appeals, and resolution of appeals can take substantial time to resolve. HMS records a) a return obligation liability for findings which have been adjudicated in favor of providers and b) an estimated return obligation liability based on the amount of revenue that is subject to appeals and which are probable of being adjudicated in favor of providers following their successful appeal. The Company's estimate is based on the Company's historical experience. To the extent the amount to be returned to providers following a successful appeal exceeds or is less than the amount recorded, revenue in the applicable period would be reduced or increased by such amount. Any future changes to any of the Company's customer contracts, including modifications to the Medicare RAC contract, may require the Company to apply different assumptions that could materially affect both the Company's revenue and estimated liability for appeals in future periods.

The Company's original Medicare RAC contract with CMS expired on January 31, 2018. As a result of the contract expiration, the Company's contractual obligation with respect to any appeals resolved in favor of providers subsequent to the expiration date have ceased and therefore the Company released its estimated liability and increased revenue by \$8.4 million during the first quarter of 2018. The Company continues to assess the remaining Medicare RAC liability to determine management's best estimate of liability for any findings which have been previously adjudicated prior to the expiration of the contract.

The total estimated liability for appeals balance of \$22.2 million and \$30.8 million as of September 30, 2018 and December 31, 2017, respectively, includes \$19.4 million and \$19.3 million, respectively, of Medicare RAC claim findings which have been adjudicated in favor of providers, and \$0.0 million and \$8.5 million, respectively, of the Company's estimate of the potential amount of Medicare RAC repayments that are probable of being adjudicated in favor of providers following a successful appeal. Additionally, the total estimated liability for appeals balance includes \$2.8 million and \$3.2 million related to commercial customers claim appeals. The provision included in the estimated liability for appeals is an offset to revenue in the Company's Consolidated Statements of Income.

A summary of the activity in the estimated liability for appeals related to the Company's original Medicare RAC contract was as follows (*in thousands*):

	September 30, 2018
Balance—beginning of period	\$ 8,544
Provision	-
Appeals found in providers favor	(108)
Release of liability	(8,436)
Balance—end of period	\$ -

10. Credit Agreement

In December 2017, the Company entered into an amendment to its Credit Agreement, which, among other things, extended the maturity of its then existing \$500 million revolving credit facility by five years to December 2022 (the "Amended Revolving Facility"). The availability of funds under the Amended Revolving Facility includes sublimits for (a) up to \$50 million for the issuance of letters of credit and (b) up to \$25 million for swingline loans. In addition, the Company may increase the commitments under the Amended Revolving Facility and/or add one or more incremental term loan facilities, provided that such incremental facilities do not exceed in the aggregate the sum of (i) the greater of \$120 million and 100% of Consolidated EBITDA (as defined in the Credit Agreement) and (ii) an additional amount so long as our first lien leverage ratio (as defined in the Credit Agreement) on a pro forma basis is not greater than 3.00:1.00, subject to obtaining commitments from lenders therefor and meeting certain other conditions.

As of September 30, 2018 and December 31, 2017, the outstanding principal balance due on the Amended Revolving Facility was \$240.0 million. No principal payments were made against the Company's Amended Revolving Facility during the nine months ended September 30, 2018.

Borrowings under the Amended Revolving Facility bear interest at a rate equal to, at the Company's election (except with respect to swingline borrowings, which will accrue interest based only at the base rate), either:

- a base rate determined by reference to the greatest of (a) the prime or base commercial lending rate of the administrative agent as in effect on the relevant date, (b) the federal funds effective rate plus 0.50% and (c) the one-month LIBO Rate plus 1.00%, plus an interest margin ranging from 0.50% to 1.00% based on the Company's consolidated leverage ratio for the applicable period; or
- an adjusted LIBO Rate, equal to the LIBO Rate for the applicable interest period multiplied by the statutory reserve rate (equal to (x) one divided by (y) one minus the aggregate of the maximum reserve percentage (including any marginal, special, emergency or supplemental reserves) established by the Board of Governors of the Federal Reserve System of the United States), plus an interest margin ranging from 1.50% to 2.00% based on the Company's consolidated leverage ratio for the applicable period.

In addition to paying interest on the outstanding principal, the Company is required to pay unused commitment fees on the Amended Revolving Facility during the term of the Credit Agreement ranging from 0.375% to 0.250% per annum based on the Company's consolidated leverage ratio and letter of credit fees equal to 0.125% per annum on the aggregate face amount of each letter of credit, as well as customary agency fees.

The Amended Revolving Facility is secured, subject to certain customary carve-outs and exceptions, by a first priority lien and security interest in substantially all tangible and intangible assets of the Company and certain subsidiaries of the Company. The Amended Revolving Facility contains certain restrictive covenants, which affect, among other things, the ability of the Company and its subsidiaries to incur indebtedness, create liens, make investments, sell or otherwise dispose of assets, engage in mergers or consolidations with other entities, and pay dividends or repurchase stock. The Company is also required to comply, on a quarterly basis, with two financial covenants: (i) a minimum interest coverage ratio of 3:00:1:00, and (ii) a maximum consolidated leverage ratio of 4.75:1.00 through December 2019 and 4.25:1.00 from and after January 2020. The consolidated leverage ratio is subject to a step-up to 5.25:1.00 for four full consecutive fiscal quarters following a permitted acquisition or similar investment. As of September 30, 2018, the Company was in compliance with all terms of the Credit Agreement.

Interest expense and the commitment fees on the unused portion of the Company's revolving credit facility were as follows (*in thousands*):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Interest expense	\$ 2,527	\$ 2,230	\$ 7,224	\$ 5,072
Commitment fees	211	325	688	1,036

As of September 30, 2018 and December 31, 2017, the unamortized balance of deferred origination fees and debt issuance costs was \$2.4 million and \$2.8 million, respectively. For the nine month periods ended September 30, 2018 and 2017, HMS amortized \$0.4 million and \$1.0 million, respectively, of interest expense related to the Company's deferred origination fees and debt issue costs.

Although HMS expects that operating cash flows will continue to be a primary source of liquidity for the Company's operating needs, the Amended Revolving Facility may be used for general corporate purposes, including, but not limited to acquisitions, if necessary.

11. Earnings Per Share

The following table reconciles the basic to diluted weighted average common shares outstanding using the treasury stock method (*in thousands, except per share amounts*):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Net income	\$ 18,574	\$ 6,372	\$ 21,598	\$ 14,331
Weighted average common shares outstanding-basic	83,509	83,923	83,373	83,778
Plus: net effect of dilutive stock options and restricted stock units	1,635	1,807	1,868	1,808
Weighted average common shares outstanding-diluted	85,144	85,730	85,241	85,586
Net income per common share-basic	\$ 0.22	\$ 0.08	\$ 0.26	\$ 0.17
Net income per common share-diluted	\$ 0.22	\$ 0.07	\$ 0.25	\$ 0.17

For the three months ended September 30, 2018 and 2017, 21,105 and 2,642,548 stock options, respectively, were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive. For the three months ended September 30, 2018 and 2017, restricted stock units representing 202 and 84,360 shares of common stock, respectively, were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive.

For the nine months ended September 30, 2018 and 2017, 531,378 and 2,132,017 stock options, respectively, were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive. For the nine months ended September 30, 2018 and 2017, restricted stock units representing 595 and 63,452 shares of common stock, respectively, were not included in the diluted earnings per share calculation because the effect would have been anti-dilutive.

12. Stock-Based Compensation

(a) Stock-Based Compensation Expense

Total stock-based compensation expense in the Company's unaudited Consolidated Statements of Income related to the Company's long-term incentive award plans was as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Cost of services-compensation	\$ 1,537	\$ 1,851	\$ 5,802	\$ 5,353
Selling, general and administrative	1,900	5,531	11,843	11,408
Total	\$ 3,437	\$ 7,382	\$ 17,645	\$ 16,761

(b) Stock Options

Stock-based compensation expense related to stock options was approximately \$1.6 million and \$3.2 million for the three months ended September 30, 2018 and 2017, respectively. Stock-based compensation expense related to stock options was approximately \$7.6 million and \$7.1 million for the nine months ended September 30, 2018 and 2017, respectively.

Presented below is a summary of stock option activity for the nine months ended September 30, 2018 (in thousands except for weighted average exercise price and weighted average remaining contractual terms):

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms	Aggregate Intrinsic Value
Outstanding balance at December 31, 2017	5,554	\$ 17.35		
Granted	1,010	19.58		
Exercised	(686)	21.13		
Forfeitures	(100)	17.64		
Expired	(30)	22.21		
Outstanding balance at September 30, 2018	5,748	17.33	5.41	\$ 88,909
Expected to vest at September 30, 2018	1,561	17.65	7.79	\$ 23,669
Exercisable at September 30, 2018	3,373	\$ 17.13	3.76	\$ 52,900

During the three months ended September 30, 2018 and 2017, the Company issued 535,077 and 40,734 shares, respectively, of the Company's common stock upon the exercise of outstanding stock options and received proceeds of \$12.1 million and \$0.8 million, respectively. The total intrinsic value of stock options exercised during the three months ended September 30, 2018 and 2017 was \$4.0 million and \$0.3 million, respectively. During the nine months ended September 30, 2018 and 2017, the Company issued 686,111 and 173,539 shares, respectively, of the Company's common stock upon the exercise of outstanding stock options and received proceeds of \$13.7 million and \$2.7 million, respectively. The total intrinsic value of stock options exercised during the nine months ended September 30, 2018 and 2017 was \$4.7 million and \$0.6 million, respectively.

As of September 30, 2018, there was approximately \$7.6 million of total unrecognized compensation cost related to stock options outstanding, which is expected to be recognized over a weighted average period of 2.1 years.

The weighted-average grant date fair value per share of the stock options granted during the nine months ended September 30, 2018 and 2017 was \$7.52 and \$7.68, respectively. HMS estimated the fair value of each stock option grant on the date of grant using a Black-Scholes option pricing model and weighted-average assumptions set forth in the following table:

	Nine Months Ended September 30,	
	2018	2017
Expected dividend yield	0%	0%
Risk-free interest rate	2.68%	1.74%
Expected volatility	42.43%	44.23%
Expected life (years)	6.00	5.00

The total tax benefits recognized on stock-based compensation for the three and nine months ended September 30, 2018 was \$1.0 million and \$3.5 million, respectively. The total tax benefits recognized on stock-based compensation for the three and nine months ended September 30, 2017 was \$0.0 and \$3.6 million, respectively.

(c) Restricted Stock Units

Stock-based compensation expense related to restricted stock units was approximately \$1.9 million and \$4.2 million for the three months ended September 30, 2018 and 2017, respectively. Stock-based compensation expense related to restricted stock units was approximately \$10.0 million and \$9.7 million for the nine months ended September 30, 2018 and 2017, respectively.

Presented below is a summary of restricted stock units activity for the nine months ended September 30, 2018 *(in thousands, except for weighted average grant date fair value per unit)*:

	Number of Units	Weighted Average Grant Date Fair Value per Unit
Outstanding balance at December 31, 2017	1,346	\$ 17.65
Granted	763	16.76
Vesting of restricted stock units, net of units withheld for taxes	(367)	17.00
Units withheld for taxes	(163)	17.00
Forfeitures	(70)	17.26
Outstanding balance at September 30, 2018	1,509	\$ 19.98

For the three months ended September 30, 2018 and 2017, HMS granted 1,794 and 59,784 restricted stock units, respectively, with an aggregate fair market value of \$58,861 and \$1.0 million, respectively. For the nine months ended September 30, 2018 and 2017, HMS granted 762,877 and 599,441 restricted stock units, respectively, with an aggregate fair market value of \$12.8 million and \$11.3 million, respectively.

As of September 30, 2018, 1,281,206 restricted stock units remained unvested and there was approximately \$11.3 million of unrecognized compensation cost related to restricted stock units, which is expected to be recognized over a weighted average vesting period of 1.13 years.

13. Commitments and Contingencies

In July 2012, Dennis Demetre and Lori Lewis (the "Plaintiffs"), filed an action in the Supreme Court of the State of New York against HMS Holdings Corp., claiming an undetermined amount of damages alleging that various actions by HMS unlawfully deprived the Plaintiffs of the acquisition earn-out portion of the purchase price for Allied Management Group Special Investigation Unit ("AMG") under the applicable Stock Purchase Agreement (the "SPA") and that HMS had breached certain contractual provisions under the SPA. The Plaintiffs filed a second amended complaint with two causes of action for breach of contract and one cause of action for breach of implied covenant of good faith and fair dealing. HMS asserted a counterclaim against Plaintiffs for breach of contract based on contractual indemnification costs, including attorneys' fees arising out of the Company's defense of AMG in *Kern Health Systems v. AMG, Dennis Demetre and Lori Lewis* (the "California Action"), which are recoverable under the SPA. In June 2016, Kern Health Systems and AMG entered into a settlement agreement that resolved all claims in the California Action. In July 2017, the Court issued a decision on the Company's motion for partial summary judgment and granted the motion in part, dismissing one of Plaintiffs' breach of contract causes of action against HMS. On November 3, 2017, following a jury trial, a verdict was returned in favor of the Plaintiffs on a breach of contract claim, and the jury awarded \$60 million in damages to the Plaintiffs. On March 14, 2018, the Court held a hearing on the Company's post-trial motion for an order granting it judgment notwithstanding the verdict or, alternatively, setting aside the jury's award of damages. On June 27, 2018, prior to the Court issuing a decision on the motion, the Company entered into a Settlement Agreement (the "Settlement Agreement") with the Plaintiffs, John Alfred Lewis and Christopher Brandon Lewis. Pursuant to the terms of the Settlement Agreement, the Company paid \$20 million to resolve all matters in controversy pertaining to the lawsuit. On July 5, 2018, the Court entered an order to discontinue the lawsuit pursuant to the Stipulation of Discontinuance with Prejudice filed by the parties.

In February 2018, the Company received a Civil Investigative Demand ("CID") from the Texas Attorney General, purporting to investigate possible unspecified violations of the Texas Medicaid Fraud Prevention Act. The Company has provided certain documents and information in March 2018 in response to the CID and continues to cooperate with the government. HMS has not received any further requests for information in connection with this CID.

On September 11, 2018, a former employee filed an action in the New York County Supreme Court entitled *Christopher Frey v. Health Management Systems, Inc.* alleging retaliation under New York law. The complaint seeks recovery of an unspecified amount of monetary damages, including back pay and other compensatory and equitable relief. The Company believes this claim is without merit and intends to vigorously defend this matter.

From time to time, HMS may be subject to investigations, legal proceedings and other disputes arising in the ordinary course of the Company's business, including but not limited to regulatory audits, billing and contractual disputes, employment-related matters and post-closing disputes related to acquisitions. Due to the Company's contractual relationships, including those with federal and state government entities, HMS's operations, billing and business practices are subject to scrutiny and audit by those entities and other multiple agencies and levels of government, as well as to frequent transitions and changes in the personnel responsible for oversight of the Company's contractual performance. HMS may have contractual disputes with its customers arising from differing interpretations of contractual provisions that define the Company's rights, obligations, scope of work or terms of payment, and with associated claims of liability for inaccurate or improper billing for reimbursement of contract fees, or for sanctions or damages for alleged performance deficiencies. Resolution of such disputes may involve litigation or may require that HMS accept some amount of loss or liability in order to avoid customer abrasion, negative marketplace perceptions and other disadvantageous results that could affect the Company's business, financial condition, results of operations and cash flows.

HMS records accruals for outstanding legal matters when it believes it is probable that a loss will be incurred and the amount can be reasonably estimated. The Company evaluates, on a quarterly basis, developments in legal matters that could affect the amount of any accrual and developments that would make a loss contingency both probable and reasonably estimable. If a loss contingency is not both probable and estimable, HMS does not establish an accrued liability.

14. Subsequent Events

In connection with the preparation of these unaudited Consolidated Financial Statements, an evaluation of subsequent events was performed through the date of filing and there were no events that have occurred that would require adjustments to the financial statements or disclosures.

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

The following Management's Discussion and Analysis is intended to help the reader understand the results of operations and financial condition of HMS. You should read this discussion and analysis in conjunction with the other sections of this Form 10-Q, including the Cautionary Note Regarding Forward-Looking Statements appearing prior to Part I and the unaudited Consolidated Financial Statements and Notes thereto in Part I, Item 1. The historical results set forth in Part I, Item 1 and Item 2 of this Form 10-Q should not be taken as necessarily indicative of our future operations or financial results.

Business Overview

HMS is a leading provider of cost containment solutions in the U.S. healthcare marketplace. Using innovative technology as well as extensive data services and powerful analytics, we deliver coordination of benefits, payment integrity, and care management and consumer engagement solutions through our operating subsidiaries to help healthcare payers improve financial performance and clinical outcomes. Together our various services help our customers recover improper payments; prevent future improper payments; reduce fraud, waste and abuse; better manage the care that their members receive; engage healthcare consumers to improve clinical outcomes and increase retention; and achieve regulatory compliance.

We serve state Medicaid programs, commercial health plans, federal government health agencies, government and private employers, CHIP and other healthcare payers and sponsors. We also serve as a subcontractor for certain business outsourcing and technology firms. As of September 30, 2018, our customer base included the following:

- over 40 state Medicaid programs;
- approximately 325 health plans, including 23 of the top 25 health plans nationally (based on membership) in support of their multiple lines of business, including Medicaid managed care, Medicare Advantage and group and individual health;
- over 225 private employers;
- CMS, the Centers for Disease Control and Prevention, and the Department of Veterans Affairs; and
- PBMs, third-party administrators and other risk-bearing entities, including independent practice associations, hospital systems, ACOs and specialty care organizations.

Critical Accounting Policies and Estimates

Since the date of our 2017 Form 10-K, there have been no material changes to our critical accounting policies other than with respect to revenue recognition as described in Notes 1 and 3 to the unaudited Consolidated Financial Statements in Part I, Item 1 of this Form 10-Q. With respect to our accounting policies other than revenue recognition, refer to the discussion in our 2017 Form 10-K under "Critical Accounting Policies and Estimates" in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and "Business and Summary of Significant Accounting Policies" in Note 1 to the Consolidated Financial Statements under Part II, Item 8.

RESULTS

As of and for the three months ended September 30, 2018 and September 30, 2017

- Revenue of \$154.2 million increased \$28.5 million, or 22.7% over the same quarter in 2017; and
- Operating income of \$24.2 million increased by \$11.3 million as compared to operating income of \$12.9 million in the same quarter prior year.

[Comparison of Three Months Ended September 30, 2018 to September 30, 2017](#)

dollars in millions

	Three Months Ended September 30,		\$ Change	% Change
	2018	2017		
Revenue	\$ 154.2	\$ 125.7	\$ 28.5	22.7%
Cost of Services :				
Compensation	58.2	49.0	9.2	18.8
Information technology	13.0	12.1	0.9	7.4
Occupancy	3.5	4.3	(0.8)	(18.6)
Direct project costs	10.7	9.5	1.2	12.6
Other operating costs	8.5	7.5	1.0	13.3
Amortization of acquisition related software and intangible assets	8.0	8.2	(0.2)	(2.4)
Total Cost of Services	101.9	90.6	11.3	12.5
Selling, general and administrative expenses	28.1	22.2	5.9	26.6
Settlement expense	-	-	-	-
Total Operating Expenses	130.0	112.8	17.2	15.2
Operating income	24.2	12.9	11.3	87.6
Interest expense	(2.9)	(3.1)	0.2	(6.8)
Interest income	0.3	-	0.3	-
Income before income taxes	21.6	9.8	11.8	120.5
Income taxes	3.1	3.4	(0.3)	(8.8)
Net Income	18.5	6.4	12.1	189.2%

Revenue (in millions)



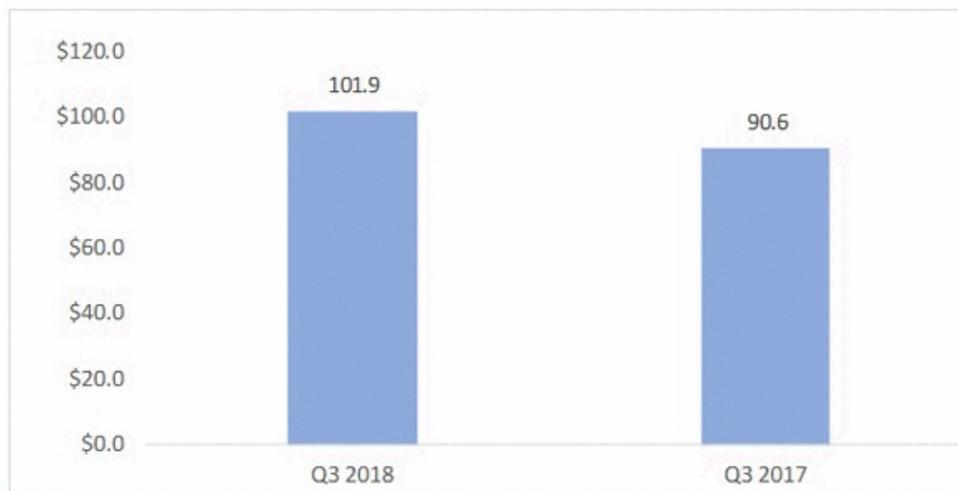
Three Months Ended September 30 – 2018 vs. 2017

During the three months ended September 30, 2018, revenue was \$154.2 million, an increase of \$28.5 million or 22.7% compared to revenue of \$125.7 million for the prior year quarter.

- By product:
 - o Coordination of benefits revenue increased \$15.6 million or 17.3% which was attributable to incremental services and yield increases provided to existing customers in our cost avoidance and direct bill business.
 - o Analytical services revenue, which consists of Care Management and Consumer Engagement, Payment integrity, and Medicare RAC, increased \$13.0 million or 36.5%. Care management and consumer engagement revenue increased by \$4.4 million or 40.4% which was mostly driven by growth in the Eliza business. Payment integrity revenue increased \$6.3 million or 26.4% primarily due to increased demand from existing clients, yield enhancements and improvements in provider processes. Medicare RAC revenue also increased by \$2.3 million period over period.

- By market:
 - Commercial health plan market revenue increased \$19.1 million or 28.3% which was attributable to growth in the Eliza business and incremental services and yield increases provided to existing customers in our cost avoidance business.
 - Federal government market revenue increased \$1.8 million or 27.7%.
 - State government market revenue grew by \$7.7 million or 14.9%.

Total Cost of Services (in millions)



Three Months Ended September 30 – 2018 vs. 2017

During the three months ended September 30, 2018, total cost of services was \$101.9 million, an increase of \$11.3 million or 12.5% compared to \$90.6 million for the prior year quarter.

- Compensation expense increased by \$9.2 million due to increases in variable compensation and fringe benefits expenses. The increase in variable compensation relates to improved results of operations in the current period compared to prior year. The increase in fringe benefits is the result of higher insurance claims cost and an increase in employer 401(k) match during 2018.
- Direct project costs increased by \$1.2 million due to increased revenue.
- Other operating expenses increased by \$1.0 million due to legal and consulting expenses.
- Information technology expenses increased by \$0.9 million due to increases in amortization of internally developed software and software maintenance.

Selling, General and Administrative expenses (in millions)



Three Months Ended September – 2018 vs. 2017

During the three months ended September 30, 2018, SG&A expense was \$28.1 million, an increase of \$5.9 million or 26.6% compared to \$22.2 million for the prior year quarter.

- In the third quarter of 2017, the Company had decreases in legal expense and other operating expenses which reduced SG&A expenses by \$4.6 million. The Company had no such reductions in 2018.
- Compensation expense in 2018 increased by \$0.9 million due to an increase in variable compensation in the current period related to improved results of operations. The increase was partially offset by a decrease in fringe benefits expenses primarily related to stock compensation expense.

Income Taxes

Three Months Ended September 30 – 2018 vs. 2017

The Company's effective tax rate decreased to 14.2% for the three months ended September 30, 2018 compared to 34.8% for the three months ended September 30, 2017. The three months ended September 30, 2018 effective tax rate includes discrete tax expenses related to the settlement of previously disclosed litigation, interest on uncertain tax benefits, state tax refunds and net stock compensation in addition to a net federal tax reform benefit comprised of a federal tax rate decrease, net of state impact, offset by tax increases for officer compensation deduction limits and loss of the domestic manufacturing deduction. Excluding the above mentioned discrete tax items and net federal tax reform benefit, our effective tax rate would approximate 35.9% for the three months ended September 30, 2018. For the three months ended September 30, 2018, the differences between the federal statutory rate and our effective tax rate are discrete tax expenses related to the settlement of previously disclosed litigation, state taxes, equity compensation impacts, unrecognized tax benefits, including interest, officer compensation deduction limits, research and development tax credits, and other permanent differences.

As of and for the nine months ended September 30, 2018 and September 30, 2017

- Revenue of \$442.5 million increased \$69.8 million, or 18.7% over the same period in 2017;
- Operating income of \$35.4 million increased \$4.1 million over the same period in 2017; and
- Net income of \$21.6 million increased \$7.3 million over the same period in 2017.

[Comparison of Nine months ended September 30, 2018 to September 30, 2017](#)

dollars in millions

	Nine Months Ended		\$ Change	% Change
	September 30,			
	2018	2017	2018 vs 2017	
Revenue	\$ 442.5	\$ 372.7	\$ 69.8	18.7%
Cost of Services :				
Compensation	169.5	149.8	19.7	13.2
Information technology	39.5	33.1	6.4	19.3
Occupancy	11.9	12.1	(0.2)	(1.7)
Direct project costs	31.7	30.1	1.6	5.3
Other operating costs	22.1	21.2	0.9	4.2
Amortization of acquisition related software and intangible assets	25.7	21.7	4.0	18.4
Total Cost of Services	300.4	268.0	32.4	12.1
Selling, general and administrative expenses	86.7	73.4	13.3	18.1
Settlement expense	20.0	-	20.0	-
Total Operating Expenses	407.1	341.4	65.7	19.2
Operating Income	35.4	31.3	4.1	13.1
Interest expense	(8.6)	(7.7)	(0.9)	11.7
Interest income	0.6	0.2	0.4	200.0
Income before income taxes	27.4	23.8	3.6	15.1
Income taxes	5.8	9.3	(3.5)	(37.6)
Net Income	\$ 21.6	\$ 14.5	\$ 7.1	49.0%

Revenue (in millions)



Nine Months Ended September 30 – 2018 vs. 2017

During the nine months ended September 30, 2018, revenue was \$442.5 million, an increase of \$69.8 million or 18.7% compared to revenue of \$372.7 million for the prior year period.

- By product:
 - Coordination of benefits revenue increased \$21.1 million or 7.6% which was attributable to incremental services and yield increases provided to existing customers in our cost avoidance business.

- o Analytical services revenue which consists of Care Management and Consumer Engagement, Payment integrity, and Medicare RAC, increased \$48.7 million or 50.9%. The increase was primarily due to our Eliza subsidiary (acquired in April 2017) increasing revenue by \$19.9 million as compared to prior year. Also, Medicare RAC revenue increased by \$14.5 million as compared to prior year primarily due to an \$8.4 million release of our Medicare RAC appeals liability due to contract expiration in the first quarter of the current year. Payment integrity revenue increased \$13.2 million as compared to prior year primarily due to increased demand from existing clients, yield enhancements and improvements in provider processes.

- By market:
 - Commercial health plan market revenue increased \$46.9 million or 24.4% which was attributable to growth in the Eliza subsidiary (acquired in April 2017) of \$19.9 million and incremental services and yield increases provided to existing customers in our cost avoidance and direct bill business.
 - Federal government market revenue increased \$13.0 million or 73.0%, primarily due to an \$8.4 million release of our Medicare RAC appeals liability due to contract expiration in the first quarter of the current year.
 - State government market revenue grew by \$9.9 million or 6.1%.

Total Cost of Services (in millions)

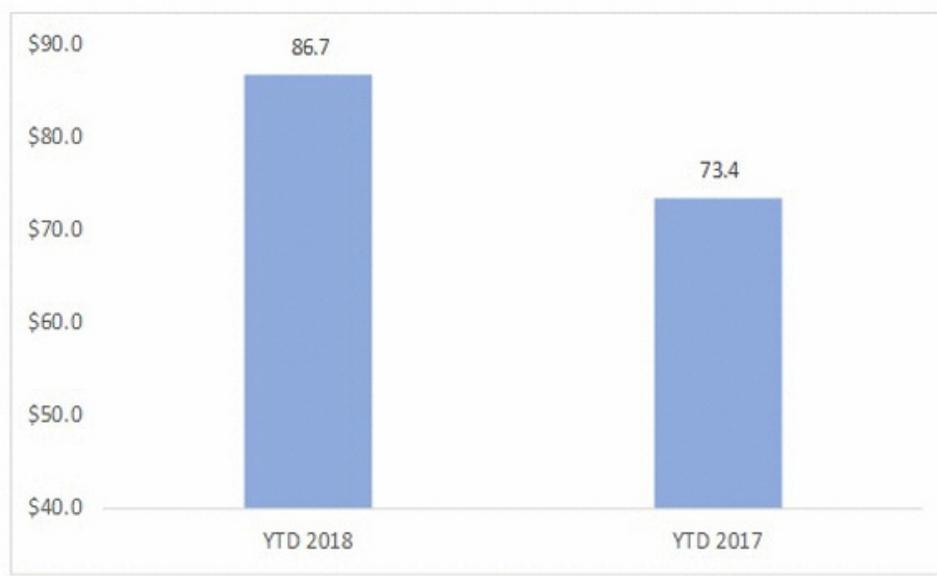


Nine Months Ended September 30– 2018 vs. 2017

During the nine months ended September 30, 2018, total cost of services was \$300.4 million, an increase of \$32.4 million or 12.1% compared to \$268.0 million for the prior year period.

- Our Eliza subsidiary (acquired in April 2017) and its related compensation, information technology, occupancy and amortization of intangibles expenses represented \$12.5 million of the increase.
- Excluding Eliza, compensation expense increased by \$14.8 million, including variable compensation, salaries, fringe benefits expenses, and stock compensation. The increase in variable compensation relates to improved results of operations in the current period compared to prior year. The increase in fringe benefits is the result of higher insurance claims cost and an increase in employer 401(k) match during 2018.
- Information technology expense increased by \$3.5 million relating to amortization of internally developed software and software maintenance.

Selling, General and Administrative expenses (in millions)



Nine Months Ended September 30 – 2018 vs. 2017

During the nine months ended September 30, 2018, SG&A expense was \$86.7 million, an increase of \$13.3 million or 18.1% compared to \$73.4 million for the prior year period.

- Our Eliza subsidiary (acquired in April 2017) represented \$2.8 million of the increase.
- Excluding Eliza, compensation expense increased by \$8.3 million including variable compensation, salaries, fringe benefits, and stock compensation expenses. The increase in variable compensation relates to improved results of operations in the current period compared to prior year. The increase in fringe benefits is the result of higher insurance claims cost and an increase in employer 401(k) match during 2018.
- Other expenses decreased by \$2.5 million primarily relating to acquisition costs incurred in the prior period.

Income Taxes

Nine Months Ended September 30 – 2018 vs. 2017

The Company's effective tax rate decreased to 21.3% for the nine months ended September 30, 2018 compared to 39.4% for the nine months ended September 30, 2017. The nine months ended September 30, 2018 effective tax rate includes discrete tax expenses related to the settlement of previously disclosed litigation, interest on uncertain tax benefits, state tax refunds and net stock compensation in addition to a net federal tax reform benefit comprised of a federal tax rate decrease, net of state impact, offset by tax increases for officer compensation deduction limits and loss of the domestic manufacturing deduction. Excluding the above mentioned discrete tax items and net federal tax reform benefit, our effective tax rate would approximate 37.2% for the nine months ended September 30, 2018. For the nine months ended September 30, 2018, the differences between the federal statutory rate and our effective tax rate are discrete tax expenses related to the settlement of previously disclosed litigation, state taxes, equity compensation impacts, unrecognized tax benefits, including interest, officer compensation deduction limits, research and development tax credits, and other permanent differences.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Liquidity and Capital Resources

The following tables should be read in conjunction with the unaudited Consolidated Financial Statements and Notes thereto in Part I, Item 1 of this Form 10-Q.

Our cash and cash equivalents, working capital and available borrowings under our credit facility (based upon the borrowing base and financial covenants in our Credit Agreement) were as follows (*in thousands*):

	September 30, 2018	December 31, 2017
Cash and cash equivalents	\$ 124,297	\$ 83,313
Working capital	\$ 262,617	\$ 199,967
Available borrowings under credit facility	\$ 260,000	\$ 254,600

A summary of our cash flows is as follows (*in thousands*):

	Nine Months Ended September 30,	
	2018	2017
Net cash provided by operating activities	\$ 55,536	\$ 55,098
Net cash used in investing activities	(19,433)	(193,494)
Net cash provided by financing activities	4,881	41,881
Net increase (decrease) in cash and cash equivalents	\$ 40,984	\$ (96,515)

Cash and cash equivalents at September 30, 2018 and net cash provided by operating activities for the nine months ended September 30, 2018, included a non-recurring cash outflow of \$20 million for the settlement expense.

Our principal source of cash has been our cash flow from operations and our \$500 million five-year revolving credit facility. Other sources of cash include proceeds from the exercise of stock options and tax benefits associated with stock option exercises. The primary uses of cash are capital investments, acquisitions, compensation expenses, information technology, direct project costs, SG&A expenses, other expense and repurchases of our common stock.

We believe that expected cash flows from operations, available cash and cash equivalents, and funds available under our revolving credit facility will be sufficient to meet our liquidity requirements for the following year, which include:

- the working capital requirements of our operations;
- investments in our business;
- business development activities; and
- repurchases of common stock

Any projections of future earnings and cash flows are subject to substantial uncertainty. We may need to access debt and equity markets in the future if unforeseen costs or opportunities arise, to meet working capital requirements, fund acquisitions or repay our indebtedness under the Credit Agreement. If we need to obtain new debt or equity financing in the future, the terms and availability of such financing may be impacted by economic and financial market conditions as well as our financial condition and results of operations at the time we seek additional financing.

Cash Flows from Operating Activities

Net cash provided by operating activities for the nine months ended September 30, 2018 was \$55.5 million, an increase of \$0.4 million as compared to net cash provided by operating activities of \$55.1 million for the nine months ended September 30, 2017. Net cash provided by operating activities for the nine months ended September 30, 2018 includes a non-recurring cash outflow of \$20 million for the settlement expense.

Cash Flows from Investing Activities

Net cash used in investing activities for the nine months ended September 30, 2018 was \$19.4 million, a \$174.1 million decrease compared to net cash used in investing activities of \$193.5 million for the nine months ended September 30, 2017. The decrease primarily related to the \$171.1 million acquisition of Eliza in the prior year period.

Cash Flows from Financing Activities

Net cash provided by financing activities for the nine months ended September 30, 2018 was \$4.9 million, a \$37.0 million decrease compared to net cash provided by financing activities of \$41.9 million for the nine months ended September 30, 2017. The decrease is primarily related to proceeds from our revolving credit facility of \$42.2 million in the prior year.

Contractual Obligations

There have been no material changes outside the ordinary course of business in our contractual obligations as presented in our 2017 Form 10-K.

Recently Issued Accounting Pronouncements

The information set forth under the caption "Recently Issued Accounting Pronouncements" in Note 1 to the unaudited Consolidated Financial Statements in Part I, Item 1 is incorporated herein by reference.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to the market risks discussed in Item 7A to Part II of our 2017 Form 10-K.

Item 4. Controls and Procedures

We are responsible for maintaining disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) that are designed to ensure that information required to be disclosed in our reports filed 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 our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) under the Exchange Act, management, with the participation of our Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of our disclosure controls and procedures as of September 30, 2018. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that their objectives were met as of the end of the period covered by this Form 10-Q.

There have been no changes in the Company's internal control over financial reporting identified in connection with the evaluation of our controls performed during the three months ended September 30, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

The information set forth under the caption “Commitments and Contingencies” in Note 13 to the unaudited Consolidated Financial Statements of this Form 10-Q is incorporated herein by reference.

Item 1A. Risk Factors

In addition to the information set forth in this Form 10-Q, the risks that are discussed in the 2017 Form 10-K, under the headings “Part I, Item 1. Business,” “Part I, Item 1A. Risk Factors” and “Part II, Item 7A. Quantitative and Qualitative Disclosures About Market Risk,” should be carefully considered as such risks could materially affect the Company’s business, financial condition or future results. There has been no material change in the Company’s risk factors from those described in the 2017 Form 10-K.

These risks are not the only risks facing the Company. Additional risks and uncertainties not currently known to the Company or that it currently deems to be immaterial also may have a material adverse effect on the Company’s business, financial condition or future results.

Item 6. Exhibits

The Exhibits may include agreements to which the Company is a party or has a beneficial interest. The agreements have been filed to provide investors with information regarding their respective terms. The agreements are not intended to provide any other actual information about the Company or its business or operations. In particular, the assertions embodied in any representations, warranties, and covenants contained in the agreements may be subject to qualifications with respect to knowledge and materiality different from those applicable to investors and may be qualified by information in confidential disclosure schedules not included with the exhibits. These disclosure schedules may contain information that modifies, qualifies and creates exceptions to the representations, warranties and covenants set forth in the agreements. Moreover, certain representations, warranties, and covenants in the agreements may have been used for the purpose of allocating risk between parties, rather than establishing matters as facts. In addition, information concerning the subject matter of the representations, warranties and covenants may have changed after the date of the respective agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. Accordingly, investors should not rely on the representations, warranties and covenants in the agreements as characterizations of the actual state of facts about the Company or its business or operations on the date hereof.

Where an exhibit is filed by incorporation by reference to a previously filed registration statement or report, such registration statement or report is identified after the description of the exhibit.

Exhibit Number	Description
<u>3.1</u>	<u>Conformed copy of Certificate of Incorporation of the Company, as amended through May 23, 2018 (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q (File No. 000-50194) as filed with the SEC on August 6, 2018)</u>
<u>3.2</u>	<u>Second Amended and Restated Bylaws of HMS Holdings Corp. dated May 23, 2018 (incorporated) by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (File No. 000-50194) as filed with the SEC on May 25, 2018)</u>
<u>31.1</u>	<u>Rule 13a-14(a)/15d-14(a) Certification of the Principal Executive Officer of HMS Holdings Corp., as adopted pursuant to Section 302 of the Sarbanes- Oxley Act of 2002</u>
<u>31.2</u>	<u>Rule 13a-14(a)/15d-14(a) Certification of the Principal Financial Officer of HMS Holdings Corp., as adopted pursuant to Section 302 of the Sarbanes- Oxley Act of 2002</u>
<u>32.1</u>	<u>Section 1350 Certification of the Principal Executive Officer of HMS Holdings Corp., as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*</u>
<u>32.2</u>	<u>Section 1350 Certification of the Principal Financial Officer of HMS Holdings Corp., as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*</u>

101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* The certifications attached hereto as Exhibit 32.1 and Exhibit 32.2 are furnished with this Form 10-Q and shall not be deemed "filed" by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

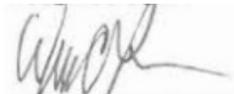
SIGNATURES

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

Date: November 5, 2018

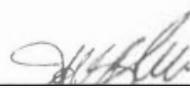
HMS HOLDINGS CORP.

By:



William C. Lucia
President and Chief Executive Officer
(Principal Executive Officer)

By:



Jeffrey S. Sherman
Executive Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Certification

I, William C. Lucia, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HMS Holdings Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2018



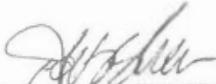
William C. Lucia
Chief Executive Officer
(Principal Executive Officer)

Certification

I, Jeffrey S. Sherman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HMS Holdings Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2018



Jeffrey S. Sherman
Chief Financial Officer
(Principal Financial Officer)

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

In connection with the Quarterly Report of HMS Holdings Corp. (the "*Company*") on Form 10-Q for the period ended September 30, 2018 as filed with the Securities and Exchange Commission (the "*Report*"), I, William C. Lucia, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.



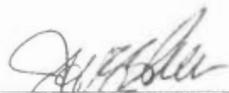
William C. Lucia
Chief Executive Officer
(Principal Executive Officer)

November 5, 2018

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

In connection with the Quarterly Report of HMS Holdings Corp. (the "*Company*") on Form 10-Q for the period ended September 30, 2018 as filed with the Securities and Exchange Commission (the "*Report*"), I, Jeffrey S. Sherman, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.



Jeffrey S. Sherman
Chief Financial Officer
(Principal Financial Officer)

November 5, 2018

