
McGraw-Hill Education, Inc.

Quarterly Report

As of June 30, 2018

INDEX TO THE CONSOLIDATED FINANCIAL STATEMENTS OF MCGRAW-HILL EDUCATION, INC. AND SUBSIDIARIES

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Special Note Regarding Forward-Looking Statements

This report includes statements that are, or may be deemed to be, “forward-looking statements.” These forward-looking statements can be identified by the use of forward-looking terminology, including the terms “believes,” “estimates,” “anticipates,” “expects,” “intends,” “plans,” “may,” “will” or “should” or, in each case, their negative or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this report and include statements regarding our intentions, beliefs or current expectations concerning, among other things, our results of operations, financial condition, liquidity, prospects, growth, strategies and the industry in which we operate.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the developments in the industry in which we operate, may differ materially from those made in or suggested by the forward-looking statements contained in this report. In addition, even if our results of operations, financial condition and liquidity, and the developments in the industry in which we operate are consistent with the forward-looking statements contained in this report, those results of operations, financial condition and liquidity or developments may not be indicative of results or developments in subsequent periods.

Any forward-looking statements we make in this report speak only as of the date of such statement, and we undertake no obligation to update such statements. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless expressed as such, and should only be viewed as historical data.

Presentation of Financial Information

This Quarterly Report contains financial statements of McGraw-Hill Education, Inc. (formerly known as Georgia Holdings, Inc.). On March 22, 2013, MHE Acquisition, LLC, acquired all of the outstanding equity interests of certain subsidiaries of The McGraw-Hill Companies, Inc. (“MHC”) pursuant to the Purchase and Sale Agreement, dated as of November 26, 2012 and as amended on March 4, 2013 (collectively, the “Acquired Business”). As a result of this transaction, investment funds affiliated with Apollo Global Management, LLC (the “Sponsors”) acquired 100% of MHE Acquisition, LLC. We refer to the purchase of the Acquired Business and the related financing transactions as the “Founding Acquisition.” MHC is now known as S&P Global Inc.

Use of Non-GAAP Financial Information

We have provided Billings, EBITDA and Adjusted EBITDA in this Quarterly Report because we believe they provide investors with additional information to measure our performance and evaluate our ability to service our indebtedness.

Management reviews these measures on a regular basis and uses them to evaluate and manage the performance of our business, make resource allocation decisions and compensate key management personnel as these measures provide comparability from period-to-period as sales of digital solutions represent an increasing percentage of our total sales during this time of transition. We believe that, for the reasons outlined herein, these non-GAAP financial measures provide useful information to investors and provide increased transparency and a better understanding of our business performance trends as a supplement to reported revenue, net income (loss) from continuing operations and operating cash flows. However, these measures should be evaluated only in conjunction with the comparable GAAP financial measures and should not be viewed as alternative or superior measures of GAAP results.

Billings is a non-GAAP sales performance measure that we believe provides useful information in evaluating our period-to-period performance because it reflects the total amount of revenue that would have been recognized in a period if we recognized all print and digital revenue at the time of sale. We use Billings as a sales performance measure given that we typically collect full payment for our digital and print solutions at the time of

sale or shortly thereafter, but recognize revenue from digital solutions and multi-year deliverables ratably over the term of our customer contracts. As sales of our digital learning solutions have increased, so has the amount of revenue that is deferred in accordance with U.S. GAAP. Billings is a key metric we use to manage our business as it reflects the sales activity in a given period, provides comparability from period-to-period during this time of digital transition and is the basis for all sales incentive compensation. In the K-12 market where customers typically pay for five to eight year contracts upfront and the ongoing costs to service any contractual obligation are limited, the impact of the change in deferred revenue is most significant. Billings is U.S. GAAP revenue plus the net change in deferred revenue.

We believe that the presentation of Adjusted EBITDA which is defined in accordance with our debt agreements is appropriate to provide additional information to investors about certain material non-cash items and about unusual items that we do not expect to continue at the same level in the future as well as other items to assess our debt covenant compliance, ability to service our indebtedness and make capital allocation decisions in accordance with our debt agreements.

Billings, EBITDA and Adjusted EBITDA are not presentations made in accordance with U.S. GAAP, and our use of these terms varies from others in our industry. Billings, EBITDA and Adjusted EBITDA should not be considered as alternatives to revenue, net income from continuing operations, operating cash flows, or any other performance measures derived in accordance with U.S. GAAP as measures of operating performance, debt covenant compliance or cash flows as measures of liquidity. Billings, EBITDA and Adjusted EBITDA have important limitations as analytical tools, and you should not consider them in isolation or as substitutes for analysis of our results as reported under U.S. GAAP. Further, EBITDA:

- excludes certain tax payments that may represent a reduction in cash available to us;
- does not reflect any cash capital expenditure requirements for assets being depreciated and amortized that may have to be replaced in the future;
- does not reflect changes in, or cash requirements for, our working capital needs; and
- does not reflect the significant interest expense, or the cash requirements necessary to service interest or principal payments, on our indebtedness.

In addition, Adjusted EBITDA, as defined in accordance with our debt agreements:

- includes estimated cost savings and operating synergies, including some adjustments not permitted under Article 11 of Regulation S-X;
- does not include one-time expenditures, including costs required to realize the synergies referred to above;
- reflects the net effect of converting deferred revenues, deferred royalties and deferred commissions to a cash basis assuming the collection of all receivable balances and payment of all amounts owed;
- does not include management fees paid to entities and investment funds affiliated with Apollo Global Management, LLC, which will discontinue upon completion of this offering; and
- does not reflect the impact of earnings or charges resulting from matters that we and the lenders under our senior secured credit facilities may consider not to be indicative of our ongoing operations.

Our definition of Adjusted EBITDA allows for the add back of certain non-cash and other charges or costs that are deducted in calculating net income from continuing operations. However, these are expenses that may recur, vary greatly and can be difficult to predict. They can represent the effect of long-term strategies as opposed to short-term results. In addition, certain of these expenses can represent the reduction of cash that could be used for other

corporate purposes. Because of these limitations, we rely primarily on our U.S. GAAP results and use Billings, EBITDA and Adjusted EBITDA only supplementally.

Trademarks

This Quarterly Report contains references to our trademarks and service marks. Solely for convenience, trademarks and trade names referred to in this Quarterly Report 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 rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

PART I - FINANCIAL INFORMATION

Item 1: FINANCIAL STATEMENTS

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Statements of Operations
(Unaudited; dollars in thousands, except per share data)

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017
Revenue	\$ 384,211	\$ 405,378
Cost of sales	102,744	105,563
Gross profit	281,467	299,815
Operating expenses		
Operating and administration expenses	251,153	266,725
Depreciation	11,186	10,756
Amortization of intangibles	20,611	22,417
Total operating expenses	282,950	299,898
Operating (loss) income	(1,483)	(83)
Interest expense (income), net	47,932	44,106
Other (income) expense	—	(12,888)
(Loss) income from operations before taxes on income	(49,415)	(31,301)
Income tax provision	627	5,753
Net (loss) income from continuing operations	(50,042)	(37,054)
Net (loss) income from discontinued operations, net of taxes	—	19
Net (loss) income	\$ (50,042)	\$ (37,035)
Net (loss) earnings per share from continuing operations, basic and dilutive	\$ (4.68)	\$ (3.51)
Net (loss) earnings per share	\$ (4.68)	\$ (3.50)
Weighted average shares outstanding, basic and dilutive	10,696	10,570

See accompanying notes to the unaudited consolidated financial statements.

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Statements of Operations
(Unaudited; dollars in thousands, except per share data)

	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Revenue	\$ 662,567	\$ 686,109
Cost of sales	164,217	172,049
Gross profit	498,350	514,060
Operating expenses		
Operating and administration expenses	514,352	526,967
Depreciation	22,382	21,797
Amortization of intangibles	41,690	45,021
Total operating expenses	578,424	593,785
Operating (loss) income	(80,074)	(79,725)
Interest expense (income), net	89,882	87,340
Other (income) expense	—	(12,888)
(Loss) income from operations before taxes on income	(169,956)	(154,177)
Income tax provision	1,146	6,377
Net (loss) income from continuing operations	(171,102)	(160,554)
Net (loss) income from discontinued operations, net of taxes	—	(480)
Net (loss) income	\$ (171,102)	\$ (161,034)
Net (loss) earnings per share from continuing operations, basic and diluted	\$ (16.07)	\$ (15.19)
Net (loss) earnings per share	\$ (16.07)	\$ (15.23)
Weighted average shares outstanding, basic and diluted	10,645	10,573

See accompanying notes to the unaudited consolidated financial statements.

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(Unaudited; dollars in thousands)

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017
Net (loss) income	\$ (50,042)	\$ (37,035)
Other comprehensive (loss) income:		
Foreign currency translation adjustment, net of tax	(7,595)	3,804
Unrealized gain (loss) on interest rate swap agreements, net of tax	3,092	(2,620)
Comprehensive (loss) income	\$ (54,545)	\$ (35,851)

See accompanying notes to the unaudited consolidated financial statements.

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(Unaudited; dollars in thousands)

	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Net (loss) income	\$ (171,102)	\$ (161,034)
Other comprehensive (loss) income:		
Foreign currency translation adjustment, net of tax	(5,004)	9,205
Unrealized gain (loss) on interest rate swap agreements, net of tax	10,986	(5,405)
Comprehensive (loss) income	\$ (165,120)	\$ (157,234)

See accompanying notes to the unaudited consolidated financial statements.

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Balance Sheets
(Dollars in thousands)

	June 30, 2018 (Unaudited)	December 31, 2017
Current assets		
Cash and cash equivalents	\$ 86,207	\$ 407,632
Accounts receivable, net of allowance for doubtful accounts of \$16,601 and \$15,185 as of June 30, 2018 and December 31, 2017, respectively, and sales returns of \$119,483 as of December 31, 2017	348,404	274,755
Inventories, net	203,491	169,050
Prepaid and other current assets	97,711	95,376
Total current assets	735,813	946,813
Pre-publication costs, net	176,947	162,297
Property, plant and equipment, net	102,804	95,544
Goodwill	496,105	497,268
Other intangible assets, net	623,017	661,732
Investments	6,285	6,381
Deferred income taxes	7,933	7,926
Other non-current assets	179,311	139,311
Total assets	\$ 2,328,215	\$ 2,517,272
Liabilities and equity (deficit)		
Current liabilities		
Accounts payable	\$ 126,304	\$ 113,902
Accrued royalties	62,647	122,538
Accrued compensation	37,758	69,101
Deferred revenue	327,019	401,676
Current portion of long-term debt	87,269	17,269
Other current liabilities, including sales returns of \$90,821 as of June 30, 2018	184,867	90,770
Total current liabilities	825,864	815,256
Long-term debt	2,153,287	2,222,570
Deferred income taxes	14,537	14,199
Long-term deferred revenue	620,471	634,021
Other non-current liabilities	32,319	29,759
Total liabilities	3,646,478	3,715,805
Commitments and contingencies (Note 14)		
Stockholders' equity (deficit)		
Preferred stock, par value \$0.01 per share; 1,000,000 shares authorized, 100,000 issued and 37,500 outstanding as of December 31, 2017	—	—
Common stock, par value \$0.01 per share; 100,000,000 shares authorized, 10,833,641 and 10,647,749 shares issued as of June 30, 2018 and December 31, 2017, respectively; and 10,730,819 and 10,588,475 shares outstanding as of June 30, 2018 and December 31, 2017, respectively	105	104
Additional paid in capital	26,092	3,713
Treasury stock, 102,822 and 59,274 shares as of June 30, 2018 and December 31, 2017, respectively	(14,893)	(9,651)
Accumulated deficit	(1,294,507)	(1,151,657)
Accumulated other comprehensive loss	(35,060)	(41,042)
Total stockholders' equity (deficit)	(1,318,263)	(1,198,533)
Total liabilities and equity (deficit)	\$ 2,328,215	\$ 2,517,272

See accompanying notes to the unaudited consolidated financial statements.

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Statements of Cash Flows
(Unaudited; dollars in thousands)

	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Operating activities		
Net (loss) income from continuing operations	\$ (171,102)	\$ (160,554)
Net (loss) income from discontinued operations, net of taxes	—	(480)
Adjustments to reconcile net loss to net cash provided by operating activities		
Depreciation (including amortization of technology projects)	22,382	21,797
Amortization of intangibles	41,690	45,021
Amortization of pre-publication costs	31,105	40,022
Gain on sale of investment	—	(4,931)
Gain on dispositions	—	(5,857)
Provision for losses on accounts receivable	4,160	2,365
Inventory obsolescence	9,107	8,973
Deferred income taxes	332	5,817
Stock-based compensation	9,374	8,448
Amortization of debt discount	5,225	4,458
Amortization of deferred financing costs	6,945	6,084
Restructuring charges	5,089	2,236
Other	(29)	(895)
Changes in operating assets and liabilities, net of the effect of acquisitions		
Accounts receivable	(78,575)	(80,146)
Inventories	(44,937)	(42,516)
Prepaid and other current assets	2,712	7,889
Accounts payable and accrued expenses	(73,477)	(62,396)
Deferred revenue	(88,308)	17,250
Other current liabilities	91,763	(2,697)
Net change in operating assets and liabilities	(511)	(26,279)
Cash (used for) provided by operating activities	(227,055)	(216,391)
Investing activities		
Investment in pre-publication costs	(46,147)	(49,065)
Capital expenditures	(36,249)	(21,641)
Proceeds from sale of investment	—	4,931
Proceeds from disposition	1,196	2,205
Cash provided by (used for) investing activities	(81,200)	(63,570)
Financing activities		
Borrowings on MHGE Parent Term Loan	175,500	—
Borrowings on Revolving Facility	70,000	60,000
Repurchase of MHGE PIK Toggle Notes	(243,496)	(48,120)
Payment of Term Loan Facility	(8,769)	(7,875)
Payment of deferred financing costs	(305)	—
Payment of capital lease obligations	(5,033)	(3,190)
Issuance of common stock	10,000	—
Repurchase of common stock	(5,242)	(1,991)
Repurchase of vested stock options and restricted stock units	—	(3,720)
Dividend equivalents on vested stock options	(1,572)	(1,295)
Dividend equivalents on vested restricted stock units	(1,398)	(1,448)
Cash provided by (used for) financing activities	(10,315)	(7,639)

McGraw-Hill Education, Inc. and subsidiaries
Consolidated Statements of Cash Flows
(Unaudited; dollars in thousands)

Effect of exchange rate changes on cash	(2,855)	2,213
Net change in cash and cash equivalents	(321,425)	(285,387)
Cash and cash equivalents at the beginning of the period	407,632	418,753
Cash and cash equivalents, ending balance	<u>\$ 86,207</u>	<u>\$ 133,366</u>
Supplemental disclosures		
Cash paid for interest expense	\$ 83,587	\$ 79,107
Cash paid for income taxes	5,280	4,855

See accompanying notes to the unaudited consolidated financial statements.

McGraw-Hill Education, Inc. and subsidiaries
Notes to the Consolidated Financial Statements
(Unaudited; dollars in thousands, unless otherwise indicated)

1. Basis of Presentation and Accounting Policies

McGraw-Hill Education, Inc. ("MHE", the "Company", "Parent", "we", "us", or "our"), is a global provider of outcome-focused learning solutions, delivering both curated content and digital learning tools and platforms to the students in the classrooms of approximately 250,000 higher education instructors, 13,000 K-12 school districts and a wide variety of academic institutions, professionals and companies in approximately 125 countries. We have evolved our business from a print-centric producer of textbooks and instructional materials to the development of digital content and technology-enabled adaptive learning solutions that are delivered anywhere, anytime. Our business is comprised of the following four operating segments:

- **Higher Education:** We are a top-three provider in the United States higher education market. We provide students, instructors and institutions with adaptive digital learning tools, digital platforms, custom publishing solutions and traditional printed textbook products. The primary users of our solutions are students enrolled in two- and four-year non-profit colleges and universities, and to a lesser extent, for profit institutions. We sell our Higher Education solutions to well-known online retailers, distribution partners and college bookstores, who subsequently sell to students. We also increasingly sell via our proprietary e-commerce platform, primarily directly to students.
- **K-12:** We are a top-three provider in the United States K-12 curriculum and learning solutions market. We sell our learning solutions directly to K-12 school districts across the United States. While we offer all of our major curriculum and learning solutions in digital format, given the varying degrees of availability and maturity of our customers' technological infrastructure, a majority of our sales are derived from selling blended print and digital solutions.
- **International:** We leverage our global scale, brand recognition and extensive product portfolio to serve students in the higher education, K-12 and professional markets in 125 countries outside of the United States. Our products and solutions for the International segment are produced in more than 60 languages and primarily originate from our offerings produced for the United States market and that are later adapted to different international markets.
- **Professional:** We are a leading provider of medical, technical, engineering and business content for the professional, education and test preparation communities.

Principles of Consolidation

The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. Generally Accepted Accounting Principles ("U.S. GAAP") and all significant intercompany transactions and balances have been eliminated. In the opinion of management, the accompanying unaudited consolidated financial statements include all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation.

These unaudited consolidated financial statements and notes reflect the Company's evaluation of events occurring subsequent to the balance sheet date through August 10, 2018, the date the financial statements were available for issuance.

Seasonality and Comparability

Our revenues, operating profit and operating cash flows are affected by the inherent seasonality of the academic calendar, which varies by country. Changes in our customers' ordering patterns may impact the comparison of our results in a quarter with the same quarter of the previous year, or in a fiscal year with the prior fiscal year, where our customers may shift the timing of material orders for any number of reasons, including, but not limited to, changes in academic semester start dates or changes to their inventory management practices.

McGraw-Hill Education, Inc. and subsidiaries
Notes to the Consolidated Financial Statements
(Unaudited; dollars in thousands, unless otherwise indicated)

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

On an ongoing basis, we evaluate our estimates and assumptions, including those related to revenue recognition, allowance for doubtful accounts and sales returns, inventories, pre-publication costs, accounting for the impairment of long-lived assets (including other intangible assets), goodwill and indefinite-lived intangible assets, restructuring, stock-based compensation, income taxes and contingencies.

Cash and Cash Equivalents

Cash and cash equivalents include bank deposits and highly liquid investments with original maturities of three months or less that consist primarily of interest bearing demand deposits with daily liquidity, money market and time deposits. The balance also includes cash that is held by the Company outside the United States to fund international operations or to be reinvested outside of the United States. The investments and bank deposits are stated at cost, which approximates market value and were \$86,207 and \$407,632 as of June 30, 2018 and December 31, 2017, respectively. These investments are not subject to significant market risk.

Accounts Receivable

Credit is extended to customers based upon an evaluation of the customer's financial condition. Accounts receivable are recorded at net realizable value.

Allowance for Doubtful Accounts and Sales Returns

The allowance for doubtful accounts and sales returns reserves methodology is based on historical analysis, a review of outstanding balances and current conditions. In determining these reserves, we consider, among other factors, the financial condition and risk profile of our customers, areas of specific or concentrated risk as well as applicable industry trends or market indicators. The allowance for sales returns is a significant estimate, which is based on historical rates of return and current market conditions. The provision for sales returns is reflected as a reduction to "Revenues" in our consolidated statements of operations. Sales returns are charged against the reserve as products are returned to inventory. Accounts receivable losses for bad debt are charged against the allowance for doubtful accounts when the receivable is determined to be uncollectible. The change in the allowance for doubtful accounts is reflected as part of operating and administrative expenses in our consolidated statement of operations.

Concentration of Credit Risk

As of June 30, 2018, no single customer comprised more than 10% and, as of December 31, 2017, two customers comprised 24% of the gross accounts receivable balance which is reflective of concentration and seasonality in our industry. In addition, the Company mitigates concentration of credit risk with respect to accounts receivable by performing ongoing credit evaluations of its customers and by periodically entering into arrangements with third parties who have agreed to purchase our accounts receivables of certain customers in the event of the customer's financial inability to pay, subject to certain limitations.

The Company had no single customer that accounted for 10% of our gross revenue for the three or six months ended June 30, 2018 and 2017. The loss of, or any reduction in sales from, a significant customer or deterioration in their ability to pay could harm our business and financial results.

Inventories

Inventories, consisting principally of books, are stated at the lower of cost or net realizable value. The majority of our inventories relate to finished goods. A significant estimate, the reserve for inventory obsolescence, is

McGraw-Hill Education, Inc. and subsidiaries
Notes to the Consolidated Financial Statements
(Unaudited; dollars in thousands, unless otherwise indicated)

reflected in operating and administration expenses. In determining this reserve, we consider management's current assessment of the marketplace, industry trends and projected product demand as compared to the number of units currently on hand.

Pre-publication Costs

Pre-publication costs include both the cost of developing educational content and the development of assessment solution products. Costs incurred prior to the publication date of a title or release date of a product represent activities associated with product development. These may be performed internally or outsourced to subject matter specialists and include, but are not limited to, editorial review and fact verification, graphic art design and layout and the process of conversion from print to digital media or within various formats of digital media. These costs are capitalized when the costs can be directly attributable to a project or title and the title is expected to generate probable future economic benefits. Capitalized costs are amortized upon publication of the title over its estimated useful life of up to six years, with a higher proportion of the amortization typically taken in the earlier years. Amortization expenses for prepublication costs are charged as a component of operating and administration expenses. In evaluating recoverability, we consider management's current assessment of the marketplace, industry trends and the projected success of programs.

Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation as of June 30, 2018 and December 31, 2017. Depreciation and amortization are recorded on a straight-line basis, over the assets' estimated useful lives. Buildings have an estimated useful life, for purposes of depreciation, from ten to forty years. Furniture, fixtures and equipment are depreciated over periods not exceeding twelve years. Leasehold improvements are amortized over the life of the lease or the life of the assets, whichever is shorter. The Company evaluates the depreciation periods of property, plant and equipment to determine whether events or circumstances warrant revised estimates of useful lives.

Royalty Advances

Royalty advances are initially capitalized and subsequently expensed as related revenues are earned or when the Company determines future recovery is not probable. The Company has a long history of providing authors with royalty advances, and it tracks each advance earned with respect to the sale of the related publication. Historically, the longer the unearned portion of the advance remains outstanding, the less likely it is that the Company will recover the advance through the sale of the publication, as the related royalties earned are applied first against the remaining unearned portion of the advance. The Company applies this historical experience to its existing outstanding royalty advances to estimate the likelihood of recovery. Additionally, the Company's editorial staff reviews its portfolio of royalty advances at a minimum quarterly to determine if individual royalty advances are not recoverable for discrete reasons, such as the death of an author prior to completion of a title or titles, a Company decision to not publish a title, poor market demand or other relevant factors that could impact recoverability. Based on this information, the portion of any advance that we believe is not recoverable is expensed.

Deferred Technology Costs

We capitalize certain software development and website implementation costs. Capitalized costs only include incremental, direct costs of materials and services incurred to develop the software after the preliminary project stage is completed, funding has been committed and it is probable that the project will be completed and used to perform the function intended. Incremental costs are expenditures that are out-of-pocket to us and are not part of an allocation or existing expense base. Software development and website implementation costs are expensed as incurred during the preliminary project stage. Capitalized costs are amortized from the period the software is ready for its intended use over its estimated useful life, generally three years, using the straight-line method and are included within depreciation in the consolidated statements of operations. Periodically, we evaluate the amortization methods, remaining lives and recoverability of such costs. Capitalized software development and website implementation costs are included in other non-current assets in the consolidated balance sheets and are presented

McGraw-Hill Education, Inc. and subsidiaries
Notes to the Consolidated Financial Statements
(Unaudited; dollars in thousands, unless otherwise indicated)

net of accumulated amortization. Gross deferred technology costs were \$142,211 and \$128,246 as of June 30, 2018 and December 31, 2017, respectively. Accumulated amortization of deferred technology costs were \$77,352 and \$66,309 as of June 30, 2018 and December 31, 2017, respectively.

Accounting for the Impairment of Long-Lived Assets (Including Other Intangible Assets)

We evaluate long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Upon such an occurrence, recoverability of assets to be held and used is measured by comparing the carrying amount of an asset to current forecasts of undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds its estimated future cash flows, an impairment charge is recognized equal to the amount by which the carrying amount of the asset exceeds the fair value of the asset. Long-lived assets held for sale are written down to fair value, less cost to sell. Fair value is determined based on market evidence, discounted cash flows, appraised values or management's estimates, depending upon the nature of the assets.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill represents the excess of purchase price and related costs over the fair value of identifiable assets acquired and liabilities assumed in a business combination. Indefinite-lived intangible assets consist of the Company's acquired brands. Goodwill and indefinite-lived intangible assets are not amortized, but instead are tested for impairment annually during the fourth quarter each year, or more frequently if events or changes in circumstances indicate that the asset might be impaired. We have four reporting units, Higher Education, K-12, International, and Professional with goodwill and indefinite-lived intangible assets that are evaluated for impairment.

We initially perform a qualitative analysis evaluating whether there are events or circumstances that provide evidence that it is more likely than not that the fair value of any of our reporting units or indefinite-lived intangible assets are less than their carrying amount. If, based on our evaluation we do not believe that it is more likely than not that the fair value of any of our reporting units or indefinite-lived intangible assets are less than their carrying amount, no quantitative impairment test is performed. Conversely, if the results of our qualitative assessment determine that it is more likely than not that the fair value of any of our reporting units or indefinite-lived intangible assets are less than their respective carrying amounts we perform a two-step quantitative impairment test.

During the first step, the estimated fair value of the reporting units are compared to their carrying value including goodwill and the estimated fair value of the intangible assets is compared to their carrying value. Fair values of the reporting units are estimated using the income approach, which incorporates the use of a discounted free cash flow analysis, and are corroborated using the market approach, which incorporates the use of revenue and earnings multiples based on market data. The discounted free cash flow analyses are based on the current operating budgets and estimated long-term growth projections for each reporting unit. Future cash flows are discounted based on a market comparable weighted average cost of capital rate for each reporting unit, adjusted for market and other risks where appropriate. Fair values of indefinite-lived intangible assets are estimated using avoided royalty discounted free cash flow analyses. Significant judgments inherent in these analyses include the selection of appropriate royalty and discount rates and estimating the amount and timing of expected future cash flows. The discount rates used in the discounted free cash flow analyses reflect the risks inherent in the expected future cash flows generated by the respective intangible assets. The royalty rates used in the discounted free cash flow analyses are based upon an estimate of the royalty rates that a market participant would pay to license the Company's trade names and trademarks.

If the fair value of the reporting units or indefinite-lived intangible assets are less than their carrying value, a second step is performed which compares the implied fair value of the reporting unit's goodwill or indefinite-lived intangible assets to the carrying value. The fair value of the goodwill or indefinite-lived intangible assets is determined based on the difference between the fair value of the reporting unit and the net fair value of the identifiable assets and liabilities of the reporting unit or carrying value of the indefinite-lived intangible asset. If the

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implied fair value of the goodwill or indefinite-lived intangible assets is less than the carrying value, the difference is recognized as an impairment charge. Significant judgments inherent in this analysis include estimating the amount and timing of future cash flows and the selection of appropriate discount rates, royalty rate and long-term growth rate assumptions. Changes in these estimates and assumptions could materially affect the determination of fair value for each reporting unit and indefinite-lived intangible asset and for some of the reporting units and indefinite-lived intangible assets could result in an impairment charge, which could be material to our financial position and results of operations.

Fair Value Measurements

In accordance with authoritative guidance for fair value measurements, certain assets and liabilities are required to be recorded at fair value on a recurring basis. Fair value is defined as the amount that would be received to sell an asset or transfer a liability in an orderly transaction between market participants. A fair value hierarchy has been established which requires us to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

The three levels of inputs used to measure fair value are as follows:

- Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities.
- Level 2 - Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the asset or liabilities.
- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Foreign Currency Translation

We have operations in many foreign countries. For most international operations, the local currency is the functional currency. For international operations that are determined to be extensions of the U.S. operations or where a majority of revenue and/or expenses is USD denominated, the United States dollar is the functional currency. For local currency operations, assets and liabilities are translated into United States dollars using end-of-period exchange rates, and revenue and expenses are translated into United States dollars using weighted-average exchange rates. Foreign currency translation adjustments are accumulated in a separate component of equity.

Stock-Based Compensation

The Company issues stock options and other stock-based compensation to eligible employees, directors and consultants and accounts for these transactions under the provisions of Accounting Standards Codification (“ASC”) 718, *Compensation - Stock Compensation*. For equity awards, total compensation cost is based on the grant date fair value. For liability awards, total compensation cost is based on the fair value of the award on the date the award is granted and is remeasured at each reporting date until settlement. For performance-based options issued, the value of the instrument is measured at the grant date as the fair value of the common stock and expensed over the vesting term when the performance targets are considered probable of being achieved. The Company recognizes stock-based compensation expense for all awards, on a straight-line basis, over the service period required to earn the award, which is typically the vesting period.

Revenue Recognition

Revenue is recognized when control of goods or services are transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, we satisfy a performance obligation.

Arrangements with multiple deliverables

Revenue relating to products that provide for more than one deliverable is recognized based upon the relative fair value to the customer of each deliverable as each deliverable is provided. Revenue relating to agreements that provide for more than one service is recognized based upon the relative fair value to the customer of each service component as each component is earned. If the fair value to the customer for each service is not determinable based on stand-alone selling price, we make our best estimate of the services' stand-alone selling price and recognize revenue as earned as the services are delivered. Because we determine the basis for allocating consideration to each deliverable primarily on prices experienced from completed sales, the portion of consideration allocated to each deliverable in a multiple deliverable arrangement may increase or decrease depending on the most recent selling price of a comparable product or service sold on a stand-alone basis. For example, as the demand for, and prevalence of, digital products increases, as new sales occur we may be required to increase the amount of consideration allocable to digital products included in multiple deliverable arrangements because the fair value of such products or services may increase relative to other products or services bundled in the arrangement. Conversely, in the event that demand for our print products decreases, thereby causing us to experience reduced prices on our print products, we may be required to allocate less consideration to our print products in our arrangements that include multiple deliverables.

Subscription-based products

Subscription income is recognized over the related subscription period that the subscription is available and is used by the customer. Subscription revenue received or receivable in advance of the delivery of services or publications is included in deferred revenue. Incremental costs that are directly related to the subscription revenue are deferred and amortized over the subscription period. Included among the underlying assumptions related to our estimates that impact the recognition of subscription income is the extent of our responsibility to provide access to our subscription-based products, and the extent of complementary support services customers demand to access our products.

Service arrangements

Revenue relating to arrangements that provide for more than one service is recognized based upon the relative fair value to the customer of each service component as each component is earned. Such arrangements may include digital products bundled with traditional print products, obligations to provide products and services in the future at no additional cost, and periodic training pertinent to products and services previously provided. If the fair value to the customer for each service is not objectively determinable, we make our best estimate of the services' stand-alone selling price and recognize revenue as earned as the services are delivered.

Shipping and Handling Costs

All amounts billed to customers in a sales transaction for shipping and handling are classified as revenue. Shipping and handling costs are also a component of cost of sales.

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Income Taxes

The Company's operations are subject to United States federal, state and local income taxes, and foreign income taxes.

We determine the provision for income taxes using the asset and liability approach. Under this approach, deferred income taxes represent the expected future tax consequences of temporary differences between the carrying amounts and tax bases of assets and liabilities.

Valuation allowances are established when management determines that it is more-likely-than not that some portion or all of the deferred tax asset will not be realized. Management evaluates the weight of both positive and negative evidence in determining whether a deferred tax asset will be realized. Management will look to a history of losses, future reversal of existing taxable temporary differences, taxable income in carryback years, feasibility of tax planning strategies, and estimated future taxable income. The valuation allowance can also be affected by changes in tax laws and changes to statutory tax rates.

We prepare and file tax returns based on management's interpretation of tax laws and regulations. As with all businesses, our tax returns are subject to examination by various taxing authorities. Such examinations may result in future tax assessments based on differences in interpretation of the tax law and regulations. We adjust our estimated uncertain tax positions reserves based on audits by and settlements with various taxing authorities as well as changes in tax laws, regulations, and interpretations. The Company recognizes accrued interest and penalties related to uncertain tax positions in income tax (benefit) provision within the consolidated statement of operations.

Contingencies

We accrue for loss contingencies when both (a) information available prior to issuance of the financial statements indicates that it is probable that a liability had been incurred at the date of the financial statements and (b) the amount of loss can reasonably be estimated. When we accrue for loss contingencies and the reasonable estimate of the loss is within a range, we record its best estimate within the range. We disclose an estimated possible loss or a range of loss when it is at least reasonably possible that a loss may have been incurred. Neither an accrual nor disclosure is required for losses that are deemed remote.

Earnings (Loss) per Share

The Company computes net income (loss) per share in accordance with ASC 260, *Earnings per Share*, which requires presentation of both basic and diluted earnings per share ("EPS") on the face of the income statement. Basic EPS is computed by dividing net income (loss) available to common shareholders (numerator) by the weighted average number of shares outstanding (denominator) during the period. Diluted EPS gives effect to all dilutive potential common shares outstanding during the period using the treasury stock method and convertible preferred stock using the if-converted method. Diluted EPS excludes all dilutive potential shares if their effect is anti-dilutive.

Recently Adopted Accounting Standards

In May 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2017-09, *Modification Accounting for Share-Based Payment Arrangements*, which identifies and provides guidance on the types of changes to share-based payment awards that an entity would be required to apply modification accounting under ASU 2016-09, *Stock Compensation (Topic 718)*. Specifically, an entity would not apply modification accounting if the fair value, vesting conditions and classification of the awards are the same immediately before and after the modification. The standard is effective for annual periods beginning after December 15, 2017 and should be applied prospectively to awards modified on or after the effective date. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cashflows (Topic 230) Classification of*

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Certain Cash Receipts and Cash Payments.” which clarifies the classification of certain cash receipts and cash payments in the statement of cash flows, including debt prepayment or extinguishment costs, settlement of contingent consideration arising from a business combination, insurance settlement proceeds, and distributions from certain equity method investees. The standard is effective for interim and annual reporting periods beginning after December 15, 2017, with early adoption permitted. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, “*Revenue from Contracts with Customers*”. The Company adopted ASU 2014-09 and its related related amendments, Accounting Standards Codification Topic 606 “*Revenue from Contracts with Customers*”, (“Topic 606”), effective January 1, 2018 using the modified retrospective method. For required disclosures relating to the impact of adopting Topic 606 and a discussion on the Company's updated accounting policies relating to revenue recognition and costs to obtain a contract, see Note 2, “Revenue from Contracts with Customers”.

Recently Issued Accounting Standards

In February 2018, the FASB issued ASU No. 2018-02, “*Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*”, to allow a reclassification from accumulated other comprehensive income (loss) for stranded tax effects resulting from the Tax Cuts and Jobs Act. This standard is effective for interim and annual reporting periods after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

In August 2017, FASB issued ASU 2017-12, “*Derivative and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*”, which aligns hedge accounting with risk management activities and changes both how companies assess hedge effectiveness and presentation and disclosure requirements. This standard is effective for interim and annual reporting periods after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, “*Leases*.” This ASU requires that a lessee record an operating lease in the balance sheet with a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term. This standard is effective for annual and interim periods beginning after December 15, 2018, with early adoption permitted. Adoption of this standard will be on a modified retrospective approach, which includes a number of optional practical expedients that the Company may elect to apply. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

Recently issued FASB accounting standard codification updates, except for the above standards, did not have a material impact to the Company's unaudited consolidated financial statements for the three or six months ended June 30, 2018.

2. Revenue from Contracts with Customers

On January 1, 2018, the Company adopted Topic 606 using the modified retrospective method for all contracts which were not completed as of the date of adoption. As a result, we recognized the cumulative impact of adopting Topic 606 as an adjustment to the opening balance of accumulated deficit while prior periods were not adjusted and will continue to be reported in accordance with the Company's previous accounting under ASC 605, Revenue Recognition (“Topic 605” or “previous guidance”).

The impact of adopting Topic 606 primarily relates to the deferral of commission costs that are incremental to obtaining customer contracts which were expensed as incurred under the previous guidance. Under Topic 606, we defer all incremental commission costs to obtain the customer contract which have a duration of greater than one year. We amortize these costs on a straight-line basis over the expected period of benefit or the related contractual renewal period, depending on whether the contract is an initial or renewal contract, respectively. For customer contracts that have a duration of less than one year, a practical expedient where the commission cost is expensed as incurred was applied.

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Topic 606 also required a change to the classification of sales returns. Under Topic 606, sales returns are classified within other current liabilities, while sales returns will continue to be classified as a reduction to accounts receivable in prior periods.

The cumulative impact of adopting Topic 606 on our consolidated balance sheets as of January 1, 2018 was as follows:

	As of		As of	
	December 31, 2017	Impact of Adoption	January 1, 2018	
Assets				
Prepaid and other current assets	\$ 95,376	\$ 6,345	\$ 101,721	
Other non-current assets	139,311	21,907	161,218	
Stockholders' equity (deficit)				
Accumulated deficit (1)	(1,151,657)	28,252	(1,123,405)	

(1) The adoption of Topic 606 resulted in the recognition of a deferred tax liability of \$7,232 for deferred commissions. However, this was offset with a full valuation allowance and therefore had no impact on our accumulated deficit.

Impact of New Revenue Guidance on Financial Statement Line Items

In accordance with Topic 606, the following tables present our reported consolidated statements of operations and consolidated balance sheet for the three and six months ended June 30, 2018, as if the previous guidance had been in effect:

	Three Months Ended June 30, 2018		
	As reported	Adjustments	Balances Without Adoption of Topic 606
Operating expenses:			
Operating and administration expenses (1)	\$ 251,153	\$ 871	\$ 252,024
Operating (loss) income	(1,483)	(871)	(2,354)
Net (loss) income	(50,042)	(871)	(50,913)

(1) This represents amortization of \$1,667 relating to deferred commission costs that were recorded as part of the cumulative adjustment upon adoption and newly capitalized commissions. In addition, the Company capitalized \$2,538 in new commission costs during the three months ended June 30, 2018. Under the previous guidance, the entire balance of \$2,538 would have been expensed as incurred as of June 30, 2018.

	Six Months Ended June 30, 2018		
	As reported	Adjustments	Balances Without Adoption of Topic 606
Operating expenses:			
Operating and administration expenses (2)	\$ 514,352	\$ (410)	\$ 513,942
Operating (loss) income	(80,074)	410	(79,664)
Net (loss) income	(171,102)	410	(170,692)

(2) This represents amortization of \$3,282 relating to deferred commission costs that were recorded as part of the cumulative adjustment upon adoption and newly capitalized commissions. In addition, the Company capitalized \$2,872 in new commission costs during the six months ended June 30, 2018. Under the previous guidance, the entire balance of \$2,872 would have been expensed as incurred as of June 30, 2018.

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As of June 30, 2018			
	As reported	Adjustments	Balances Without Adoption of Topic 606
Assets			
Accounts receivable (3)	\$ 348,404	\$ (90,821)	\$ 257,583
Prepaid and other current assets (4)	97,711	(6,730)	90,981
Other non-current assets (4)	179,311	(21,112)	158,199
Liabilities			
Other current liabilities (3)	184,867	(90,821)	94,046
Stockholders' equity (deficit)			
Accumulated deficit (5)	(1,294,507)	(27,842)	(1,322,349)

(3) This represents the reclassification of sales returns from accounts receivable, net to other current liabilities;

(4) This represents the short-term and long-term portion of deferred commission costs; and

(5) This represents the cumulative adjustment of deferred commission costs recognized upon adoption of \$28,252, offset by the adjustment to the consolidated statement of operations as described in footnote (2) in the table above of \$410.

The adoption of Topic 606 resulted in offsetting shifts in accounts receivable, net and other current liabilities for the reclassification of sales returns. However, the adoption had no impact on the Company's overall cash flows from operating, investing or financing activities. In addition, the adoption of Topic 606 had no impact on Billings and Adjusted EBITDA.

Disaggregation of Revenue

The following table summarizes revenue for the three and six months ended June 30, 2018:

Three Months Ended June 30, 2018			
	Digital	Print (1)	Total
Reported Revenue by segment:			
Higher Education	\$ 106,343	\$ 21,214	\$ 127,557
K-12	46,586	126,064	172,650
International	11,311	49,679	60,990
Professional	15,513	11,843	27,356
Other	1,000	(5,342)	(4,342)
Total Reported Revenue	\$ 180,753	\$ 203,458	\$ 384,211

(1) Print revenue contains traditional print, consumable print workbooks and custom revenue.

Six Months Ended June 30, 2018			
	Digital	Print (1)	Total
Reported Revenue by segment:			
Higher Education	\$ 216,807	\$ 53,161	\$ 269,968
K-12	91,275	146,133	237,408
International	24,813	79,758	104,571
Professional	31,494	21,804	53,298
Other	1,352	(4,030)	(2,678)
Total Reported Revenue	\$ 365,741	\$ 296,826	\$ 662,567

(1) Print revenue contains traditional print, consumable print workbooks and custom revenue.

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Higher Education

For our print products, our performance obligation is satisfied at the time of shipment directly to the student or to our distribution partners, who typically order products several weeks before the beginning of an academic semester to ensure sufficient physical product inventory. Digital products are generally sold as subscriptions, which are paid for at the time of sale or shortly thereafter, and our performance obligation is satisfied over the life of the subscription.

K-12

Our performance obligation from traditional print products is typically satisfied at the time of shipment, which closely aligns with when a school district takes possession of the required number of products at the outset of a multi-year adoption. Traditional print products are typically re-used by students over the term of the adoption, and school districts will occasionally purchase replacement products due to wear or increasing enrollment over the life of the adoption. Sales of these replacement products are known as residual sales, from which we derive a significant portion of our revenue. Our digital solutions are sold as a subscription, which states and districts generally pay for at the beginning of a multi-year adoption. We defer revenue related to digital solutions for the entirety of the contract upfront and satisfy our performance obligation ratably over the term of the contract. Revenues for print workbooks are deferred when we enter into a multi-year contract and our performance obligation is satisfied when delivery takes place, often at the beginning of each academic year over the contract term.

International

Revenue recognition for international products is similar to products sold in the United States, primarily in the Higher Education market. Our performance obligations for traditional print products are typically satisfied upon shipment, while digital performance obligations are satisfied over the contractual term of the product.

Professional

Our performance obligations for traditional print products are typically satisfied upon shipment, while our performance obligations for digital products are satisfied over the contractual term.

In addition, revenues are also impacted by our reserve for product returns. To more accurately reflect the economic impact of returns on our operating performance, we reserve a percentage of our gross sales in anticipation of these returns when calculating our net revenues.

Significant Judgments

Our contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. We use an observable price to determine the stand-alone selling price for separate performance obligations if available or when not available, an estimate that maximizes the use of observable inputs and faithfully depicts the selling price of the promised goods or services if the entity sold those goods or services separately to a similar customer in similar circumstances.

Deferred Commission Costs

As of June 30, 2018, the Company had \$6,730 and \$21,112 of deferred commission costs included within prepaid and other current assets and other non-current assets, respectively. In addition, the Company had \$1,667 and \$3,282 of amortization expense related to deferred commission costs during the three and six months ended June 30, 2018, respectively, which are included within operating and administration expenses in our consolidated statements of operations. There were no impairment losses of deferred commission costs for the three or six months ended June 30, 2018.

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Contract Liabilities

Revenues from our digital subscription products and multi-year consumable products are deferred at the time of sale and are recognized in earnings on a pro-rata basis over the term of the subscription or contract.

	Deferred Revenue		
	Current	Non-current	Total
Balance as of January 1, 2018	\$ 401,676	\$ 634,021	\$ 1,035,697
Balance as of June 30, 2018	327,019	620,471	947,490

Revenue recognized during the three and six months ended June 30, 2018 from amounts included in deferred revenue at the beginning of the period was approximately \$139,760 and \$263,795, respectively.

In addition, the estimated revenue expected to be recognized in the future related to the \$947,490 of performance obligations that are unsatisfied or partially unsatisfied as of June 30, 2018 is approximately 71% over the next one to three years.

3. Other Income

On May 10, 2017, the Company entered into a definitive agreement and consummated the sale of substantially all of the assets and certain liabilities of the Company's wholly-owned K-12 Canadian business to Nelson Education Ltd. ("Nelson"). The aggregate sales price was \$7,884, subject to working capital adjustments, of which \$2,205 was received at closing on June 1, 2017. The remaining proceeds will be received in six month installments beginning November 30, 2017 and ending May 31, 2020. On November 30, 2017, the working capital adjustment was finalized resulting in the Company making a payment of \$49. As the disposal does not represent a strategic shift that will have a major effect on the Company's operations and financial results, the K-12 Canadian business does not qualify as discontinued operations. As a result, the gain on disposal of \$5,857 is recognized in other income within the consolidated statement of operations.

In addition, during the three months ended June 30, 2017, the Company recorded a gain of \$4,931 within other income in the consolidated statement of operations related to the sale of an equity method investment.

4. Inventories

Inventories consist of the following:

	As of	
	June 30, 2018	December 31, 2017
Raw materials	\$ 3,960	\$ 2,246
Work-in-progress	1,199	854
Finished goods	257,975	229,374
	263,134	232,474
Reserves	(59,643)	(63,424)
Inventories, net	\$ 203,491	\$ 169,050

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5. Debt

Long-term debt consisted of the following:

	As of	
	June 30, 2018	December 31, 2017
MHGE Senior Notes	\$ 400,000	\$ 400,000
Term Loan Facility	1,692,227	1,700,995
Revolving Facility	70,000	—
MHGE PIK Toggle Notes	—	243,621
MHGE Parent Term Loan	180,000	—
Total long-term debt outstanding	2,342,227	2,344,616
Less: unamortized debt discount	(59,819)	(60,544)
Less: unamortized deferred financing costs	(41,852)	(44,233)
Less: current portion of long-term debt	(87,269)	(17,269)
Long-Term Debt	\$ 2,153,287	\$ 2,222,570

MHGE Senior Notes

On May 4, 2016, McGraw-Hill Global Education Holdings, ("MHGE") and McGraw-Hill Global Education Finance, Inc. (together with MHGE, the "Issuers") issued \$400,000 aggregate principal amount of the 7.875% Senior Notes due 2024, ("MHGE Senior Notes") in a private placement. The MHGE Senior Notes mature on May 15, 2024 and bear interest at a rate of 7.875% per annum, payable semi-annually in arrears on May 15 and November 15 of each year, and commenced on November 15, 2016.

As of June 30, 2018, the unamortized debt discount and deferred financing costs was \$41,676 and \$18,983, respectively, which are amortized over the term of the MHGE Senior Notes using the effective interest method.

The Issuers may redeem the MHGE Senior Notes at their option, in whole or in part, at any time on or after May 15, 2019, at certain redemption prices. In addition, prior to May 15, 2019 the Issuers may redeem the MHGE Senior Notes at their option, in whole at any time or in part from time to time, at a redemption price equal to 100% of the principal amount of the MHGE Senior Notes redeemed, plus a "make-whole" premium and accrued and unpaid interest, if any. Notwithstanding the foregoing, from time to time on or prior to May 15, 2019 the Issuers may redeem in the aggregate up to 40% of the original aggregate principal amount of the MHGE Senior Notes (calculated after giving effect to any issuance of additional notes) in an aggregate amount equal to the net cash proceeds of one or more equity offerings at a redemption price equal to 107.875%, plus accrued and unpaid interest, if any, so long as at least 50% of the original aggregate principal amount of the MHGE Senior Notes (calculated after giving effect to any issuance of additional notes) must remain outstanding after each such redemption.

The MHGE Senior Notes are fully and unconditionally guaranteed by each of McGraw-Hill Education Holdings, LLC's, ("MHGE Holdings") domestic restricted subsidiaries that guarantee the Senior Facilities.

The MHGE Senior Notes contain certain customary negative covenants and events of default. The negative covenants limit MHGE Holdings and its restricted subsidiaries' ability to, among other things: incur additional indebtedness or issue certain preferred shares, create liens on certain assets, pay dividends or prepay junior debt, make certain loans, acquisitions or investments, materially change its business, engage in transactions with affiliates, conduct asset sales, restrict dividends from subsidiaries, restrict liens, or merge, consolidate, sell or otherwise dispose of all or substantially all of MHGE Holdings' assets.

The fair value of the MHGE Senior Notes was approximately \$369,000 and \$394,000 as of June 30, 2018 and December 31, 2017, respectively. The Company estimates the fair value of its MHGE Senior Notes based on

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trades in the market. Since the MHGE Senior Notes do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities (Level 2). As of June 30, 2018, the remaining contractual life of the MHGE Senior Notes is approximately 5.75 years.

Senior Facilities

On May 4, 2016, MHGE Holdings executed a credit agreement for \$1,925,000 of secured credit facilities, ("Senior Facilities"). The Senior Facilities consist of:

- a senior secured term loan credit facility in an aggregate principal amount of \$1,575,000 with a maturity of 6 years (the "Term Loan Facility"); and
- a senior secured revolving credit facility in an aggregate principal amount of up to \$350,000 with a maturity of 5 years (the "Revolving Facility"), including both a letter of credit sub-facility and a swingline loan sub-facility.

On December 18, 2017, the Company completed an incremental aggregate principal amount of \$150,000 under the existing Term Loan Facility. The incremental Term Loan Facility was issued at a 0.25% discount and will mature concurrently with the existing Term Loan Facility. The proceeds from this transaction, together with cash on hand, were used to fund the repurchase of a portion of the Existing PIK Toggle Notes.

Borrowings under the Senior Facilities bear interest at a rate equal to a LIBOR or Prime rate plus an applicable margin, subject to a 1.00% floor in the case of the Term Loan Facility. As of June 30, 2018, the interest rate for the Term Loan Facility was 5.98%. In addition, the Term Loan Facility was issued at a discount of 0.5%. As of June 30, 2018, the unamortized debt discount and deferred financing costs was \$13,900 and \$20,036, respectively, which are amortized over the term of the facility using the effective interest method.

As of June 30, 2018, the Company has \$70,000 outstanding under the Revolving facility, of which \$60,000 is subject to an interest rate of LIBOR plus 4.00% and \$10,000 is subject to a base rate of 5.00% plus an applicable margin of 3.00%. The outstanding amount is included within the current portion of long-term debt within the consolidated balance sheet as of June 30, 2018 (excluding outstanding letters of credit of \$4,275). In addition, we are required to pay a commitment fee of 0.50% per annum to the lenders under the Revolving Facility in respect of the unutilized commitments thereunder.

The Senior Facilities require scheduled quarterly principal payments on the term loans in amounts equal to 0.25% of the original principal amount of the term loans commencing with the end of the first full fiscal quarter ending after the closing date, with the balance payable at maturity.

In addition, the Senior Facilities include customary mandatory prepayment requirements based on certain events such as asset sales, debt issuances and defined levels of excess cash flow.

All obligations under the Senior Facilities are unconditionally guaranteed by each of MHGE Holdings' existing and future direct and indirect material, wholly owned domestic subsidiaries. The obligations are secured by substantially all of MHGE Holdings' assets and those of each subsidiary guarantor, capital stock of the subsidiary guarantors and 65% of the voting capital stock of the first-tier foreign subsidiaries that are not subsidiary guarantors, in each case subject to exceptions. Such security interests consist of a first priority lien with respect to the collateral.

Our Revolving Facility includes a springing covenant that requires MHGE Holdings, subject to a testing threshold, comply on a quarterly basis with a maximum net first lien senior secured leverage ratio (the ratio of consolidated net debt secured by first-priority liens on the collateral to Adjusted EBITDA) of (a) with respect to the first, third and fourth fiscal quarters of any year, 4.80 to 1.00 and (b) with respect to the second quarter of any fiscal year, 5.25 to 1.00. The testing threshold is satisfied at any time at which the sum of outstanding revolving credit

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facility loans, swingline loans and certain letters of credit exceeds thirty percent (30%) of commitments under the revolving credit facility at quarter end.

Adjusted EBITDA reflects EBITDA as defined in the credit agreement governing the Senior Facilities. Solely for the purpose of calculating the springing financial covenant, pre-publication investments should be excluded from the calculation of Adjusted EBITDA.

The Senior Facilities contain certain customary affirmative covenants and events of default. The negative covenants in the Senior Facilities include, among other things, limitations on MHGE Holdings' and its subsidiaries' ability to incur additional debt or issue certain preferred shares; create liens on certain assets; make certain loans or investments (including acquisitions); pay dividends on or make distributions in respect of capital stock or make other restricted payments; consolidate, merge, sell or otherwise dispose of all or substantially all of their assets; sell assets; enter into certain transactions with affiliates; enter into sale-leaseback transactions; change their lines of business; restrict dividends from their subsidiaries or restrict liens; change their fiscal year; and modify the terms of certain debt or organizational agreements.

The fair value of the Term Loan Facility was approximately \$1,662,613 and \$1,700,995 as of June 30, 2018 and December 31, 2017, respectively. The Company estimates the fair value of its Term Loan Facility based on trades in the market. Since the Term Loan Facility do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities (Level 2). As of June 30, 2018, the remaining contractual life of the Term Loan Facility is approximately 3.75 years.

MHGE PIK Toggle Notes

On July 17, 2014, MHGE Parent, LLC ("MHGE Parent") and MHGE Parent Finance, Inc. issued \$400,000 aggregate principal amount of the MHGE PIK Toggle Notes in a private placement. The MHGE PIK Toggle Notes were issued at a discount of 1%. The net proceeds were used to make a return of capital to the equity holders of MHGE Parent and pay certain related transaction costs and expenses.

On April 6, 2015, additional aggregate principal amount of \$100,000 was issued under the same indenture, and part of the same series, as the outstanding \$400,000 of the MHGE PIK Toggle Notes previously issued by MHGE Parent and MHGE Parent Finance, Inc. The proceeds from this private offering were used to make a return of capital to the equity holders of MHGE Parent.

On December 8, 2017, MHGE Parent and MHGE Parent Finance Inc., announced a cash tender offer to repurchase up to \$200,000 of the outstanding Existing PIK Toggle Notes for total consideration of \$1,002.75 per \$1,000.00 principal amount of notes, plus any accrued and unpaid interest on the Notes up to, but not including, the settlement date. On December 15, 2017, the Issuers repurchased \$200,000 aggregate principal amount of the Notes pursuant to the cash tender offer. In addition, as of December 31, 2017, a total of \$56,500 aggregate principal amount of MHGE PIK Toggle Notes was repurchased by the Company, all of which has subsequently been canceled.

On April 10, 2018, the Company repurchased a total of \$20,000 aggregate principal amount of MHGE PIK Toggle Notes, all of which has subsequently been canceled.

On April 20, 2018, the Company used the proceeds from the MHGE Parent Term Loan, together with cash on hand, to repay the remaining \$229,376 of the MHGE PIK Toggle Notes outstanding principal and accrued interest through the call date of May 20, 2018 to the trustee and was subsequently discharged from its obligations.

MHGE Parent Term Loan

On April 20, 2018, MHGE Parent, LLC ("MHGE Parent"), an indirect parent of MHGE, entered into a term loan agreement with Ares Agent Services, L.P., as administrative agent, and clients of Ares Capital Management,

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LLC and certain funds and accounts advised by Guggenheim Partners Investment Management, LLC, as lenders, providing for a \$180,000 term loan facility (the “MHGE Parent Term Loan”) with a maturity of April 20, 2022. The MHGE Parent Term Loan was issued at a discount of 2.5%.

The MHGE Parent Term Loan bears interest at 11.00% per annum for interest paid in cash and 11.75% per annum for interest paid in kind. Interest is payable semiannually on April 15 and October 15 of each year, commencing on October 15, 2018. The first four interest payments must be paid in cash. Thereafter, the determination as to whether interest is paid in cash or in kind will be based on the amount of cash available to pay interest and the ability of the MHGE Parent subsidiaries to make distributions and dividends to MHGE Parent to fund such payments. The MHGE Parent Term Loan is unsecured and is not guaranteed by any of the MHGE Parent subsidiaries.

As of June 30, 2018, the unamortized debt discount and deferred financing costs was \$4,243 and \$2,833, respectively, which are amortized over the term of the MHGE Parent Term Loan using the effective interest method.

The MHGE Parent Term Loan contains certain customary affirmative covenants and events of default that are similar to those contained in the indenture governing the MHGE Senior Notes. The negative covenants in the MHGE Parent Term Loan limit MHGE Parent and its subsidiaries’ ability to, among other things: incur additional indebtedness or issue certain preferred shares, create liens on certain assets, pay dividends or prepay junior debt, make certain loan, acquisitions or investments, materially change its business, engage into transactions with affiliates, conduct asset sales, restrict dividends from subsidiaries or restrict liens, or merge, consolidate, sell or otherwise dispose of all or substantially all of MHGE Parent’s assets.

The fair value of the MHGE Parent Term Loan was approximately \$180,000 as of June 30, 2018. The Company estimates the fair value of its MHGE Parent Term Loan based on trades in the market. Since the MHGE Parent Term Loan do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities (Level 2). As of June 30, 2018, the remaining contractual life of the MHGE Parent Term Loan is approximately 3.75 years.

Scheduled Principal Payments

The scheduled principal payments required under the terms of the MHGE Senior Notes, Senior Facilities and MHGE Parent Term Loan were as follows:

	As of
	June 30, 2018
Remainder of 2018	\$ 78,634
2019	17,269
2020	17,269
2021	17,269
2022	1,811,786
2023 and beyond	400,000
	<u>2,342,227</u>
Less: Current portion	(87,269)
	<u><u>\$ 2,254,958</u></u>

6. Interest Rate Swap

In the normal course of business, the Company may enter into interest rate swap agreements to manage exposure to interest rate risk. Interest rate swap agreements are derivative financial instruments and generally

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involve the conversion of variable-rate debt to fixed-rate debt over the life of the interest rate swap agreement without exchange of the underlying notional amount.

Interest rate swap agreements which are designated and qualify as a hedge of the exposure to variability in expected future cash flows are considered cash flow hedges. The Company prepares written hedge documentation for all interest rate swap agreements which are designated as cash flow hedges. The written hedge documentation includes identification of, among other items, the risk management objective, hedging instrument, hedged item and methodologies for assessing and measuring hedge effectiveness and ineffectiveness, along with support for management's assertion that the hedge will be highly effective.

For designated hedging relationships, the Company performs retrospective and prospective effectiveness testing to determine whether the hedging relationship has been highly effective in offsetting changes in cash flows of hedged items and whether the relationship is expected to continue to be highly effective in the future. Assessments of hedge effectiveness and measurements of hedge ineffectiveness are performed at least quarterly. The effective portion of the changes in the fair value of an interest rate swap that is highly effective and that has been designated and qualifies as a cash flow hedge are initially recorded in accumulated other comprehensive income and reclassified to earnings in the same period that the hedged item impacts earnings or when the hedging relationship is terminated. The ineffective portion of the gain or loss, if any, is recognized in earnings.

The Company recognizes all interest rate swap agreements as assets or liabilities in the balance sheet at fair value and is included with other non-current assets or other non-current liabilities, respectively. Cash flows from interest rate swap agreements used to manage interest rate risk are classified as operating activities. We do not use derivative instruments for trading or speculative purposes. In addition, we enter into interest rate swap agreements with a variety of financial institutions that we believe are creditworthy in order to reduce our concentration of credit risk.

During the three months ended March 31, 2017, the Company entered into interest rate swap agreements with a total notional value of \$500,000 to convert a portion of its variable-rate debt to a fixed rate. The Company will receive payments from the counterparties at one-month LIBOR and make payments to the counterparties at a fixed rate of 2.07%. The cash flow payments on the interest rate swap agreements began in April 2017 and terminate April 2022. The interest rate swap agreements have been designated as a cash flow hedge. The notional amount and interest payment date of the interest rate and interest rate swaps match the principal, interest payment and maturity date of the related debt.

The Company records the fair value of its interest rate swap agreements on a recurring basis using Level 2 inputs of quoted prices for similar assets or liabilities in active markets. The unrealized gain (loss) recognized in accumulated other comprehensive loss for the three and six months ended June 30, 2018 was \$3,092 and \$10,986, and for the three and six months ended June 30, 2017 was \$(2,620) and \$(5,405) and is included as other non-current assets and other non-current liabilities, respectively, within the consolidated balance sheet. Ineffectiveness of the cash flow hedge was not material for the period presented.

7. Segment Reporting

The Company manages and reports its businesses in the following segments:

- **Higher Education:** We provide students, instructors and institutions with adaptive digital learning, tools, digital platforms, custom publishing solutions and traditional printed textbook products.
- **K - 12:** Provides curriculum and learning solutions to the K-12 market. We sell our learning solutions directly to K-12 school districts across the United States. While we offer all of our major curriculum and learning solutions in digital format, given the varying degrees of availability and maturity of our customers' technological infrastructure, a majority of our sales are derived from selling blended print and digital solutions.

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- **International:** We leverage our global scale, brand recognition and extensive product portfolio to serve students in the higher education, K-12 and professional markets in 125 countries outside of the United States. Our products and solutions for the International segment are produced in more than 60 languages and primarily originate from our offerings produced for the United States market and that are later adapted to different international markets.
- **Professional:** We are a leading provider of medical, technical, engineering and business content for the professional, education and test preparation communities.
- **Other:** Includes certain transactions or adjustments that our Chief Operating Decision Maker ("CODM") considers to be unusual and/or non-operational.

The Company's business segments are consistent with how management views the markets served by the Company. The CODM reviews their separate financial information to assess performance and to allocate resources. We measure and evaluate our reportable segments based on segment Billings and Adjusted EBITDA and believe they provide additional information to management and investors to measure our performance and evaluate our ability to service our indebtedness. We include the change in deferred revenue to GAAP revenue to arrive at Billings. Billings is a key metric that we use to manage our business as it reflects the sales activity in a given period and provides comparability during this time of digital transition, particularly in the K-12 market, in which our customers typically pay for five to eight-year contracts upfront. Furthermore, Billings incorporates the change in deferred revenue that is reflected in the calculation of Adjusted EBITDA. Therefore when the Company uses a margin calculation based on Adjusted EBITDA, the margin has to be based on Billings. We exclude from segment Adjusted EBITDA: interest expense (income), net, income tax (benefit) provision, depreciation, amortization and pre-publication amortization and certain transactions or adjustments that our CODM does not consider for the purposes of making decisions to allocate resources among segments or assessing segment performance. Although we exclude these amounts from segment Adjusted EBITDA, they are included in reported consolidated net income (loss) and are included in the reconciliation below.

Billings and Adjusted EBITDA are not presentations made in accordance with U.S. GAAP and the use of the terms, Billings and Adjusted EBITDA, varies from others in our industry. Billings and Adjusted EBITDA should be considered in addition to, not as a substitute for, revenue and net income (loss), or other measures of financial performance derived in accordance with U.S. GAAP as measures of operating performance or cash flows as measures of liquidity.

Segment asset disclosure is not used by the CODM as a measure of segment performance since the segment evaluation is driven by Billings and Adjusted EBITDA. As such, segment assets are not disclosed in the notes to the accompanying unaudited consolidated financial statements.

The following tables set forth information about the Company's operations by its segments:

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017
Billings:		
Higher Education	\$ 86,248	\$ 96,681
K - 12	181,126	283,531
International	55,586	63,837
Professional	29,260	29,825
Other	853	616
Total Billings (1)	353,073	474,490
Change in deferred revenue	31,138	(69,112)
Total Consolidated Revenue	\$ 384,211	\$ 405,378

(1) The elimination of inter-segment revenues was not significant to the revenues of any one segment.

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	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017
Adjusted EBITDA:		
Higher Education	\$ (15,686)	\$ (6,805)
K - 12	20,616	99,000
International	(8,655)	475
Professional	7,601	9,242
Other	7,527	3,228
Total Adjusted EBITDA	\$ 11,403	\$ 105,140

	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Billings:		
Higher Education	\$ 221,795	\$ 227,418
K - 12	210,899	320,142
International	93,562	105,081
Professional	47,163	50,543
Other	939	695
Total Billings (1)	574,358	703,879
Change in deferred revenue	88,209	(17,770)
Total Consolidated Revenue	\$ 662,567	\$ 686,109

(1) The elimination of inter-segment revenues was not significant to the revenues of any one segment.

Adjusted EBITDA:		
Higher Education	\$ 513	\$ 4,943
K - 12	(63,954)	13,296
International	(21,591)	(15,415)
Professional	5,311	9,002
Other	(2,093)	404
Total Adjusted EBITDA	\$ (81,814)	\$ 12,230

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Reconciliation of Adjusted EBITDA to the consolidated statements of operations is as follows:

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017
Total Adjusted EBITDA	\$ 11,403	\$ 105,140
Interest (expense) income, net	(47,932)	(44,106)
Provision for taxes on income	(627)	(5,753)
Depreciation, amortization and pre-publication amortization	(49,745)	(57,407)
Change in deferred revenue	31,138	(69,112)
Change in deferred royalties	(5,886)	11,781
Change in deferred commissions	871	—
Restructuring and cost savings implementation charges	(5,152)	(3,728)
Sponsor fees	(875)	(875)
Other	(6,851)	3,010
Pre-publication investment	23,614	23,996
Net (loss) income from continuing operations	(50,042)	(37,054)
Net (loss) income from discontinued operations, net of taxes	—	19
Net (loss) income	\$ (50,042)	\$ (37,035)

	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Total Adjusted EBITDA	\$ (81,814)	\$ 12,230
Interest (expense) income, net	(89,882)	(87,340)
Provision for taxes on income	(1,146)	(6,377)
Depreciation, amortization and pre-publication amortization	(95,177)	(106,840)
Change in deferred revenue	88,209	(17,770)
Change in deferred royalties	(12,150)	6,008
Change in deferred commissions	(410)	—
Restructuring and cost savings implementation charges	(8,501)	(5,894)
Sponsor fees	(1,750)	(1,750)
Other	(14,628)	(1,886)
Pre-publication investment	46,147	49,065
Net (loss) income from continuing operations	(171,102)	(160,554)
Net (loss) income from discontinued operations, net of taxes	—	(480)
Net (loss) income	\$ (171,102)	\$ (161,034)

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The following is a schedule of revenue and long-lived assets by geographic region:

Revenue (1)				
	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
United States	\$ 323,221	\$ 339,358	\$ 557,996	\$ 575,679
International	60,990	66,020	104,571	110,430
Total	\$ 384,211	\$ 405,378	\$ 662,567	\$ 686,109

Long-lived Assets (2)			
		As of	
		June 30, 2018	December 31, 2017
United States	\$	406,248	\$ 339,505
International		43,952	47,226
Total	\$	450,200	\$ 386,731

- (1) Revenues are attributed to a geographic region based on the location of customer.
(2) Reflects total assets less current assets, goodwill, intangible assets, investments, deferred financing costs and non-current deferred tax assets.

8. Taxes on Income

For the three months ended June 30, 2018 and 2017, the effective tax rate on continuing operations was (1.3)% and (18.4)%, respectively. For the six months ended June 30, 2018 and 2017, the effective tax rate on continuing operations was (0.7)% and (4.1)%, respectively. A full valuation allowance has been recorded for net federal and state and certain net foreign deferred tax assets due to the negative evidence of cumulative book losses. For the six months ended June 30, 2018 and 2017, no deferred income tax benefit was recognized for the domestic and certain foreign losses on operations as a result of the valuation allowance against these tax benefits.

At the end of each interim period, we estimate the annual effective tax rate and apply that rate to our ordinary quarterly earnings. The tax expense or benefit related to significant, unusual or extraordinary items that will be separately reported or reported net of their related tax effect that are individually computed, are recognized in the interim period in which those items occur. In addition, the effect of changes in enacted tax laws or rates or tax status is recognized in the interim period in which the change occurs.

The Tax Cuts and Jobs Act ("TCJA"), signed in to law on December 22, 2017, made substantial changes to the Internal Revenue Code, including reducing the federal corporate income tax rate from 35% to 21% effective January 1, 2018. Other favorable tax changes in the TCJA include elimination of the alternative minimum tax and the switch to a hybrid territorial tax system (subject to several anti-base erosion provisions which are not expected to have a significant impact on the Company). Unfavorable changes in the TCJA impacting the Company include the limitation on the net interest expense deduction, with unused interest expense carrying forward indefinitely, and capitalization of research and development expenses beginning in 2022. The Company recorded provisional amounts in the consolidated financial statements for the year ended December 31, 2017, for the income tax effects of TCJA (see Note 11, "Taxes on Income" within the notes to the consolidated financial statements included in the Annual Report). For the three and six months ended June 30, 2018, the Company did not record any significant adjustments to the provisional amounts related to the TCJA. These results are based upon the Company's current interpretation of the TCJA and may change as we receive additional clarification and guidance during the one year re-measurement period as provided for in ASU 2018-05 Income Taxes ("Topic 740"), Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118.

9. Employee Benefits

A majority of the Company's employees are participants in voluntary 401(k) plans sponsored by the Company under which the Company matches employee contributions up to certain levels of compensation.

10. Stock-Based Compensation

The Company issues share based compensation under the Management Equity Plan (the "Plan") which was established during the quarter ended June 30, 2013. The Plan permits the grant of stock options, restricted stock, restricted stock units and other equity based awards to the Company's employees and directors.

Stock options granted generally vest up to five years with 50% vesting on cumulative financial performance measures under the Plan and the remaining 50% vest annually in equal installments, in each case subject to continued service. Stock options terminate on the earliest of the tenth year from the date of the grant or other committee action, as defined under the Plan. Restricted stock and restricted stock units issued vest in equal installments over a three or four year period subject only to continued service.

The Company measures compensation cost for share based awards according to the equity method. In accordance with the expense recognition provisions of those standards, the Company amortizes unearned compensation associated with share based awards on a straight-line basis over the vesting period of the option or award.

The following table sets forth the total recognized compensation expense related to stock option grants and restricted stock and restricted stock units issuances for all periods presented:

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Stock option expense	\$ 2,404	\$ 2,971	\$ 3,302	\$ 4,749
Restricted stock and unit awards expense	2,928	1,872	6,072	3,699
Total stock-based compensation expense	\$ 5,332	\$ 4,843	\$ 9,374	\$ 8,448

An income tax benefit for stock options and restricted stock units was recognized and subsequently offset with a full valuation allowance for the three and six months ended June 30, 2018 and 2017.

Stock Options

As of June 30, 2018, there was \$18,189 of unrecognized compensation expense related to the Company's grant of nonvested stock options. Unrecognized compensation expense related to nonvested stock options granted to employees is expected to be recognized over a weighted-average period of 1.5 years.

Restricted stock and restricted stock units

As of June 30, 2018, there was \$20,050 of unrecognized compensation expense related to the Company's grant of nonvested restricted shares and restricted stock units to employees. Unrecognized compensation expense related to nonvested restricted shares and restricted stock units granted to employees is expected to be recognized over a weighted-average period of 1.8 years.

11. Earnings (Loss) per Share

Basic earnings (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the period. Diluted earnings per share is computed by dividing net income by the weighted-average number of common stock outstanding, including all potentially dilutive common stock.

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The following table sets forth reconciliations of the numerators and denominators used to compute basic and diluted earnings per share of common stock for all periods presented:

(Dollars in thousands, except per share data)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Numerator:				
(Loss) income from continuing operations	\$ (50,042)	\$ (37,054)	\$ (171,102)	\$ (160,554)
(Loss) income from discontinued operations, net of taxes	—	19	—	(480)
Net (loss) income	<u>\$ (50,042)</u>	<u>\$ (37,035)</u>	<u>\$ (171,102)</u>	<u>\$ (161,034)</u>
Denominator:				
Basic weighted - average number of shares outstanding	10,696	10,570	10,645	10,573
Effect of dilutive securities	—	—	—	—
Diluted weighted-average number of shares outstanding	<u>10,696</u>	<u>10,570</u>	<u>10,645</u>	<u>10,573</u>
Basic and Dilutive EPS:				
(Loss) income from continuing operations	\$ (4.68)	\$ (3.51)	\$ (16.07)	\$ (15.19)
(Loss) income from discontinued operations, net of taxes	—	—	—	(0.05)
Net (loss) income	(4.68)	(3.50)	(16.07)	(15.23)

The number of anti-dilutive shares that have been excluded in the computation of diluted earnings per share for the three months ended June 30, 2018 and 2017 was 213 and 278, respectively. The number of anti-dilutive shares that have been excluded in the computation of diluted earnings per share for the six months ended June 30, 2018 and 2017 was 232 and 289, respectively.

12. Restructuring

In order to contain costs and mitigate the impact of current and expected future economic conditions, as well as a continued focus on process improvements, we have initiated various restructuring plans over the last several years. The charges for each restructuring plan, are classified as operating and administration expenses within the consolidated statements of operations.

In certain circumstances, reserves are no longer needed because of efficiencies in carrying out the plans, or because employees previously identified for separation resigned from the Company and did not receive severance or were reassigned due to circumstances not foreseen when the original plans were initiated. In these cases, we reverse reserves through the consolidated statements of operations when it is determined they are no longer needed.

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The following table summarizes restructuring information by reporting segment:

	Higher Education	K-12	International	Professional	Other	Total
As of December 31, 2017	\$ 6,695	\$ 1,788	\$ 357	\$ 45	\$ 540	\$ 9,425
Charges:						
Employee severance and other personal benefits	1,004	591	3,494	—	—	5,089
Payments:						
Employee severance and other personal benefits	(4,554)	(1,329)	(377)	(45)	(540)	(6,845)
As of June 30, 2018	\$ 3,145	\$ 1,050	\$ 3,474	\$ —	\$ —	\$ 7,669

The Company expects to utilize the remaining reserves of \$6,459 and \$1,210 in 2018 and 2019, respectively.

13. Transactions with Apollo Global Management LLC (the "Sponsors")

Transactions Fee Agreement

The Company entered into a transaction fee agreement on March 22, 2013 (the "Transactions Fee Agreement") with Apollo Global Securities, LLC (the "Service Provider") relating to the provision of certain structuring, financial, investment banking and other similar advisory services by the Service Provider to the Company, its direct and indirect divisions and subsidiaries, parent entities or controlled affiliates (collectively, the "Company Group") in connection with future transactions. Subject to the terms and conditions of the Transactions Fee Agreement, a fee equal to 1% of the aggregate enterprise value is payable in connection with any merger, acquisition, disposition, recapitalization, divestiture, sale of assets, joint venture, issuance of securities (whether equity, equity-linked, debt or otherwise), financing or any similar transaction effected by a member of the Company Group.

Management Fee Agreement

The Company entered into a management fee agreement (the "Management Fee Agreement") with Apollo Management VII, L.P. (the "Advisor") on March 22, 2013, relating to the provision of certain management consulting and advisory services to the members of the Company Group. In exchange for the provision of such services, the Advisor will receive a non-refundable annual management fee of \$3,500 in the aggregate. Subject to the terms and conditions of the Management Fee Agreement, upon a change of control or an initial public offering ("IPO") of a member of the Company Group, the Advisor may elect to receive a lump sum payment in lieu of future management fees payable to them under the Management Fee Agreement. For the three months ended June 30, 2018 and 2017, the Company recorded an expense of \$875 for management fees, respectively. For the six months ended June 30, 2018 and 2017, the Company recorded an expense of \$1,750 for management fees, respectively.

14. Commitments and Contingencies

Legal Matters

In the normal course of business both in the United States and abroad, the Company is a defendant in various lawsuits and legal proceedings which may result in adverse judgments, damages, fines or penalties and is subject to inquiries and investigations by various governmental and regulatory agencies concerning compliance with applicable laws and regulations. In view of the inherent difficulty of predicting the outcome of legal matters, we cannot state with confidence what the timing, eventual outcome, or eventual judgment, damages, fines, penalties or

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other impact of these pending matters will be. We believe, based on our current knowledge, that the outcome of the legal actions, proceedings and investigations currently pending should not have a material adverse effect on the Company's financial condition.

15. Related Party Transactions

In the normal course of business, the Company has transactions with its wholly owned consolidated subsidiaries and affiliated entities.

Presidio

The Company entered into a master lease agreement with Presidio Technology Capital, LLC ("Presidio Technology"), a portfolio company of the Sponsors, primarily for the lease of computer equipment and software. For the three months ended June 30, 2018 and 2017 the Company paid Presidio Technology \$166 and \$649, respectively. For the six months ended June 30, 2018 and 2017 the Company paid Presidio Technology \$473 and \$797, respectively.

In addition, the Company purchases technology equipment from Presidio Networked Solutions ("Presidio Networked"), a portfolio company of the Sponsors. For the three months ended June 30, 2018 and 2017 the Company paid Presidio Networked \$75 and \$400, respectively. For the six months ended June 30, 2018 and 2017 the Company paid Presidio Networked \$399 and \$1,229, respectively.

University of Phoenix

University of Phoenix is owned by Apollo Education Group, which was acquired by the Sponsors and certain co-investors in February 2017. For the three and six months ended June 30, 2018, the Company's sales to University of Phoenix totaled \$453 and \$953. For the three and six months ended June 30, 2017, the Company's sales to University of Phoenix totaled \$871.

CEVA Group

The Company utilizes CEVA Freight Management, a wholly owned subsidiary of CEVA Group PLC, a U.K. based portfolio company of the Sponsors, as one of our freight forwarding contractors. For the three months ended June 30, 2018 and 2017 the Company paid CEVA \$87 and \$374, respectively. For the six months ended June 30, 2018 and 2017 the Company paid CEVA \$243 and \$926, respectively.

16. Subsequent Events

As of August 10, 2018, \$100,000 is outstanding under the Revolving Facility of which \$60,000 is subject to an interest rate of LIBOR plus 4.00% and \$40,000 is subject to a base rate of 5.00% plus an applicable margin of 3.00%.

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

The following discussion provides a narrative of our results of operations and financial condition for the three and six months ended June 30, 2018 and 2017. You should read the following discussion of our results of operations and financial condition in conjunction with the accompanying unaudited financial statements and notes thereto, appearing elsewhere in this document.

Company Overview

We are a leading provider of outcome-focused learning solutions, delivering both curated content and digital learning tools and platforms to the students in the classrooms of approximately 250,000 higher education instructors, 13,000 pre-kindergarten through 12th grade (“K-12”) school districts and a wide variety of academic institutions, professionals and companies in approximately 125 countries. We have evolved our business from a printcentric producer of textbooks and instructional materials to a leader in the development of digital content and technology-enabled adaptive learning solutions that are delivered anywhere, anytime. We believe we have established a reputation as an industry leader in the delivery of innovative educational content and methodologies.

As learners and educators have become increasingly outcome-focused in their search for more effective learning solutions, we have embraced adaptive learning tools as a central feature of our digital learning solutions. Adaptive learning is based on educational theory and cognitive science that emphasizes personalized delivery of concepts, continuous assessment of gained and retained knowledge and skills, and design of targeted and personalized study paths that help students improve in their areas of weakness while retaining competencies. We have developed a unique set of digital solutions by combining innovative adaptive learning methods with our proprietary content and digital delivery platforms. These solutions provide immediate feedback, and we believe they are more effective than traditional print textbooks in driving positive student outcomes. Students’ year-over-year performance can be impacted by many factors outside the instructional materials used in class. We believe that even taking into account these factors, our learning solutions can contribute to significant improvements in students’ classroom performance as well as improved student retention. For the instructor, time spent on active learning experiences increases significantly as a result of a reduction in time spent on administrative tasks and the availability of critical data to help better focus in class instruction.

Business Segments

We have four operating business segments: Higher Education, K-12, International and Professional. Higher Education is our largest segment, representing 42%, 42% and 44% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. Our K-12 segment generated 35%, 35% and 32% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. Our International segment generated 16%, 16% and 17% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. Our Professional segment represents 7% of total revenue for the years ended December 31, 2017, 2016 and 2015, respectively. The remaining total revenue relates to adjustments made for in-transit product sales.

Higher Education

In the higher education market in the United States, we provide students, instructors and institutions with adaptive digital learning tools, digital platforms, custom publishing solutions and traditional printed textbook products with capabilities in adaptive learning, homework tools, lecture capture and Learning Management System (“LMS”) integration for post-secondary markets. Although we cover all major academic disciplines, our content portfolio is organized into three key disciplines: (i) Business, Economics & Career; (ii) Science, Engineering & Math; and (iii) Humanities, Social Science & Languages. Our top selling products include *Economics: Principles, Problems, and Policies* (McConnell/Brue/Flynn), *ALEKS*, *Managerial Accounting* (Garrison) and *The Art of Public Speaking* (Lucas). The primary users of our solutions are students enrolled in two- and four-year non-profit colleges and universities, and to a much lesser extent, for-profit institutions.

We sell our Higher Education solutions to well-known online retailers, distribution partners and college bookstores, who subsequently sell to students. Our own direct-to-student sales channel is increasing via our proprietary e-commerce platform, which currently represents the largest distribution channel in this segment. Although we sell our products to the students as end users, it is the instructor that makes the ultimate decision regarding new materials for the course. We have longstanding and exclusive relationships with many authors and nearly all of our products are covered by copyright in major markets, providing us the exclusive right to produce and distribute such content in those markets during the applicable copyright terms.

In addition, our formal rental program will be introduced for our copyright 2019 Higher Education titles in the fall of 2018 with rental agreements already executed with several distribution partners. In preparation for launch, inventory has been shipped to distributors on consignment with rental revenue expected later in the year and the potential for quarterly revenues to be impacted by rental timing.

K-12

In the K-12 market in the United States, we primarily sell curriculum and learning solutions, which include core basal programs, intervention and supplemental products, formative assessment tools, teaching resources and professional development programs. We sell our learning solutions directly to school districts across the United States. The process through which products are selected and procured for classroom use varies throughout the United States. Eighteen states, known as adoption states, approve and procure new basal programs, usually every five to eight years on a state-wide basis for each major area of study, before individual schools or school districts are permitted to schedule the purchase of materials. In all remaining states, known as open territories, each individual school or school district can procure materials at any time, though they usually do so on a five to eight year cycle. The student population in adoption states represents nearly 50% of the U.S. elementary and secondary school-age population. Many adoption states provide “categorical funding” for instructional materials, which means that state funds cannot be used for any other purpose. While we offer all of our curriculum and learning solutions in digital format, given the varying degrees of availability and maturity of our customers’ technological infrastructure, a majority of our sales are derived from blended print and digital solutions. Our top selling programs are *Reading Wonders*, *McGraw-Hill My Math*, *Everyday Mathematics*, *Glencoe Math*, and the *Networks Social Studies Series*.

International

Our International segment, defined as sales outside the United States, serves students in the higher education, K-12 and professional markets in approximately 125 countries. Our products and solutions for the International segment are produced in more than 60 languages and primarily originate from our offerings for the United States market, which are later adapted to meet the needs of individual geographies. Sales of our digital offerings are growing significantly in the international market, and we are continuously increasing our inventory of digital programs. The growth in the use of the English language is also a driver of demand for digital learning solutions and printed educational instructional materials.

Professional

In the professional market in the United States, we provide medical, technical, engineering and business content for the professional, education and test preparation communities. Our digital subscription products are sold to nearly 2,600 customers including corporations, academic institutions, libraries and hospitals. Our digital subscription products had a 93% annual retention rate in 2017.

Other

Other represents certain transactions or adjustments that are unusual or non-operational. In addition, adjustments made for in-transit product sales, timing related corporate cost allocations and other costs not attributed to a single operating segment are recorded within Other.

Consolidated Operating Results

The following tables set forth certain unaudited consolidated financial information for the three and six months ended June 30, 2018 and 2017. The following tables and discussion should be read in conjunction with the information contained in our unaudited consolidated financial statements and the notes thereto which are included elsewhere in this document.

Consolidated Operating Results for the Three Months Ended June 30, 2018 and 2017

(Dollars in thousands)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	\$ Change	% Change
Revenue	\$ 384,211	\$ 405,378	\$ (21,167)	(5.2)%
Cost of sales	102,744	105,563	(2,819)	(2.7)%
Gross profit	281,467	299,815	(18,348)	(6.1)%
Operating expenses				
Operating and administration expenses	251,153	266,725	(15,572)	(5.8)%
Depreciation	11,186	10,756	430	4.0 %
Amortization of intangibles	20,611	22,417	(1,806)	(8.1)%
Total operating expenses	282,950	299,898	(16,948)	(5.7)%
Operating (loss) income	(1,483)	(83)	(1,400)	n/m
Interest expense (income), net	47,932	44,106	3,826	8.7 %
Other (income) expense	—	(12,888)	12,888	—
Income (loss) from operations before taxes on income	(49,415)	(31,301)	(18,114)	57.9 %
Income tax provision	627	5,753	(5,126)	(89.1)%
Net (loss) income from continuing operations	(50,042)	(37,054)	(12,988)	35.1 %
Net (loss) income from discontinuing operations, net of taxes	—	19	(19)	(100.0)%
Net (loss) income	\$ (50,042)	\$ (37,035)	\$ (13,007)	35.1 %

Revenue

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	\$ Change	% Change
Reported Revenue by segment:				
Higher Education	\$ 127,557	\$ 122,548	\$ 5,009	4.1 %
K-12	172,650	206,752	(34,102)	(16.5)%
International	60,990	66,020	(5,030)	(7.6)%
Professional	27,356	26,870	486	1.8 %
Other	(4,342)	(16,812)	12,470	(74.2)%
Total Reported Revenue	\$ 384,211	\$ 405,378	\$ (21,167)	(5.2)%

Revenue for the three months ended June 30, 2018 and 2017 was \$384.2 million and \$405.4 million, respectively, a decrease of \$21.2 million or 5.2%. Excluding the impact of purchase accounting (which negatively impacted revenue as a result of the adjustment recorded to reduce the carrying value of deferred revenue on the opening balance sheet), revenue for the three months ended June 30, 2018 and 2017 was \$385.0 million and \$407.9 million, respectively, a decrease of \$22.8 million or 5.6%. The decrease was driven by the segment factors described below.

Higher Education

Higher Education revenue for the three months ended June 30, 2018 and 2017 was \$127.6 million and \$122.5 million, respectively, an increase of \$5.0 million or 4.1%. The increase was primarily due to:

- growth in front-list and back-list digital revenue (paid activations of *Connect/LearnSmart* grew by approximately 12%), driven by direct-to-student e-commerce and inclusive access sales;
- lower product returns reserve rate driven by the ongoing shift to digital learning solutions and a continued decline in actual product returns from major distributors; and
- the timing of revenue recognition, driven by the recognition of previously deferred revenue which more than offset new deferred revenue from sales of digital learning solutions; partially offset by
- a decline in print revenue primarily driven by lower demand as the business continues to migrate from print to digital learning solutions and limited sales of our 2019 copyright titles which will be primarily available only through our new rental program; and
- a non-recurring prior period digital content sale.

K-12

K-12 revenue for the three months ended June 30, 2018 and 2017 was \$172.7 million and \$206.8 million respectively, a decrease of \$34.1 million or 16.5%. Excluding the impact of purchase accounting, revenue for the three months ended June 30, 2018 and 2017 was \$173.5 million and \$209.3 million, respectively, a decrease of \$35.8 million or 17.1%. The decrease was primarily due to:

- a decline in adoption sales, most notably California ELA sales, which despite continued strong market share, declined as a result of a smaller market opportunity in the third and final year of purchasing;
- a cyclically smaller adoption market year-over-year as California ELA is replaced by much smaller adoption opportunities; and
- a decline in open territory due to prior period non-recurring sales, including math and science in Indiana and elementary reading in Arizona and Kentucky.

International

International revenue for the three months ended June 30, 2018 and 2017 was \$61.0 million and \$66.0 million, respectively, a decrease of \$5.0 million or 7.6%. The decrease was primarily due to:

- lower print revenue, primarily driven by the sale of the K-12 Canadian business in the prior period and declines in EMEA and Latin America, mitigated by growth in the Asia Pacific Region; partially offset by
- strong digital revenue growth in Canada, primarily driven by Connect sales; and
- a \$0.9 million favorable foreign exchange rate impact (estimated by re-calculating current period results of foreign operations using the average exchange rate from the prior period).

Professional

Professional revenue for the three months ended June 30, 2018 and 2017 was \$27.4 million and \$26.9 million, respectively, an increase of \$0.5 million or 1.8%. This was primarily due to the increase in the recognition

of previously deferred revenue as compared to the prior year as a result of the growth in sales of our digital subscriptions related to our *Access* platform offering, partially offset by a decline in print and eBook revenue.

Cost of Sales

Cost of sales for the three months ended June 30, 2018 and 2017 was \$102.7 million and \$105.6 million, respectively, a decrease of \$2.8 million or 2.7%. The decrease was driven primarily by lower manufacturing costs attributable to lower revenue and the ongoing shift to digital learning solution sales, as well as lower gratis costs in comparison to the prior year due to the California ELA adoption.

Operating and Administration Expenses

Operating and administration expenses for the three months ended June 30, 2018 and 2017 was \$251.2 million and \$266.7 million, respectively, a decrease of \$15.6 million or 5.8%. Included within operating and administration expense is the amortization of pre-publication expenditures which decreased by \$6.3 million or 25.9% driven by the timing and level of pre-publication expenditures. The remaining variance was primarily due to:

- lower compensation (including commissions) due to a strategic reduction in headcount and a decline in revenue;
- a decrease in samples expense primarily due to timing of new adoptions as compared to the prior period; and
- lower technology related expenditures due to operational improvements and contract negotiations.

Depreciation & Amortization of Intangibles

Depreciation and amortization expenses for the three months ended June 30, 2018 and 2017 was \$31.8 million and \$33.2 million, respectively, a decrease of \$1.4 million or 4.1%. The decrease was driven by the use of accelerated amortization methods for certain of our acquired intangible assets.

Interest expense, net

Interest expense, net, for the three months ended June 30, 2018 and 2017 was \$47.9 million and \$44.1 million, respectively, an increase of \$3.8 million or 8.7%. The increase was primarily due to:

- a higher applicable LIBOR margin related to the Term Loan Facility in comparison to the prior period;
- \$70 million of borrowings under the Revolving Facility as compared to \$60 million in the prior period; and
- the issuance of \$180 million MHGE Parent Term Loan on April 20, 2018; partially offset by
- a reduction in interest expense primarily due to the repurchase of \$207.8 million face value of MHGE PIK Toggle Notes during the second half of 2017 (with the remaining \$243.6 million face value being repaid in full by April 20, 2018).

Refer to Note 5, "Debt," of our consolidated financial statements for further discussion of our debt.

Provision for Taxes on Income

Taxes on income from continuing operations for the three months ended June 30, 2018 and 2017 was a provision of \$0.6 million and \$5.8 million, respectively. For the three months ended June 30, 2018 and 2017, the effective tax rate on continuing operations was (1.3)% and (18.4)%, respectively. A valuation allowance has been

recorded for net federal and state and certain net foreign deferred tax assets due to the negative evidence of cumulative book losses. For the three months ended June 30, 2018 and 2017, no deferred income tax provision was recognized for the domestic operating income as a result of the valuation allowance against these tax benefits.

The Tax Cuts and Jobs Act ("TCJA"), signed in to law on December 22, 2017, made substantial changes to the Internal Revenue Code, including reducing the federal corporate income tax rate from 35% to 21% effective January 1, 2018. Other favorable tax changes in the TCJA include elimination of the alternative minimum tax and the switch to a hybrid territorial tax system (subject to several anti-base erosion provisions which are not expected to have a significant impact on the Company). Unfavorable changes in the TCJA impacting the Company include the limitation on the net interest expense deduction, with unused interest expense carrying forward indefinitely, and capitalization of research and development expenses beginning in 2022. The Company recorded provisional amounts in the consolidated financial statements for the year ended December 31, 2017, for the income tax effects of the TCJA. (see Note 8, "Taxes on Income" within the notes to the consolidated financial statements included in the Annual Report). For the three months ended June 30, 2018, the Company did not record any significant adjustments to the provisional amounts related to the TCJA. These results are based upon the Company's current interpretation of the TCJA and may change as we receive additional clarification and guidance during the one year re-measurement period as provided for in ASU 2018-05 Income Taxes ("Topic 740"), Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118.

Adjusted EBITDA by Segment for the Three Months Ended June 30, 2018 and 2017

Adjusted EBITDA by segment, as determined in accordance with Accounting Standards Codification Topic 280, Segment Reporting, is a measure used by management to assess the performance of our segments. We exclude from Adjusted EBITDA by segment: interest expense (income), net, income tax (benefit) provision, depreciation, amortization and pre-publication amortization and certain transactions or adjustments that our management does not consider for the purposes of making decisions to allocate resources among segments or assessing segment performance. In addition, Adjusted EBITDA by segment is calculated in a manner consistent with the definition and meaning of our Adjusted EBITDA non-GAAP debt covenant compliance measure, see "Non-GAAP Measures" - "Debt Covenant Compliance".

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	\$ Change	% Change
Adjusted EBITDA by segment:				
Higher Education	\$ (15,686)	\$ (6,805)	\$ (8,881)	130.5 %
K-12	20,616	99,000	(78,384)	(79.2)%
International	(8,655)	475	(9,130)	n/m
Professional	7,601	9,242	(1,641)	(17.8)%
Other	7,527	3,228	4,299	133.2 %

Higher Education

Adjusted EBITDA for the three months ended June 30, 2018 and 2017 was \$(15.7) million and \$(6.8) million, respectively, a decrease of \$8.9 million or 130.5%. The decrease was primarily due to:

- the gross profit impact of the \$10.4 million unfavorable Billings variance discussed under "Non-GAAP Measures-Billings for the Three Months Ended June 30, 2018 and 2017 -Higher Education"; and
- an increase in pre-publication investment cash costs related to spend on new front-list titles; partially offset by

- lower manufacturing costs during the period as a result of the ongoing shift to digital learning solution sales; and
- lower compensation due to a strategic reduction in headcount.

K-12

Adjusted EBITDA for the three months ended June 30, 2018 and 2017 was \$20.6 million and \$99.0 million, respectively, a decrease of \$78.4 million or 79.2%. The decrease was primarily due to:

- the gross profit impact of the \$102.4 million unfavorable Billings variance discussed under “Non-GAAP Measures-Billings for the Three Months Ended June 30, 2018 and 2017 - K-12”; partially offset by
- a decrease in pre-publication investment cash costs and lower samples primarily due to the timing of new adoptions in comparison to the prior period; and
- lower commissions primarily due to the decline in revenue, as well as lower discretionary spending.

International

Adjusted EBITDA for the three months ended June 30, 2018 and 2017 was \$(8.7) million and \$0.5 million, respectively, a decrease of \$9.1 million. The decrease was primarily due to:

- the gross profit impact of the \$8.3 million unfavorable Billings variance discussed under “Non-GAAP Measures-Billings for the Three Months Ended June 30, 2018 and 2017 - International”; and
- a \$1.3 million unfavorable foreign exchange rate impact (estimated by re-calculating current period results of foreign operations using the average exchange rate from the prior period); partially offset by
- lower pre-publication investment cash costs, primarily due to the costs incurred in the prior year associated with the development of localized digital offerings for the multi-year United Arab Emirates contract entered into in 2016.

Professional

Adjusted EBITDA for the three months ended June 30, 2018 and 2017 was \$7.6 million and \$9.2 million, respectively, a decrease of \$1.6 million or 17.8%. The decrease was primarily due to:

- the gross profit impact of the \$0.6 million unfavorable Billings variance discussed under “Non-GAAP Measures Billings for the Three Months Ended June 30, 2018 and 2017 - Professional”;
- slightly higher pre-publication investment cash costs; partially offset by
- lower compensation expense as a result of strategic headcount reductions in prior periods.

Consolidated Operating Results

Consolidated Operating Results for the Six Months Ended June 30, 2018 and 2017

(Dollars in thousands)	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017	\$ Change	% Change
Revenue	\$ 662,567	\$ 686,109	\$ (23,542)	(3.4)%
Cost of sales	164,217	172,049	(7,832)	(4.6)%
Gross profit	498,350	514,060	(15,710)	(3.1)%
Operating expenses				
Operating and administration expenses	514,352	526,967	(12,615)	(2.4)%
Depreciation	22,382	21,797	585	2.7 %
Amortization of intangibles	41,690	45,021	(3,331)	(7.4)%
Total operating expenses	578,424	593,785	(15,361)	(2.6)%
Operating (loss) income	(80,074)	(79,725)	(349)	0.4 %
Interest expense (income), net	89,882	87,340	2,542	2.9 %
Other (income) expense	—	(12,888)	12,888	—
(Loss) income from operations before taxes on income	(169,956)	(154,177)	(15,779)	10.2 %
Income tax provision	1,146	6,377	(5,231)	(82.0)%
Net (loss) income from continuing operations	(171,102)	(160,554)	(10,548)	6.6 %
Net (loss) income from discontinuing operations, net of taxes	—	(480)	480	(100.0)%
Net (loss) income	\$ (171,102)	\$ (161,034)	\$ (10,068)	6.3 %

Revenue

(Dollars in thousands)	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017	\$ Change	% Change
Reported Revenue by segment:				
Higher Education	\$ 269,968	\$ 268,747	\$ 1,221	0.5 %
K-12	237,408	269,596	(32,188)	(11.9)%
International	104,571	110,430	(5,859)	(5.3)%
Professional	53,298	53,497	(199)	(0.4)%
Other	(2,678)	(16,161)	13,483	(83.4)%
Total Reported Revenue	\$ 662,567	\$ 686,109	\$ (23,542)	(3.4)%

Revenue for the six months ended June 30, 2018 and 2017 was \$662.6 million and \$686.1 million, respectively, a decrease of \$23.5 million or 3.4%. Excluding the impact of purchase accounting (which negatively impacted revenue as a result of the adjustment recorded to reduce the carrying value of deferred revenue on the opening balance sheet), revenue for the six months ended June 30, 2018 and 2017 was \$664.0 million and \$691.1 million, respectively, a decrease of \$27.0 million or 3.9%. The decrease was driven by the segment factors described below.

Higher Education

Higher Education revenue for the six months ended June 30, 2018 and 2017 was \$270.0 million and \$268.7 million, respectively, an increase of \$1.2 million or 0.5%. The increase was primarily due to:

- growth in front-list and back-list digital revenue (paid activations of *Connect/LearnSmart* grew by approximately 9%), driven by direct-to-student e-commerce and inclusive access sales;
- lower product returns reserve rate driven by the ongoing shift to digital learning solutions and a continued decline in actual product returns from major distributors; and
- the timing of revenue recognition, driven by the recognition of previously deferred revenue which more than offset new deferred revenue from sales of digital learning solutions; partially offset by
- a decline in print revenue primarily driven by lower demand as the business continues to migrate from print to digital learning solutions and limited sales of our 2019 copyright titles which will be primarily available only through our new rental program; and
- a non-recurring prior period digital content sale.

K-12

K-12 revenue for the six months ended June 30, 2018 and 2017 was \$237.4 million and \$269.6 million respectively, a decrease of \$32.2 million or 11.9%. Excluding the impact of purchase accounting, revenue for the six months ended June 30, 2018 and 2017 was \$238.9 million and \$274.6 million, respectively, a decrease of \$35.7 million or 13.0%. The decrease was primarily due to:

- a decline in adoption sales, most notably California ELA sales, which despite continued strong market share, declined as a result of a smaller market opportunity in the third and final year of purchasing;
- a cyclically smaller adoption market year-over-year as California ELA is replaced by much smaller adoption opportunities; and
- a decline in open territory due to prior period non-recurring sales, including math and science in Indiana and elementary reading in Arizona and Kentucky.

International

International revenue for the six months ended June 30, 2018 and 2017 was \$104.6 million and \$110.4 million, respectively, a decrease of \$5.9 million or 5.3%. The decrease was primarily due to:

- lower print revenue, primarily driven by the sale of the K-12 Canadian business in the prior period and declines in EMEA, mitigated by growth in the Asia Pacific region and India; partially offset by
- strong digital revenue growth in Canada, primarily driven by Connect sales; and
- a \$2.8 million favorable foreign exchange rate impact (estimated by re-calculating current period results of foreign operations using the average exchange rate from the prior period).

Professional

Professional revenue for the six months ended June 30, 2018 and 2017 was \$53.3 million and \$53.5 million, respectively, a decrease of \$0.2 million or 0.4%. The decrease was primarily due to a decline in print and

eBook revenue, partially offset by the increase in the recognition of previously deferred revenue as compared to the prior year as a result of the growth in sales of our digital subscriptions related to our *Access* platform offering.

Cost of Sales

Cost of sales for the six months ended June 30, 2018 and 2017 was \$164.2 million and \$172.0 million, respectively, a decrease of \$7.8 million or 4.6%. The decrease was primarily due to lower manufacturing costs attributable to lower sales and the ongoing shift to digital learning solutions.

Operating and Administration Expenses

Operating and administration expenses for the six months ended June 30, 2018 and 2017 was \$514.4 million and \$527.0 million, respectively, a decrease of \$12.6 million or 2.4%. Included within operating and administration expense is the amortization of pre-publication expenditures which decreased by \$8.9 million or 22.3% driven by the timing and level of pre-publication expenditures. The remaining variance was primarily due to:

- lower compensation (including commissions) due to a strategic reduction in headcount and a decline in revenue;
- a decrease in samples expense primarily due to timing of new adoptions as compared to the prior period; and
- lower technology related expenditures due to operational improvements and contract negotiations.

Depreciation & Amortization of Intangibles

Depreciation and amortization expenses for the six months ended June 30, 2018 and 2017 was \$64.1 million and \$66.8 million, respectively, a decrease of \$2.7 million or 4.1%. The decrease was driven by the use of accelerated amortization methods for certain of our acquired intangible assets.

Interest expense, net

Interest expense, net, for the six months ended June 30, 2018 and 2017 was \$89.9 million and \$87.3 million, respectively, an increase of \$2.5 million or 2.9%. The increase was primarily due to:

- a higher applicable LIBOR margin related to the Term Loan Facility in comparison to the prior period;
- \$70 million of borrowings under the Revolving Facility as compared to \$60 million in the prior period; and
- the issuance of \$180 million MHGE Parent Term Loan on April 20, 2018; partially offset by
- a reduction in interest expense primarily due to the repurchase of \$207.8 million face value of MHGE PIK Toggle Notes during the second half of 2017 (with the remaining \$243.6 million face value being repaid in full by April 20, 2018).

Refer to Note 5, "Debt," of our consolidated financial statements for further discussion of our debt.

Provision for Taxes on Income

Taxes on income from continuing operations for the six months ended June 30, 2018 and 2017 was provisions of \$1.1 million and \$6.4 million, respectively. For the six months ended June 30, 2018 and 2017, the effective tax rate on continuing operations was (0.7)% and (4.1)%, respectively. A valuation allowance has been recorded for net federal and state and certain net foreign deferred tax assets due to the negative evidence of

cumulative book losses. For the six months ended June 30, 2018 and 2017, no deferred income tax benefit was recognized for the domestic and certain foreign losses on operations as a result of the valuation allowance against these tax benefits.

The Tax Cuts and Jobs Act ("TCJA"), signed in to law on December 22, 2017, made substantial changes to the Internal Revenue Code, including reducing the federal corporate income tax rate from 35% to 21% effective January 1, 2018. Other favorable tax changes in the TCJA include elimination of the alternative minimum tax and the switch to a hybrid territorial tax system (subject to several anti-base erosion provisions which are not expected to have a significant impact on the Company). Unfavorable changes in the TCJA impacting the Company include the limitation on the net interest expense deduction, with unused interest expense carrying forward indefinitely, and capitalization of research and development expenses beginning in 2022. The Company recorded provisional amounts in the consolidated financial statements for the year ended December 31, 2017, for the income tax effects of the TCJA. (see Note 8, "Taxes on Income" within the notes to the consolidated financial statements included in the Annual Report). For the six months ended June 30, 2018, the Company did not record any significant adjustments to the provisional amounts related to the TCJA. These results are based upon the Company's current interpretation of the TCJA and may change as we receive additional clarification and guidance during the one year re-measurement period as provided for in ASU 2018-05 Income Taxes ("Topic 740"), Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118.

Adjusted EBITDA by Segment for the Six Months Ended June 30, 2018 and 2017

Adjusted EBITDA by segment, as determined in accordance with Accounting Standards Codification Topic 280, Segment Reporting, is a measure used by management to assess the performance of our segments. We exclude from Adjusted EBITDA by segment: interest expense (income), net, income tax (benefit) provision, depreciation, amortization and pre-publication amortization and certain transactions or adjustments that our management does not consider for the purposes of making decisions to allocate resources among segments or assessing segment performance. In addition, Adjusted EBITDA by segment is calculated in a manner consistent with the definition and meaning of our Adjusted EBITDA non-GAAP debt covenant compliance measure, see "Non-GAAP Measures" - "Debt Covenant Compliance".

(Dollars in thousands)	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017	\$ Change	% Change
Adjusted EBITDA by segment:				
Higher Education	\$ 513	\$ 4,943	\$ (4,430)	(89.6)%
K-12	(63,954)	13,296	(77,250)	n/m
International	(21,591)	(15,415)	(6,176)	40.1 %
Professional	5,311	9,002	(3,691)	(41.0)%
Other	(2,093)	404	(2,497)	n/m

Higher Education

Adjusted EBITDA for the six months ended June 30, 2018 and 2017 was \$0.5 million and \$4.9 million, respectively, a decrease of \$4.4 million or 89.6%. The decrease was primarily due to:

- the gross profit impact of the \$5.6 million unfavorable Billings variance discussed under "Non-GAAP Measures-Billings for the Six Months Ended June 30, 2018 and 2017 - Higher Education"; and
- an increase in pre-publication investment cash costs related to spend on new front-list titles; partially offset by

- lower manufacturing costs during the period as a result of the ongoing shift to digital learning solution sales; and
- lower compensation due to a strategic reduction in headcount.

K-12

Adjusted EBITDA for the six months ended June 30, 2018 and 2017 was \$(64.0) million and \$13.3 million, respectively, a decrease of \$77.3 million. The decrease was primarily due to:

- the gross profit impact of the \$109.2 million unfavorable Billings variance discussed under “Non-GAAP Measures-Billings for the Six Months Ended June 30, 2018 and 2017 - K-12”; partially offset by
- a decrease in pre-publication investment cash costs and lower samples primarily due to the timing of new adoptions in comparison to the prior period; and
- lower commissions primarily due to the decline in revenue, as well as lower discretionary spending.

International

Adjusted EBITDA for the six months ended June 30, 2018 and 2017 was \$(21.6) million and \$(15.4) million, respectively, a decrease of \$6.2 million or 40.1%. The decrease was primarily due to:

- the gross profit impact of the \$11.5 million unfavorable Billings variance discussed under "Non-GAAP Measures- Billings for the Six Months Ended June 30, 2018 and 2017 - International"; and
- a \$1.9 million unfavorable foreign exchange rate impact (estimated by re-calculating current period results of foreign operations using the average exchange rate from the prior period.); partially offset by
- lower pre-publication investment cash costs, primarily due to the costs incurred in the prior year associated with the development of localized digital offerings for the multi-year United Arab Emirates contract entered into in 2016.

Professional

Adjusted EBITDA for the six months ended June 30, 2018 and 2017 was \$5.3 million and \$9.0 million, respectively, a decrease of \$3.7 million. The decrease was primarily due to:

- the gross profit impact of the \$3.4 million unfavorable Billings variance discussed under “Non-GAAP Measures-Billings for the Six Months Ended June 30, 2018 and 2017 - Professional”;
- slightly higher pre-publication investment cash costs; partially offset by
- lower compensation expense as a result of strategic headcount reductions in prior periods.

Non-GAAP Measures

Billings, EBITDA and Adjusted EBITDA

The SEC has adopted rules to regulate the use in filings with the SEC and in public disclosures of “non-GAAP financial measures,” such as Billings, EBITDA and Adjusted EBITDA. These measures are derived on the basis of methodologies other than in accordance with U.S. GAAP.

Billings is a non-GAAP performance measure that provides useful information in evaluating our period-to-period performance because it reflects the total amount of revenue that would have been recognized in a period if we recognized all print and digital revenue at the time of sale. We use Billings as a performance measure given that we typically collect full payment for our digital and print solutions at the time of sale or shortly thereafter, but recognize revenue from digital solutions and multi-year deliverables ratably over the term of our customer contracts. As sales of our digital learning solutions have increased, so has the amount of revenue that is deferred in accordance with U.S. GAAP. Billings is a key metric we use to manage our business as it reflects the sales activity in a given period, provides comparability from period-to-period during this time of digital transition and is the basis for all sales incentive compensation. In the K-12 market where customers typically pay for five to eight year contracts upfront and the ongoing costs to service any contractual obligation are limited, the impact of the change in deferred revenue is most significant. Billings is U.S. GAAP revenue plus the net change in deferred revenue.

EBITDA, a measure used by management to assess operating performance, is defined as net income from continuing operations plus net interest, income taxes, depreciation and amortization (including amortization of pre-publication investment cash costs). Adjusted EBITDA is a non-GAAP debt covenant compliance measure that is defined in accordance with our debt agreements. Adjusted EBITDA is a material term in our debt agreements and provides an understanding of our debt covenant compliance, ability to service our indebtedness and make capital allocation decisions in accordance with our debt agreements.

Each of the above described measures is not a recognized term under U.S. GAAP and does not purport to be an alternative to revenue, income from continuing operations, or any other measure derived in accordance with U.S. GAAP as a measure of operating performance, debt covenant compliance or to cash flows from operations as a measure of liquidity. Additionally, each such measure is not intended to be a measure of free cash flows available for management's discretionary use, as it does not consider certain cash requirements such as interest payments, tax payments and debt service requirements. Such measures have limitations as analytical tools, and you should not consider any of such measures in isolation or as substitutes for our results as reported under U.S. GAAP. Management compensates for the limitations of using non-GAAP financial measures by using them to supplement U.S. GAAP results to provide a more complete understanding of the factors and trends affecting the business than U.S. GAAP results alone. Because not all companies use identical calculations, our measures may not be comparable to other similarly titled measures of other companies.

Management believes Adjusted EBITDA is helpful in highlighting trends because Adjusted EBITDA excludes the results of certain transactions or adjustments that are non-recurring or non-operational and can differ significantly from company to company depending on long-term strategic decisions regarding capital structure, the tax rules in the jurisdictions in which companies operate, and capital investments. In addition, Billings and Adjusted EBITDA provide more comparability between the historical operating results and operating results that reflect purchase accounting and the new capital structure post the Founding Acquisition as well as the digital transformation that we are undertaking which requires different accounting treatment for digital and print solutions in accordance with U.S. GAAP.

Management believes that the presentation of Adjusted EBITDA, which is defined in accordance with our debt agreements, is appropriate to provide additional information to investors about certain material non-cash items and about unusual items that we do not expect to continue at the same level in the future as well as other items to assess our debt covenant compliance, ability to service our indebtedness and make capital allocation decisions in accordance with our debt agreements.

Billings for the Three Months Ended June 30, 2018 and 2017

(Dollars in thousands)	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	\$ Change	% Change
Reported Revenue by segment:				
Higher Education	\$ 127,557	\$ 122,548	\$ 5,009	4.1 %
K-12	172,650	206,752	(34,102)	(16.5)%
International	60,990	66,020	(5,030)	(7.6)%
Professional	27,356	26,870	486	1.8 %
Other	(4,342)	(16,812)	12,470	(74.2)%
Total Reported Revenue	\$ 384,211	\$ 405,378	\$ (21,167)	(5.2)%
Change in deferred revenue	(31,138)	69,112	(100,250)	(145.1)%
Billings	\$ 353,073	\$ 474,490	\$ (121,417)	(25.6)%
Billings by Segment:				
Higher Education	\$ 86,248	\$ 96,681	\$ (10,433)	(10.8)%
K-12	181,126	283,531	(102,405)	(36.1)%
International	55,586	63,837	(8,251)	(12.9)%
Professional	29,260	29,825	(565)	(1.9)%
Other	853	616	237	38.5 %
Total Billings	\$ 353,073	\$ 474,490	\$ (121,417)	(25.6)%

Billings for the three months ended June 30, 2018 and 2017 was \$353.1 million and \$474.5 million, respectively, a decrease of \$121.4 million or 25.6%.

These variances were driven by the segment factors described below.

Higher Education

Billings for the three months ended June 30, 2018 and 2017 was \$86.2 million and \$96.7 million, respectively, a decrease of \$10.4 million or 10.8%. The decrease was primarily due to:

- a decline in print revenue primarily driven by lower demand as the business continues to migrate from print to digital learning solutions and limited sales of our 2019 copyright titles which are primarily available only through our new rental program; and
- a non-recurring prior period digital content sale; partially offset by
- growth in front-list and back-list digital revenue (paid activations of *Connect/LearnSmart* grew by approximately 12%), driven by direct-to-student e-commerce and inclusive access sales; and
- lower product returns reserve rate driven by the ongoing shift to digital learning solutions and a continued decline in actual product returns from major distributors.

K-12

Billings for the three months ended June 30, 2018 and 2017 was \$181.1 million and \$283.5 million, respectively, a decrease of \$102.4 million or 36.1%. The decrease was primarily due to:

- a decline in adoption sales, most notably California ELA sales, which despite continued strong market

share, declined as a result of a smaller market opportunity in the third and final year of purchasing;

- a cyclically smaller adoption market year-over-year as California ELA is replaced by much smaller adoption opportunities; and
- a decline in open territory due to prior period non-recurring sales, including math and science in Indiana and elementary reading in Arizona and Kentucky.

International

Billings for the three months ended June 30, 2018 and 2017 was \$55.6 million and \$63.8 million, respectively, a decrease of \$8.3 million or 12.9%. The decrease was primarily due to:

- lower print revenue, primarily driven by the sale of the K-12 Canadian business in the prior period and declines in EMEA and Latin America, mitigated by growth in the Asia Pacific Region; partially offset by
- strong digital revenue growth in Canada, primarily driven by Connect sales.

Professional

Billings for the three months ended June 30, 2018 and 2017 was \$29.3 million and \$29.8 million, respectively, a decrease of \$0.6 million or 1.9%. The decrease was primarily due to the decline in print and eBook billings.

Billings for the Six Months Ended June 30, 2018 and 2017

(Dollars in thousands)	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017	\$ Change	% Change
Reported Revenue by segment:				
Higher Education	\$ 269,968	\$ 268,747	\$ 1,221	0.5 %
K-12	237,408	269,596	(32,188)	(11.9)%
International	104,571	110,430	(5,859)	(5.3)%
Professional	53,298	53,497	(199)	(0.4)%
Other	(2,678)	(16,161)	13,483	(83.4)%
Total Reported Revenue	\$ 662,567	\$ 686,109	\$ (23,542)	(3.4)%
Change in deferred revenue	(88,209)	17,770	(105,979)	(596.4)%
Billings	\$ 574,358	\$ 703,879	\$ (129,521)	(18.4)%
Billings by Segment:				
Higher Education	\$ 221,795	\$ 227,418	\$ (5,623)	(2.5)%
K-12	210,899	320,142	(109,243)	(34.1)%
International	93,562	105,081	(11,519)	(11.0)%
Professional	47,163	50,543	(3,380)	(6.7)%
Other	939	695	244	35.1 %
Total Billings	\$ 574,358	\$ 703,879	\$ (129,521)	(18.4)%

Billings for the six months ended June 30, 2018 and 2017 was \$574.4 million and \$703.9 million, respectively, a decrease of \$129.5 million or 18.4%.

These variances were driven by the segment factors described below.

Higher Education

Billings for the six months ended June 30, 2018 and 2017 was \$221.8 million and \$227.4 million, respectively, a decrease of \$5.6 million or 2.5%. The decrease was primarily due to:

- a decline in print revenue primarily driven by lower demand as the business continues to migrate from print to digital learning solutions and limited sales of our 2019 copyright titles which are primarily available only through our new rental program; and
- a non-recurring prior period digital content sale; partially offset by
- growth in front-list and back-list digital revenue (paid activations of *Connect/LearnSmart* grew by approximately 9%), driven by direct-to-student e-commerce and inclusive access sales; and
- lower product returns reserve rate driven by the ongoing shift to digital learning solutions and a continued decline in actual product returns from major distributors.

K-12

Billings for the six months ended June 30, 2018 and 2017 was \$210.9 million and \$320.1 million, respectively, a decrease of \$109.2 million or 34.1%. The decrease was primarily due to:

- a decline in adoption sales, most notably California ELA sales, which despite continued strong market share, declined as a result of a smaller market opportunity in the third and final year of purchasing;
- a cyclically smaller adoption market year-over-year as California ELA is replaced by much smaller adoption opportunities; and
- a decline in open territory due to prior period non-recurring sales, including math and science in Indiana and elementary reading in Arizona and Kentucky.

International

Billings for the six months ended June 30, 2018 and 2017 was \$93.6 million and \$105.1 million, respectively, a decrease of \$11.5 million or 11.0%. The decrease was primarily due to:

- lower print revenue, primarily driven by the sale of the K-12 Canadian business in the prior period and declines in EMEA and Latin America, mitigated by growth in the Asia Pacific Region and India; partially offset by
- strong digital revenue growth in Canada, primarily driven by Connect sales; and
- a \$2.0 million favorable foreign exchange rate impact (estimated by re-calculating current period results of foreign operations using the average exchange rate from the prior period).

Professional

Billings for the six months ended June 30, 2018 and 2017 was \$47.2 million and \$50.5 million, respectively, a decrease of \$3.4 million or 6.7%. The decrease was primarily due to the decline in print and eBook billings and the timing of digital subscription billings for our *Access* platform offerings due to a large number of multi-year contract renewals in 2017.

Debt Covenant Compliance

Adjusted EBITDA is an important measure because, under our debt agreements, our ability to incur additional indebtedness or issue certain preferred shares, make certain types of acquisitions or investments, operate our business and make dividends, conduct asset sales or dispose of all or substantially all of our assets, all of which will impact our financial performance, is impacted by our Adjusted EBITDA, as our lenders measure our performance with a net first lien leverage ratio by comparing our senior secured bank indebtedness to our Adjusted EBITDA and a fixed charge coverage ratio, and several of our debt, investment and restricted payment baskets are measured using Adjusted EBITDA.

The Senior Facilities and the indentures governing the MHGE Parent Term Loan and the MHGE Senior Notes contain, among other provisions, certain customary covenants regarding indebtedness, payments and distributions, mergers and acquisitions, asset sales and affiliate transactions. Capacity for investments, debt, distributions and certain prepayments is measured in many instances by a multiple of Adjusted EBITDA. Our revolving credit facility requires that MHGE Holdings, after an initial grace period and subject to a testing threshold, comply on a quarterly basis with a maximum net first lien senior secured leverage ratio (the ratio of consolidated net debt secured by first-priority liens on the collateral to Adjusted EBITDA, as defined in the credit agreement governing the Senior Facilities) of (a) with respect to the first, third and fourth fiscal quarters of any year, 4.80 to 1.00 and (b) with respect to the second quarter of any fiscal year, 5.25 to 1.00. The testing threshold is satisfied at any time at which the sum of outstanding revolving credit facility loans, swingline loans and certain letters of credit exceeds thirty percent (30%) of commitments under the revolving credit facility at quarter end. Payment of borrowings under the debt agreements may be accelerated if there is an event of default. Events of default include the failure to pay principal and interest when due, a material breach of a representation or warranty, certain non-payments or defaults under other indebtedness, covenant defaults, events of bankruptcy and a change of control. Our historical debt agreements, including the MHGE Facilities, the MHSE Revolving Facility and the MHSE Term Loan, contained similar covenants predicated on the same Adjusted EBITDA measure. Failure to comply with these covenants, which are based, in part, upon Adjusted EBITDA could limit our long-term growth prospects by hindering our ability to incur future debt or make acquisitions.

“Adjusted EBITDA” as defined in our Senior Facilities debt agreements, is net income, adjusted for the items summarized in the table below. Adjusted EBITDA is intended to show our unleveraged, pre-tax operating results and therefore reflects our financial performance based on operational factors, excluding non-operational or non-recurring losses or gains. Adjusted EBITDA is not a presentation made in accordance with U.S. GAAP, and our use of the term Adjusted EBITDA varies from others in our industry. This measure should not be considered as an alternative to net income (loss) from continuing operations or any other performance measures derived in accordance with U.S. GAAP. Adjusted EBITDA has important limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under U.S. GAAP. For example, Adjusted EBITDA does not reflect: (a) our cash capital expenditure requirements for the assets being depreciated and amortized that may have to be replaced in the future; (b) changes in, or cash requirements for, our working capital needs; (c) the significant interest expenses, or the cash requirements necessary to service interest or principal payments, on our debt; (d) tax payments that may represent a reduction in cash available to us; (e) management fees paid to entities and investment funds affiliated with Apollo Global Management, LLC; (f) one-time expenditures to realize the synergies referred to above; or (g) the impact of earnings or charges resulting from matters that we and the lenders under our debt agreements may not consider indicative of our ongoing operations. In particular, our definition of Adjusted EBITDA allows us to add back certain non-cash and other charges or costs that are deducted in calculating net income from continuing operations. However, these are expenses that may recur, vary greatly and are difficult to predict. They can represent the effect of long-term strategies as opposed to short-term results. In addition, certain of these expenses can represent the reduction of cash that could be used for other corporate purposes.

Further, although not included in the calculation of Adjusted EBITDA below, the measure may at times allow us to add estimated cost savings and operating synergies related to operational changes ranging from acquisitions or dispositions to restructurings, and/or exclude one-time transition expenditures that we anticipate we will need to incur to realize cost savings before such savings have occurred.

The calculation of Adjusted EBITDA in accordance with our debt agreements is presented in the table below. The results of such calculation could differ in the future based on the different types of adjustments that may be included in such respective calculations at the time.

	Three Months Ended June 30, 2018	Three Months Ended June 30, 2017	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017	Year Ended December 31, 2017	LTM June 30, 2018
Net income (loss) from continuing operations	\$ (50,042)	\$ (37,054)	\$ (171,102)	\$ (160,554)	\$ (65,930)	\$ (76,478)
Interest (income) expense, net	47,932	44,106	89,882	87,340	179,378	181,920
Income tax (benefit) provision	627	5,753	1,146	6,377	(7,351)	(12,582)
Depreciation, amortization and pre-publication investment amortization	49,745	57,407	95,177	106,840	232,212	220,549
EBITDA	\$ 48,262	\$ 70,212	\$ 15,103	\$ 40,003	\$ 338,309	\$ 313,409
Change in deferred revenue (a)	(31,138)	69,112	(88,209)	17,770	147,344	41,365
Change in deferred royalties (b)	5,886	(11,781)	12,150	(6,008)	(22,426)	(4,268)
Change in deferred commissions (c)	(871)	—	410	—	—	410
Restructuring and cost savings implementation charges (d)	5,152	3,728	8,501	5,894	14,261	16,868
Sponsor fees (e)	875	875	1,750	1,750	3,500	3,500
Other (f)	6,851	(3,010)	14,628	1,886	18,376	31,118
Pre-publication investment (g)	(23,614)	(23,996)	(46,147)	(49,065)	(99,219)	(96,301)
Adjusted EBITDA	\$ 11,403	\$ 105,140	\$ (81,814)	\$ 12,230	\$ 400,145	\$ 306,101

- (a) We receive cash up-front for most sales but recognize revenue (primarily related to digital sales) over time recording a liability for deferred revenue at the time of sale. This adjustment represents the net effect of converting deferred revenues to a cash basis assuming the collection of all receivable balances.
- (b) Royalty obligations are generally payable in the period incurred with limited recourse. This adjustment represents the net effect of converting deferred royalties to a cash basis assuming the payment of all amounts owed in the period incurred.
- (c) Commissions are generally payable in the period incurred. This adjustment represents the net effect of converting deferred commissions to a cash basis assuming the payment of all amounts owed in the period incurred.
- (d) Represents severance and other expenses associated with headcount reductions and other cost savings initiated as part of our formal restructuring initiatives to create a flatter and more agile organization.
- (e) Beginning in 2014, \$3.5 million of annual management fees was recorded and payable to Apollo.
- (f) For the three and six months ended June 30, 2018 the amount represents (i) non-cash incentive compensation expense and (ii) other adjustments required or permitted in calculating covenant compliance under our debt agreements.

For the three and six months ended June 30, 2017, the amount represents (i) non-cash incentive compensation expense and (ii) other adjustments required or permitted in calculating covenant compliance under our debt agreements.

For the year ended December 31, 2017 the amount represents (i) non-cash incentive compensation expense (ii) elimination of a \$5.8 million gain on disposal of the K-12 Canadian business (iii) elimination of a \$4.9 million gain related to the sale of an equity method investment and (iv) other adjustments required or permitted in calculating covenant compliance under our debt agreements.

- (g) Represents the cash cost for pre-publication investment during the period.

In addition, the Senior Facilities credit agreement, the indentures governing the MHGE Senior Notes and the MHGE Parent Term Loan, contain a financial covenant that requires the disclosure of a description of the quantitative differences from the parent, McGraw Hill Education Inc., (“MHE”) to MHGE and its subsidiaries (for

the Senior Facilities and MHGE Senior Notes) and from MHE to MHGE Parent, LLC (“MHGE Parent”) and its subsidiaries (for the MHGE Parent Term Loan).

As of June 30, 2018, the material quantitative differences from MHE to MHGE and its subsidiaries relate to \$0.8 million of cash and cash equivalents, of which \$0.4 million was held by MHGE Parent and \$0.4 million was held by MHE. There were no other material assets or liabilities other than the \$172.9 million of MHGE Parent Term Loan due in 2019 and its related accrued interest of \$6.6 million.

As of June 30, 2018, the material quantitative differences from MHE to MHGE Parent and its subsidiaries relate to \$0.4 million of cash and cash equivalents held by MHE. There were no other material assets or liabilities.

Furthermore, MHE and MHGE Parent do not generate revenue or conduct, transact or engage in any material business or operations other than their direct or indirect ownership of the equity interests in MHGE.

Seasonality and Comparability

Our revenues, operating profit and operating cash flows are affected by the inherent seasonality of the academic calendar. During 2017, we realized approximately 16%, 24%, 37% and 23% of our revenues during the first, second, third and fourth quarters, respectively. This seasonality affects operating cash flow from quarter to quarter and there are certain months when we operate at a net cash deficit. Changes in our customers’ ordering patterns may affect the comparison of our results in a quarter with the same quarter of the previous year or in a fiscal year with the prior fiscal year, where our customers may shift timing of material orders for any number of reasons, including, but not limited to, changes in academic semester start dates or changes to their inventory management practices.

Quarterly Results of Operations

(Dollars in thousands)	2016		2017				2018	
	Third Quarter 2016	Fourth Quarter 2016	First Quarter 2017	Second Quarter 2017	Third Quarter 2017	Fourth Quarter 2017	First Quarter 2018	Second Quarter 2018
Reported revenue by segment:								
Higher Education	\$ 248,850	\$ 208,867	\$ 146,199	\$ 122,548	\$ 245,880	\$ 198,956	\$ 142,411	\$ 127,557
K-12	272,224	69,516	62,844	206,752	264,701	68,330	64,758	168,371
International	88,077	90,109	44,410	66,020	77,277	93,779	43,581	60,990
Professional	30,008	31,044	26,627	26,870	31,513	35,460	25,942	27,356
Other	2,904	430	651	(16,812)	15,946	1,121	1,664	(63)
Total Reported Revenue	\$ 642,063	\$ 399,966	\$ 280,731	\$ 405,378	\$ 635,317	\$ 397,646	\$ 278,356	\$ 384,211
Change in deferred revenue	190,239	(38,467)	(51,342)	69,112	187,710	(58,136)	(57,071)	(31,138)
Billings	\$ 832,302	\$ 361,499	\$ 229,389	\$ 474,490	\$ 823,027	\$ 339,510	\$ 221,285	\$ 353,073
Billings by segment:								
Higher Education	\$ 326,004	\$ 173,258	\$ 130,737	\$ 96,681	\$ 346,728	\$ 144,365	\$ 135,547	\$ 86,248
K-12	382,957	54,464	36,611	283,531	360,240	52,870	29,773	181,126
International	95,170	92,027	41,244	63,837	85,915	95,766	37,976	55,586
Professional	28,133	40,693	20,719	29,825	29,646	45,221	17,903	29,260
Other	38	1,057	78	616	498	1,288	86	853
Total Billings	\$ 832,302	\$ 361,499	\$ 229,389	\$ 474,490	\$ 823,027	\$ 339,510	\$ 221,285	\$ 353,073

(Dollars in thousands)	2016		2017				2018	
	Third Quarter 2016	Fourth Quarter 2016	First Quarter 2017	Second Quarter 2017	Third Quarter 2017	Fourth Quarter 2017	First Quarter 2018	Second Quarter 2018
Adjusted EBITDA by segment:								
Higher Education	\$ 192,451	\$ 39,396	\$ 11,748	\$ (6,805)	\$ 198,682	\$ 24,082	\$ 16,199	\$ (15,686)
K-12	184,906	(72,115)	(85,704)	99,000	167,694	(68,912)	(84,570)	20,616
International	17,331	11,862	(15,890)	475	13,237	20,502	(12,936)	(8,655)
Professional	8,716	17,809	(240)	9,242	10,393	20,549	(2,290)	7,601
Other	5,813	744	(2,824)	3,228	2,437	(749)	(9,620)	7,527

Indebtedness and Liquidity

(Dollars in thousands)	As of	
	June 30, 2018	December 31, 2017
Cash and cash equivalents	\$ 86,207	\$ 407,632
Current portion of long-term debt	87,269	17,269
Long-term debt	2,153,287	2,222,570

Historically, we have generated operating cash flows sufficient to fund our seasonal working capital, capital requirements, expenditure and financing requirements. We use our cash generated from operating activities for a variety of needs, including among others: working capital requirements, pre-publication investment cash costs, capital expenditures and strategic acquisitions.

Our operating cash flows are affected by the inherent seasonality of the academic calendar. This seasonality also impacts cash flow patterns as investments are typically made in the first half of the year to support the significant selling period that occurs in the second half of the year. As a result, our cash flow is typically lower in the first half of the fiscal year and higher in the second half of the fiscal year.

Going forward, we may need cash to fund operating activities, working capital, pre-publication investment cash costs, capital expenditures and strategic investments. Our ability to fund our capital needs will depend on our ongoing ability to generate cash from operations and our access to the bank and capital markets. We believe that our future cash flow from operations, together with our access to funds on hand and capital markets, will provide adequate resources to fund our operating and financing needs for at least the next twelve months. We also expect our working capital requirements to be positively impacted by our migration from print products to digital learning solutions.

If our cash flows from operations are less than we require, we may need to incur debt or issue equity. From time to time we may need to access the long-term and short-term capital markets to obtain financing. Although we believe we can currently finance our operations on acceptable terms and conditions, our access to, and the availability of, financing on acceptable terms and conditions in the future will be affected by many factors, including: (i) our credit ratings, (ii) the liquidity of the overall capital markets and (iii) the current state of the economy. There can be no assurance that we will continue to have access to the capital markets on terms acceptable to us.

Cash and cash equivalents

Cash and cash equivalents include bank deposits and highly liquid investments with original maturities of three months or less that consist primarily of interest bearing demand deposits with daily liquidity, money market and time deposits. The balance also includes cash that is held by the Company outside the United States to fund international operations or to be reinvested outside of the United States. In the event funds from international

operations were needed to fund operations in the United States, we would provide for taxes in the United States, if any, on repatriated funds.

MHGE Senior Notes

On May 4, 2016, the Issuers issued \$400.0 million in principal amount of the MHGE Senior Notes in a private placement. The MHGE Senior Notes mature on May 15, 2024 and bear interest at a rate of 7.875% per annum, payable semi-annually in arrears on May 15 and November 15 of each year, commencing on November 15, 2016.

As of June 30, 2018, the unamortized debt discount and deferred financing costs were \$41.7 million and \$19.0 million, respectively, which are amortized over the term of the MHGE Senior Notes using the effective interest method.

The Issuers may redeem the MHGE Senior Notes at their option, in whole or in part, at any time on or after May 15, 2019, at certain redemption prices. In addition, prior to May 15, 2019 the Issuers may redeem the MHGE Senior Notes at their option, in whole at any time or in part from time to time, at a redemption price equal to 100% of the principal amount of the MHGE Senior Notes redeemed, plus a “make-whole” premium and accrued and unpaid interest, if any. Notwithstanding the foregoing, from time to time on or prior to May 15, 2019 the Issuers may redeem in the aggregate up to 40% of the original aggregate principal amount of the Notes (calculated after giving effect to any issuance of additional notes) in an aggregate amount equal to the net cash proceeds of one or more equity offerings at a redemption price equal to 107.875%, plus accrued and unpaid interest, if any, so long as at least 50% of the original aggregate principal amount of the Notes (calculated after giving effect to any issuance of additional notes) must remain outstanding after each such redemption.

The MHGE Senior Notes are fully and unconditionally guaranteed by each of MHGE Holdings’ domestic restricted subsidiaries that guarantee the Senior Facilities.

The MHGE Senior Notes contain certain customary negative covenants and events of default. The negative covenants limit MHGE Holdings and its restricted subsidiaries’ ability to, among other things: incur additional indebtedness or issue certain preferred shares, create liens on certain assets, pay dividends or prepay junior debt, make certain loans, acquisitions or investments, materially change its business, engage in transactions with affiliates, conduct asset sales, restrict dividends from subsidiaries, restrict liens, or merge, consolidate, sell or otherwise dispose of all or substantially all of MHGE Holdings’ assets.

The fair value of the MHGE Senior Notes was approximately \$369.0 million and \$394.0 million as of June 30, 2018 and December 31, 2017, respectively. The Company estimates the fair value of its MHGE Senior Notes based on trades in the market. Since the MHGE Senior Notes do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities (Level 2). As of June 30, 2018, the remaining contractual life of the MHGE Senior Notes is approximately 5.75 years.

Senior Facilities

On May 4, 2016, MHGE Holdings entered into the Senior Facilities. The Senior Facilities provide for senior secured financing of up to \$1,925.0 million, consisting of:

- the Term Loan Facility in an aggregate principal amount of \$1,575.0 million with a maturity of 6 years; and
- the Revolving Facility in an aggregate principal amount of up to \$350.0 million with a maturity of 5 years, including both a letter of credit sub-facility and a swingline loan sub-facility.

On December 18, 2017, the Company completed an incremental aggregate principal amount of \$150.0 million under the existing Term Loan Facility. The incremental Term Loan Facility was issued at a 0.25% discount

and will mature concurrently with the existing Term Loan Facility. The proceeds from this transaction, together with cash on hand, were used to fund the repurchase of a portion of the Existing PIK Toggle Notes.

Borrowings under the Senior Facilities bear interest at a rate equal to a LIBOR or Prime rate plus an applicable margin, subject to a 1.00% floor in the case of the Term Loan Facility. As of June 30, 2018, the interest rate for the Term Loan Facility was 6.0%. In addition, the Term Loan Facility was issued at a discount of 0.5%. As of June 30, 2018, the unamortized debt discount and deferred financing costs was \$13.9 million and \$20.0 million, respectively, which are amortized over the term of the facility using the effective interest method.

As of June 30, 2018, the Company has \$70,000 outstanding under the Revolving facility, of which \$60,000 is subject to an interest rate of LIBOR plus 4.00% and \$10,000 is subject to a base rate of 5.00% plus an applicable margin of 3.00%. The outstanding amount is included within the current portion of long-term debt within the consolidated balance sheet as of June 30, 2018 (excluding outstanding letters of credit of \$4,275). In addition, we are required to pay a commitment fee of 0.50% per annum to the lenders under the Revolving Facility in respect of the unutilized commitments thereunder.

The Senior Facilities require scheduled quarterly principal payments on the term loans in amounts equal to 0.25% of the original principal amount of the term loans commencing with the end of the first full fiscal quarter ending after the closing date, with the balance payable at maturity.

In addition, the Senior Facilities include customary mandatory prepayment requirements based on certain events such as asset sales, debt issuances and defined levels of excess cash flow.

All obligations under the Senior Facilities are unconditionally guaranteed by each of MHGE Holdings' existing and future direct and indirect material, wholly owned domestic subsidiaries. The obligations are secured by substantially all of MHGE Holdings' assets and those of each subsidiary guarantor, capital stock of the subsidiary guarantors and 65% of the voting capital stock of the first-tier foreign subsidiaries that are not subsidiary guarantors, in each case subject to exceptions. Such security interests consist of a first priority lien with respect to the collateral.

Our Revolving Facility a springing financial covenant that requires MHGE Holdings, subject to a testing threshold, comply on a quarterly basis with a maximum net first lien senior secured leverage ratio (the ratio of consolidated net debt secured by first-priority liens on the collateral to Adjusted EBITDA) of (a) with respect to the first, third and fourth fiscal quarters of any year, 4.80 to 1.00 and (b) with respect to the second quarter of any fiscal year, 5.25 to 1.00. The testing threshold are satisfied at any time at which the sum of outstanding revolving credit facility loans, swingline loans and certain letters of credit exceeds thirty percent (30%) of commitments under the revolving credit facility at quarter end.

Adjusted EBITDA reflects EBITDA as defined in the credit agreement governing the Senior Facilities. Solely for the purpose of calculating the springing financial covenant, pre-publication investments should be excluded from the calculation of Adjusted EBITDA.

The Senior Facilities contain certain customary affirmative covenants and events of default. The negative covenants in the Senior Facilities include, among other things, limitations on MHGE Holdings' and its subsidiaries' ability to incur additional debt or issue certain preferred shares; create liens on certain assets; make certain loans or investments (including acquisitions); pay dividends on or make distributions in respect of capital stock or make other restricted payments; consolidate, merge, sell or otherwise dispose of all or substantially all of their assets; sell assets; enter into certain transactions with affiliates; enter into sale-leaseback transactions; change their lines of business; restrict dividends from their subsidiaries or restrict liens; change their fiscal year; and modify the terms of certain debt or organizational agreements.

The fair value of the Term Loan Facility was approximately \$1,662.6 million and \$1,701.0 million as of June 30, 2018 and December 31, 2017, respectively. The Company estimates the fair value of its Term Loan Facility based on trades in the market. Since the Term Loan Facility do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with

similar terms and average maturities (Level 2). As of June 30, 2018, the remaining contractual life of the Term Loan Facility is approximately 3.75 years.

MHGE PIK Toggle Notes

On July 17, 2014, MHGE Parent and MHGE Parent Finance, Inc. issued \$400.0 million aggregate principal amount of the MHGE PIK Toggle Notes in a private placement. The MHGE PIK Toggle Notes were issued at a discount of 1%. The net proceeds were used to make a return of capital to the equity holders of MHGE Parent and pay certain related transaction costs and expenses.

On April 6, 2015, additional aggregate principal amount of \$100.0 million was issued under the same indenture, and part of the same series, as the outstanding \$400.0 million of the MHGE PIK Toggle Notes previously issued by MHGE Parent and MHGE Parent Finance, Inc. The proceeds from this private offering were used to make a return of capital to the equity holders of MHGE Parent.

On December 8, 2017, MHGE Parent and MHGE Parent Finance Inc., announced a cash tender offer to repurchase up to \$200.0 million of the outstanding Existing PIK Toggle Notes for total consideration of \$1,002.75 per \$1,000.00 principal amount of notes, plus any accrued and unpaid interest on the Notes up to, but not including, the settlement date. On December 15, 2017, the Issuers repurchased \$200.0 million aggregate principal amount of the Notes pursuant to the cash tender offer. In addition, as of December 31, 2017, a total of \$56.5 million aggregate principal amount of MHGE PIK Toggle Notes was repurchased by the Company, all of which has subsequently been canceled.

On April 10, 2018, the Company repurchased a total of \$20 million aggregate principal amount of MHGE PIK Toggle Notes, all of which has subsequently been canceled.

On April 20, 2018, the Company used the proceeds from the MHGE Parent Term Loan, together with cash on hand, to repay the remaining \$229.4 million of the MHGE PIK Toggle Notes outstanding principal and accrued interest through the call date of May 20, 2018 to the trustee and was subsequently discharged from its obligations.

MHGE Parent Term Loan

On April 20, 2018, MHGE Parent, LLC ("MHGE Parent"), an indirect parent of MHGE, entered into a term loan agreement with Ares Agent Services, L.P., as administrative agent, and clients of Ares Capital Management, LLC and certain funds and accounts advised by Guggenheim Partners Investment Management, LLC, as lenders, providing for a \$180 million term loan facility (the "MHGE Parent Term Loan") with a maturity of April 20, 2022. The MHGE Parent Term Loan was issued at a discount of 2.5%.

The MHGE Parent Term Loan bears interest at 11.00% per annum for interest paid in cash and 11.75% per annum for interest paid in kind. Interest is payable semiannually on April 15 and October 15 of each year, commencing on October 15, 2018. The first four interest payments must be paid in cash. Thereafter, the determination as to whether interest is paid in cash or in kind will be based on the amount of cash available to pay interest and the ability of the MHGE Parent subsidiaries to make distributions and dividends to MHGE Parent to fund such payments. The MHGE Parent Term Loan is unsecured and is not guaranteed by any of the MHGE Parent subsidiaries.

As of June 30, 2018, the unamortized debt discount and deferred financing costs was \$4.2 million and \$2.8 million respectively, which are amortized over the term of the MHGE Parent Term Loan using the effective interest method.

The MHGE Parent Term Loan contains certain customary affirmative covenants and events of default that are similar to those contained in the indenture governing the MHGE Senior Notes. The negative covenants in the MHGE Parent Term Loan limit MHGE Parent and its subsidiaries' ability to, among other things: incur additional indebtedness or issue certain preferred shares, create liens on certain assets, pay dividends or prepay junior debt,

make certain loan, acquisitions or investments, materially change its business, engage into transactions with affiliates, conduct asset sales, restrict dividends from subsidiaries or restrict liens, or merge, consolidate, sell or otherwise dispose of all or substantially all of MHGE Parent's assets.

The fair value of the MHGE Parent Term Loan was approximately \$180 million as of June 30, 2018. The Company estimates the fair value of its MHGE Parent Term Loan based on trades in the market. Since the MHGE Parent Term Loan do not trade on a daily basis in an active market, the fair value estimates are based on market observable inputs based on borrowing rates currently available for debt with similar terms and average maturities (Level 2). As of June 30, 2018, the remaining contractual life of the MHGE Parent Term Loan is approximately 3.75 years.

Scheduled Principal Payments

The scheduled principal payments required under the terms of the MHGE Senior Notes, Senior Facilities and MHGE Parent Term Loan were as follows:

(Dollars in thousands)	As of	
	June 30, 2018	
Remainder of 2018	\$	78,634
2019		17,269
2020		17,269
2021		17,269
2022		1,811,786
2023 and beyond		400,000
		2,342,227
Less: Current portion		(87,269)
	\$	2,254,958

Cash Flows

Cash flows from operating, investing and financing activities are presented in the following table:

(Dollars in thousands)	Six Months Ended June 30, 2018	Six Months Ended June 30, 2017
Cash flows from operating activities	\$ (227,055)	\$ (216,391)
Cash flows from investing activities	(81,200)	(63,570)
Cash flows from financing activities	(10,315)	(7,639)

Net cash flows from operating activities consist of profit after income tax, adjusted for changes in net working capital and non-cash items such as depreciation, amortization and write-offs, and provisions.

Operating Activities

- Cash flows provided by (used for) operating activities for the six months ended June 30, 2018 and 2017 were \$(227.1) million and \$(216.4) million, respectively, an increase of \$10.7 million. The increase in cash used for operating activities was primarily driven by:
 - an increase in accounts payable and accrued expenses driven by timing as well as higher royalties to authors in our K-12 segment; and

- lower cash inflows from deferred revenue driven by the decline in revenue primarily related to our K-12 segment; partially offset by
- lower accounts receivable growth due to a decline in revenue primarily related to our K-12 segment (after considering the impact of the reclassification of \$90.8 million of sales returns from accounts receivable, net to other current liabilities, as a result of the adoption of Topic 606, effective January 1, 2018. Refer to Note 2, "Revenue from Contracts with Customers" of the notes to the consolidated financial statements included elsewhere in this Quarterly Report for more details).

Investing Activities

- Cash flows provided by (used for) investing activities for the six months ended June 30, 2018 and 2017 were \$(81.2) million and \$(63.6) million, respectively, an increase of \$17.6 million. Cash flows used for investing activities increased primarily as a result of a \$14.6 million increase in capital expenditures associated with leasehold improvements in our leased properties and software license renewals. In addition, the Company received \$4.9 million of proceeds from the sale of an equity investment in the prior year.

Financing Activities

- Cash flows provided by (used for) financing activities for the six months ended June 30, 2018 and 2017 were \$(10.3) million and \$(7.6) million, respectively, an increase of \$2.7 million. Cash flows used for financing activities was primarily related to the repurchase of \$243.5 million of our MHGE PIK Toggle Notes and principal payments of \$8.8 million of our Term Loan Facility, partially offset by borrowings of \$175.5 million related to our MHGE Parent Term Loan and \$70 million related to our Revolving Facility as compared to \$60 million in the prior year.

Capital Expenditures and Pre-publication Expenditures

Part of our plan for growth and stability includes disciplined capital expenditures and pre-publication expenditures.

An important component of our cash flow generation is our pre-publication efficiency. We have been focused on optimizing our pre-publication expenditures to generate content that can be leveraged across our full range of products, maximizing long-term return on investment. Pre-publication expenditures, principally external preparation costs, are amortized from the year of publication over their estimated useful lives, one to six years, using either an accelerated or straight-line method. The majority of the programs are amortized using an accelerated methodology. We periodically evaluate the amortization methods, rates, remaining lives and recoverability of such costs. In evaluating recoverability, we consider our current assessment of the market place, industry trends, and the projected success of programs. Our pre-publication expenditures were \$46.1 million and \$49.1 million for the six months ended June 30, 2018 and 2017, respectively.

Capital expenditures include purchases of property, plant and equipment and capitalized technology costs that meet certain internal and external criteria. Capital expenditures were \$36.2 million and \$21.6 million for the six months ended June 30, 2018 and 2017, respectively.

Our planned capital expenditures and pre-publication expenditures will require, individually and in the aggregate, significant capital commitments and, if completed, may result in significant additional revenues. Cash needed to finance investments and projects currently in progress, as well as additional investments being pursued, is expected to be made available from operating cash flows and our credit facilities. See "Indebtedness and Liquidity" for further information.

Off-Balance Sheet Arrangements

As of June 30, 2018 we did not have any relationships with unconsolidated entities, such as entities often referred to as specific purpose or variable interest entities where we are the primary beneficiary, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As such we are not exposed to any financial liquidity, market or credit risk that could arise if we had engaged in such relationships.

Contractual Obligations

We typically have various contractual obligations, which are recorded as liabilities in our consolidated balance sheets, while other items, such as certain purchase commitments and other executory contracts, are not recognized, but are disclosed herein. For example, we are contractually committed to acquire paper and other printing services and make certain minimum lease payments for the use of property under operating and capital lease agreements.

The following table summarizes our significant debt related contractual obligations over the next several years that relate to our continuing operations as of June 30, 2018:

(Dollars in thousands)	Payments due by Period				
	Total	Remainder of 2018	2019-2020	2021-2022	2023 and beyond
Long-term debt, including current portion (1)	\$ 2,342,227	\$ 78,634	\$ 34,538	\$ 1,829,055	\$ 400,000
Interest on long-term debt (2)	669,725	80,508	312,723	229,244	47,250

(1) Amounts shown include principal on the MHGE Senior Notes, Term Loan Facility, Revolving Facility and MHGE Parent Term Loan.

(2) Amounts shown include interest on the MHGE Senior Notes, Term Loan Facility, Revolving Facility and MHGE Parent Term Loan.

Critical Accounting Policies and Estimates

Critical accounting policies are those that require the Company to make significant judgments, estimates or assumptions that affect amounts reported in the financial statements and accompanying notes. On an on-going basis, we evaluate our estimates and assumptions, including, but not limited to, revenue recognition, allowance for doubtful accounts and sales returns, inventories, pre-publication costs, accounting for the impairment of long-lived assets (including other intangible assets), goodwill and indefinite-lived intangible assets, stock-based compensation, income taxes and contingencies. The Company bases its judgments, estimates and assumptions on current facts, historical experience and various other factors that the Company believes to be reasonable and prudent under the circumstances. Actual results may differ materially from these estimates. For a complete description of our significant accounting policies, refer to Note 1, "Basis of Presentation and Accounting Policies" of the notes to consolidated financial statements included elsewhere in this Quarterly Report.

Allowance for Doubtful Accounts and Sales Returns

The allowance for doubtful accounts and sales returns reserves methodology is based on historical analysis, a review of outstanding balances and current conditions. In determining these reserves, we consider, among other factors, the financial condition and risk profile of our customers, areas of specific or concentrated risk as well as applicable industry trends or market indicators. The allowance for sales returns is a significant estimate, which is based on historical rates of return and current market conditions. The provision for sales returns is reflected as a reduction to "revenues" in our consolidated statements of operations. Sales returns are charged against the reserve as products are returned to inventory. Accounts receivable losses for bad debt are charged against the allowance for doubtful accounts when the receivable is determined to be uncollectible.

Inventories

Inventories, consisting principally of books, are stated at the lower of cost or net realizable value. The majority of our inventories relate to finished goods. A significant estimate, the reserve for inventory obsolescence, is reflected in operating and administration expenses. In determining this reserve, we consider management's current assessment of the marketplace, industry trends and projected product demand as compared to the number of units currently on hand.

Pre-publication Costs

Pre-publication costs include both the cost of developing educational content and the development of assessment solution products. Costs incurred prior to the publication date of a title or release date of a product represent activities associated with product development. These may be performed internally or outsourced to subject matter specialists and include, but are not limited to, editorial review and fact verification, graphic art design and layout and the process of conversion from print to digital media or within various formats of digital media.

Deferred Technology Costs

We capitalize certain software development and website implementation costs. Capitalized costs only include incremental, direct costs of materials and services incurred to develop the software after the preliminary project stage is completed, funding has been committed and it is probable that the project will be completed and used to perform the function intended. Incremental costs are expenditures that are out-of-pocket to us and are not part of an allocation or existing expense base. Software development and website implementation costs are expensed as incurred during the preliminary project stage. Capitalized costs are amortized from the period the software is ready for its intended use over its estimated useful life, three to seven years, using the straight-line method. Periodically, we evaluate the amortization methods, remaining lives and recoverability of such costs. Capitalized software development and website implementation costs are included in other non-current assets in the consolidated balance sheets and are presented net of accumulated amortization.

Accounting for the Impairment of Long-Lived Assets (Including Other Intangible Assets)

We evaluate long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Upon such an occurrence, recoverability of assets to be held and used is measured by comparing the carrying amount of an asset to current forecasts of undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds its estimated future cash flows, an impairment charge is recognized equal to the amount by which the carrying amount of the asset exceeds the fair value of the asset. Long-lived assets held for sale are written down to fair value, less cost to sell. Fair value is determined based on market evidence, discounted cash flows, appraised values or management's estimates, depending upon the nature of the assets.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill represents the excess of purchase price and related costs over the fair value of identifiable assets acquired and liabilities assumed in a business combination. Indefinite-lived intangible assets consist of the Company's acquired brands. Goodwill and indefinite-lived intangible assets are not amortized, but instead are tested for impairment annually during the fourth quarter each year, or more frequently if events or changes in circumstances indicate that the asset might be impaired. We have four reporting units, Higher Education, K-12, International and Professional with goodwill and indefinite-lived intangible assets that are evaluated for impairment.

We initially perform a qualitative analysis evaluating whether there are events or circumstances that provide evidence that it is more likely than not that the fair value of any of our reporting units or indefinite-lived intangible assets are less than their carrying amount. If, based on our evaluation we do not believe that it is more likely than not that the fair value of any of our reporting units or indefinite-lived intangible assets are less than their carrying amount, no quantitative impairment test is performed. Conversely, if the results of our qualitative

assessment determine that it is more likely than not that the fair value of any of our reporting units or indefinite-lived intangible assets are less than their respective carrying amounts we perform a two-step quantitative impairment test.

During the first step, the estimated fair value of the reporting units are compared to their carrying value including goodwill and the estimated fair value of the intangible assets is compared to their carrying value. Fair values of the reporting units are estimated using the income approach, which incorporates the use of a discounted free cash flow analysis, and are corroborated using the market approach, which incorporates the use of revenue and earnings multiples based on market data. The discounted free cash flow analyses are based on the current operating budgets and estimated long-term growth projections for each reporting unit. Future cash flows are discounted based on a market comparable weighted average cost of capital rate for each reporting unit, adjusted for market and other risks where appropriate. Fair values of indefinite-lived intangible assets are estimated using avoided royalty discounted free cash flow analyses. Significant judgments inherent in these analyses include the selection of appropriate royalty and discount rates and estimating the amount and timing of expected future cash flows. The discount rates used in the discounted free cash flow analyses reflect the risks inherent in the expected future cash flows generated by the respective intangible assets. The royalty rates used in the discounted free cash flow analyses are based upon an estimate of the royalty rates that a market participant would pay to license the Company's trade names and trademarks.

If the fair value of the reporting units or indefinite-lived intangible assets are less than their carrying value, a second step is performed which compares the implied fair value of the reporting unit's goodwill or indefinite-lived intangible assets to the carrying value. The fair value of the goodwill or indefinite-lived intangible assets is determined based on the difference between the fair value of the reporting unit and the net fair value of the identifiable assets and liabilities of the reporting unit or carrying value of the indefinite-lived intangible asset. If the implied fair value of the goodwill or indefinite-lived intangible assets is less than the carrying value, the difference is recognized as an impairment charge. Significant judgments inherent in this analysis include estimating the amount and timing of future cash flows and the selection of appropriate discount rates, royalty rate and long-term growth rate assumptions. Changes in these estimates and assumptions could materially affect the determination of fair value for each reporting unit and indefinite-lived intangible asset and for some of the reporting units and indefinite-lived intangible assets could result in an impairment charge, which could be material to our financial position and results of operations.

The following table summarizes the changes in the carrying value of goodwill by reporting segment:

	Higher Education	K-12	International	Professional	Total
As of December 31, 2015	\$ 422,366	\$ 25,423	\$ 4,089	\$ 37,078	\$ 488,956
Adjustment to goodwill	(1,685)	4,844	—	—	3,159
As of December 31, 2016	\$ 420,681	\$ 30,267	\$ 4,089	\$ 37,078	\$ 492,115
Adjustment to goodwill	5,484	(331)	—	—	5,153
As of December 31, 2017	\$ 426,165	\$ 29,936	\$ 4,089	\$ 37,078	\$ 497,268

Goodwill in the table above includes a \$5.5 million and \$1.7 million impact from foreign exchange as of December 31, 2017 and 2016, respectively.

Stock-Based Compensation

The Company issues stock options and other stock-based compensation to eligible employees, directors and consultants and accounts for these transactions under the provisions of Accounting Standards Codification ("ASC") 718, *Compensation-Stock Compensation*. For equity awards, total compensation cost is based on the grant date fair value. For liability awards, total compensation cost is based on the fair value of the award on the date the award is granted and is remeasured at each reporting date until settlement. For performance-based options issued, the value of the instrument is measured at the grant date as the fair value of the common stock and expensed over the vesting

term when the performance targets are considered probable of being achieved. The Company recognizes stock-based compensation expense for all awards, on a straight-line basis, over the service period required to earn the award, which is typically the vesting period.

Revenue Recognition

Revenue is recognized when control of goods or services are transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. We determine revenue recognition through the following steps:

- Identification of the contract, or contracts, with a customer;
- Identification of the performance obligations in the contract;
- Determination of the transaction price;
- Allocation of the transaction price to the performance obligations in the contract; and
- Recognition of revenue when, or as, we satisfy a performance obligation.

Arrangements with multiple deliverables

Revenue relating to products that provide for more than one deliverable is recognized based upon the relative fair value to the customer of each deliverable as each deliverable is provided. Revenue relating to agreements that provide for more than one service is recognized based upon the relative fair value to the customer of each service component as each component is earned. If the fair value to the customer for each service is not determinable based on stand-alone selling price, we make our best estimate of the services' stand-alone selling price and recognize revenue as earned as the services are delivered. Because we determine the basis for allocating consideration to each deliverable primarily on prices experienced from completed sales, the portion of consideration allocated to each deliverable in a multiple deliverable arrangement may increase or decrease depending on the most recent selling price of a comparable product or service sold on a stand-alone basis. For example, as the demand for, and prevalence of, digital products increases, as new sales occur we may be required to increase the amount of consideration allocable to digital products included in multiple deliverable arrangements because the fair value of such products or services may increase relative to other products or services bundled in the arrangement. Conversely, in the event that demand for our print products decreases, thereby causing us to experience reduced prices on our print products, we may be required to allocate less consideration to our print products in our arrangements that include multiple deliverables.

Subscription-based products

Subscription income is recognized over the related subscription period that the subscription is available and is used by the customer. Subscription revenue received or receivable in advance of the delivery of services or publications is included in deferred revenue. Incremental costs that are directly related to the subscription revenue are deferred and amortized over the subscription period. Included among the underlying assumptions related to our estimates that impact the recognition of subscription income is the extent of our responsibility to provide access to our subscription-based products, and the extent of complementary support services customers demand to access our products.

Service arrangements

Revenue relating to arrangements that provide for more than one service is recognized based upon the relative fair value to the customer of each service component as each component is earned. Such arrangements may include digital products bundled with traditional print products, obligations to provide products and services in the future at no additional cost, and periodic training pertinent to products and services previously provided. If the fair value to the customer for each service is not objectively determinable, we make our best estimate of the services' stand-alone selling price and recognize revenue as earned as the services are delivered.

Income Taxes

We determine the provision for income taxes using the asset and liability approach. Under this approach, deferred income taxes represent the expected future tax consequences of temporary differences between the carrying amounts and tax bases of assets and liabilities.

Valuation allowances are established when management determines that it is more likely than not that some portion or all of the deferred tax asset will not be realized. Management evaluates the weight of both positive and negative evidence in determining whether a deferred tax asset will be realized. Management will look to a history of losses, future reversal of existing taxable temporary differences, taxable income in carryback years, feasibility of tax planning strategies, and estimated future taxable income. The valuation allowance can also be affected by changes in tax laws and changes to statutory tax rates.

We prepare and file tax returns based on management's interpretation of tax laws and regulations. As with all businesses, our tax returns are subject to examination by various taxing authorities. Such examinations may result in future tax assessments based on differences in interpretation of the tax law and regulations. We adjust our estimated uncertain tax positions reserves based on audits by and settlements with various taxing authorities as well as changes in tax laws, regulations, and interpretations. The Company recognizes accrued interest and penalties related to uncertain tax positions in income tax (benefit) provision within the consolidated statement of operations.

Earnings (Loss) per Share

The Company computes net income (loss) per share in accordance with ASC 260, *Earnings per Share*, which requires presentation of both basic and diluted earnings per share ("EPS") on the face of the income statement. Basic EPS is computed by dividing net income (loss) available to common shareholders (numerator) by the weighted average number of shares outstanding (denominator) during the period. Diluted EPS gives effect to all dilutive potential common shares outstanding during the period using the treasury stock method and convertible preferred stock using the if-converted method. Diluted EPS excludes all dilutive potential shares if their effect is anti-dilutive.

Recently Adopted Accounting Standards

In May 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2017-09, *Modification Accounting for Share-Based Payment Arrangements*, which identifies and provides guidance on the types of changes to share-based payment awards that an entity would be required to apply modification accounting under ASU 2016-09, *Stock Compensation (Topic 718)*. Specifically, an entity would not apply modification accounting if the fair value, vesting conditions and classification of the awards are the same immediately before and after the modification. The standard is effective for annual periods beginning after December 15, 2017 and should be applied prospectively to awards modified on or after the effective date. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cashflows (Topic 230) Classification of Certain Cash Receipts and Cash Payments*, which clarifies the classification of certain cash receipts and cash payments in the statement of cash flows, including debt prepayment or extinguishment costs, settlement of contingent consideration arising from a business combination, insurance settlement proceeds, and distributions from certain equity method investees. The standard is effective for interim and annual reporting periods beginning after December 15, 2017, with early adoption permitted. The adoption of this guidance did not have a material impact on the Company's consolidated financial statements.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers*. The Company adopted ASU 2014-09 and its related related amendments, Accounting Standards Codification Topic 606 *Revenue from Contracts with Customers*, ("Topic 606"), effective January 1, 2018 using the modified retrospective method. For required disclosures relating to the impact of adopting Topic 606 and a discussion on the Company's updated accounting policies relating to revenue recognition and costs to obtain a contract, see Note 2, "Revenue

from Contracts with Customers".

Recently Issued Accounting Standards

In February 2018, the FASB issued ASU No. 2018-02, "*Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*", to allow a reclassification from accumulated other comprehensive income (loss) for stranded tax effects resulting from the Tax Cuts and Jobs Act. This standard is effective for interim and annual reporting periods after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

In August 2017, FASB issued ASU 2017-12, "*Derivative and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*", which aligns hedge accounting with risk management activities and changes both how companies assess hedge effectiveness and presentation and disclosure requirements. This standard is effective for interim and annual reporting periods after December 15, 2018, with early adoption permitted. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, "*Leases*." This ASU requires that a lessee record an operating lease in the balance sheet with a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term. This standard is effective for annual and interim periods beginning after December 15, 2018, with early adoption permitted. Adoption of this standard will be on a modified retrospective approach, which includes a number of optional practical expedients that the Company may elect to apply. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

Recently issued FASB accounting standard codification updates, except for the above standards, did not have a material impact to the Company's unaudited consolidated financial statements for the three months ended June 30, 2018.

Item 3: QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Foreign Exchange Risk

Our exposure to market risk includes changes in foreign exchange rates. We have operations in various foreign countries where the functional currency is primarily the local currency. For international operations that are determined to be extensions of the parent company, the United States dollar is the functional currency. Our principal currency exposures relate to the Australian Dollar, British Pound, Canadian Dollar, Euro, Mexican Peso and Singapore Dollar. From time to time, we may enter into hedging arrangements with respect to foreign currency exposures.

Interest Rate Risk

Term Loan Facility

Borrowings under our Term Loan Facility will accrue interest at variable rates with a LIBOR floor of 1%, and a 100 basis point increase in the LIBOR on our debt balances outstanding as of June 30, 2018 would increase our annual interest expense by \$12.0 million.

From time to time we may enter into hedging arrangements with respect to floating interest rate borrowings. While we may enter into agreements limiting our exposure to higher interest rates, any such agreements may not offer complete protection from this risk. During the first quarter of 2017, the Company entered into interest rate swap agreements with a total notional value of \$500,000 to convert a portion of its variable-rate debt to a fixed rate. For more information regarding the interest rate swap agreements, refer to Note 6, "Interest Rate Swap" of the notes to the consolidated financial statements included elsewhere in this Quarterly Report.

We do not purchase or hold any derivative financial instruments for trading purposes.

PART II - OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

In the normal course of business both in the United States and abroad, we are a defendant in various lawsuits and legal proceedings which may result in adverse judgments, damages, fines or penalties and is subject to inquiries and investigations by various governmental and regulatory agencies concerning compliance with applicable laws and regulations. In view of the inherent difficulty of predicting the outcome of legal matters, we cannot state with confidence what the timing, eventual outcome, or eventual judgment, damages, fines, penalties or other impact of these pending matters will be. We believe, based on our current knowledge, that the outcome of the legal actions, proceedings and investigations currently pending should not have a material adverse effect on the Company's combined financial condition.

Item 1A: RISK FACTORS

There have been no material changes during the period covered by this Quarterly Report to the risk factors previously disclosed in our Annual Report for the year ended December 31, 2017. For more information regarding the risks regarding our business and industry, please see our Annual Report for the year ended December 31, 2017.

Item 2: UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Not applicable.

Item 3: DEFAULTS UPON SENIOR SECURITIES

None.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 5: OTHER INFORMATION

None.