

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-K

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934, or**
For the fiscal year ended December 31, 2016
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Commission file number 001-36166

Houghton Mifflin Harcourt Company

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

27-1566372
(I.R.S. Employer
Identification No.)

**125 High Street
Boston, MA 02110
(617) 351-5000**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class
Common Stock, \$0.01 par value

Name of each exchange on which registered
The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>

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

The aggregate market value of the voting stock held by non-affiliates of the Registrant as of June 30, 2016, was approximately \$1.6 billion.

The number of shares of common stock, par value \$0.01 per share, outstanding as of February 3, 2017 was 123,082,650.

Documents incorporated by reference and made a part of this Form 10-K:

The information required by Part III of this Form 10-K, to the extent not set forth herein, is incorporated herein by reference from the Registrant's Definitive Proxy Statement for its 2017 Annual Meeting of Stockholders, to be filed with the Securities and Exchange Commission not later than 120 days after December 31, 2016.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

The statements contained herein include forward-looking statements, which involve risks and uncertainties. These forward-looking statements can be identified by the use of forward-looking terminology, including the terms “believes,” “estimates,” “projects,” “anticipates,” “expects,” “could,” “intends,” “may,” “will” or “should,” “forecast,” “intend,” “plan,” “potential,” “project,” “target” 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 include statements regarding our intentions, beliefs or current expectations concerning, among other things, our results of operations, financial condition, liquidity, prospects, growth, strategies, the industry in which we operate, the impact of new accounting guidance, expenses, effective tax rates, future liabilities, decisions of our customers, education expenditures, population growth, state curriculum adoptions and purchasing cycles, the impact of acquisitions and other investments, our share repurchase program and potential business decisions. We derive many of our forward-looking statements from our operating budgets and forecasts, which are based upon many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and, of course, it is impossible for us to anticipate all factors that could affect our actual results. All forward-looking statements are based upon information available to us on the date of this report.

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 development of the industry in which we operate may differ materially from those made in or suggested by the forward-looking statements contained herein. In addition, even if our results of operations, financial condition and liquidity and the development of the industry in which we operate are consistent with the forward looking statements contained herein, those results or developments may not be indicative of results or developments in subsequent periods.

Important factors that could cause our results to vary from expectations include, but are not limited to: changes in state and local education funding and/or related programs, legislation and procurement processes; industry cycles and trends; the rate and state of technological change; changes in product distribution channels and concentration of retailer power; changes in our competitive environment; periods of operating and net losses; our ability to enforce our intellectual property and proprietary rights; risks based on information technology systems; dependence on a small number of print and paper vendors; third-party software and technology development; our ability to identify, complete, or achieve the expected benefits of, acquisitions; increases in our operating costs; exposure to litigation; major disasters or other external threats; contingent liabilities; risks related to our indebtedness; future impairment charges; changes in school district payment practices; a potential increase in the portion of our sales coming from digital sales; risks related to doing business abroad; changes in tax law or interpretation; management and personnel changes; the results and timing of our transition to a new Chief Executive Officer; and other factors discussed in the “Risk Factors” section of this Annual Report on Form 10-K (this “Annual Report”). In light of these risks, uncertainties and assumptions, the forward-looking events described herein may not occur.

We undertake no obligation, and do not expect, to publicly update or publicly revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by law. All subsequent written and oral forward-looking statements attributable to us or to persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained herein.

Item 1. Business

As used in this Annual Report, the terms “we,” “us,” “our,” “HMH” and the “Company” refer to Houghton Mifflin Harcourt Company, formerly known as HMH Holdings (Delaware), Inc., and its consolidated subsidiaries, unless otherwise expressly stated or the context otherwise requires.

Our Company

Overview of Houghton Mifflin Harcourt

We are a global learning company, specializing in world-class content, services and cutting-edge technology solutions that enable learning in a changing landscape. We provide dynamic, engaging, and effective solutions across a variety of media and in three key focus areas: early learning, K-12, and beyond the classroom, reaching over 50 million students in more than 150 countries worldwide.

The kindergarten through 12th grade (“K-12”) market is our primary market, and in the United States, we are a leading provider of educational content by market share. Some of our core educational offerings include *HMH Science Dimensions*, *Collections*, *GO! Math*, *Read 180* Universal, and *Journeys*. We believe our long-standing reputation and trusted brand enable us to capitalize on trends in the education market through our existing and developing channels.

Furthermore, for nearly two centuries, we have published renowned and awarded children’s, fiction, nonfiction, culinary and reference titles enjoyed by readers throughout the world. Our distinguished author list includes ten Nobel Prize winners, forty-eight Pulitzer Prize winners, and fifteen National Book Award winners. We are home to popular characters and titles such as Curious George, Carmen Sandiego, *The Lord of the Rings*, *The Whole 30*, The Best American Series, the Peterson Field Guides, CliffsNotes, and *The Polar Express*, and published distinguished authors such as Philip Roth, Temple Grandin, Tim O’Brien, Amos Oz, Kwame Alexander, Lois Lowry, and Chris Van Allsburg.

We sell our products and services across multiple media and distribution channels. Leveraging our portfolio of content, including some of our best-known children’s brands and titles, such as Carmen Sandiego and Curious George, we create interactive digital content, mobile applications and educational games that can be used by families at home or on the go.

Our digital products portfolio, combined with our content development or distribution agreements with recognized technology leaders, such as Apple, Google, Intel and Microsoft, enable us to bring our next-generation educational solutions and content to learners across virtually all platforms and devices. Additionally, we believe our technology and development capabilities allow us to enhance content engagement and effectiveness with embedded assessment, interactivity and personalized adaptable content as well as increased accessibility.

Market Opportunity

U.S. K-12 Market is Large and Growing

In the United States, which is our primary market in which we sell educational content for both public and private schools, the K-12 education market represents one of the largest industry segments, accounting for over \$696 billion of expenditures, or about 4.0% of the 2011 U.S. gross domestic product as measured by the U.S. Education’s National Center for Education Statistics (“NCES”) for the 2014-2015 school year. The instructional supplies and services component of this market was estimated to be approximately \$30 billion in 2011 and is expected to continue growing as a result of several secular and cyclical factors. From 2000-2001 to 2010-2011, current expenditures per student in public elementary and secondary schools increased by 14%, after adjusting for inflation. However, there can be no assurance that the U.S. K-12 market will grow.

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In addition to its size, the U.S. K-12 education market is highly decentralized and is characterized by complex content adoption processes. It is comprised of approximately 13,500 public school districts across the 50 states and 132,000 public and private elementary and secondary schools. While we believe certain initiatives in the education sector such as the Common Core State Standards, a set of mathematics and English language arts standards, and Next Generation Science Standards, a set of science standards, each benchmarked to international standards, have increased standardization in K-12 education content, we also believe significant state standard specific customization still exists, and we believe the need to address customization provides an ongoing need for companies in the industry to maintain relationships with individual state and district policymakers and expertise in state-varying academic standards.

Growth in the U.S. K-12 market for educational materials and services is driven by, among other factors, the fiscal condition of state governments and school districts and, in particular, by the level of funding for public education generated by state and local tax collections. While the market has historically grown above the pace of inflation, averaging 7.2% growth annually since 1969, the sharp declines in tax revenues stemming from the 2008-2009 recession created a difficult operating environment for states and school districts, leading many to defer spending on educational materials and services. State and local tax receipts began to rebound in 2010 and have continued to grow, driving seven consecutive years of higher state general revenue spending and a much improved funding environment for K-12 institutions, although there are some indications that the rate of growth may be slowing, according to the National Association of State Budget Officers' Fall 2016 Fiscal Survey of the States and there can be no assurance of any further improvement or that it will be significant.

State adoptions of instructional materials, which were often deferred during the recession, have for the most part returned to regular, pre-recession cyclical patterns. California purchased English language arts materials in 2016 and will continue such purchases in 2017 and 2018; Texas is scheduled to purchase in world languages in 2017, and is scheduled to adopt English language arts in 2018 (for purchase in 2019 and subsequent years); and Florida is slated to purchase new social studies programs in 2017 and subsequent years, and to adopt science programs in 2017 (for purchase in 2018 and subsequent years). We also expect modest growth in open territories.

Long-term growth in the U.S. K-12 education market is positively correlated with student enrollments. From 2013-2014 to 2025-2026, total public school enrollment is projected to increase by 3% to 51.4 million students, according to NCES.

In addition, increased investment in areas of government policy focus is expected to further drive market growth. We believe the adoption of new academic standards in many states, including states that have adopted the Common Core State Standards in mathematics and English language arts and states adopting or contemplating adoption of the Next Generation Science Standards, is also expanding the market for teacher professional development and school improvement services.

We estimate that our U.S. K-12 educational addressable market is expected to be approximately in the range of \$2.6 billion to \$3.2 billion from 2015 through 2019. We define our addressable market as the market that we primarily compete in with our products, with the exception of our trade products, our cognitive and summative assessment products, professional development products and products sold internationally.

Expansion of Market Opportunities

In the U.S. educational market, intervention and supplemental materials, professional services and "early learning" (pre-K) programs have demonstrated growth in recent years. Demand for intervention materials is significant and growing in the United States. More than 60 percent of students enrolled in the public school environment perform below their grade level and are strong candidates for intervention programs both in literacy and in mathematics. Demand for teacher training and professional development opportunities tied to the implementation of new or revised standards at the state level is expected to continue as there will be a significant

number of new teachers entering the workforce over the next several years. Also, according to a January 2016 report from the Education Commission of the States, state funding for pre-K programs in FY 2015 totaled nearly \$7 billion, representing a 12% increase over the prior year. This growing emphasis on early childhood education is further evidenced by language in recently enacted legislation to reauthorize the Elementary and Secondary Education Act (“ESEA”) now known as the Every Student Succeeds Act (“ESSA”), that authorizes continued funding for Preschool Development Grants, with an increased focus on coordinating programs, ensuring quality, and broadening access to early childhood education.

Increasing Focus on Accountability and Student Outcomes

U.S. K-12 education has come under significant political scrutiny in recent years, due to recognition of its importance to the U.S. society at large and concern over the perceived decline in U.S. students’ competitiveness relative to their international peers. An independent task force report published in March of 2012 by the Council on Foreign Relations, a non-partisan membership organization and think tank, observed that American students rank far behind global leaders in international tests of literacy, math and science, and concluded that the current state of U.S. education severely impairs the United States’ economic, military and diplomatic security as well as broader components of America’s global leadership.

These concerns helped lead to the passage in 2002 of the No Child Left Behind Act (“NCLB”), which ushered in an era of stricter accountability, higher standards and increased transparency in education. Since the enactment of NCLB, states have been required to measure progress towards these standards through annual student testing and make results, disaggregated by demographic sub-group, publicly available. In 2010 the Common Core State Standards, new academic standards in math and English language arts developed under the auspices of governors and state chief school officers, were released. Forty-six states and the District of Columbia initially adopted the new standards. The Every Student Succeeds Act (“ESSA”), which reauthorized and overhauled the ESEA and replaced the NCLB, allows states greater flexibility in how to carry out federal mandates but retain NCLB’s focus on accountability, standards and transparency, including NCLB’s requirements for annual student testing and disaggregated score reporting.

This heightened focus on accountability and international competitiveness and the adoption of new, more rigorous standards has elevated the importance of, and helped drive demand for, high-quality content that is aligned with these standards and empowers educators to meet new requirements. Schools have also increased their expenditures on services and professional development for educators that support teachers in implementing new programs effectively and provide district and school leaders with data management and assessment capabilities to measure progress. Although this trend may lead to increases in spending by schools and districts, educational mandates and expenditures can also be affected by other factors.

Growing Shift Towards Digital Materials

In the U.S. K-12 education market, an increasing number of schools are utilizing digital content in their classrooms and implementing online or blended learning environments, which mix the use of print and digital educational materials in the classroom. Technologies are also being adapted for educational uses via digital platforms, which permit the sharing of digital files and programs among multiple computers, mobile, or other devices in real time through a virtual network.

While the speed of technology adoption within the U.S. K-12 education market differs across districts and states due to varying resources and infrastructure, most schools are implementing more technology and are seeking partners to help them create effective digital learning environments. In some cases, districts are requiring providers of instructional materials to include flexible digital components in their offerings, and are exploring subscription-based models for acquiring content. Many educators also believe that the increased implementation of digital learning environments will enable the widespread use of learning analytics, which enhance the ability

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to monitor effectiveness and learning outcomes to ultimately help schools build better pedagogical methods, personalize learning, identify and support at-risk students and improve student retention. As demand for digital content and personalized learning solutions is growing, traditional distinctions between core, supplemental and intervention materials and assessments are blurring.

Rising Global Demand for Education

The global education market, especially in Asia and the Middle East, is experiencing rising enrollments and increasing government and consumer spending driven by the close connection between levels of educational attainment, evolving standards, personal career prospects and economic growth that will increase the demand for English language products. Population growth is a leading indicator for pre-primary school enrollments, which have a subsequent impact on secondary and higher education enrollments. Globally, according to United Nations Educational, Scientific and Cultural Organization (“UNESCO”), rapid population growth has caused pre-primary enrollments in recent decades—in 2012, 184 million children were enrolled in pre-primary education worldwide, an increase of nearly two-thirds since 1999. Additionally, according to the United Nations, the world population of 7.4 billion in 2016 is projected to reach 9.9 billion by 2050, up 33% from 2016, as countries develop and improvements in medical conditions increase the birth rate.

Currently, we focus our offerings in international markets on English language education and instructional products.

Our Industry

K-12 Instructional Materials

Core Instructional Materials

In the U.S., K-12 core curriculum programs provides educational content and assessments to over 55.0 million students across approximately 132,000 public and private elementary and secondary schools. Core programs cover curriculum standards in a particular subject and include a comprehensive offering of teacher and student materials necessary to conduct the class throughout the year. Products and services include students’ print and digital offerings and a variety of supporting materials such as teacher’s editions, formative assessments, supplemental materials, whole group instruction materials, practice aids, educational games and services.

Core curriculum programs traditionally have been the primary resource for classroom instruction in most K-12 academic subjects, and as a result, enrollment trends are a major driver of industry growth. Although economic cycles may affect short-term buying patterns, school enrollments, a driver of growth in the educational content industry, are highly predictable and are expected to trend upward over the longer term.

Demand for core curriculum programs is also affected by changes in state curriculum standards, which drive instruction, assessment, and accountability in each state. A significant change in state curriculum standards requires that assessments, teacher training programs, and instructional materials be revised or replaced to align to the new standards, which historically has driven demand for new comprehensive curriculum programs.

The majority of states have recently transitioned to or are in the process of transitioning to new curriculum standards in two of the most important subject areas, mathematics and English language arts. For the most part, these new standards are based on the Common Core State Standards, the product of a multi-state effort to establish a single set of content standards in mathematics and English language arts for grades K-12. Forty-six states and the District of Columbia initially adopted the Common Core State Standards, and, while some states have nominally moved away from the standards, a majority of the original adopting states continue to use Common Core State Standards or curriculum standards closely based on them. Many states also have recently adopted or are in the process of developing new science standards, including 16 states that have adopted the multi-state Next Generation Science Standards. Most of these states are administering new student assessments aligned to the new standards.

Instructional Material Adoption Process

The process through which materials and curricula are selected and procured for classroom use varies throughout the United States. In nineteen states, known as adoption states, new programs are evaluated at the state level, usually every six to eight years, for alignment to standards and other criteria. Individual school districts then purchase instructional materials for local use, typically from the state-approved list, although in some adoption states districts are permitted to purchase instructional materials that are not on the state list, including textbooks, supplemental materials, digital media, digital courseware and online services. In all remaining states, known as open states or open territories, each individual school or school district evaluates and purchases materials independently and at any time, typically according to a five to ten year cycle.

The following chart illustrates the current adoption and open states:



The student population in adoption states represents approximately 50% of the U.S. elementary and secondary school-age population. A number of adoption states, and a few open territory states, provide categorical state funding for instructional materials; that is, funds that cannot be used for any purpose other than to purchase instructional content or, in some cases, technology equipment used to deliver instruction. In some states, categorical instructional materials funds can be used only for the purchase of materials on the state-approved list. In states that do not provide categorical state instructional materials funding, districts pay for materials primarily out of general state formula aid and/or local funds.

In adoption states, the state education board’s decision to approve a certain program developed by an educational content provider depends on recommendations from instructional materials review committees, which are often comprised of educators and curriculum specialists. Such committees typically recommend a program if it aligns to the state’s educational content standards. To ensure the approval and subsequent success of a new instructional materials program, educational content providers conduct extensive market research, which may include: discussions of the planned curriculum with state-level curriculum advisors to secure their support; development of prototype instructional materials that are focus-tested with educators, often against competing programs, to gather feedback on the program’s content and design; and incorporation of qualitative input from existing customers in terms of classroom needs.

In open territory states, the procurement process is typically characterized by a presentation and the provision of sample materials to district-level instructional materials selection committees, which subsequently evaluate and recommend a particular program to district officials and school boards. Products are generally customized to meet the states’ curriculum standards with similar research methods as in adoption states.

We believe that a content provider’s ultimate success in a given state will depend on a variety of factors, including the quality of its programs and materials, alignment with state standards and the effectiveness of its marketing and sales efforts. As a result, educational content providers often implement formal market research efforts that include educator focus groups, prototypes of student and ancillary materials and comparisons against

competing products. At the same time, marketing and editorial staffs work closely together to incorporate the results of research into products, while developing the most up-to-date, research- and needs-based curricula.

Intervention and Supplemental Materials

Intervention and supplemental materials include a wide range of product offerings targeted at addressing specific needs in key subject areas, such as literacy and mathematics. They provide students in need of targeted support with additional instruction, knowledge and practice as well as supplemental materials and solutions that educators can use in addition to core curriculum to tailor education programs for their classrooms. Intervention solutions are generally purchased by individual schools or districts, while supplemental materials are generally purchased by individual teachers whose purchases are not tied to adoption schedules. Demand for intervention materials is significant and growing in the United States. More than 60 percent of students enrolled in the public school environment perform below their grade level and are strong candidates for intervention programs both in literacy and mathematics. As demand for digital content and personalized learning solutions is growing, traditional distinctions between core, supplemental and intervention materials and assessments are blurring.

Intervention and supplemental products and services are funded through state and local funding as well as federal funding allocations pursuant to the ESSA and the Individuals with Disabilities Education Act (“IDEA”). Title I, the largest program within ESSA, provides funding to schools and school districts with high concentrations of students from low income families. Title I and other ESSA programs also provide targeted funding for specific activities, such as early childhood education, school improvement, response to intervention, dropout prevention, and before- and after-school programs. IDEA governs how states and public agencies provide early intervention, special education and related services to children with disabilities. In addition, school districts in many states are now able to spend educational funds on “instructional materials” that include core and supplemental materials, computer software, digital media, digital courseware, and online services.

Professional Services

The Professional Services includes consulting and support services to assist individual schools and school districts in raising student achievement, implementing new programs and technology effectively, developing effective teachers, principals and leaders, as well as school and school-district turnaround and improvement solutions. We believe all districts and schools contract for some level of professional services. These services may include support for up-front training, in-classroom coaching, institutes, author workshops, professional learning communities, leadership development, technical support and maintenance, and program management. Historically, it has been challenging to measure the success of these investments or sustain their effects owing to the fragmented nature of initiatives and providers in a single district as well as the lack of sustained plans.

Professional development is directly addressed in ESSA. ESSA restructured Title II, the section of the law addressing teacher quality, and authorized over \$2 billion in grants to support activities that promote teacher and principal effectiveness. ESSA also eliminated federal “highly qualified teacher” requirements and prohibits U.S. Department of Education mandates and incentives to evaluate teachers on the basis of student test scores, which in recent years have channeled resources and attention to the development of educator evaluation systems, measurement tools, and related training. Title II now focuses instead on the role of the profession in improving student achievement, including new requirements to ensure professional development is not only sustained (“no one-day workshops”), but also “job-embedded”, “data-driven,” and “personalized.” It is expected that school districts will need to focus their applications for teacher training to ensure teacher alignment with high quality standards as well as priorities for funds to low-performing schools where comprehensive support and improvement plans are in place. There are also significant funding opportunities for professional development as part of state programs, especially in states where they have consolidated program funding and want solutions that are “evidence-based.”

The professional development services segment, which is relatively fragmented in the United States, is expected to grow as the transition to digital learning in classrooms increases the need for technology

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training and implementation support for educators. We believe that the use of interim data, differentiation, teacher content knowledge (in mathematics) and the use of technology in the classroom are the areas in which teachers and leaders are most seeking support. Also, demand for teacher training and professional development opportunities tied to the implementation of new or revised standards at the state level is expected to continue. In addition, there is expected to be a need to develop new teachers as the next several years are expected to continue to see the “greening” of the teaching force, with approximately 200,000 new teachers entering the work force every year and roughly 50% attrition rate among new teachers.

Assessment

The assessment segment includes summative, formative or in-classroom, and cognitive assessments. Summative assessments are concluding or “final” exams that measure students’ proficiency in a particular subject or group of subjects on an aggregate level or against state standards. Formative assessments are on-going, in-classroom tests that occur throughout the school year and monitor progress in certain subjects or curriculum units. Cognitive assessments are designed to pinpoint areas of need and are often administered by specialists to identify learning difficulties and qualify individuals for special services under the requirements IDEA.

Many states and districts are currently utilizing teacher evaluation systems that measure teacher performance based on standardized test scores and other elements required to meet certain benchmarks set by policymakers. Additionally, Federal education policymakers have shifted the focus to children at even younger ages to provide intervention before significant achievement gaps are realized. As a result, this has led to additional opportunities in the early childhood assessment and intervention segments.

ESSA requires annual summative testing in reading and mathematics at grades 3 through 8 and one grade level of high school, as well as testing in science at a minimum of three grade levels. Under ESSA, states have greater flexibility than under NCLB in choosing their assessment approach and how they intervene with the lowest performing schools. In addition, the law prohibits federal incentives for states to adopt any particular set of standards, including the Common Core State Standards, and assessments. Several states that had initially participated in the Common Core-based Smarter Balanced Assessment Consortium (“SBAC”) and the Partnership Assessment of Readiness for College and Careers (“PARCC”) have since dropped out of the consortia and decided to use other assessments to measure student achievement. Major challenges facing the future of the consortia are testing time, cost, and dependency for online assessment delivery.

As states plan for and implement new assessments and districts continue to transition to new standards, demand for quality measures and reporting systems that help educators prepare students for the content coverage and item types anticipated on the new assessments should continue to increase.

International

Internationally, we predominantly export and sell K-12 English language education products to premium private schools that utilize the U.S. curriculum, which are located primarily in Asia, the Pacific, the Middle East, Latin America, the Caribbean and Africa. Our international sales team utilizes a global network of distributors in local markets around the world.

Our immediate international strategy is to expand our addressable market through offering private schools in targeted international markets educational solutions comprising print and digital content, professional development services and a wide array of supplemental, intervention and assessment products, which are aimed at improving learning outcomes.

Early Learning

Over the last decade, the early childhood segment has seen significant growth in enrollments and increases in state and federal funding. These increases are driven by increased awareness of the value of quality pre-K

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experiences to educational achievement, its economic benefits, as well as the growth in breadth and depth of state early learning standards. For example, ESSA, while eliminating and consolidating programs in other areas, created a new national program for early childhood education. The Preschool Development Grants program, with authorized annual funding of \$250 million, provides grants to support the expansion of quality pre-K programs serving low-income and disadvantaged children. The program builds upon and codifies a similar grant program formerly administered by the U.S. Department of Education. We believe the key to the overall success of pre-K is the quality of the experience, from environments to teachers, with a special focus on instructional materials, an area in which we believe we are well-positioned to grow.

Trade Publishing

Trade Publishing includes children's, fiction, nonfiction, culinary and reference titles. While print remains the primary format in which trade books are produced and distributed, demand for trade titles in digital format, primarily e-books, has developed rapidly over the past several years, as the industry evolves to embrace new technologies for developing, producing, marketing and distributing trade works.

Our Products and Services

We are organized along two reportable segments: Education and Trade Publishing. Our primary segment measures are net sales and Adjusted EBITDA. The Education segment is our largest business, representing approximately 88% of our total net sales for each of the years ended December 31, 2016, 2015 and 2014.

Education

Our Education segment provides educational content, services, and technology solutions to meet the diverse needs of today's classrooms. The principal customers for our Education products are K-12 school systems, which purchase core curriculum materials, intervention and supplemental materials, professional development and school turnaround services, and an array of highly regarded assessment products. Additionally, we believe our increasing portfolio of educational content in the early learning and direct-to-consumer spaces puts us in a strong position for growth in these areas.

The Education segment net sales and Adjusted EBITDA were \$1,207.1 million and \$225.7 million, \$1,251.1 million and \$269.4 million, and \$1,209.1 million and \$298.5 million for the years ended December 31, 2016, 2015 and 2014, respectively.

Our Education products consist of the following offerings:

- *Comprehensive Curriculum* : Our core curriculum offerings include educational programs intended to provide a complete course of study in a subject, either at a single grade level or across multiple grade levels, and serve as the primary source of classroom instruction. We develop and market core curriculum programs for the pre-K-12 market utilizing the Houghton Mifflin Harcourt brands and focusing our content portfolio on the subjects that have consistently received the highest priority from educators and educational policy makers, namely reading, literature and language arts, mathematics, science, world languages and social studies. Within each subject, core learning programs are designed and then marketed with a variety of proprietary products to maximize teaching effectiveness, including digital and print programs, workbooks, teachers' guides and resources, audio and visual aids and technology-based products.
- *Intervention Products and Supplemental Materials*: We develop products targeted at addressing struggling learners through comprehensive intervention solutions, products targeted at assisting English language learners and products providing incremental instruction in a particular subject area. Included with this group of products are: flagship intervention programs such as *MATH 180*, *READ 180* Universal, *System 44* and *iRead*, which were obtained as part of the Scholastic EdTech acquisition;

professional books and developmental resources aimed at empowering pre-K-12 teachers; our *Benchmark Assessment System* , which allows teachers to evaluate students' reading levels three times a year; and our *Leveled Literacy Intervention System* , which is a supplementary intervention program for children struggling with reading and writing. The intervention and supplemental materials group generates net sales and earnings that do not vary greatly with the adoption cycle. In addition, the development of intervention and supplemental materials tends to require significantly less capital investment than the development of a core curriculum program. However, as demand for personalized learning solutions is growing, traditional distinctions between core, supplemental and intervention materials and assessments are blurring.

- *Professional Services* . To extend our value proposition, we provide consulting services to assist school districts in increasing accountability for improvement and offering professional development training, comprehensive services and school turnaround solutions. We believe our educational services offer integrated solutions that combine the best learning resources available today. These include learning resources that are supported with professional development in classroom assessment, digital implementation, teacher effectiveness and high-impact leadership, which have a measurable and sustainable impact on student achievement.
- *Assessment*. Our assessment products provide district and state-level solutions focused on cognitive and formative assessment tools and platform solutions. Cognitive solutions provide psychological and special needs testing to assess intellectual, cognitive and behavioral development. Our group and formative solutions include largely K-12 assessment tools and services relating to academic achievement as well as low-stakes assessment tools that assist in identifying the learning needs and abilities of students.
- *International* . We sell our educational solutions into global education markets that predominantly consist of large English-language schools in high growth territories in Asia, the Pacific, the Middle East, Latin America, the Caribbean and Africa.
- *Early Learning* : We recognize the critical importance of early education at home, in the classroom, and in childcare settings, as well as its far-reaching implications for school and career readiness and lifelong success. We enable effective early learning in today's changing landscape through research-based, individualized content; effective tools and resources for parents and educators; and the thoughtful integration of technology. Grounded in brain science and informed by child biology, educational psychology, and cognitive theory, our content is designed to help children meet key development milestones in core learning areas, including executive function, language and literacy, mathematics, science, and creative expression. HMH Early Learning solutions include our core curriculum program *Big Day for PreK* and digital foundational reading program *iRead*.

Trade Publishing

Our Trade Publishing segment, which dates back to 1832, primarily develops, markets and sells consumer books in print and digital formats and licenses book rights to other publishers and electronic businesses in the United States and abroad. The principal distribution channels for Trade Publishing products are retail stores (both physical and online) and wholesalers. Reference materials are also sold to schools, colleges, libraries, office supply distributors and other businesses.

Our Trade Publishing segment offers an extensive library of general interest, young readers and reference works that include well-known characters and brands. Our award-winning general interest titles include literary fiction, culinary, and non-fiction in hardcover, e-book and paperback formats, including the Mariner Books paperback line. Among the general interest properties are the popular J.R.R. Tolkien titles and the prolific The Best American Series. The general interest group also publishes the CliffsNotes series of test prep and study guides, branded field guides, such as the Peterson Field Guides and extensive culinary works. In culinary, our catalog now includes major cookbook brands such as Betty Crocker and Better Homes and Gardens in addition to

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recent best sellers including the How to Cook Everything series and Whole30. Our catalog features numerous Nobel and Pulitzer Prize winners and Newbery and Caldecott medal winners, including a 2015 Newbery Medal winner, a 2014 and 2013 Caldecott Honor winner and a 2014 Pulitzer Prize winner. In young readers publishing, our list addresses a broad age group and includes an array of products for preschool/early learning programs, including board books, picture books and workbooks. This list includes recognized characters and titles such as Curious George and Martha Speaks, both successful television programs featured on PBS, Five Little Monkeys, Gossie & Friends, Polar Express, Little Blue Truck, and many more. We also publish novels for young adults, a growing genre, including titles from Lois Lowry, author of *The Giver*, and Kwame Alexander. In the reference category, we are the publisher of the American Heritage and Webster's New World dictionaries, and related titles.

In addition to traditional conversions of print to digital content, we develop our content digitally in various formats with minimal incremental investment. As such, we have an established and flexible solution for converting, manipulating and distributing trade content to the many digital consumer platforms such as e-readers and tablets. We continue to actively publish into the sizable consumer market for e-books, book or character-based applications and other digital products with net sales from e-books reaching \$15.0 million for the year ended December 31, 2016, representing approximately 9% of our Trade Publishing segment net sales for the same period. We continue to focus on the development of innovative new digital products which capitalize on our content, our digital expertise, and the growing consumer demand for these products. In addition, we are increasingly leveraging the strength of our Trade Publishing brands and characters, such as Curious George, together with our expertise in developing educational solutions, to further penetrate the large and growing consumer market for at-home educational products and services.

For the years ended December 31, 2016, 2015 and 2014, Trade Publishing net sales and Adjusted EBITDA were approximately \$165.6 million and \$6.3 million, \$164.9 million and \$7.7 million, and \$163.2 million and \$12.7 million, respectively.

Seasonality

Approximately 88% of our net sales for the year ended December 31, 2016 were derived from our Education segment, which is a markedly seasonal business. Schools conduct the majority of their purchases in the second and third quarters of the calendar year in preparation for the beginning of the school year. Thus, over our latest three completed fiscal years, approximately 68% of consolidated net sales were realized in the second and third quarters. Sales of K-12 instructional materials and customized assessment products are also cyclical, with some years offering more sales opportunities than others. The amount of funding available at the state level for educational materials also has a significant effect on year-to-year net sales. Although the loss of a single customer would not have a material adverse effect on our business, schedules of school adoptions and market acceptance of our products can materially affect year-to-year net sales performance.

Competition

We sell our products in highly competitive markets. In these markets, product quality, innovation and customer service are major differentiating factors between companies. Other factors affecting competition include: (i) competitive pricing, sampling and gratis costs; (ii) digitization and innovative delivery; and (iii) educational effectiveness of the program. In addition to national curriculum publishers, we also compete with a variety of specialized or regional publishers that focus on select disciplines and/or geographic regions in the K-12 market. There are also multiple competitors in the Trade Publishing, supplemental and assessment segments offering content that school districts increasingly are using as part of their core classroom instructional materials. In addition, school districts in many states are able to spend educational funds on "instructional materials" that include core and supplemental materials, computer software, digital media, digital courseware, and online services. Our larger competitors in the educational market include Pearson Education, Inc., McGraw Hill Education, Cengage Learning, Inc., Scholastic Corporation, K12 Inc., John Wiley & Sons, Inc., The College

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Board, Inc., Curriculum Associates, LLC, Benchmark Education, LLC, Accelerate Learning, Inc., Discovery Education, Cambium Learning Group, Inc., Carnegie Learning, Inc., Amplify Education, Inc., New Mountain Learning, LLC and Great Minds, Inc. Additionally, the trend towards digitalization of content and proliferation of distribution channels and learning management solutions and courseware systems has created additional opportunities for new entrants.

Printing and binding; raw materials

We outsource the printing and binding of our products, with approximately 55% of our printing requirements handled by one major supplier. We have procurement agreements that provide volume and scheduling flexibility and price predictability. We have a longstanding relationship with these parties. Approximately 20% of our printed materials (consisting primarily of teacher's editions and other ancillary components) are printed outside of the United States and approximately 80% of our printed materials (including most student editions) are printed within the United States. Paper is one of our principal raw materials. We purchase our paper primarily through one paper merchant and also directly through suppliers for limited product types. We maintain various agreements that protect against supply availability and unbound price increases. We manage our paper supply concentration by having primary and secondary sources and staying ahead of dramatic market changes.

Distribution

We operate three distribution facilities from which we coordinate our own distribution process: one each in Indianapolis, Indiana; Geneva, Illinois; and Troy, Missouri. We also utilize select suppliers to assist us with coordinating the distribution process for a limited number of product types. Additionally, some adoption states require us to use in-state textbook depositories for educational materials sold in that particular state. We utilize delivery firms including United Parcel Service Inc., FedEx Freight, CH Robinson Worldwide Inc., YRC Freight, SAIA and USF Holland, Inc. to facilitate the principally ground transportation of products.

Employees

As of December 31, 2016, we had approximately 4,500 employees, none of which were covered by collective bargaining agreements. These employees are substantially located in the United States with 243 employees located outside of the United States. We believe that relations with employees are generally good.

Intellectual property

Our principal intellectual property assets consist of our trademarks and copyrights in our content. Substantially all of our publications are protected by copyright, whether registered or unregistered, either in our name as the author of a work made for hire or the assignee of copyright, or in the name of an author who has licensed us to publish the work. Ownership of such copyrights secures the exclusive right to publish the work in the United States and in many countries abroad for specified periods: in the United States, in most cases, either 95 years from publication or for the author's life plus 70 years, but in any event a minimum of 28 years for works published prior to 1978 and 35 years for works published thereafter. In most cases, the authors who retain ownership of their copyright have licensed to us exclusive rights for the full term of copyright. Under U.S. copyright law, for licenses granted by an author during or after 1978, such exclusive licenses are subject to termination by the author or certain of the author's heirs for a five year period beginning at the end of 35 years after the date of publication of the work or 40 years after the date of the license grant, whichever term ends earlier.

We do not own any material patents, franchises or concessions, but we have registered certain trademarks and service marks in connection with our publishing businesses. We believe we have taken, and take in the ordinary course of business, appropriate available legal steps to reasonably protect our intellectual property in all material jurisdictions.

Environmental matters

We generally contract with independent printers and binders for their services, and our operations are generally not otherwise affected by environmental laws and regulations. However, as the owner and lessee of real property, we are subject to environmental laws and regulations, including those relating to the discharge of hazardous materials into the environment, the remediation of contaminated sites and the handling and disposal of wastes. It is possible that we could face liability, regardless of fault, and can be held jointly or severally liable, if contamination were to be discovered on the properties that we own or lease or on properties that we have formerly owned or leased. We are currently unaware of any material environmental liabilities or other material environmental issues relating to our properties or operations and anticipate no material expenditures for compliance with environmental laws or regulations.

Additional information

Houghton Mifflin Harcourt Company was incorporated as a Delaware corporation on March 5, 2010, and was established as the holding company of the current operating group. Houghton Mifflin Harcourt was formed in December 2007 with the acquisition of Harcourt Education Group, then the second-largest K-12 U.S. publisher, by Houghton Mifflin Group. We are headquartered in Boston, Massachusetts. We make available our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to these reports, as well as other information, free of charge through our corporate website under the “Financial Information” link located at: ir.hmhco.com, as soon as reasonably practicable after being filed with or furnished to the Securities and Exchange Commission (the “SEC”). The information found on our website or any other website we refer to in this Annual Report is not part of this Annual Report or any other report we file with or furnish to the SEC.

Item 1A. Risk Factors

Our business and results of operations may be adversely affected by many factors outside of our control, including changes in federal, state and local education funding, general economic conditions and/or the loosening of restrictions on the use of state educational funding currently dedicated to instructional material purchases.

The performance and growth of our U.S. educational businesses depend in part on federal, state and local education funding, which in turn is dependent in part on the robustness of federal, state and local finances and the level of funding allocated to educational programs. Most public school districts, the primary customers for K-12 products and services, depend largely on state and local funding to purchase instructional materials. In school districts in states that primarily rely on local tax proceeds, significant reductions in those proceeds for any reason can severely restrict district purchases of instructional materials. In school districts in states that primarily rely on state funding for instructional materials, a reduction in state funds or loosening of restrictions on the use of those funds may reduce our net sales. Additionally, many school districts receive substantial amounts through Federal education programs, funding for which may be reduced as a result of Congressional budget actions.

Federal and/or state legislative changes can also affect the funding available for educational expenditure, which include the impact of education reform, such as ESSA and the implementation of Common Core State Standards and new science standards. The ESSA legislation consolidates funding for a number of existing federal programs into a single block grant and makes other significant changes to the law, including significant changes to state accountability requirements and increased flexibility in use of federal funds, that could affect demand for our products and services. Moreover, federal educational funding is subject to the Congressional appropriations process and, accordingly, could result in program funding at or below authorized or historical levels, which could adversely affect sources of funding for our products and services. There can be no assurances that states or districts will have sufficient funding to purchase our products and services, that we will win their business in our competitive marketplace or that schools or districts that have historically purchased our products and services will do so again in the future.

Recent changes in leadership of the executive branch of the federal government, including new leadership at the Department of Education, could bring about changes in federal education policy, including shifts or reductions in federal funding, with the potential to affect our customers and/or the way we deliver educational materials and services, in ways we cannot foresee at this time.

Decreases in federal, state and/or local education funding available to school districts, the loosening of restrictions on the use of state educational funding currently dedicated to instructional materials purchases, federal and/or state legislative changes and/or negative trends or changes in general economic conditions could have a material adverse effect on our business, results of operations and financial condition.

State changes to curriculum standards, such as Common Core State Standards, or procurement processes and/or our ability to do well in state adoptions may have a material adverse effect on our business, results of operations and our financial condition.

Changes in state curriculum standards, such as Common Core State Standards and new science standards, may affect our market and sales. Delays or controversies in connections with the adoption of new standards could disrupt local adoptions of instructional materials and require modifications to our programs offered for sale in states that adopt such changes, which may have a material adverse effect on our business and results of operations. Further, the ESSA legislation consolidates funding for a number of existing federal programs into a single block grant and makes other significant changes to the law, including significant changes to state accountability requirements and increased flexibility in the use of federal education funds, which could affect demand for our educational products and services.

Similarly, changes in the state procurement process for instructional, assessment and supplemental materials, particularly in adoption states, can also affect our markets and sales. A significant portion of our net

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sales is derived from sales of K-12 instructional materials pursuant to pre-determined adoption schedules. Due to the revolving and staggered nature of state adoption schedules, sales of K-12 instructional materials have traditionally been cyclical, with some years offering more sales opportunities than others. For example, over the next few years adoptions are scheduled, or have already begun, in one or more of the primary subjects of reading, language arts and literature, social studies, science and mathematics in, among others, the states of California, Texas and Florida, the three largest adoption states. Adoption states, at times, can delay, postpone or cancel an adoption after we have invested considerable development expenditures in anticipation of a specific discipline adoption and school districts at times, can decline to purchase new instructional materials. This could have a direct impact on overall investment returns and both our timing and amount of net sales. The inability to succeed in adoption states, or reductions in their anticipated funding levels, could materially and adversely affect net sales for the year of adoption and subsequent years. Further, allowing school districts flexibility to use state funds currently dedicated exclusively to the purchase of instructional materials on other items such as technology equipment and training could adversely affect district expenditures on state-adopted instructional materials in the future.

State changes to curriculum standards, such as Common Core State Standards, or procurement process, particularly in adoption states, could materially and adversely affect our markets, business and results of operations. For example, states have at times changed their standards after we have invested to customize a program to meet their original standards. If these changes occur late in the process, this can significantly impact our ability to deliver a program on the original timeline. Our failure to do well in state adoptions could have a material adverse effect on our business, results of operations and financial condition.

Introduction of new products, services or technologies could impact our profitability.

We operate in highly competitive markets that continue to change to adapt to customer needs. These needs include an increasing demand for digitalized and personalized learning solutions. In order to maintain a competitive position, we must continue to invest in new content, new infrastructure and technology, and new ways to deliver our products and services. These investments may not be profitable or may be less profitable than what we have experienced historically. In particular, in the context of our current focus on key digital opportunities, the market is evolving, and we may be unsuccessful in establishing ourselves as a significant competitor. New distribution channels, such as digital platforms, courseware and-learning management solutions, the internet, online retailers and delivery platforms (e.g., tablets and e-readers), present both threats and opportunities to our traditional publishing models, potentially impacting both sales volumes and pricing.

Our operating results fluctuate on a seasonal and quarterly basis and our business is dependent on our results of operations for the third quarter.

Our business is seasonal. For the year ended December 31, 2016, we derived approximately 88% of net sales from our Education Segment, which is a markedly seasonal business. Typically, purchases of educational products are made primarily in the second and third quarters of the calendar year in preparation for the beginning of the school year, though assessment net sales are primarily generated in the second and fourth quarters. We typically realize a significant portion of net sales during the third quarter, making third-quarter results material to full-year performance. This sales seasonality affects operating cash flow from quarter to quarter. We typically incur a net cash deficit from all of our activities through the middle of the third quarter of the year. We cannot make assurances that our second and third quarter net sales will continue to be sufficient to fund our business and meet our obligations or that they will be higher than our net sales in prior-year or consecutive quarters. In the event that we do not derive sufficient net sales for the second and third quarter, we may have a liquidity shortfall and may not be able to fund our business and/or meet our debt service requirements and other obligations.

In addition, changes in our customers' ordering patterns may impact the comparison of results for a period with the same prior-year or consecutive period and may make it increasingly difficult for us to forecast the timing of customer purchases and assess our financial performance until later in the year.

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Our business is and will continue to be impacted by the rate and state of technological change, including the digital evolution and other disruptive technologies, and the presence and development of open-sourced content could continue to increase, which could adversely affect our net sales.

Our industry has been impacted by the digitalization of content and proliferation of distribution channels, either over the internet, or via other electronic means, replacing traditional print formats. The digital migration brings the need for change in product distribution, consumers' perception of value and the publisher's position between retailers and authors. Such digitalization increases competitive threats both from large media and technology players and from smaller businesses, online and mobile portals.

Free or relatively inexpensive educational products are becoming increasingly available, particularly in digital formats and through the internet. For example, some governmental and regulatory agencies have increased the amount of information they make publicly available for free. In addition, in recent years, there have been initiatives by non-profit organizations such as the Gates Foundation and the Hewlett Foundation to develop educational content that can be "open sourced" and made available to educational institutions for free or nominal cost. To the extent that such open sourced content is developed and made available to educational customers and is competitive with our instructional materials, our sales opportunities and net sales could be adversely affected. Technological changes and the availability of free or relatively inexpensive information and materials may also affect changes in customer behavior and expectations. Public and private sources of free or relatively inexpensive information and lower pricing for digital products may reduce demand, and impact the prices we can charge for, our products. To the extent that technological changes and the availability of free or relatively inexpensive information and materials limit demand or the prices we can charge for our products, our business, financial position and results of operations may be materially adversely affected.

Changes in product distribution channels and concentration of retailer power may restrict our ability to grow and affect our profitability in our Trade Publishing segment.

Distribution channels such as online retailers and ecommerce sites, evolving digital delivery platforms, expanding social media, digital discovery and marketing platforms, combined with the increased concentration of retailer power, pose threats and provide opportunities to our traditional consumer publishing models in our Trade Publishing segment, potentially impacting both sales volumes and profitability. The continued reduction in "brick and mortar" booksellers, the resulting concentration of power held by our largest retailers, and the increased concentration of consumer book spending on best-selling titles could negatively affect our business, financial condition and results of operations.

We operate in a highly competitive environment that is subject to rapid change and we must continue to adapt to remain competitive.

We operate in highly competitive markets with competitors such as Pearson Education, Inc., McGraw Hill Education, Cengage Learning, Inc., Scholastic Corporation, K12 Inc., John Wiley & Sons, Inc., The College Board, Inc., Curriculum Associates, LLC, Benchmark Education, LLC, Accelerate Learning, Inc., Discovery Education, Cambium Learning Group, Inc., Carnegie Learning, Inc., Amplify Education, Inc., New Mountain Learning, LLC and Great Minds, Inc. Some of these established competitors may have greater resources and less debt than us and, therefore, may be able to adapt more quickly to new or emerging technologies and changes in customer requirements or devote greater resources to the development, promotion and sale of their products and services than we can.

The risks of competition are intensified in the current environment where investment in new technology is ongoing and there are rapid changes in the products and services our customers are seeking and our competitors are offering, as well as new technologies, sales and distribution channels. As a result, we could experience threats to our existing businesses from the rise of new competitors due to the rapidly changing environment within which we operate.

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For example, while our educational content is protected by copyright law, there is nothing to prevent technology companies from developing their own educational digital products and content and offering them to schools. Technology companies are free to distribute materials with and on their technology devices and platforms. Many technology companies have substantial resources that they could devote to expand their business, including the development of educational digital products. Furthermore, while we have entered into digital distribution agreements with a number of technology companies, our agreements are non-exclusive arrangements and there is nothing to prevent such technology companies from developing and distributing their own or other publishers' educational content to the K-12 market. There is a risk that a technology company with significant resources could license or acquire their own educational content and compete with us, which could negatively affect our business, financial condition and results of operations.

There is also a risk of further disintermediation, which is the occurrence of state, district and other customers contracting directly with technology companies. As a result, there is a risk that technology companies may own direct relationships with our customers, and accordingly, they may have a significant influence over access to, pricing and distribution of digital and print education materials.

Our history of operations includes periods of operating and net losses, and we may incur operating and net losses in the future. Such losses may impact our liquidity. Our significant net losses and our significant amount of indebtedness led us to declare bankruptcy in 2012.

For the years ended December 31, 2016, 2015 and 2014, we generated operating losses of \$310.8 million, \$116.1 million, and \$85.4 million, respectively, and net losses of \$284.6 million, \$133.9 million, and \$111.5 million, respectively. If we continue to suffer operating and net losses, our liquidity may suffer and we may not be able to fund all of our obligations. Furthermore, the trading price of our common stock may decline significantly.

In addition, we had a significant amount of indebtedness prior to May 2012. During May 2012, as a result of our financial position, results of operations and significant amount of indebtedness, we filed a voluntary petition for bankruptcy under Chapter 11 of the United States Bankruptcy Code. On June 22, 2012, we emerged from bankruptcy pursuant to a pre-packaged plan of reorganization with \$250.0 million of indebtedness. In connection with the closing of our EdTech Acquisition we increased our indebtedness by \$575.0 million. Although we have significantly less interest expense now than we did prior to emerging from bankruptcy, we may not generate sufficient net sales in future periods to pay for all of our operating or other expenses, which could have a material adverse effect on our business, results of operations and financial condition.

Our ability to enforce our intellectual property and proprietary rights may be limited, which may harm our competitive position and materially and adversely affect our business and results of operations.

Our products are largely comprised of intellectual property content delivered through a variety of media, including print, digital and web-based media. We rely on copyright, trademark and other intellectual property laws and rights to establish and protect our proprietary rights in these products. However, our efforts to protect our intellectual property and proprietary rights may not be sufficient and we cannot make assurances that our proprietary rights will not be challenged, invalidated or circumvented. Moreover, we conduct business in certain other countries where the extent of effective legal protection for intellectual property rights is uncertain. We may also be required to initiate expensive and time-consuming litigation to maintain, defend or enforce our intellectual property.

Moreover, despite the existence of copyright and trademark protection under applicable laws, third parties may nonetheless violate our intellectual property rights, and our ability to remedy such violations, including in certain foreign countries where we conduct or seek to conduct business, may be limited. In addition, the copying and distribution of content over the Internet creates additional challenges for us in protecting our proprietary rights.

If we are unable to adequately protect and enforce our intellectual property and proprietary rights, our competitive position may be harmed and our business and financial results could be materially and adversely affected.

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We are subject to risks based on Information Technology (“IT”) systems. A major data privacy breach or unanticipated IT system failure could interrupt the availability of our internet-based products and services, result in corruption /and/or loss of data or breach in security and cause liability, reputational damage to our brands and/or financial loss.

Our business is dependent on information technology systems to support our complex operational and logistical arrangements across our businesses. We provide software and/or internet-based products and services to our customers. We also use complex information technology systems and products to support our business activities, particularly in infrastructure and as we move our products and services to an increasingly digital delivery platform.

We face several technological risks associated with software and/or internet-based product and service delivery in our educational businesses, including with respect to information technology capability, reliability and security, enterprise resource planning, system implementations and upgrades. Failures of our information technology systems and products (including as a result of operational failure, natural disaster, computer virus or hacker attacks) could interrupt the availability of our internet-based products and services, result in corruption or loss of data or breach in security and result in liability, reputational damage to our brands and/or adversely impact our operating results.

Across our businesses we hold large volumes of personal data, including that of employees, customers and students, and are subject to privacy laws, rules, regulations and standards in U.S. federal, state and local jurisdictions as well as in foreign jurisdictions where we conduct business, including (i) the Children’s Online Privacy Protection Act and state student data privacy laws in connection with access to, collection of, and use of personally identifiable information of students, (ii) the Health Insurance Portability and Accountability Act in connection with our self-insured health plan and assessment products, (iii) the Payment Card Industry Data Security Standards in connection with collection of credit card information from customers, and (iv) various EU data protection laws resulting from the EU Privacy Directive. Our brands and customer relationships are important assets. Failure to adequately protect such personal data could lead to penalties, significant remediation costs, reputational damage to our brands and customer relationships, potential cancellation of existing business and diminished ability to compete for future business.

While we have policies, processes, internal controls and cybersecurity mechanisms in place intended to ensure the stability of our information technology, provide security from unauthorized access to our systems and maintain business continuity, no mechanisms are entirely free from the risk of failure and we have no guarantee that our security mechanisms will be adequate to prevent all possible security threats. Our operating results may be adversely impacted by unanticipated system failures, corruption or loss of data or breaches in security.

We are dependent on a small number of third parties to print and bind our products and to supply paper, a principal material for our products. If we were to lose our relationship with our print vendor and/or paper merchant, our business and results of operations may be materially and adversely affected.

We outsource the printing and binding of our products and currently rely on one key third-party print vendor that handles approximately 55% of our printing requirements, and we expect a small number of print vendors will continue to account for a substantial portion of our printing requirements for the foreseeable future. The loss of, or a significant adverse change in our relationship with, our key print vendor could have a material adverse effect on our business and cost of sales. In addition, we purchase paper, a principal raw material for our print products, primarily through one paper merchant. There can be no assurance that our relationships with our print vendor and/or paper merchant will continue or that their business or operations will not be affected by major disasters or other external factors. The loss of our key print vendor and/or paper merchant, a material change in our relationship with them, a material disruption in their business or their failure to otherwise perform in the expected manner could cause disruptions in our business that may materially and adversely affect our results of operations and financial condition.

We rely on third-party software and technology development as part of our digital platform.

We rely on third parties for some of our software and technology development. For example, some of the technologies and software that compose our instruction and assessment technologies are developed by third parties. We rely on those third parties for the development of future components and modules. Thus, we face risks associated with technology and software product development and the ability of those third parties to meet our needs and their obligations under our contracts with them. In addition, we rely on third parties for our internet-based product hosting. The loss of one or more of these third-party partners, a material disruption in their business or their failure to otherwise perform in the expected manner could cause disruptions in our business that may materially and adversely affect our results of operations and financial condition.

We may not be able to identify and complete any future acquisitions, or achieve the expected benefits from any previous or future acquisitions, which could materially and adversely affect our business, financial condition and results of operations and/or our growth.

We have at times used acquisitions as a means of expanding our business and technologies, and expect that we will continue to do so in the future as part of our capital allocation strategy. We may be unable to identify suitable acquisition opportunities and, even if we were able to do so, we may not be able to finance or complete any such future acquisition on terms satisfactory to us, if at all. Further, we may not be able to successfully integrate previous or future acquisitions into our existing business, achieve anticipated operating advantages and/or realize anticipated cost savings or other synergies. The acquisition and integration of businesses involve a number of risks, including: use of available cash, issuance of equity or debt securities, incurrence of new indebtedness or borrowings under our revolving credit facility to consummate the acquisition and/or integrate the acquired business; diversion of management's attention from existing operations of our existing and the acquired business to the integration; integration of complex systems, technologies and networks into our existing systems; difficulties in the assimilation and retention of employees; unexpected costs, delays or other risks related to transition support services provided under any transition services agreement that may be executed as part of the acquisition; demands on management related to the increase in our size after an acquisition; and potential adverse effects on our operating results.

If we are unable to finance or complete any future acquisition on terms satisfactory to us (or at all) and/or we are unable to successfully integrate any previous or future acquisitions into our existing business, achieve anticipated operating advantages and/or realize anticipated cost savings or other synergies from any such acquired business, it could materially and adversely affect our business, financial condition and results of operations.

For example, we completed the acquisition of EdTech on May 29, 2015. Significant management attention and resources have been and continue to be devoted to integrating the business practices and operations of EdTech with our Company. This integration has proven to be more costly and time-consuming than expected, which has in the short term caused and could continue to cause us not to realize some or all of the anticipated benefits from the acquisition. Further, we currently expect to achieve certain benefits as a result of the acquisition of EdTech, including revenue and cost synergies, and we have made certain projections about the performance of EdTech. There can be no assurances that we will realize the expected benefits currently anticipated from the acquisition or that EdTech will perform according to our current projections. A failure to achieve any of the anticipated benefits of the acquisition of EdTech or a failure of EdTech to perform according to our projections could materially and adversely affect our financial condition and results of operations.

If we are unable to attract, retain and focus key personnel, it could have an adverse effect on our ability to remain competitive and on our business, financial condition and results from operations.

Our success depends, in part, on our ability to continue to attract, retain and focus key personnel. We operate in highly competitive industry segments that continue to change to adapt to customer needs and

technological advances and where there is intense competition for experienced and highly effective personnel. If we are unable to timely attract, retain and focus key personnel with relevant skills for our evolving industry segment, including executive officers and other key members of management, it could adversely affect our business, financial condition and results of operations.

For example, we recently made changes to our executive management team and recently announced the upcoming appointment of a new Chief Executive Officer. The transition to a successor Chief Executive Officer may lead to inefficiencies in our ability run our business, execute on Company initiatives and/or result in uncertainty among our employees and investors concerning our future direction and performance. It may also impact our ability to attract and retain other key personnel until the transition is complete. Any such inefficiencies and uncertainty, as well as any failure to timely and successfully transition to our successor Chief Executive Officer could have a material adverse effect on our business, financial condition and results from operations and/or increase volatility in our stock price.

In addition, our business results depend largely upon the experience, knowledge of local market dynamics and long-standing customer relationships of our sales personnel. Our inability to attract, retain and focus effective sales personnel at economically reasonable compensation levels could materially and adversely affect our ability to operate profitably and grow our business.

A significant increase in operating costs and expenses could have a material adverse effect on our profitability.

Our major expenses include employee compensation and printing, paper and distribution costs for product-related manufacturing.

We offer competitive salary and benefit packages in order to attract and retain the quality employees required to grow and expand our businesses. Compensation costs are influenced by general economic factors, including those affecting the cost of health insurance and post-retirement benefits, and any trends specific to the employee skillsets we require. We could experience changes in pension costs and funding requirements due to poor investment returns and/or changes in pension laws and regulations.

Paper is one of our principal raw materials. As a result, our business may be negatively impacted by an increase in paper prices. Paper prices fluctuate based on the worldwide demand and supply for paper in general and for the specific types of paper used by us. The price of paper may fluctuate significantly in the future, and changes in the market supply of, or demand for paper, could affect delivery times and prices. Paper suppliers may consolidate and as a result, there may be future shortfalls in supplies necessary to meet the demands of the entire marketplace. We may need to find alternative sources for paper from time to time. Our books and workbooks are printed by third parties and we typically have multi-year contracts for the production of books and workbooks. Increases in any of our operating costs and expenses could materially and adversely affect our profitability and our business, financial condition and results of operations.

We make significant investments in information technology software and hardware, as well as significant investments in the development of programs for the K-12 marketplace. Although we believe we are prudent in our investment strategies and execution of our implementation plans, there is no assurance as to the ultimate recoverability of these investments.

We also have other significant operating costs, and unanticipated increases in these costs could adversely affect our operating margins. Higher energy costs and other factors affecting the cost of publishing, transporting and distributing our products could adversely affect our financial results. Our inability to absorb the impact of increases in paper costs and other costs or any strategic determination not to pass on all or a portion of these increases to customers could adversely affect our business, financial condition and results of operations.

Exposure to litigation could have a material effect on our financial position and results of operations.

In the ordinary course of business, we are involved in legal actions, claims litigation and other matters arising from our business operations and face the risk that additional actions and claims will be filed in the future. Litigation alleging infringement of copyrights and other intellectual property rights, particularly with respect to proprietary photographs and images, has become extensive in the educational publishing industry. For example, during the second quarter of 2016, we settled all such pending or actively threatened litigations alleging infringement of copyrights, and made total settlement payments of \$10.0 million collectively, with \$4.0 million paid during the third quarter of 2016 and \$6.0 million paid during the fourth quarter of 2016. While management does not expect any of the existing legal actions and claims arising from our business operations to have a material adverse effect on our results of operations, financial position or cash flows, due to the inherent uncertainty of the litigation process, the costs of pursuing or defending against any particular legal proceeding, the resolution of any particular legal proceeding or change in applicable legal standards could have a material effect on our financial position and results of operations.

We have insurance in such amounts and with such coverage and deductibles as management believes is reasonable. However, our coverage for certain business lines has been exceeded and there can be no assurance that our liability insurance for other business lines will cover all events or that the limits of such coverage will be sufficient to fully cover all potential liabilities thereunder.

Operational disruption to our business caused by a major disaster or other external threats could restrict our ability to supply products and services to our customers.

Across all our businesses, we manage complex operational and logistical arrangements including distribution centers, data centers and large office facilities. Failure to recover from a major disaster (such as fire, flood or other natural disaster) or other external threat (such as terrorist attacks, strikes, weather or political unrest or other external factors) at a key center or facility could affect our business and employees, disrupt our daily business activities and/or restrict our ability to supply products and services to our customers.

We are subject to contingent liabilities that may affect liquidity and our ability to meet our obligations.

In the ordinary course of business, we issue performance-related surety bonds and letters of credit posted as security for our operating activities, some of which obligate us to make payments if we fail to perform under certain contracts in connection with the sale of instructional materials and assessment programs. The surety bonds are partially backstopped by letters of credit. As of December 31, 2016, our contingent liability for all letters of credit was approximately \$31.7 million, of which \$2.4 million were issued to backstop \$4.1 million of surety bonds. The letters of credit reduce the borrowing availability on our revolving credit facility, which could affect liquidity and, therefore, our ability to meet our obligations. We may increase the number and amount of contracts that require the use of letters of credit, which may further restrict liquidity and, therefore, our ability to meet our obligations in the future.

Our substantial level of indebtedness could adversely affect our financial condition and results of operations.

As of December 31, 2016, we had approximately \$788.0 million (\$772.7 million, net of discount and issuance costs) outstanding under our term loan facility and no amounts outstanding under our revolving credit facility. Our substantial outstanding indebtedness could have important consequences, including the following:

- our high level of indebtedness could make it more difficult for us to satisfy our obligations;
- our high level of indebtedness could adversely impact our credit rating;
- the restrictions imposed on the operation of our business under the agreements governing such indebtedness may hinder our ability to take advantage of strategic opportunities to grow our business and to make attractive investments;

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- our ability to obtain additional financing for working capital, capital expenditures, product development, debt service requirements, restructuring, acquisitions or general corporate purposes may be impaired, which could be exacerbated by volatility in the credit markets;
- we must use a substantial portion of our cash flow from operations to pay principal and interest on our indebtedness, which will reduce the funds available to us for operations, working capital, capital expenditures and other purposes;
- our high level of indebtedness could place us at a competitive disadvantage compared to our competitors that may have proportionately less debt;
- our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate may be limited;
- our failure to satisfy our obligations under the agreements governing our indebtedness could result in an event of default, which could result in all of our debt becoming immediately due and payable and could permit our secured lenders to foreclose on our assets securing such indebtedness;
- our high level of indebtedness makes us more vulnerable to economic downturns and adverse developments in our business and industry; and
- we may be vulnerable to interest rate increases, as certain of our borrowings bear interest at variable rates. A 1% increase or decrease in the interest rate will change our interest expense by approximately \$7.9 million on an annual basis for our term loan facility and \$2.5 million on an annual basis for our revolving credit facility, assuming it is fully drawn.

Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, prospects and ability to satisfy our obligations. In addition, we may incur substantial additional indebtedness in the future. The terms of the agreements governing our existing indebtedness do not, and any future debt may not, fully prohibit us from doing so. If new indebtedness is added to our current indebtedness levels, the related risks that we now face could substantially intensify.

We may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.

Our ability to make scheduled payments or to refinance our debt obligations and to fund planned capital expenditures and other growth initiatives depends on our financial and operating performance, which is subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control. We may not be able to maintain a level of cash flow from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness or to fund our other liquidity needs.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or seek to restructure or refinance our indebtedness. These alternative measures may not be successful and may not permit us to meet our scheduled debt service obligations. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to sell material assets or operations to attempt to meet our debt service and other obligations. Our Senior Secured Credit Facilities restrict our ability to use the proceeds from asset sales. We may not be able to consummate those asset sales to raise capital or sell assets at prices that we believe are fair and proceeds that we do receive may not be adequate to meet any debt service obligations then due.

We may record future goodwill or additional indefinite-lived intangibles impairment charges related to our reporting units, which could have a material adverse impact on our results of operations.

We test our goodwill and indefinite-lived intangibles asset balances for impairment during the fourth quarter of each year, or more frequently if indicators are present or changes in circumstances suggest that impairment

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may exist. We assess goodwill for impairment at the reporting unit level and, in evaluating the potential for impairment of goodwill, we make assumptions regarding estimated net sales projections, growth rates, cash flows and discount rates. Although we use consistent methodologies in developing the assumptions and estimates underlying the fair value calculations used in our impairment tests, these estimates are uncertain by nature and can vary from actual results. Declines in the future performance and cash flows of the reporting unit or small changes in other key assumptions may result in future impairment charges, which could have a material adverse impact on our results of operations.

We recorded a non-cash indefinite-lived asset impairment charge of \$139.2 million and \$0.4 million for the years ended December 31, 2016 and 2014, respectively. The indefinite-lived asset impairment charges related to four specific tradenames within the Education segment in 2016 and two specific tradenames within the Trade Publishing segment in 2014. In 2016, the impairment charges primarily resulted primarily from the strategic decision to market our products under the Houghton Mifflin Harcourt and HMH name rather than legacy imprints and certain declining sales projections. In 2014, the impairment charges resulted from a decline in revenue from previously projected amounts within the Trade Publishing segment. No indefinite-lived intangible assets were deemed to be impaired for the year ended December 31, 2015. We will continue to monitor and evaluate the carrying value of goodwill and indefinite-lived assets. If market and economic conditions or business performance deteriorate, this could increase the likelihood of us recording an impairment charge.

A change from up-front payment by school districts for multi-year programs could adversely affect our cash flow.

In keeping with the past practice of payments, school districts typically pay up-front when buying multi-year programs. If school districts changed their payment practices to spread their payments to us over the term of a program, our cash flow could be adversely affected.

The shift to sales of greater digital content may affect the comparability of our revenue to prior periods and cause increases or decreases in our sales to be reflected in our results of operations on a delayed basis.

As K-12 instructional materials transition from printed to digital products, an increasing percentage of our revenues are derived from time-based digital products. Our customers typically pay for purchased products up-front; however, we recognize a significant portion of our time-based digital sales over their respective terms, as required by Generally Accepted Accounting Principles in the United States. As a result, an increase in the portion of our sales coming from digital sales may impact the comparison of our revenue results for a period with the same prior-year or consecutive period.

Another effect of recognizing revenue from digital sales over their respective terms is that any increases or decreases in sales during a particular period may not translate into proportional increases or decreases in revenue during that period. Consequently, deteriorating sales activity may be less immediately observable in our results of operations.

Changes in U.S. federal, state and local or foreign tax law, interpretations of existing tax law, or adverse determinations by tax authorities, could increase our tax burden or otherwise adversely affect our financial condition or results of operations.

We are subject to taxation at the federal, state or provincial and local levels in the U.S. and various other countries and jurisdictions. The change in administration in the United States may lead to new tax legislative initiatives, such as the proposal for comprehensive tax reform in the United States. As any tax reform may result in further changes in tax laws and related regulations, our financial results could be materially impacted. Given the unpredictability of these possible changes and their potential interdependency, it is very difficult to assess whether the overall effect of such potential tax changes would be cumulatively positive or negative for our earnings and cash flow, but such changes could adversely impact our financial results.

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We face risks of doing business abroad.

We conduct business in a number of regions outside of the U.S., including emerging markets in South America, Asia and the Middle East. Accordingly, we face exposure to the risks of doing business abroad, including, but not limited to, longer customer payment terms in certain countries; increased credit risk; difficulties in protecting intellectual property, enforcing agreements and collecting receivables under certain foreign legal systems; compliance under local privacy laws, rules, regulations and standards; the need to comply with U.S. Foreign Corrupt Practices Act and local laws, rules and regulations; and in some countries, a higher risk of political instability, economic volatility, terrorism, corruption, and social and ethnic unrest.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal executive office is located at 125 High Street, Boston, Massachusetts 02110. The following table describes the approximate building areas in square feet, principal uses and the years of expiration on leased premises of our significant operating properties as of December 31, 2016. We believe that these properties are suitable and adequate for our present and anticipated business needs, satisfactory for the uses to which each is put, and, in general, fully utilized.

Location	Expiration year	Approximate area	Principal use of space	Segment used by
Owned Premises:				
Indianapolis, Indiana	Owned	491,779	Warehouse	All segments
Troy, Missouri	Owned	575,000	Office and warehouse	Education
Leased Premises:				
Orlando, Florida	2019	250,842	Office	Education
Evanston, Illinois	2027	111,398	Office	Education
Itasca, Illinois	2027	105,976	Office	Education
Geneva, Illinois	2019	485,989	Office and warehouse	Education
Boston, Massachusetts (Corporate office)	2033	194,946	Office	All segments
Portsmouth, New Hampshire	2019	25,145	Office	Education
New York, New York	2025	31,815	Office	Education
New York, New York	2027	101,841	Office	All segments
Austin, Texas	2028	87,570	Office	Education
Dublin, Ireland	2025	39,108	Office	Education
Orlando, Florida	2021	25,400	Warehouse	Corporate Records Center
Itasca, Illinois	2019	46,823	Warehouse	Education
St Charles, Illinois	2024	26,029	Office	Education

In addition, we lease several other offices that are not material to our operations and, in some instances, are partially or fully subleased.

Item 3. Legal Proceedings

We are involved in legal actions, claims, litigation and other matters incidental to our business. Litigation alleging infringement of copyrights and other intellectual property rights, particularly with respect to proprietary photographs and images, has become extensive in the educational publishing industry. Specifically, there have been various settled, pending and threatened litigation that allege we exceeded the print run limitation or other

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restrictions in licenses granted to us to reproduce photographs in our instructional materials. During the second quarter of 2016, we settled all such pending or actively threatened litigations alleging infringement of copyrights, and made total settlement payments of \$10.0 million collectively, with \$4.0 million paid during the third quarter of 2016 and \$6.0 million paid during the fourth quarter of 2016.

While management believes there is a reasonable possibility we may incur a loss associated with the existing legal actions, claims and litigation, we are not able to estimate such amount, but we do not expect any of these matters to have a material adverse effect on our results of operations, financial position or cash flows. We have insurance in such amounts and with such coverage and deductibles as management believes is reasonable. However, there can be no assurance that our liability insurance will cover all events or that the limits of such coverage will be sufficient to fully cover all potential liabilities thereunder.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market information. Our common stock has been listed on the NASDAQ Global Select Market ("NASDAQ") under the symbol "HMHC" since November 14, 2013. The following table sets forth, for the periods indicated, the high and low closing sales prices for our common stock as reported by NASDAQ.

	<u>High</u>	<u>Low</u>
2015		
First Quarter	\$23.75	\$18.68
Second Quarter	26.95	22.86
Third Quarter	26.75	20.24
Fourth Quarter	21.78	17.91
2016		
First Quarter	\$20.47	\$16.32
Second Quarter	20.85	14.79
Third Quarter	17.38	12.91
Fourth Quarter	13.40	9.35

The closing price of our common stock on NASDAQ on February 3, 2017, was \$11.05 per share.

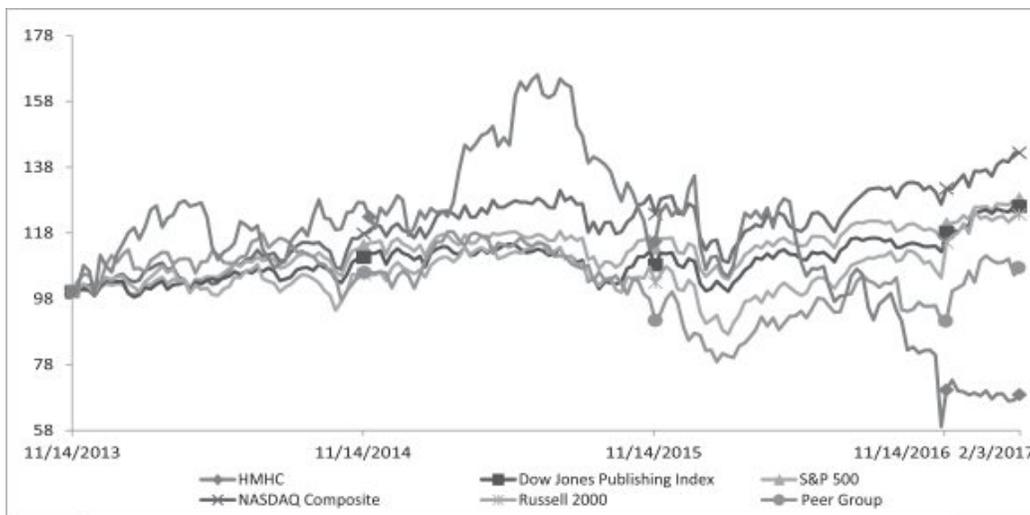
Holdings. As of February 3, 2017, there were approximately 14 stockholders of record of our common stock, one of which was Cede & Co., a nominee for The Depository Trust Company. All of our common stock held by brokerage firms, banks and other financial institutions as nominees for beneficial owners are considered to be held of record by Cede & Co., who is considered to be one stockholder of record. A substantially greater number of holders of our common stock are "street name" or beneficial holders, whose shares of common stock are held of record by banks, brokers and other financial institutions. Because such shares of common stock are held on behalf of stockholders, and not by the stockholders directly, and because a stockholder can have multiple positions with different brokerage firms, banks and other financial institutions, we are unable to determine the total number of stockholders we have.

Dividends. We have never paid or declared any cash dividends on our common stock. At present, we intend to retain our future earnings, if any, to fund operations, the growth of our business and, as appropriate, execute our share repurchase program. Our future decisions concerning the payment of dividends on our common stock will depend upon our results of operations, financial condition and capital expenditure plans, as well as other factors as our board of directors, in its discretion, may consider relevant, and the extent to which the declaration or payment of dividends may be limited by agreements we have entered or cause us to lose the benefits of certain of our agreements. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

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Securities authorized for issuance under equity compensation plans. The equity compensation plan information set forth in Part III, Item 12 of this Annual Report is incorporated by reference herein.

Performance Graph. The graph below matches the cumulative return of holders of the Company’s common stock with the cumulative returns of the Dow Jones Publishing index, the S&P 500 index, the NASDAQ Composite index, the Russell 2000 index, and a Peer Group index of certain public companies in the educational space, comprised of Pearson PLC, Scholastic Corporation, K-12 Inc., and John Wiley & Sons, Inc. The Russell 2000 index was included as the Company was added to that index during 2014. The graph assumes that the value of the investment in the Company’s common stock, in each index (including reinvestment of dividends) was \$100 on November 14, 2013 and tracks it through February 3, 2017. All prices reflect closing prices on the last day of trading at the end of each period. Notwithstanding any general incorporation by reference of this Annual Report into any other document, the information contained in the graph shall not be deemed to be “soliciting material” or to be “filed” with the SEC or subject to Regulation 14A or 14C under the Exchange Act or to the liabilities of Section 18 of the Exchange Act, except: (i) as expressly required by applicable law or regulation; or (ii) to the extent that the Company specifically requests that such information be treated as soliciting material or specifically incorporates it by reference into a filing under the Securities Act or the Exchange Act.



	11/14/2013	11/14/2014	11/14/2015	11/14/2016	2/3/2017
HMHC	100	129	117	73	70
Dow Jones Publishing Index	100	111	109	119	126
S&P 500	100	114	113	121	128
NASDAQ Composite	100	118	124	131	143
Russell 2000	100	106	103	117	124
Peer Group	100	103	91	100	105

The stock price performance shown on the graph is not necessarily indicative of future price performance. Information used in the graph was obtained from a source we believe to be reliable, but we do not assume responsibility for any errors or omissions in such information.

Recent sales of unregistered securities. There have been no sales of unregistered securities by the Company in the three year period ended December 31, 2016.

Issuer Purchases of Equity Securities

There were no purchases of equity securities in the fourth quarter of 2016. Our Board of Directors has authorized the repurchase of up to \$1.0 billion in aggregate value of the Company's common stock. As of December 31, 2016, there was approximately \$482.0 million available for share repurchases under this authorization. The aggregate share repurchase program may be executed through December 31, 2018. Repurchases under the program may be made from time to time in the open market (including under a trading plan) or in privately negotiated transactions. The extent and timing of any such repurchases would generally be at our discretion and subject to market conditions, applicable legal requirements and other considerations. Any repurchased shares may be used for general corporate purposes.

Item 6. Selected Financial Data

The following table summarizes the consolidated historical financial data of Houghton Mifflin Harcourt Company. We derived the consolidated historical financial data as of December 31, 2016 and 2015 and for the years ended December 31, 2016, 2015, and 2014 from our audited consolidated financial statements included in this Annual Report. We derived the consolidated historical financial statement data as of December 31, 2014, 2013 and 2012 and for the years ended December 31, 2013 and 2012 from our consolidated financial statements for such years, which are not included in this Annual Report. Historical results for any prior period are not necessarily indicative of results to be expected in any future period. The data set forth in the following table should be read together with the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes thereto.

	Years Ended December 31,				
	2016 (4)	2015 (4)	2014	2013	2012
Operating Data:					
Net sales	\$ 1,372,685	\$ 1,416,059	\$ 1,372,316	\$ 1,378,612	\$ 1,285,641
Cost and expenses:					
Cost of sales, excluding publishing rights and pre-publication amortization	610,715	622,668	588,726	585,059	515,948
Publishing rights amortization	61,351	81,007	105,624	139,588	177,747
Pre-publication amortization	130,243	120,506	129,693	121,715	137,729
Cost of sales	802,309	824,181	824,043	846,362	831,424
Selling and administrative	699,544	681,124	612,535	580,887	533,462
Other intangible asset amortization	26,750	22,038	12,170	18,968	54,815
Impairment charge for intangible assets, investment in preferred stock, pre-publication costs and fixed assets (1)	139,205	—	1,679	9,000	8,003
Severance and other charges (2)	15,650	4,767	7,300	10,040	9,375
Gain on bargain purchase	—	—	—	—	(30,751)
Operating loss	(310,773)	(116,051)	(85,411)	(86,645)	(120,687)
Other income (expense)					
Interest expense	(38,663)	(32,045)	(18,245)	(21,344)	(123,197)
Loss on extinguishment of debt	—	(3,051)	—	(598)	—
Change in fair value of derivative instruments	(614)	(2,362)	(1,593)	(252)	1,688
Loss before reorganization items and taxes	(350,050)	(153,509)	(105,249)	(108,839)	(242,196)
Reorganization items, net (3)	—	—	—	—	(149,114)
Income tax expense (benefit)	(65,492)	(19,640)	6,242	2,347	(5,943)
Net loss	\$ (284,558)	\$ (133,869)	\$ (111,491)	\$ (111,186)	\$ (87,139)
Net loss per share attributable to common stockholders—basic	\$ (2.32)	\$ (0.98)	\$ (0.79)	\$ (0.79)	\$ (0.26)
Net loss per share attributable to common stockholders—diluted	\$ (2.32)	\$ (0.98)	\$ (0.79)	\$ (0.79)	\$ (0.26)
Weighted average number of common shares used in net loss per share attributable to common stockholders—basic and diluted	122,418,474	136,760,107	140,594,689	139,928,650	340,918,128
Balance Sheet Data (as of period end):					
Cash, cash equivalents and short-term investments	\$ 306,943	\$ 432,403	\$ 743,345	\$ 425,349	\$ 475,119
Working capital	200,570	376,217	751,009	588,643	556,227
Total assets (5)	2,731,471	3,121,950	2,982,788	2,870,364	2,973,582
Debt (short-term and long-term) (5)	772,738	777,283	235,265	235,445	234,981
Stockholders’ equity (deficit)	880,040	1,198,321	1,759,680	1,850,276	1,943,701
Statement of Cash Flows Data:					
Net cash provided by (used in):					
Operating activities	143,751	348,359	491,043	157,203	104,802
Investing activities	(113,946)	(676,787)	(367,619)	(168,578)	(295,998)
Financing activities	(37,960)	106,104	19,529	(4,075)	106,664

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	Years Ended December 31,				
	2016 (4)	2015 (4)	2014	2013	2012
Other Data:					
Capital expenditures:					
Pre-publication capital expenditures	124,031	103,709	115,509	126,718	114,522
Property, plant, and equipment capital expenditures	105,553	82,987	67,145	59,803	50,943
Pre-publication amortization	130,243	120,506	129,693	121,715	137,729
Depreciation and intangible asset amortization	167,926	176,103	190,084	220,264	290,693

- (1) Primarily represents tradenames and to a lesser extent software and program development costs, along with a preferred stock investment.
- (2) Represents severance and real estate charges.
- (3) Represents net gain associated with our Chapter 11 reorganization in 2012.
- (4) Includes the results of our acquisition of the EdTech business from May 29, 2015 through December 31, 2016.
- (5) 2012 through 2015 include the retrospective adoption of new guidance for the recognition and measurement of debt issuance costs effective for annual reporting periods beginning after December 15, 2015.

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis is intended to facilitate an understanding of our results of operations and financial condition and should be read in conjunction with our consolidated financial statements and the accompanying notes included elsewhere in this Annual Report. The following discussion and analysis of our financial condition and results of operations contains forward-looking statements about our business, operations and industry that involve risks and uncertainties, such as statements regarding our plans, objectives, expectations and intentions. Actual results and the timing of events may differ materially from those expressed or implied in such forward-looking statements due to a number of factors, including those set forth under “Risk Factors” and elsewhere in this Annual Report. See “Risk Factors” and “Special Note Regarding Forward-Looking Statements.”

Overview

We are a global learning company, specializing in education solutions across a variety of media, delivering content, services and technology to both educational institutions and consumers, reaching over 50 million students in more than 150 countries worldwide. In the United States, we are a leading provider of K-12 educational content by market share. We believe our long-standing reputation and trusted brand enable us to capitalize on consumer and digital trends in the education market through our existing and developing channels. Furthermore, our trade and reference materials, including adult and children’s fiction and non-fiction books, have won industry awards such as the Pulitzer Prize, Newbery and Caldecott medals and National Book Award.

Corporate History

Houghton Mifflin Harcourt Company was incorporated as a Delaware corporation on March 5, 2010, and was established as the holding company of the current operating group. Houghton Mifflin Harcourt was formed in December 2007 with the acquisition of Harcourt Education Group, then the second-largest K-12 U.S. publisher, by Houghton Mifflin Group. We are headquartered in Boston, Massachusetts.

Acquisition

On April 23, 2015, we entered into a stock and asset purchase agreement with Scholastic Corporation (“Scholastic”) to acquire certain assets (including the stock of two of Scholastic’s subsidiaries) comprising its Educational Technology and Services (“EdTech”) business. On May 29, 2015, we completed the acquisition and paid an aggregate purchase price of \$574.8 million in cash to Scholastic, including adjustments for working capital. The EdTech acquisition provided us with a leading position in intervention curriculum and services and extends our product offerings in key growth areas, including educational technology, early learning, and education services, creating a more comprehensive offering for students, teachers and schools.

Key Aspects and Trends of Our Operations

Business Segments

We are organized along two business segments: Education and Trade Publishing. Our Education segment is our largest segment and represented approximately 88% of our total net sales for each of the years ended December 31, 2016, 2015 and 2014. Our Trade Publishing segment represented approximately 12% of our total net sales for each of the years ended December 31, 2016, 2015 and 2014. The Corporate and Other category represents certain general overhead costs not fully allocated to the business segments, such as legal, accounting, treasury, human resources and executive functions.

Net Sales

We derive revenue primarily from the sale of print and digital content and instructional materials, trade books, reference materials, multimedia instructional programs, license fees for book rights, content, software and

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services, test scoring, consulting and training. We primarily sell to customers in the United States. Our net sales are driven primarily as a function of volume and, to a certain extent, changes in price. Our net sales consist of our billings for products and services, less revenue that will be deferred until future recognition along with a provision for product returns. Deferred revenues primarily derive from online interactive digital content, digital and online learning components along with undelivered work-texts, workbooks and services. The work-texts, workbooks and services are deferred until delivered, which often extends over the life of the contract and the online and digital content is typically recognized ratably over the life of the contract. The digitalization of education content and delivery is driving a substantial shift in the education market. As the K-12 educational market transitions to purchasing more digital, personalized education solutions, we believe our ability now or in the future to offer embedded assessments, adaptive learning, real-time interaction and student specific personalization of educational content in a platform- and device-agnostic manner will provide new opportunities for growth. An increasing number of schools are utilizing digital content in their classrooms and implementing online or blended learning environments, which is altering the historical mix of print and digital educational materials in the classroom. As a result, our business model has shifted to more digital and online learning components to address the needs of the education marketplace; thus, often resulting in an increase in our billings being deferred compared to historical levels. The level of revenues being deferred can be fluctuating depending upon the mix of product offering between digital and non-digital products, the length of programs and the mix of product delivered immediately or over time.

Core curriculum programs, which represent the most significant portion of our Education segment net sales, cover curriculum standards in a particular K-12 academic subject and include a comprehensive offering of teacher and student materials required to conduct the class throughout the school year. Products and services in these programs include print and digital offerings for students and a variety of supporting materials such as teacher's editions, formative assessments, supplemental materials, whole group instruction materials, practice aids, educational games and professional services. The process through which materials and curricula are selected and procured for classroom use varies throughout the United States. Currently, nineteen states, known as adoption states, review and approve new programs usually every six to eight years on a state-wide basis. School districts in those states typically select and purchase materials from the state-approved list. The remaining states are known as open states or open territories. In those states, materials are not reviewed at the state level, and each individual school or school district is free to procure materials at any time, although most follow a five-to-ten year replacement cycle. The student population in adoption states represents over 50% of the U.S. elementary and secondary school-age population. Some adoption states provide "categorical funding" for instructional materials, which means that those state funds cannot be used for any other purpose. Our core curriculum programs, primarily in adoption states, typically have higher deferred sales than other parts of the business. The higher deferred sales are primarily due to the length of time that our programs are being delivered, along with greater component and digital product offerings. A significant portion of our Education segment net sales is dependent upon our ability to maintain residual sales, which are subsequent sales after the year of the original adoption, and our ability to continue to generate new business by developing new programs that meet our customers' evolving needs. In addition, our market is affected by changes in state curriculum standards, which drive instruction, assessment and accountability in each state. Changes in state curriculum standards require that instructional materials be revised or replaced to align to the new standards, which historically has driven demand for core curriculum programs.

We also derive our Education segment net sales from the sale of summative, cognitive and formative or in-classroom assessments to districts and schools in all 50 states. Summative assessments are concluding or "final" exams that measure students' proficiency in a particular academic subject or group of subjects on an aggregate level or against state standards. Formative assessments are on-going, in-classroom tests that occur throughout the school year and monitor progress in certain subjects or curriculum units. Additionally, our offerings include supplemental products that target struggling learners through comprehensive intervention solutions aimed at raising student achievement by providing solutions that combine technology, content and other educational products, as well as consulting and professional development services. We also offer products targeted at assisting English language learners.

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In international markets, we predominantly export and sell K-12 books to premium private schools that utilize the U.S. curriculum, which are located primarily in Asia, the Pacific, the Middle East, Latin America, the Caribbean and Africa. Our international sales team utilizes a global network of distributors in local markets around the world.

Our Trade Publishing segment sells works of fiction and non-fiction in the General Interest and Young Reader's categories, dictionaries and other reference works. While print remains the primary format in which trade books are produced and distributed, the market for trade titles in digital format, primarily e-books, has developed over the past several years, and generally represents approximately 10% of our Trade Publishing net sales.

Factors affecting our net sales include:

Education

- state or district per student funding levels;
- federal funding levels;
- the cyclicity of the purchasing schedule for adoption states;
- student enrollments;
- adoption of new education standards;
- technological advancement and the introduction of new content and products that meet the needs of students, teachers and consumers, including through strategic agreements pertaining to content development and distribution; and
- the amount of net sales subject to deferrals which is impacted by the mix of product offering between digital and non-digital products, the length of programs and the mix of product delivered immediately or over time.

Trade Publishing

- consumer spending levels as influenced by various factors, including the U.S. economy and consumer confidence;
- the publishing of bestsellers along with obtaining recognized authors;
- movie tie-ins to our titles that spur sales of current and backlist titles, which are titles that have been on sale for more than a year; and
- market growth or contraction.

State or district per-student funding levels, which closely correlate with state and local receipts from income, sales and property taxes, impact our sales as institutional customers are affected by funding cycles. Most public school districts, the primary customers for K-12 products and services, are largely dependent on state and local funding to purchase materials. Recently, total educational materials expenditures by institutions in the United States have been rebounding in the wake of the economic recovery. Globally, education expenditures are projected to grow at 7% through 2018, according to GSV Asset Management.

We monitor the purchasing cycles for specific disciplines in the adoption states in order to manage our product development and to plan sales campaigns. Our sales may be materially impacted during the years that major adoption states, such as Florida, California and Texas, are or are not scheduled to make significant purchases. For example, Florida is adopting social studies materials in 2016, for purchase in 2017, and is scheduled to adopt science in 2017 for purchase in 2018. Texas school districts purchased social studies and high school math materials in 2015 and will purchase materials for languages other than English in 2017. The next major adoption in Texas is expected to be Reading/English language arts, currently scheduled for adoption in

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2018 and purchase in 2019. California adopted English language arts materials in 2015 for purchase beginning in 2016 and continuing through 2018 and will adopt history social science materials in 2017 for purchase in 2018 and continuing through 2020. Both Florida and Texas, along with several other adoption states, provide dedicated state funding for instructional materials and classroom technology, with funding typically appropriated by the legislature in the first half of the year in which materials are to be purchased. Texas has a two-year budget cycle and in the 2017 legislative session is expected to appropriate funds for purchases in 2017 and 2018. California funds instructional materials in part with a dedicated portion of state lottery proceeds and in part out of general formula funds, with the minimum overall level of school funding determined according to the Proposition 98 funding guarantee. Nationally, total state funding for public schools has been trending upward as state revenues recover from the lows of the 2008-2009 economic recession. While we do not currently have contracts with these states for future instructional materials adoptions and there is no guarantee that we will continue to capture the same market share in the future, we have historically, although not always, captured a leading market share in these states in the years that they adopt educational materials for various subjects.

Long-term growth in the U.S. K-12 market is positively correlated with student enrollments, which is a driver of growth in the educational publishing industry. Although economic cycles may affect short-term buying patterns, school enrollments are highly predictable and are expected to trend upward over the longer term. According to NCES, student enrollments are expected to increase from 54.7 million in 2010, to over 57.0 million by the 2022 school year. Outside the United States, the global education market continues to demonstrate strong macroeconomic growth characteristics. Population growth is a leading indicator for pre-primary school enrollments, which have a subsequent impact on secondary and higher education enrollments. Globally, according to UNESCO, rapid population growth has caused pre-primary enrollments to grow by 50.3% worldwide over the 10-year period from 2004 to 2014. Additionally, according to the United Nations, the world population of 7.2 billion in 2013 is projected to increase by 1 billion by 2025 and reach 9.9 billion by 2050, as countries develop and improvements in medical conditions increase the birth rate.

The digitalization of education content and delivery is also driving a substantial shift in the education market. As the K-12 educational market transitions to purchasing more digital solutions, we believe our ability to offer embedded assessments, adaptive learning, real-time interaction and student specific personalized learning and educational content in a platform- and device-agnostic manner will provide new opportunities for growth.

Our Trade Publishing segment is heavily influenced by the U.S. and broader global economy, consumer confidence and consumer spending. As the economy continues to recover, both consumer confidence and consumer spending have increased.

While print remains the primary format in which trade books are produced and distributed, the market for trade titles in digital format, primarily e-books, has developed over the past several years, as the industry evolved to embrace new technologies for developing, producing, marketing and distributing trade works. We continue to focus on the development of innovative new digital products which capitalize on our strong content, our digital expertise and the consumer demand for these products.

In the Trade Publishing segment, annual results can be driven by bestselling trade titles. Furthermore, backlist titles can experience resurgence in sales when made into films. Over the past several years, a number of our backlist titles such as *The Hobbit*, *The Lord of the Rings*, *Life of Pi*, *Extremely Loud and Incredibly Close*, *The Giver* and *The Time Traveler's Wife* have benefited in popularity due to movie releases and have subsequently resulted in increased trade sales.

We employ several pricing models to serve various customer segments, including institutions, consumers, other government agencies (e.g., penal institutions, community centers, etc.) and other third parties. In addition to traditional pricing models where a customer receives a product in return for a payment at the time of product receipt, we currently use the following pricing models:

- Pay-up-front: Customer makes a fixed payment at time of purchase and we provide a specific product/service in return;

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- **Pre-pay Subscription:** Customer makes a one-time payment at time of purchase, but receives a stream of goods/services over a defined time horizon; for example, we currently provide customers the option to purchase a multi-year subscription to textbooks where for a one-time charge, a new copy of the work text is delivered to the customer each year for a defined time period. Pre-pay subscriptions to online textbooks are another example where the customer receives access to an online book for a specific period of time; and
- **Pay-as-you-go Subscription:** Similar to the pre-pay subscription, except that the customer makes periodic payments in a pre-described manner. With the exception of our professional services business, this pricing model is the least prevalent of the three models.

Cost of sales, excluding publishing rights and pre-publication amortization

Cost of sales, excluding publishing rights and pre-publication amortization, include expenses directly attributable to the production of our products and services, including the non-capitalizable costs associated with our content and platform development group. The expenses within cost of sales include variable costs such as paper, printing and binding costs of our print materials, royalty expenses paid to our authors, gratis costs or products provided at no charge as part of the sales transaction, and inventory obsolescence. Also included in cost of sales are labor costs related to professional services and the non-capitalized costs associated with our content and platform development group. We also include amortization expense associated with our customer-facing software platforms. Certain products such as trade books and those products associated with our renowned authors carry higher royalty costs; conversely, digital offerings usually have a lower cost of sales due to lower costs associated with their production. Also, sales to adoption states usually contain higher cost of sales. A change in the sales mix of our products or services can impact consolidated profitability.

Publishing rights and Pre-publication amortization

A publishing right is an acquired right which allows us to publish and republish existing and future works as well as create new works based on previously published materials. As part of our March 9, 2010 restructuring, we recorded an intangible asset for publishing rights and amortize such asset on an accelerated basis over the useful lives of the various copyrights involved. This amortization will continue to decrease approximately 25% annually through March of 2023.

We capitalize the art, prepress, manuscript and other costs incurred in the creation of the master copy of our content, known as the pre-publication costs. Pre-publication costs are primarily amortized from the year of sale over five years using the sum-of-the-years-digits method, which is an accelerated method for calculating an asset's amortization. Under this method, the amortization expense recorded for a pre-publication cost asset is approximately 33% (year 1), 27% (year 2), 20% (year 3), 13% (year 4) and 7% (year 5). We utilize this policy for all pre-publication costs, except with respect to our Trade Publishing segment's consumer books, which we generally expense such costs as incurred, our assessment products, which we use the straight-line amortization method and the acquired content of the EdTech business, which we amortize over 7 years using an accelerated amortization method. The amortization methods and periods chosen best reflect the pattern of expected sales generated from individual titles or programs. We periodically evaluate the remaining lives and recoverability of capitalized pre-publication costs, which are often dependent upon program acceptance by state adoption authorities.

Selling and administrative expenses

Our selling and administrative expenses include the salaries, benefits and related costs of employees engaged in sales and marketing, fulfillment and administrative functions. Also included within selling and administrative costs are variable costs such as commission expense, outbound transportation costs and depository fees, which are fees paid to state-mandated depositories that fulfill centralized ordering and warehousing functions for specific states. Additionally, significant fixed and discretionary costs include facilities, telecommunications, professional fees, promotions, sampling and advertising.

Other intangible asset amortization

Our other intangible asset amortization expense primarily includes the amortization of acquired intangible assets consisting of customer relationships, tradenames, content rights and licenses. The customer relationships, tradenames, content rights and licenses are amortized over varying periods of 6 to 25 years. The expense for the year ending December 31, 2016 was \$26.8 million, of which \$2.4 million related to the tradenames that were changed from indefinite-lived intangible assets to definite-lived intangible assets on October 1, 2016 due to the strategic decision to gradually migrate away from specific imprints, primarily the Holt McDougal and various supplemental brands, and to market our products under the corporate Houghton Mifflin Harcourt and HMH names.

Interest expense

Our interest expense includes interest accrued on our term loan facility along with, to a lesser extent, our revolving credit facility, capital leases, the amortization of any deferred financing fees and loan discounts, and payments in connection with interest rate hedging agreements. Our interest expense for the year ended December 31, 2016 was \$38.7 million.

Results of Operations

Consolidated Operating Results for the Years Ended December 31, 2016 and 2015

(dollars in thousands)	Year Ended December 31, 2016	Year Ended December 31, 2015	Dollar change	Percent Change
Net sales	\$ 1,372,685	\$ 1,416,059	\$ (43,374)	(3.1)%
Costs and expenses:				
Cost of sales, excluding publishing rights and pre-publication amortization	610,715	622,668	(11,953)	(1.9)%
Publishing rights amortization	61,351	81,007	(19,656)	(24.3)%
Pre-publication amortization	130,243	120,506	9,737	8.1%
Cost of sales	802,309	824,181	(21,872)	(2.7)%
Selling and administrative	699,544	681,124	18,420	2.7%
Other intangible asset amortization	26,750	22,038	4,712	21.4%
Impairment charge for intangible assets	139,205	—	139,205	NM
Severance and other charges	15,650	4,767	10,883	NM
Operating loss	(310,773)	(116,051)	(194,722)	NM
Other expense:				
Interest expense	(38,663)	(32,045)	(6,618)	(20.7)%
Change in fair value of derivative instruments	(614)	(2,362)	1,748	74.0%
Loss on debt extinguishment	—	(3,051)	3,051	NM
Loss before taxes	(350,050)	(153,509)	(196,541)	NM
Income tax expense (benefit)	(65,492)	(19,640)	(45,852)	NM
Net loss	\$ (284,558)	\$ (133,869)	\$ (150,689)	NM

NM = not meaningful

Net sales for the year ended December 31, 2016 decreased \$43.4 million, or 3.1%, from \$1,416.1 million for the same period in 2015 to \$1,372.7 million. The net sales decrease was driven by a decline in the Company's legacy basal and supplemental education business net sales of \$108.0 million due to a smaller new adoption market in 2016 versus 2015 coupled with lower market share and \$21.0 million of lower net sales from the assessment business, primarily clinical, due to natural attrition of sales over time following the initial release of a

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new product version. Partially offsetting this decrease was a \$49.0 million incremental contribution from the EdTech business which was acquired in May 2015. Further, there was an \$18.0 million increase in net sales of our Heinemann intervention and professional publishing products, an \$11.0 million increase in net sales of the international business due primarily to Department of Defense sales, and to a lesser extent, greater sales in Asia Pacific.

Operating loss for the year ended December 31, 2016 unfavorably changed \$194.7 million from a loss of \$116.1 million for the same period in 2015 to a loss of \$310.8 million, due primarily to the following:

- A \$139.2 million impairment charge for intangible assets pertaining to certain tradenames within the education business as the Company has made a strategic decision to gradually migrate away from specific imprints, primarily Holt McDougal and our various supplemental brands, in favor of branding our products under the HMH and Houghton Mifflin Harcourt names,
- A \$18.4 million increase in selling and administrative costs primarily due to higher fixed and discretionary expenses attributed to the full-year effect of the EdTech business, primarily with respect to internal and external labor and higher depreciation, coupled with higher office lease cost due to the expiration of favorable office leases. Partially offsetting the increase were \$19.0 million of lower commission expenses in 2016 versus the prior period due to the sales performance shortfall. Further offsetting the increase was \$4.7 million of lower transactional expenses relating to legal settlements and integration activity in the current year as compared to the prior year where we incurred \$30.1 million of transaction expenses relating to equity, acquisition and integration activity,
- Additionally, there was a \$10.9 million increase in severance and other charges attributed to changes in executive management as well as cost-reduction activities in the current year,
- Partially offsetting the aforementioned was a \$5.2 million net reduction in amortization expense related to publishing rights, pre-publication costs, and other intangible assets, due primarily to our use of accelerated amortization methods for publishing rights amortization, partially offset by the amortization of certain tradenames, previously unamortized, due to a change in estimate of the useful lives, and
- Our cost of sales, excluding publishing rights and pre-publication amortization, decreased \$12.0 million of which \$19.1 million of the decrease is attributed to lower volume partially offset by \$7.1 million as our cost of sales, excluding publishing rights and pre-publication amortization, as a percent of net sales increased to 44.5% from 44.0% due to product mix, as we sold more product carrying higher cost this year and had higher technology costs to support our digital products.

Interest expense for the year ended December 31, 2016 increased \$6.6 million, or 20.7%, from \$32.0 million for the same period in 2015 to \$38.7 million, primarily as a result of the increase to our outstanding term loan facility from \$243.1 million to \$800.0 million, all of which was drawn at closing of the EdTech acquisition in May of 2015. Further, interest expense increased \$1.2 million in 2016 due to our interest rate derivative contracts.

Change in fair value of derivative instruments for the year ended December 31, 2016 favorably changed by \$1.7 million from an expense of \$2.4 million in 2015 to an expense of \$0.6 million in 2016. The current year loss on change in fair value of derivative instruments was related to unfavorable foreign exchange forward and option contracts executed on the Euro that were unfavorably impacted by the stronger U.S. dollar against the Euro. Although a similar instance existed in the prior year, the change of the U.S dollar against the Euro was greater than the current year based on the timing of the execution of the derivative instruments.

Loss on extinguishment of debt for the year ended December 31, 2015 consisted of a \$2.2 million write-off of the portion of the unamortized deferred financing fees associated with the portion of our previous term loan facility accounted for as an extinguishment. Further, there was a \$0.9 million write-off of the portion of the unamortized deferred financing fees associated with the portion of our previous revolving credit facility which was also accounted for as an extinguishment.

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Income tax benefit for the year ended December 31, 2016 increased \$45.9 million from a benefit of \$19.6 million for the same period in 2015 to a benefit of \$65.5 million in 2016. The 2016 income tax benefit was primarily related to a change from indefinite-lived intangibles to definite-lived, partially offset by movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles, and state and foreign taxes. The income tax benefit of \$19.6 million for the year ended December 31, 2015 was primarily related to a \$34.9 million release of an accrual for uncertain tax positions due to the lapsing of the statute, partially offset by movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles, and state and foreign taxes. For both periods, the income tax benefit was impacted by certain discrete tax items including the accrual of potential interest and penalties on uncertain tax positions. Including the tax effects of these discrete tax items, the effective tax rate was 18.7% and 12.8% for the years ended December 31, 2016 and 2015, respectively.

Consolidated Operating Results for the Years Ended December 31, 2015 and 2014

(dollars in thousands)	Year Ended December 31, 2015	Year Ended December 31, 2014	Dollar change	Percent Change
Net sales	\$ 1,416,059	\$ 1,372,316	\$ 43,743	3.2%
Costs and expenses:				
Cost of sales, excluding publishing rights and pre-publication amortization	622,668	588,726	33,942	5.8%
Publishing rights amortization	81,007	105,624	(24,617)	(23.3)%
Pre-publication amortization	120,506	129,693	(9,187)	(7.1)%
Cost of sales	824,181	824,043	138	NM
Selling and administrative	681,124	612,535	68,589	11.2%
Other intangible asset amortization	22,038	12,170	9,868	81.1%
Impairment charge for investment in preferred stock	—	1,679	(1,679)	NM
Severance and other charges	4,767	7,300	(2,533)	(34.7)%
Operating loss	(116,051)	(85,411)	(30,640)	(35.9)%
Other expense:				
Interest expense	(32,045)	(18,245)	(13,800)	(75.6)%
Change in fair value of derivative instruments	(2,362)	(1,593)	(769)	(48.3)%
Loss on debt extinguishment	(3,051)	—	(3,051)	NM
Loss before taxes	(153,509)	(105,249)	(48,260)	(45.9)%
Income tax expense	(19,640)	6,242	(25,882)	NM
Net loss	\$ (133,869)	\$ (111,491)	\$ (22,378)	(20.1)%

NM = not meaningful

Net sales for the year ended December 31, 2015 increased \$43.7 million, or 3.2%, from \$1,372.3 million for the same period in 2014 to \$1,416.1 million. The net sales increase was driven by the \$148.0 million contribution from the acquired EdTech business. The increase was substantially offset by lower net sales of the domestic education business, which decreased by \$98.0 million, due to the comparable 2014 Texas math and science adoptions, and to a lesser extent the Florida language arts adoption, all of which contributed to \$90.0 million of higher net sales in 2014 compared to the same period in 2015, as the adoption market was substantially lower in 2015. Additionally, international net sales decreased \$9.0 million from the prior year period due to the timing of purchases. Offsetting a portion of the lower domestic education sales for the 2015 period was a strong performance in the California math and West Virginia adoptions. There were net sales of \$124.0 million during 2015 that were deferred, compared to net sales of \$230.0 million in 2014, primarily due to the previously

mentioned large Texas Math and Science adoptions and Florida language arts adoption that existed in 2014. The deferred revenue will be recognized up to seven years rather than immediately as a result of the digital and subscription components within our programs along with the length of our programs. Our billings, which we define as net sales adjusted for the impact of deferred revenue, decreased \$61.8 million, or 4%, from 2014 to 2015.

Operating loss for the year ended December 31, 2015 unfavorably changed \$30.6 million from a loss of \$85.4 million for the same period in 2014 to a loss of \$116.1 million, due primarily to the following:

- A \$68.6 million increase in selling and administrative costs primarily due to \$63.0 million of expenses attributed to the EdTech business, \$21.0 million of higher professional and legal fees associated with an equity secondary offering and acquisition and integration related matters, along with higher salary and promotion cost to support growth initiatives, all partially offset by \$28.3 million of lower commissions as the 2014 commissions were higher due to over-performance.
- As a percentage of net sales, our cost of sales, excluding publishing rights and pre-publication amortization, increased to 44.0% from 42.9%, resulting in an approximate \$15.2 million decrease in profitability. The increase in such costs was primarily attributed to product and services mix, shorter print runs with the lack of major adoptions, and technology costs to support our digital products. Additionally there was an \$18.8 million increase to our cost of sales, excluding publishing rights and pre-publication amortization, attributed to higher volume.
- Partially offsetting the aforementioned was a \$23.9 million net reduction in amortization expense related to publishing rights, pre-publication costs, and other intangible assets, due primarily to our use of accelerated amortization methods, the \$43.7 million increase in net sales, and a reduction in severance and other charges of \$2.5 million, along with a decrease of \$1.7 million in an impairment charge.

Interest expense for the year ended December 31, 2015 increased \$13.8 million, or 75.6%, to \$32.0 million from \$18.2 million for the same period in 2014, primarily as a result of the increase to our outstanding term loan facility from \$243.1 million to \$800.0 million, all of which was drawn at closing of the EdTech acquisition in May of 2015. Further, interest expense increased as a result of expensing deferred financing costs of \$2.0 million in 2015 due to the accelerated principal payment of \$63.6 million required as of December 31, 2014 by the excess cash flow provision of our previous term loan facility.

Change in fair value of derivative instruments for the year ended December 31, 2015 unfavorably changed by \$0.8 million from an expense of \$1.6 million in 2014, to an expense of \$2.4 million in 2015. The loss on change in fair value of derivative instruments was related to unfavorable foreign exchange forward and option contracts executed on the Euro that were adversely impacted by the stronger U.S. dollar against the Euro during the period compared to the same period last year.

Loss on extinguishment of debt for the year ended December 31, 2015 consisted of a \$2.2 million write-off of the portion of the unamortized deferred financing fees associated with the portion of our previous term loan facility accounted for as an extinguishment. Further, there was a \$0.9 million write-off of the portion of the unamortized deferred financing fees associated with the portion of our previous revolving credit facility which was also accounted for as an extinguishment.

Income tax expense for the year ended December 31, 2015 decreased \$25.9 million from an expense of \$6.2 million for the same period in 2014 to a benefit of \$19.6 million in 2015. The 2015 income tax benefit was primarily related to a \$34.9 million release of an accrual for uncertain tax positions due to the lapsing of the statute, partially offset by movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles, and state and foreign taxes. The income tax expense of \$6.2 million for the year ended December 31, 2014 was primarily related to movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles. For both periods, the income tax expense was impacted by certain

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discrete tax items including the accrual of potential interest and penalties on uncertain tax positions. Including the tax effects of these discrete tax items, the effective tax rate was 12.8% and (5.9)% for the years ended December 31, 2015 and 2014, respectively.

Adjusted EBITDA

To supplement our financial statements presented in accordance with GAAP, we have presented Adjusted EBITDA, which is not prepared in accordance with GAAP. This information should be considered as supplemental in nature and should not be considered in isolation or as a substitute for the related financial information prepared in accordance with GAAP. Management believes that the presentation of Adjusted EBITDA provides useful information to investors regarding our results of operations because it assists both investors and management in analyzing and benchmarking the performance and value of our business. Adjusted EBITDA provides an indicator of general economic performance that is not affected by debt restructurings, fluctuations in interest rates or effective tax rates, non-cash charges, or levels of depreciation or amortization along with costs such as severance, separation and facility closure costs, acquisition-related activity costs, and restructuring/integration costs. Accordingly, our management believes that this measurement is useful for comparing general operating performance from period to period. In addition, targets in Adjusted EBITDA (further adjusted to include changes in deferred revenue and exclude pre-publication costs spend) are used as performance measures to determine certain compensation of management, and Adjusted EBITDA is used as the base for calculations relating to incurrence covenants in our debt agreements. Other companies may define Adjusted EBITDA differently and, as a result, our measure of Adjusted EBITDA may not be directly comparable to Adjusted EBITDA of other companies. Although we use Adjusted EBITDA as a financial measure to assess the performance of our business, the use of Adjusted EBITDA is limited because it does not include certain material costs, such as interest and taxes, necessary to operate our business. Adjusted EBITDA should be considered in addition to, and not as a substitute for, net loss/income in accordance with GAAP as a measure of performance. Adjusted EBITDA is not intended to be a measure of liquidity or free cash flow for discretionary use. You are cautioned not to place undue reliance on Adjusted EBITDA.

Below is a reconciliation of our net loss to Adjusted EBITDA for the years ended December 31, 2016, 2015 and 2014:

	Years Ended December 31,		
	2016	2015	2014
Net loss	\$ (284,558)	\$ (133,869)	\$ (111,491)
Interest expense	38,663	32,045	18,245
Provision (benefit) for income taxes	(65,492)	(19,640)	6,242
Depreciation expense	79,825	72,639	72,290
Amortization expense	218,344	223,551	247,487
Non-cash charges—stock-compensation	10,567	12,452	11,376
Non-cash charges—loss on derivative instruments	614	2,362	1,593
Non-cash charges—asset impairment charges	139,205	—	1,679
Purchase accounting adjustments	5,116	7,487	3,661
Fees, expenses or charges for equity offerings, debt or acquisitions	1,123	25,562	4,424
Restructuring/Integration	14,364	4,572	2,577
Severance, separation costs and facility closures	15,650	4,767	7,300
Loss on extinguishment of debt	—	3,051	—
Legal settlement	10,000	—	—
Adjusted EBITDA	<u>\$ 183,421</u>	<u>\$ 234,979</u>	<u>\$ 265,383</u>

Segment Operating Results
Results of Operations—Comparing Years Ended December 31, 2016, 2015 and 2014
Education

	Years Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	Dollar change	Percent change	Dollar change	Percent change
Net sales	\$1,207,070	\$1,251,122	\$1,209,142	\$ (44,052)	(3.5)%	\$ 41,980	3.5%
Costs and expenses:							
Cost of sales, excluding publishing rights and pre-publication amortization	498,991	511,706	482,765	(12,715)	(2.5)%	28,941	6.0%
Publishing rights amortization	52,660	71,109	94,225	(18,449)	(25.9)%	(23,116)	(24.5)%
Pre-publication amortization	129,836	119,894	128,793	9,942	8.3%	(8,899)	(6.9)%
Cost of sales	681,487	702,709	705,783	(21,222)	(3.0)%	(3,074)	(0.4)%
Selling and administrative	545,433	534,477	495,421	10,956	2.0%	39,056	7.9%
Other intangible asset amortization	23,250	18,840	9,865	4,410	23.4%	8,975	91.0%
Impairment charge for intangible assets and investment in preferred stock	139,205	—	1,279	139,205	NM	(1,279)	NM
Operating loss	\$ (182,305)	\$ (4,904)	\$ (3,206)	\$ (177,401)	NM	\$ (1,698)	(53.0)%
Net loss	\$ (182,305)	\$ (4,904)	\$ (3,206)	\$ (177,401)	NM	\$ (1,698)	(53.0)%
Adjustments from net loss to Education segment Adjusted EBITDA							
Depreciation expense	\$ 57,910	\$ 56,960	\$ 63,865	\$ 950	1.7%	\$ (6,905)	(10.8)%
Amortization expense	205,746	209,843	232,884	(4,097)	(2.0)%	(23,041)	(9.9)%
Non-cash charges—asset impairment charges	139,205	—	1,279	139,205	NM	(1,279)	NM
Purchase accounting adjustments	5,116	7,487	3,661	(2,371)	(31.7)%	3,826	NM
Education segment Adjusted EBITDA	\$ 225,672	\$ 269,386	\$ 298,483	\$ (43,714)	(16.2)%	\$ (29,097)	(9.7)%
Education segment Adjusted EBITDA as a % of net sales	18.7%	21.5%	24.7%				

NM = not meaningful

Our Education segment net sales for the year ended December 31, 2016 decreased \$44.1 million, or 3.5%, from \$1,251.1 million for the same period in 2015 to \$1,207.1 million. The net sales decrease was driven by a decline in the Company's legacy basal and supplemental education business net sales of \$108.0 million due to a smaller new adoption market in 2016 versus 2015 coupled with lower market share, and \$21.0 million of lower net sales from the assessment business, primarily clinical, due to natural attrition of sales over time following the initial release of a new product version. Partially offsetting this decrease was a \$49.0 million incremental contribution from the EdTech business, which was acquired in May 2015. Further, there was an \$18.0 million increase in net sales of our Heinemann intervention and professional publishing products, an \$11.0 million increase in net sales of the international business due primarily to Department of Defense sales, and to a lesser extent, greater sales in Asia Pacific.

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Our Education segment net sales for the year ended December 31, 2015 increased \$42.0 million, or 3.5%, from \$1,209.1 million for the same period in 2014, to \$1,251.1 million. The net sales increase was driven by the \$148.0 million contribution from the acquired EdTech business. The increase was substantially offset by lower net sales of the domestic education business, which decreased by \$98.0 million, due to the comparable 2014 Texas math and science adoptions, and to a lesser extent the Florida language arts adoption, all of which contributed to \$90.0 million of higher net sales in 2014 as compared to the same period in 2015, as the adoption market was substantially lower in 2015. Additionally, international net sales decreased \$9.0 million from the prior year due to the timing of purchases. Offsetting a portion of the lower domestic education sales in 2015 was a strong performance in the California math and West Virginia adoptions. There were net sales of \$124.0 million during 2015 that were deferred, compared to net sales of \$230.0 million in 2014, primarily due to the previously mentioned large Texas math and science adoptions and Florida language arts adoption that existed in 2014. The deferred revenue will be recognized up to seven years rather than immediately as a result of the digital and subscription components within our programs along with the length of our programs.

Our Education segment cost of sales for the year ended December 31, 2016, decreased \$21.2 million, or 3.0%, from \$702.7 million for the same period in 2015, to \$681.5 million. The decrease was attributed to a reduction in our cost of sales, excluding publishing rights and pre-publication amortization of \$12.7 million, of which \$18.0 million is attributed to lower volume. Our cost of sales, excluding publishing rights and pre-publication amortization, as a percent of net sales increased to 41.3% from 40.9%, resulting in an approximate \$5.3 million decrease in profitability primarily attributed to our product mix as we sold more product carrying higher cost this year. Further, there was an \$8.5 million reduction in net amortization expense related to publishing rights and pre-publication costs, primarily due to our use of accelerated amortization methods for publishing rights.

Our Education segment cost of sales for the year ended December 31, 2015 decreased \$3.1 million, or 0.4%, from \$705.8 million for the same period in 2014 to \$702.7 million. The decrease was attributed to a \$32.0 million reduction in net amortization expense related to publishing rights and pre-publication costs primarily due to our use of accelerated amortization methods. Partially offsetting the aforementioned reductions was an increase in our cost of sales, excluding publishing rights and pre-publication amortization of \$28.9 million, of which \$16.7 million is attributed to additional volume. Our cost of sales excluding publishing rights and pre-publication amortization, as a percent of net sales increased to 40.9% from 39.9%, resulting in an approximate \$12.2 million decrease in profitability primarily attributed to product and services mix, shorter print runs with the lack of major adoptions, and technology costs to support our digital products.

Our Education segment selling and administrative expense for the year ended December 31, 2016 increased \$11.0 million, or 2.0%, from \$534.5 million for the same period in 2015 to \$545.4 million. The increase was primarily due to higher fixed and discretionary expenses attributed to the full year effect of the EdTech business, primarily with respect to internal and external labor, coupled with higher office lease cost due to the expiration of favorable office leases. Partially offsetting the increase are \$19.0 million of lower commission expenses in 2016 versus the prior period due to the sales performance shortfall.

Our Education segment selling and administrative expense for the year ended December 31, 2015 increased \$39.1 million, or 7.9%, from \$495.4 million for the same period in 2014 to \$534.5 million. The increase was primarily due to \$63.0 million of expenses attributed to the EdTech business and \$11.9 million of higher operating expenses, largely salary and marketing, associated with growth initiatives, partially offset by \$28.3 million of lower commissions and \$7.7 million of variable expenses such as transportation, depository fees and samples as a result of the lower billings in 2015.

Our Education segment impairment charge for intangible assets and investment in preferred stock increased \$139.2 million in 2016 from no expense for the same period in 2015. The increase is due to an impairment charge for intangible assets, as the Company made the strategic decision to gradually migrate away from specific imprints, primarily the Holt McDougal and our various supplemental brands, in favor of branding our products under the HMH and Houghton Mifflin Harcourt names.

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Our Education segment impairment charge for intangible assets and investment in preferred stock decreased \$1.3 million in 2015 from \$1.3 million in 2014 to no expense in 2015. The impairment in 2015 related to an investment in preferred stock that lost value.

Our Education segment Adjusted EBITDA for the year ended December 31, 2016, decreased \$43.7 million, or 16.2%, from \$269.4 million for the same period in 2015 to \$225.7 million. Our Education segment Adjusted EBITDA excludes depreciation, amortization, impairment charges and purchase accounting adjustments. The purchase accounting adjustments primarily relate to the acquisition of the EdTech business. Education segment Adjusted EBITDA as a percentage of net sales decreased from 21.5% of net sales for the year ended December 31, 2015 to 18.7% for the same period in 2016 due to the identified factors impacting net sales, cost of sales and selling and administrative expense after removing those items not included in Education segment Adjusted EBITDA.

Our Education segment Adjusted EBITDA for the year ended December 31, 2015, decreased \$29.1 million, or 9.7%, from \$298.5 million for the same period in 2014 to \$269.4 million. Our Education segment Adjusted EBITDA excludes depreciation, amortization and purchase accounting adjustments. The purchase accounting adjustments primarily relate to the acquisition of the EdTech business along with a recapitalization of the Company in 2010. Education segment Adjusted EBITDA as a percentage of net sales decreased from 24.7% of net sales for the year ended December 31, 2014 to 21.5% for the same period in 2015 due to the identified factors impacting net sales, cost of sales and selling and administrative expense after removing those items not included in Education segment Adjusted EBITDA.

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Trade Publishing

	Years Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	Dollar change	Percent change	Dollar change	Percent change
Net sales	\$ 165,615	\$ 164,937	\$ 163,174	\$ 678	0.4%	\$ 1,763	1.1%
Costs and expenses:							
Cost of sales, excluding publishing rights and pre-publication amortization	111,724	110,962	105,961	762	0.7%	5,001	4.7%
Publishing rights amortization	8,691	9,898	11,399	(1,207)	(12.2)%	(1,501)	(13.2)%
Pre-publication amortization	407	612	900	(205)	(33.5)%	(288)	(32.0)%
Cost of sales	120,822	121,472	118,260	(650)	(0.5)%	3,212	2.7%
Selling and administrative	48,227	47,363	45,128	864	1.8%	2,235	5.0%
Other intangible asset amortization	3,500	3,198	2,305	302	9.4%	893	38.7%
Impairment charge for intangible assets	—	—	400	—	NM	(400)	NM
Operating loss	\$ (6,934)	\$ (7,096)	\$ (2,919)	\$ 162	2.3%	\$(4,177)	NM
Net loss	\$ (6,934)	\$ (7,096)	\$ (2,919)	\$ 162	2.3%	\$(4,177)	NM
Adjustments from net loss to Trade Publishing segment Adjusted EBITDA							
Depreciation expense	\$ 591	\$ 1,091	\$ 591	\$ (500)	(45.7)%	\$ 500	84.6%
Amortization expense	12,598	13,708	14,603	(1,110)	(8.1)%	(895)	(6.1)%
Non-cash charges—asset impairment charges	—	—	400	—	NM	(400)	NM
Trade Publishing segment Adjusted EBITDA	\$ 6,255	\$ 7,703	\$ 12,675	\$(1,448)	(18.8)%	\$(4,972)	(39.2)%
Trade Publishing segment Adjusted EBITDA as a % of net sales	3.8%	4.7%	7.8%				

NM = not meaningful

Our Trade Publishing segment net sales for the year ended December 31, 2016 increased \$0.7 million, or 0.4%, from \$164.9 million for the same period in 2015 to \$165.6 million. The increase in net sales was driven by increased net sales of frontlist titles *The Whole30*, *Tools for Titans*, *Property Brothers Dream Home*, and *Food Freedom Forever*. Partially offsetting the aforementioned was a decline in ebook net sales due to lower subscriptions.

Our Trade Publishing segment net sales for the year ended December 31, 2015 increased \$1.8 million, or 1.1%, from \$163.2 million for the same period in 2014 to \$164.9 million. The increase in net sales was driven by increased net sales of frontlist culinary titles such as *The Whole 30*, *Jacques Pépin Heart & Soul in the Kitchen* and general interest titles lead by *Thing Explainer* partially offset by 2014 strong net sales of titles such as *The Giver* and the bestselling *What If*.

Our Trade Publishing segment cost of sales for the year ended December 31, 2016 decreased \$0.7 million, or 0.5%, from \$121.5 million for the same period in 2015 to \$120.8 million. The decrease in cost of sales was driven by lower amortization expense of \$1.1 million primarily related to publishing rights, which was lower due

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to our use of accelerated amortization methods. Partially offsetting the decrease was a \$0.8 million increase in cost of sales, excluding publishing rights and pre-publication amortization, of which \$0.5 million is due to increased sales and \$0.3 million is due to our cost of sales, excluding publishing rights and pre-publication amortization, as a percent of sales increasing to 67.5% from 67.3% primarily due to increased royalty costs due to product mix.

Our Trade Publishing segment cost of sales for the year ended December 31, 2015 increased \$3.2 million, or 2.7%, from \$118.3 million for the same period in 2014 to \$121.5 million. Our cost of sales excluding publishing rights and pre-publication amortization as a percent of sales increased to 67.3% from 64.9% adversely impacting cost of sales by \$3.9 million primarily due to increased royalty costs due to product mix. Additionally, \$1.1 million of the increase in cost of sales excluding publishing rights and pre-publication amortization, was due to increased sales. Partially offsetting the increase in cost of sales was lower amortization expense of \$1.5 million related to publishing rights, which was lower due to our use of accelerated amortization methods.

Our Trade Publishing segment selling and administrative expense for the year ended December 31, 2016 increased \$0.9 million, or 1.8%, from \$47.4 million for the same period in 2015 to \$48.2 million. The increase was primarily related to higher rent expense associated with new office space along with higher bad debt expense, partially offset by lower advertising, promotion expense and development costs.

Our Trade Publishing segment selling and administrative expense for the year ended December 31, 2015 increased \$2.2 million, or 5.0%, from \$45.1 million for the same period in 2014 to \$47.4 million. The increase was primarily related to higher salary costs and promotion expense.

Our Trade Publishing segment Adjusted EBITDA for the year ended December 31, 2016 decreased \$1.4 million, from \$7.7 million for the same period in 2015 to \$6.3 million in 2016. Our Trade Publishing segment Adjusted EBITDA excludes depreciation and amortization costs. Our Trade Publishing segment Adjusted EBITDA as a percentage of net sales was 3.8% for the year ended December 31, 2016, which decreased from 4.7% for the same period in 2015 due to the identified factors impacting net sales, cost of sales and selling and administrative expenses after removing those items not included in segment Adjusted EBITDA.

Our Trade Publishing segment Adjusted EBITDA for the year ended December 31, 2015 decreased \$5.0 million, from \$12.7 million for the same period in 2014 to \$7.7 million in 2015. Our Trade Publishing segment Adjusted EBITDA excludes depreciation, amortization costs and impairment charges. Our Trade Publishing segment Adjusted EBITDA as a percentage of net sales was 4.7% for the year ended December 31, 2015, which decreased from 7.8% for the same period in 2014 due to the identified factors impacting net sales, cost of sales and selling and administrative expenses after removing those items not included in segment Adjusted EBITDA.

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Corporate and Other

	Years Ended December 31,			2016 vs. 2015		2015 vs. 2014	
	2016	2015	2014	Dollar change	Percent change	Dollar change	Percent change
	\$	\$	\$	\$	NM	\$	NM
Net sales	\$ —	\$ —	\$ —	\$ —	NM	\$ —	NM
Costs and expenses:							
Cost of sales, excluding publishing rights and pre-publication amortization	—	—	—	—	NM	—	NM
Publishing rights amortization	—	—	—	—	NM	—	NM
Pre-publication amortization	—	—	—	—	NM	—	NM
Cost of sales	—	—	—	—	NM	—	NM
Selling and administrative	105,884	99,284	71,986	6,600	6.6%	27,298	37.9%
Severance and other charges	15,650	4,767	7,300	10,883	NM	(2,533)	(34.7)%
Operating loss	<u>\$(121,534)</u>	<u>\$(104,051)</u>	<u>\$(79,286)</u>	<u>\$(17,483)</u>	<u>(16.8)%</u>	<u>\$(24,765)</u>	<u>(31.2)%</u>
Interest expense	(38,663)	(32,045)	(18,245)	(6,618)	(20.7)%	(13,800)	(75.6)%
Change in fair value of derivative instruments	(614)	(2,362)	(1,593)	1,748	74.0%	(769)	(48.3)%
Loss on extinguishment of debt	—	(3,051)	—	3,051	NM	(3,051)	NM
Loss before taxes	(160,811)	(141,509)	(99,124)	(19,302)	(13.6)%	(42,385)	(42.8)%
Income tax (benefit) expense	(65,492)	(19,640)	6,242	(45,852)	NM	(25,882)	NM
Net loss	<u>\$ (95,319)</u>	<u>\$(121,869)</u>	<u>\$(105,366)</u>	<u>\$ 26,550</u>	<u>21.8%</u>	<u>\$(16,503)</u>	<u>(15.7)%</u>
Adjustments from net loss to Corporate and Other Adjusted EBITDA							
Interest expense	\$ 38,663	\$ 32,045	\$ 18,245	\$ 6,618	20.7%	\$ 13,800	75.6%
Provision for income taxes	(65,492)	(19,640)	6,242	(45,852)	NM	(25,882)	NM
Depreciation expense	21,324	14,588	7,834	6,736	46.2%	6,754	86.2%
Non-cash charges—loss on derivative instruments	614	2,362	1,593	(1,748)	(74.0)%	769	48.3%
Non-cash charges—stock-compensation	10,567	12,452	11,376	(1,885)	(15.1)%	1,076	9.5%
Fees, expenses or charges for equity offerings, debt or acquisitions	1,123	25,562	4,424	(24,439)	(95.6)%	21,138	NM
Restructuring/integration	14,364	4,572	2,577	9,792	NM	1,995	77.4%
Severance separation costs and facility closures	15,650	4,767	7,300	10,883	NM	(2,533)	(34.7)%
Loss on extinguishment of debt	—	3,051	—	(3,051)	NM	3,051	NM
Legal settlement	10,000	—	—	10,000	NM	—	NM
Corporate and Other Adjusted EBITDA	<u>\$ (48,506)</u>	<u>\$ (42,110)</u>	<u>\$ (45,775)</u>	<u>\$ (6,396)</u>	<u>(15.2)%</u>	<u>\$ 3,665</u>	<u>8.0%</u>

NM= not meaningful

The Corporate and Other category represents certain general overhead costs not fully allocated to the business segments such as, but not limited to, legal, accounting, treasury, human resources, technology and executive functions.

Our cost of sales for the Corporate and Other category for the year ended December 31, 2016 was the same as the period in 2015, as no costs of sales from a segment perspective were considered Other.

Our cost of sales for the Corporate and Other category for the year ended December 31, 2015 was the same as the period in 2014, as no costs of sales from a segment perspective were considered Other.

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Our selling and administrative expense for the Corporate and Other category for the year ended December 31, 2016 increased \$6.6 million, or 6.6%, from \$99.3 million for the same period in 2015 to \$105.9 million. The increase was primarily due to an increase of \$6.7 million of higher depreciation as a result of our increased investment in our infrastructure in addition to higher labor costs and higher office lease cost due to the expiration of favorable office leases. Partially offsetting, legal settlements and integration expenses amounting to \$24.4 million in 2016 and were lower by \$5.7 million from the \$30.1 million of transaction expenses in the prior year related to equity, acquisition and integration activities.

Our selling and administrative expense for the Corporate and Other category for the year ended December 31, 2015 increased \$27.3 million, or 37.9%, from \$72.0 million for the same period in 2014 to \$99.3 million. Approximately \$21.9 million of this increase was attributed to the combination of higher professional and legal costs associated with a secondary equity offering along with acquisition related and integration related activity. Further, depreciation expense increased \$6.8 million from the prior year due to increased technology investment in a variety of initiatives and platforms.

Our interest expense for the Corporate and Other category for the year ended December 31, 2016 increased \$6.6 million, or 20.7%, to \$38.7 million from \$32.0 million for the same period in 2015, primarily as a result of the increase to our outstanding term loan credit facility from \$243.1 million to \$800.0 million, all of which was drawn at closing of the EdTech acquisition in May 2015. Further, interest expense increased \$1.2 million in 2016 due to our interest rate derivative contracts.

Our interest expense for the Corporate and Other category for the year ended December 31, 2015 increased \$13.8 million, or 75.6%, to \$32.0 million from \$18.2 million for the same period in 2014, primarily as a result of the increase to our outstanding term loan credit facility from \$243.1 million to \$800.0 million, all of which was drawn at closing of the EdTech acquisition in May 2015. Further, interest expense also increased as a result of expensing of \$2.0 million deferred financing costs due to the accelerated principal payment of \$63.6 million required by the excess cash flow provision of our term loan facility.

Change in fair value of derivative instruments for the year ended December 31, 2016 favorably changed by \$1.7 million from an expense of \$2.4 million in 2015 to an expense of \$0.6 million in 2016. The loss on change in fair value of derivative instruments was related to unfavorable foreign exchange forward and option contracts executed on the Euro that were favorably impacted by the stronger U.S. dollar against the Euro. Although a similar instance existed in the prior year, the change of the U.S. dollar against the Euro was greater than the current year based on the timing of the execution of the derivative instruments.

Our change in fair value of derivative instruments for the Corporate and Other category for the year ended December 31, 2015 unfavorably changed by \$0.8 million from an expense of \$1.6 million in 2014 to an expense of \$2.4 million in 2015. The loss on change in fair value of derivative instruments was related to unfavorable foreign exchange forward and option contracts executed on the Euro that were adversely impacted by the stronger U.S. dollar against the Euro during the period compared to the same period last year.

Our loss on extinguishment of debt for the Corporate and Other category for the year ended December 31, 2015 consisted of a \$2.2 million write off of the portion of the unamortized deferred financing fees associated with the portion of our previous term loan credit facility accounted for as an extinguishment. Further, there was a \$0.9 million write off of the portion of the unamortized deferred financing fees associated with the portion of our previous revolving credit facility which was also accounted for as an extinguishment.

Income tax benefit for the year ended December 31, 2016 increased \$45.9 million from a benefit of \$19.6 million for the same period in 2015 to a benefit of \$65.5 million in 2016. The 2016 income tax benefit was primarily related to a change from indefinite-lived intangibles to definite-lived, partially offset by movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles, and state and foreign taxes. The income tax benefit of \$19.6 million for the year ended December 31, 2015 was primarily related to a

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\$34.9 million release of an accrual for uncertain tax positions due to the lapsing of the statute, partially offset by movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles, and state and foreign taxes. For both periods, the income tax benefit was impacted by certain discrete tax items including the accrual of potential interest and penalties on uncertain tax positions. Including the tax effects of these discrete tax items, the effective tax rate was 18.7% and 12.8% for the years ended December 31, 2016 and 2015, respectively.

Income tax expense for the year ended December 31, 2015 decreased \$25.9 million from an expense of \$6.2 million for the same period in 2014 to a benefit of \$19.6 million in 2015. The 2015 income tax benefit was primarily related to a \$34.9 million release of an accrual for uncertain tax positions due to the lapsing of the statute, partially offset by movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles, and state and foreign taxes. The income tax expense of \$6.2 million for the year ended December 31, 2014 was primarily related to movement in the deferred tax liability associated with tax amortization on indefinite-lived intangibles. For both periods, the income tax expense was impacted by certain discrete tax items including the accrual of potential interest and penalties on uncertain tax positions. Including the tax effects of these discrete tax items, the effective tax rate was 12.8% and (5.9)% for the years ended December 31, 2015 and 2014, respectively.

Adjusted EBITDA for the Corporate and Other category for the year ended December 31, 2016 changed unfavorably by \$6.4 million, or 15.2%, from a loss of \$42.1 million for the same period in 2015 to a loss of \$48.5 million. Our Adjusted EBITDA for the Corporate and Other category excludes interest, taxes, depreciation, derivative instruments charges, equity compensation charges, acquisition-related activity, restructuring/integration costs, severance and facility vacant space costs, debt extinguishment losses and legal settlement charges. The unfavorable change in our Adjusted EBITDA for the Corporate and Other category was due to the factors described above after removing those items not included in Adjusted EBITDA for the Corporate and Other category.

Adjusted EBITDA for the Corporate and Other category for the year ended December 31, 2015, improved \$3.7 million, or 8.0%, from a loss of \$45.8 million for the same period in 2014 to a loss of \$42.1 million. Our Adjusted EBITDA for the Corporate and Other category excludes interest, taxes, depreciation, derivative instruments charges, equity compensation charges, acquisition-related activity, restructuring/integration costs, severance and facility vacant space costs, debt extinguishment losses and legal settlement charges. The unfavorable change in our Adjusted EBITDA for the Corporate and Other category was due to the factors described above after removing those items not included in Adjusted EBITDA for the Corporate and Other category.

Seasonality and Comparability

Our net sales, operating profit or loss and net cash provided by or used in operations are impacted by the inherent seasonality of the academic calendar. Consequently, the performance of our businesses may not be comparable quarter to consecutive quarter and should be considered on the basis of results for the whole year or by comparing results in a quarter with results in the same quarter for the previous year.

Approximately 88% of our net sales for the year ended December 31, 2016 were derived from our Education segment, which is a markedly seasonal business. Schools conduct the majority of their purchases in the second and third quarters of the calendar year in preparation for the beginning of the school year. Thus, over the past three completed fiscal years, approximately 68% of our consolidated net sales were realized in the second and third quarters. Sales of K-12 instructional materials and customized testing products are also cyclical, with some years offering more sales opportunities than others. The amount of funding available at the state level for educational materials also has a significant effect on year-to-year net sales. Although the loss of a single customer would not have a material adverse effect on our business, schedules of school adoptions and market acceptance of our products can materially affect year-to-year net sales performance.

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The following table is indicative of the seasonality of our business and the related results:

Quarterly Results of Operations

(in thousands)	First Quarter 2015	Second Quarter 2015	Third Quarter 2015	Fourth Quarter 2015	First Quarter 2016	Second Quarter 2016	Third Quarter 2016	Fourth Quarter 2016
Education segment	\$ 128,870	\$ 342,441	\$ 532,245	\$ 247,566	\$ 174,305	\$ 353,384	\$ 487,209	\$ 192,172
Trade Publishing segment	33,799	37,442	43,262	50,434	31,511	38,658	45,812	49,634
Net sales	162,669	379,883	575,507	298,000	205,816	392,042	533,021	241,806
Costs and expenses:								
Cost of sales, excluding publishing rights and pre-publication amortization	96,569	168,076	220,492	137,531	105,518	173,466	206,177	125,554
Publishing rights amortization	23,143	19,148	19,358	19,358	17,793	14,413	14,573	14,572
Pre-publication amortization	26,463	27,909	32,437	33,697	28,281	31,315	33,903	36,744
Cost of sales	146,175	215,133	272,287	190,586	151,592	219,194	254,653	176,870
Selling and administrative	143,009	170,687	191,843	175,585	168,675	184,479	185,252	161,138
Other intangible asset amortization	3,218	4,261	7,255	7,304	6,176	5,968	5,980	8,626
Impairment charge for intangible assets	—	—	—	—	—	—	—	139,205
Severance and other charges	1,057	985	1,563	1,162	1,577	3,553	3,765	6,755
Operating income (loss)	<u>(130,790)</u>	<u>(11,183)</u>	<u>102,559</u>	<u>(76,637)</u>	<u>(122,204)</u>	<u>(21,152)</u>	<u>83,371</u>	<u>(250,788)</u>
Other income (expense)								
Interest expense	(5,954)	(6,160)	(10,196)	(9,735)	(9,333)	(9,402)	(9,493)	(10,435)
Change in fair value of derivative instruments	(2,220)	369	(42)	(469)	784	(619)	257	(1,036)
Loss on extinguishment of debt	—	(2,173)	(878)	—	—	—	—	—
Income (loss) before taxes	(138,964)	(19,147)	91,443	(86,841)	(130,753)	(31,173)	74,135	(262,259)
Income tax expense (benefit)	20,976	(11,404)	(39,638)	10,426	34,395	(2,782)	(15,887)	(81,218)
Net income (loss)	<u><u>\$(159,940)</u></u>	<u><u>\$ (7,743)</u></u>	<u><u>\$131,081</u></u>	<u><u>\$ (97,267)</u></u>	<u><u>\$(165,148)</u></u>	<u><u>\$ (28,391)</u></u>	<u><u>\$ 90,022</u></u>	<u><u>\$ (181,041)</u></u>

Liquidity and Capital Resources

(in thousands)	December 31,		
	2016	2015	2014
Cash and cash equivalents	\$ 226,102	\$ 234,257	\$ 456,581
Short-term investments	80,841	198,146	286,764
Current portion of long-term debt	8,000	8,000	67,500
Long-term debt, net of discount	764,738	769,283	175,625
	Years ended December 31,		
	2016	2015	2014
Net cash provided by operating activities	\$ 143,751	\$ 348,359	\$ 491,043
Net cash used in investing activities	(113,946)	(676,787)	(367,619)
Net cash (used in) provided by financing activities	(37,960)	106,104	19,529

Operating activities

Net cash provided by operating activities was \$143.8 million for the year ended December 31, 2016, a \$204.6 million decrease from the \$348.4 million provided by operating activities for the year ended December 31, 2015. The decrease in cash provided by operating activities from 2015 to 2016 was primarily driven by less profitable operations, net of non-cash items, of \$136.2 million, attributed largely to lower sales and higher selling and administrative expenses, along with unfavorable net changes in operating assets and liabilities of \$68.4 million. The unfavorable net changes in operating assets and liabilities were primarily due to lower deferred revenue of \$86.8 million attributed to greater recognition of revenue attributed to product mix when compared to the prior year period along with lower billings in 2016, unfavorable changes in accounts payable of \$36.8 million and in royalties of \$19.0 million due to timing of payments, and unfavorable changes in inventory of \$17.2 million as the reduction in inventory was due to better inventory management and was not as large as the prior year. These unfavorable changes were partially offset by favorable changes primarily due to a reversal of a \$74.3 million accrual related to uncertain tax positions as the statutory period expired in the prior period, favorable changes in accounts receivable of \$9.3 million due to lower fourth quarter sales and net favorable changes in other assets and liabilities of \$7.8 million due to timing of disbursements.

Net cash provided by operating activities was \$348.4 million for the year ended December 31, 2015, a \$142.7 million decrease from the \$491.0 million provided by operating activities for the year ended December 31, 2014. The decrease in cash provided by operating activities from 2014 to 2015 was primarily driven by unfavorable net changes in operating assets and liabilities of \$150.1 million modestly offset by more profitable operations, net of depreciation and amortization, of \$7.4 million. These unfavorable net changes in operating assets and liabilities were primarily due to unfavorable changes in deferred revenue of \$104.6 million attributed to lower billings compared to the prior year due to a smaller adoption market, unfavorable changes in accounts receivable of \$34.7 million due to timing of receipts with the fourth quarter of 2015 being larger than the fourth quarter of 2014, unfavorable changes in royalties of \$7.0 million due to volume and timing of payments and unfavorable changes in other operating assets and liabilities of \$61.8 million primarily related to a reversal of a \$74.3 million accrual related to uncertain tax positions as the statutory period expired, partially offset by favorable changes in accounts payable of \$16.6 million, favorable changes in inventories of \$28.0 million, and favorable changes in pension and postretirement benefits of \$11.9 million as there were no company contributions to the pension plan in the current period, and favorable changes in severance and other charges of \$1.6 million.

Investing activities

Net cash used in investing activities was \$113.9 million for the year ended December 31, 2016, a decrease of \$562.8 million from the \$676.8 million used in investing activities for the year ended December 31, 2015. The decrease in investing activities was primarily due to the acquisition of the EdTech business in May 2015, and by higher net proceeds from sales and maturities of short-term investments of \$28.5 million compared to 2015. Offsetting the decrease, capital investing expenditures related to pre-publication costs and property, plant and equipment increased by \$42.9 million, due to capital spend pertaining to the EdTech business, and increased spend on leasehold improvements related to various office moves, technology infrastructure and timing of spend.

Net cash used in investing activities was \$676.8 million for the year ended December 31, 2015, an increase of \$309.2 million from the \$367.6 million used in investing activities for the year ended December 31, 2014. The increase in cash investing expenditures is primarily attributed to an increase in the acquisition of business expenditures of \$569.1 million related primarily to our acquisition of the EdTech business in the current period compared to three smaller acquisitions that occurred during 2014. The increase in expenditures was partially offset by an increase in net proceeds from sales and maturities of short-term investments of \$263.9 million attributed to management's decision to have increased liquidity to fund strategic initiatives. Further, capital investing expenditures related to pre-publication costs and property, plant and equipment increased by \$4.0 million. The increase in capital investing expenditures was primarily the result of capital spend pertaining to the EdTech business.

Financing activities

Net cash used in financing activities was \$38.0 million for the year ended December 31, 2016, an increase of \$144.1 million from the \$106.1 million of net cash provided by financing activities for the year ended December 31, 2015. The increase in cash used in financing activities was primarily due to the prior period benefiting from net proceeds of \$796.0 million from our term loan facility partially offset by an increase in principal payments on our previously existing term loan of \$243.1 million in connection with the acquisition of the EdTech business in May 2015. Further, we incurred \$15.3 million in the prior period for deferred financing fees related to the closing of the term loan facility and the amendment to the revolving credit facility. In 2016, we made \$8.0 million of principal payments under our term loan facility compared with \$4.0 million in 2015. Offsetting the aforementioned, our share repurchases under our share repurchase program for our common stock were \$408.0 million less during 2016 compared to the prior period. Also, we received \$11.6 million of less proceeds during 2016 related to stock option exercises partially offset by proceeds received of \$2.2 million related to our employee stock purchase program.

Net cash provided by financing activities was \$106.1 million for the year ended December 31, 2015, an increase of \$86.6 million from the \$19.5 million of net cash provided by financing activities for the year ended December 31, 2014. The increase was primarily due to net proceeds from the term loan facility of \$796.0 million partially offset by an increase in principal payments on our previously existing term loan of \$240.6 million related to our acquisition of the EdTech business, and principal payments of \$4.0 million related to the term loan facility. Further, we incurred \$15.3 million of deferred financing fees expenditures in connection with our term loan facility and revolving credit facility. During 2015, we also incurred cash outlays of \$463.0 million under our share repurchase program for our common stock, partially offset by an increase in proceeds from stock option exercises of \$13.4 million.

Debt

Under both our revolving credit facility and term loan facility, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC and Houghton Mifflin Harcourt Publishing Company are the borrowers (collectively, the “Borrowers”), and Citibank, N.A. acts as both the administrative agent and the collateral agent.

The obligations under these senior secured facilities are guaranteed by the Company and each of its direct and indirect for-profit domestic subsidiaries (other than the Borrowers) (collectively, the “Guarantors”) and are secured by all capital stock and other equity interests of the Borrowers and the Guarantors and substantially all of the other tangible and intangible assets of the Borrowers and the Guarantors, including, without limitation, receivables, inventory, equipment, contract rights, securities, patents, trademarks, other intellectual property, cash, bank accounts and securities accounts and owned real estate. The revolving credit facility is secured by first priority liens on receivables, inventory, deposit accounts, securities accounts, instruments, chattel paper and other assets related to the foregoing (the “Revolving First Lien Collateral”), and second priority liens on the collateral which secures the term loan facility on a first priority basis. The term loan facility is secured by first priority liens on the capital stock and other equity interests of the Borrower and the Guarantors, equipment, owned real estate, trademarks and other intellectual property, general intangibles that are not Revolving First Lien Collateral and other assets related to the foregoing, and second priority liens on the Revolving First Lien Collateral.

Term Loan Facility

In connection with our closing of the EdTech acquisition, we entered into an amended and restated term loan credit facility (the “term loan facility”) dated as of May 29, 2015 to, among other things, increase our outstanding term loan credit facility from \$250.0 million, of which \$178.9 million was outstanding, to \$800.0 million, all of which was drawn at closing. As of December 31, 2016, we had approximately \$788.0 million (\$772.7 million, net of discount and issuance costs) outstanding under the term loan facility.

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The term loan facility has a six year term and matures on May 29, 2021. The interest rate applicable to borrowings under the facility is based, at our election, on LIBOR plus 3.0% or an alternative base rate plus applicable margins. LIBOR is subject to a floor of 1.0%, with the length of the LIBOR contracts ranging up to six months at the option of the Company. As of December 31, 2016, the interest rate of the term loan facility was 4.0%.

The term loan facility may be prepaid, in whole or in part, at any time, without premium. The term loan facility is required to be repaid in quarterly installments equal to 0.25%, or \$2.0 million, of the aggregate principal amount outstanding under the Term Loan Facility immediately prior to the first quarterly payment date.

The term loan facility does not require us to comply with financial maintenance covenants. We are currently required to meet certain incurrence based financial covenants as defined under our term loan facility.

The term loan facility is subject to usual and customary conditions, representations, warranties and covenants, including restrictions on additional indebtedness, liens, investments, mergers, acquisitions, asset dispositions, dividends to stockholders, repurchase or redemption of our stock, transactions with affiliates and other matters. The term loan facility is subject to customary events of default. If an event of default occurs and is continuing, the administrative agent may, or at the request of certain required lenders shall, accelerate the obligations outstanding under the term loan facility.

We are subject to excess cash flow provisions under the term loan facility that are predicated upon our leverage ratio and cash flow. There was no payment required under the excess cash flow provision in 2016. In accordance with the excess cash flow provisions of our previous term loan facility, we made a \$63.6 million principal payment on March 5, 2015.

On January 15, 2014, we entered into an amendment to our previous term loan facility to, among other things, reduce the interest rates applicable to the loans under the facility. As a result of the amendment, interest rates for loans under the previous term loan facility were reduced by 1% and based, at the Company's election, on LIBOR plus 3.25% per annum or the alternate base rate plus 2.25% per annum.

Revolving Credit Facility

On July 22, 2015, we entered into an amended and restated revolving credit facility (the "revolving credit facility") to, among other things, reduce the pricing, extend the maturity, conform certain terms to those of our term loan facility and to provide greater availability and operational flexibility. The revolving credit facility provides borrowing availability in an amount equal to the lesser of \$250.0 million and a borrowing base that is computed monthly or weekly as the case may be and comprised of the Borrowers' and certain Guarantors' eligible inventory and receivables.

The revolving credit facility includes a letter of credit subfacility of \$50.0 million, a swingline subfacility of \$20.0 million and the option to expand the facility by up to \$100.0 million in the aggregate under certain specified conditions. The amount of any outstanding letters of credit reduces borrowing availability under the revolving credit facility on a dollar-for-dollar basis. As of December 31, 2016, we had approximately \$31.7 million of outstanding letters of credit and approximately \$130.7 million of borrowing availability under the revolving credit facility. No loans have been drawn on the revolving credit facility as of February 3, 2017.

The revolving credit facility has a five year term and matures on July 22, 2020. The interest rate applicable to borrowings under the facility is based, at our election, on LIBOR plus 1.75% or an alternative base rate plus 0.75%; such applicable margins may increase up to 2.25% and 1.25%, respectively, based on average daily availability. The revolving credit facility may be prepaid, in whole or in part, at any time, without premium.

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The revolving credit facility requires us to maintain a minimum fixed charge coverage ratio of 1.0 to 1.0 on a trailing four-quarter basis for periods in which excess availability under the facility is less than the greater of \$25.0 million and 12.5% of the lesser of the total commitment and the borrowing base then in effect, or less than \$20.0 million if certain conditions are met. The minimum fixed charge coverage ratio was not applicable under the facility as of December 31, 2016, due to our level of borrowing availability.

The revolving credit facility is subject to usual and customary conditions, representations, warranties and covenants, including restrictions on additional indebtedness, liens, investments, mergers, acquisitions, asset dispositions, dividends to stockholders, repurchase or redemption of our stock, transactions with affiliates and other matters. The revolving credit facility is subject to customary events of default. If an event of default occurs and is continuing, the administrative agent may, or at the request of certain required lenders shall, accelerate the obligations outstanding under the revolving credit facility.

General

We had \$226.1 million of cash and cash equivalents and \$80.8 million of short-term investments at December 31, 2016. We had \$234.3 million of cash and cash equivalents and \$198.1 million of short-term investments at December 31, 2015.

We expect our net cash provided by operations combined with our cash and cash equivalents and borrowings under our revolving credit facility to provide sufficient liquidity to fund our current obligations, capital spending, debt service requirements and working capital requirements over at least the next twelve months.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. GAAP requires the use of estimates, assumptions and judgments by management that affect the reported amounts of assets, liabilities, net sales, expenses and related disclosure of contingent assets and liabilities in the 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, book returns, allowance for bad debts, recoverability of advances to authors, valuation of inventory, financial instruments, depreciation and amortization periods, recoverability of long-term assets such as property, plant and equipment, capitalized pre-publication costs, other identified intangibles, goodwill, deferred revenue, income taxes, pensions and other postretirement benefits, contingencies, litigation and purchase accounting. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates. For a complete description of our significant accounting policies, see Note 2 of Notes to Consolidated Financial Statements included in Item 8, "Financial Statements and Supplementary Data." The following policies and account descriptions include those identified as critical to our business operations and the understanding of our results of operations.

Revenue Recognition

Revenue is recognized only once persuasive evidence of an arrangement with the customer exists, the sales price is fixed or determinable, delivery of products or services has occurred, title and risk of loss with respect to products have transferred to the customer, all significant obligations, if any, have been performed, and collection is reasonably assured.

We enter into certain contractual arrangements that have multiple elements, one or more of which may be delivered subsequent to the delivery of other elements. These multiple-deliverable arrangements may include print and digital media, professional development services, training, software licenses, access to hosted content,

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and various services related to the software including but not limited to hosting, maintenance and support, and implementation. For these multiple-element arrangements, we allocate revenue to each deliverable of the arrangement based on the relative selling prices of the deliverables. In such circumstances, we first determine the selling price of each deliverable based on (i) vendor-specific objective evidence of fair value (“VSOE”) if that exists, (ii) third-party evidence of selling price (“TPE”) when VSOE does not exist, or (iii) our best estimate of the selling price when neither VSOE nor TPE exists. Revenue is then allocated to the non-software deliverables as a group and to the software deliverables as a group using the relative selling prices of each of the deliverables in the arrangement, based on the selling price hierarchy. Non-software deliverables include print and digital textbooks and instructional materials, trade books, reference materials, assessment materials and multimedia instructional programs; licenses to book rights and content; access to hosted content; and services including test development, test delivery, test scoring, professional development, consulting and training when those services do not relate to software deliverables. Software deliverables include software licenses, software maintenance and support services, professional services and training when those services relate to software deliverables.

For the non-software deliverables, we determine the revenue for each deliverable based on its relative selling price in the arrangement and we recognize revenue upon delivery of the product or service, assuming all other revenue recognition criteria have been met. Revenue for test delivery, test scoring and training is recognized when the service has been completed. Revenue for test development, professional development, consulting and training is recognized as the service is provided. Revenue for access to hosted interactive content is recognized ratably over the term of the arrangement.

For the software deliverables as a group, we recognize revenue in accordance with the authoritative guidance for software revenue recognition. As our software licenses are typically sold with maintenance and support, professional services or training, we use the residual method to determine the amount of software license revenue to be recognized in instances where VSOE has not been established for an element sold in the arrangement.

Under the residual method, arrangement consideration of the software deliverables as a group is allocated to the undelivered elements based upon VSOE of those elements, with the residual amount of the arrangement fee allocated to and recognized as license revenue upon delivery, assuming all other revenue recognition criteria have been met. If VSOE of one or more of the undelivered services or other elements does not exist, all revenues of the software-deliverables arrangement are deferred until delivery of all of those services or other elements has occurred, or until VSOE of each of those services or other elements can be established.

As products are shipped with right of return, a provision for estimated returns on these sales is made at the time of sale based on historical experience by product line or customer.

Shipping and handling fees charged to customers are included in net sales.

Allowance for Doubtful Accounts and Reserves for Book Returns

Accounts receivable are recorded net of allowances for doubtful accounts and reserves for book returns. In the normal course of business, we extend credit to customers that satisfy predefined criteria. We estimate the collectability of our receivables. Allowances for doubtful accounts are established through the evaluation of accounts receivable aging, prior collection experience and specific facts and circumstances. Reserves for book returns are based on historical return rates and sales patterns. We determine the required reserves by segregating our returns into the applicable product or sales channel pools. Returns in the K-12 market have been historically low. We have experienced higher returns with respect to sales to resellers, international sales and Trade Publishing sales, which all result in a greater degree of risk and subjectivity when establishing the appropriate level of reserves for this customer base. At the time we determine that a receivable balance, or any portion thereof, is deemed to be permanently uncollectible, the balance is written off. The allowance for doubtful accounts and reserve for returns are reported as reductions of the accounts receivable balance and amounted to \$3.6 million and \$19.0 million, and \$8.5 million and \$24.3 million as of December 31, 2016 and 2015, respectively.

Inventories

Inventories are substantially stated at the lower of weighted average cost or net realizable value. The level of obsolete and excess inventory is estimated on a program or title-level basis by comparing the number of units in stock with the expected future demand. The expected future demand of a program or title is determined by the copyright year, the previous years' sales history, the subsequent year's sales forecast, known forward-looking trends including our development cycle to replace the title or program and competing titles or programs. A change in sales trends could affect the estimated reserve. The inventory obsolescence reserve is reported as a reduction of the inventories balance and amounted to \$53.6 million and \$55.8 million as of December 31, 2016 and 2015, respectively.

Pre-publication Costs

Pre-publication costs are capitalized and are primarily amortized from the year of sale over five years using the sum-of-the-years-digits method, which is an accelerated method for calculating an asset's amortization. Under this method, the amortization expense recorded for a pre-publication cost asset is approximately 33% (year 1), 27% (year 2), 20% (year 3), 13% (year 4) and 7% (year 5). We utilize this policy for all pre-publication costs, except with respect to our Trade Publishing young readers and general interest books, for which we expense such costs as incurred, and our assessment products, for which we use the straight-line amortization method. Additionally, pre-publication costs recorded in connection with the acquisition of the EdTech business are amortized over 7 years on a projected sales pattern. The amortization methods and periods chosen best reflect the pattern of expected sales generated from individual titles or programs. On a quarterly basis, we evaluate the remaining lives and recoverability of capitalized pre-publication costs, which are often dependent upon program acceptance by state adoption authorities.

Amortization expense related to pre-publication costs for the years ended December 31, 2016, 2015 and 2014 were \$130.2 million, \$120.5 million and \$129.7 million, respectively.

For the years ended December 31, 2016, 2015 and 2014, no pre-publication costs were deemed to be impaired.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill and indefinite-lived intangible assets (certain tradenames) are not amortized but are reviewed at least annually for impairment or earlier, if an indication of impairment exists. Goodwill is allocated entirely to our Education reporting unit. Determining the fair value of a reporting unit is judgmental in nature, and involves the use of significant estimates and assumptions. These estimates and assumptions may include net sales growth rates and operating margins used to calculate projected future cash flows, risk-adjusted discount rates, future economic and market conditions, the determination of appropriate market comparables as well as the fair value of individual assets and liabilities.

We have the option of first assessing qualitative factors to determine whether it is necessary to perform the current two-step impairment test for goodwill or we can perform the two-step impairment test without performing the qualitative assessment. During 2015, the Education reporting unit did not experience any significant adverse changes in its business or reporting structures or any other adverse changes, and since the reporting unit's fair value substantially exceeded its carrying value from when the previous Step 1 analysis was performed, we performed the qualitative Step 0 assessment. In performing the qualitative Step 0 assessment, we considered certain events and circumstances specific to the reporting unit and to the entity as a whole, such as macroeconomic conditions, industry and market considerations, overall financial performance and cost factors when evaluating whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount.

Recoverability of goodwill can also be evaluated using a two-step process. In the first step, the fair value of a reporting unit is compared to its carrying value. If the fair value of a reporting unit exceeds the carrying value

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of the net assets assigned to a reporting unit, goodwill is considered not impaired and no further testing is required. If the carrying value of the net assets assigned to a reporting unit exceeds the fair value of a reporting unit, the second step of the impairment test is performed in order to determine the implied fair value of a reporting unit's goodwill. Determining the implied fair value of goodwill requires valuation of a reporting unit's tangible and intangible assets and liabilities in a manner similar to the allocation of purchase price in a business combination. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, goodwill is deemed impaired and is written down to the extent of the difference. We estimate total fair value of each reporting unit using discounted cash flow analysis, and make assumptions regarding future net sales, gross margins, working capital levels, investments in new products, capital spending, tax, cash flows and the terminal value of the reporting unit. With regard to indefinite-lived intangible assets, the recoverability is evaluated using a one-step process whereby we determine the fair value by asset, which is then compared to its carrying value to determine if the assets are impaired. We perform a discounted cash flow analysis using a relief from royalty method whereby we select royalty rates, discount rates and long-term growth rates by intangible asset. Given the subjective nature of the inputs selected, a change in these selected rates could have a material impact on our results of operations.

We completed our annual goodwill impairment tests as of October 1, 2016, 2015, and 2014. In 2016 and 2014, we used an income approach to establish the fair value of the reporting unit and used the most recent five year strategic plan as the initial basis of our analysis. In 2015, we performed the qualitative Step 0 assessment for goodwill and determined that it is more likely than not that the fair value of the reporting unit exceeds its carrying amount. There was no goodwill impairment for the years ended December 31, 2016, 2015 and 2014. We will continue to monitor and evaluate the carrying value of goodwill. If market and economic conditions or business performance deteriorate, this could increase the likelihood of us recording an impairment charge. However, management believes it is not reasonably likely that an impairment will occur at its reporting unit over the next twelve months.

We completed our annual indefinite-lived assets impairment tests as of October 1, 2016, 2015, and 2014. We recorded a non-cash impairment charge of \$139.2 million and \$0.4 million for the years ended December 31, 2016 and 2014, respectively. The impairment charges related to four specific tradenames within the Education segment in 2016 and two specific tradenames within the Trade Publishing segment in 2014. In 2016, the impairment charges primarily resulted from the strategic decision to market our products under the Houghton Mifflin Harcourt and HMH name rather than legacy imprints and certain declining sales projections. In 2014, the impairment charges resulted from a decline in revenue from previously projected amounts within the Trade Publishing segment. No indefinite-lived intangible assets were deemed to be impaired for the year ended December 31, 2015.

Royalty Advances

Royalty advances to authors are capitalized and represent amounts paid in advance of the sale of an author's product and are recovered as earned. As advances are recorded, a partial reserve may be recorded immediately based primarily upon historical sales experience to estimate the likelihood of recovery. Advances are evaluated periodically to determine if they are expected to be recovered. Any portion of a royalty advance that is not expected to be recovered is fully reserved. The reserve for royalty advances is reported as a reduction of the royalty advances to authors balance and amounted to \$85.5 million and \$70.0 million as of December 31, 2016 and 2015, respectively.

Stock-Based Compensation

The fair value of each restricted stock and restricted stock unit was estimated at the date of the grant based upon the target value of the award and the current market price. The fair value of each market-based restricted stock unit was estimated at the date of grant using the Monte Carlo simulation, which requires management's use of highly subjective estimates and assumptions. The fair value of each stock option grant was estimated on the date of grant using the Black-Scholes option pricing model, which also requires management's use of highly

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subjective estimates and assumptions. The use of different estimates and assumptions in the option pricing model could have a material impact on the estimated fair value of option grants and the related expense. We estimate our expected volatility based on the historical volatility of our publicly traded peer companies (including our own) and expect to continue to do so until such time as we have adequate historical data regarding the volatility of our traded stock price. The expected life assumption is based on the simplified method for estimating expected term for awards. This option has been elected as we do not have sufficient stock option exercise experience to support a reasonable estimate of the expected term. The risk-free interest rate is the yield currently available on U.S. Treasury zero-coupon issues with a remaining term approximating the expected term of the option. The expected dividend yield is based on actual dividends paid or to be paid. We recognize stock-based compensation expense over the awards requisite service period on a straight-line basis for time based stock options, restricted stock and restricted stock units and on a graded basis for restricted stock and restricted stock units that are contingent on the achievement of performance conditions. We recognize compensation expense for only the portion of stock based awards that are expected to vest. Accordingly, we have estimated expected forfeitures of stock based awards based on our historical forfeiture rate and used these rates in developing a future forfeiture rate. If our actual forfeiture rate varies from our historical rates and estimates, additional adjustments to compensation expense may be required in future periods.

Impact of Inflation and Changing Prices

Although inflation is currently well below levels in prior years and has, therefore, benefited recent results, particularly in the area of manufacturing costs, there are offsetting costs. Our ability to adjust selling prices has always been limited by competitive factors and long-term contractual arrangements which either prohibit price increases or limit the amount by which prices may be increased. Further, a weak domestic economy at a time of low inflation could cause lower tax receipts at the state and local level, and the funding and buying patterns for textbooks and other educational materials could be adversely affected. Prices for paper moderated during the last three years.

The most significant assets affected by inflation include pre-publication, other property, plant and equipment and inventories. We use the weighted average cost method to value substantially all inventory. We have negotiated favorable pricing through contractual agreements with our two top print and sourcing vendors, and from our other major vendors, which has helped to stabilize our unit costs, and therefore our cost of inventories sold. Our publishing business requires a high level of investment in pre-publication for our educational and reference works, and in other property, plant and equipment. We expect to continue to commit funds to the publishing areas through both internal growth and acquisitions. We believe that by continuing to emphasize cost controls, technological improvements and quality control, we can continue to moderate the impact of inflation on our operating results and financial position.

Covenant Compliance

As of December 31, 2016, we were in compliance with all of our debt covenants.

We are currently required to meet certain incurrence based financial covenants as defined under our Term Loan Facility and Revolving Credit Facility. We have incurrence based financial covenants primarily pertaining to a maximum leverage ratio, fixed charge coverage ratio, and liquidity. A breach of any of these covenants, ratios, tests or restrictions, as applicable, for which a waiver is not obtained could result in an event of default, in which case our lenders could elect to declare all amounts outstanding to be immediately due and payable and result in a cross-default under other arrangements containing such provisions. A default would permit lenders to accelerate the maturity for the debt under these agreements and to foreclose upon any collateral securing the debt owed to these lenders and to terminate any commitments of these lenders to lend to us. If the lenders accelerate the payment of the indebtedness, our assets may not be sufficient to repay in full the indebtedness and any other indebtedness that would become due as a result of any acceleration. Further, in such an event, the lenders would not be required to make further loans to us, and assuming similar facilities were not established and we are unable to obtain replacement financing, it would materially affect our liquidity and results of operations.

Contractual Obligations

The following table provides information with respect to our estimated commitments and obligations as of December 31, 2016:

Contractual Obligations	Total	Less than 1 year	(in thousands)		
			1-3 years	3-5 years	More than 5 years
Term loan facility due May 29, 2021 (1)	\$ 788,000	\$ 8,000	\$ 16,000	\$ 764,000	\$ —
Interest payable on term loan facility due May 29, 2021 (2)	163,474	29,396	73,833	60,245	—
Payments on derivative instruments	7,514	4,394	3,174	(54)	—
Operating leases (3)	358,755	39,674	70,699	42,630	205,752
Purchase obligations (4)	52,729	33,544	15,368	1,163	2,654
Total cash contractual obligations	\$ 1,370,472	\$ 115,008	\$ 179,074	\$ 867,984	\$ 208,406

- (1) The term loan facility amortizes at a rate of 1.0% per annum of the original \$800.0 million amount.
- (2) As of December 31, 2016, the interest rate was 4.0%.
- (3) Represents minimum lease payments under non-cancelable operating leases.
- (4) Purchase obligations are agreements to purchase goods or services that are enforceable and legally binding. These goods and services consist primarily of author advances, subcontractor expenses, information technology licenses, and outsourcing arrangements.

In addition to the payments described above, we have employee benefit obligations that require future payments. For example, we expect to make \$1.9 million of contributions in 2017 relating to our pension and postretirement benefit plans. We expect to periodically draw and repay borrowings under the revolving credit facility. We believe that we will be able to meet our cash interest obligations on our outstanding debt when they are due and payable.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk from foreign currency exchange rates and interest rates, which could affect operating results, financial position and cash flows. We manage exposure to these market risks through our regular operating and financing activities and, when appropriate, through the use of derivative financial instruments. These derivative financial instruments are utilized to hedge economic exposures as well as reduce our earnings and cash flow volatility resulting from shifts in market rates. As permitted, we may designate certain of these derivative contracts for hedge accounting treatment in accordance with authoritative guidance regarding accounting for derivative instruments and hedging activities. However, certain of these instruments may not qualify for, or we may choose not to elect, hedge accounting treatment and, accordingly, the results of our operations may be exposed to some level of volatility. Volatility in our results of operations will vary with the type and amount of derivative hedges outstanding, as well as fluctuations in the currency and interest rate market during the period. Periodically, we may enter into derivative contracts, including interest rate swap agreements and interest rate caps and collars to manage interest rate exposures, and foreign currency spot, forward, swap and option contracts to manage foreign currency exposures. The fair market values of all of these derivative contracts change with fluctuations in interest rates and/or currency rates and are designed so that any changes in their values are offset by changes in the values of the underlying exposures. Derivative financial instruments are held solely as risk management tools and not for trading or speculative purposes.

By their nature, all derivative instruments involve, to varying degrees, elements of market and credit risk not recognized in our financial statements. The market risk associated with these instruments resulting from currency exchange and interest rate movements is expected to offset the market risk of the underlying transactions, assets and liabilities being hedged. Our policy is to deal with counterparties having a single A or better credit rating at the time of the execution. We manage our exposure to counterparty risk of derivative instruments by entering into contracts with a diversified group of major financial institutions and by actively monitoring outstanding positions.

We continue to review liquidity sufficiency by performing various stress test scenarios, such as cash flow forecasting which considers hypothetical interest rate movements. Furthermore, we continue to closely monitor current events and the financial institutions that support our credit facility, including monitoring their credit ratings and outlooks, credit default swap levels, capital raising and merger activity.

As of December 31, 2016, we had \$788.0 million (\$772.7 million, net of discount and issuance costs) of aggregate principal amount indebtedness outstanding under our term loan facility that bears interest at a variable rate. An increase or decrease of 1% in the interest rate will change our interest expense by approximately \$7.9 million on an annual basis. We also have up to \$250.0 million of borrowing availability, subject to borrowing base availability, under our revolving credit facility, and borrowings under the revolving credit facility bear interest at a variable rate. We had no borrowings outstanding under the revolving credit facility at December 31, 2016. Assuming that the revolving credit facility is fully drawn, an increase or decrease of 1% in the interest rate will change our interest expense associated with the revolving credit facility by \$2.5 million on an annual basis.

Our interest rate risk relates primarily to U.S. dollar borrowings partially offset by U.S. dollar cash investments. We have historically used interest rate derivative instruments to manage our earnings and cash flow exposure to changes in interest rates. On August 17, 2015, we entered into interest rate derivative contracts with various financial institutions having an aggregate notional amount of \$400.0 million to convert floating rate debt into fixed rate debt, which we designated as cash flow hedges, and for which we had \$400.0 million outstanding as of December 31, 2016. These contracts were effective beginning September 30, 2016 and mature on July 22, 2020.

We conduct various digital development activities in Ireland, and as such, our cash flows and costs are subject to fluctuations from changes in foreign currency exchange rates. We manage our exposures to this market risk through the use of short-term foreign exchange forward and option contracts, when deemed appropriate, which were not significant as of December 31, 2016 and December 31, 2015. We do not enter into derivative transactions or use other financial instruments for trading or speculative purposes.

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Houghton Mifflin Harcourt Company:

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of Houghton Mifflin Harcourt Company and its subsidiaries at December 31, 2016 and December 31, 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on criteria established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements and on the Company's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 6 to the consolidated financial statements, the Company changed the manner in which it accounts for debt issuance costs in 2016.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 23, 2017

Houghton Mifflin Harcourt Company
Consolidated Balance Sheets

<i>(in thousands of dollars, except share information)</i>	December 31,	
	2016	2015
Assets		
Current assets		
Cash and cash equivalents	\$ 226,102	\$ 234,257
Short-term investments	80,841	198,146
Accounts receivable, net of allowance for bad debts and book returns of \$22.5 million and \$32.7 million, respectively	216,006	256,099
Inventories	162,415	171,446
Prepaid expenses and other assets	20,356	22,877
Total current assets	705,720	882,825
Property, plant, and equipment, net	175,202	149,680
Pre-publication costs, net	314,784	321,931
Royalty advances to authors, net	43,977	44,736
Goodwill	783,073	783,073
Other intangible assets, net	685,649	912,955
Deferred income taxes	3,458	3,540
Other assets	19,608	23,210
Total assets	\$ 2,731,471	\$ 3,121,950
Liabilities and Stockholders' Equity		
Current liabilities		
Current portion of long-term debt	\$ 8,000	\$ 8,000
Accounts payable	76,181	94,483
Royalties payable	72,233	85,766
Salaries, wages, and commissions payable	41,289	45,340
Deferred revenue	272,828	231,172
Interest payable	193	106
Severance and other charges	8,863	4,894
Accrued postretirement benefits	1,928	1,910
Other liabilities	23,635	34,937
Total current liabilities	505,150	506,608
Long-term debt, net of discount and issuance costs	764,738	769,283
Long-term deferred revenue	436,627	440,625
Accrued pension benefits	28,956	23,726
Accrued postretirement benefits	22,084	23,657
Deferred income taxes	71,381	139,810
Other liabilities	22,495	19,920
Total liabilities	1,851,431	1,923,629
Commitments and contingencies (Note 12)		
Stockholders' equity		
Preferred stock, \$0.01 par value: 20,000,000 shares authorized; no shares issued and outstanding at December 31, 2016 and 2015	—	—
Common stock, \$0.01 par value: 380,000,000 shares authorized; 147,556,804 and 145,613,978 shares issued at December 31, 2016 and 2015, respectively; 122,979,770 and 123,940,510 shares outstanding at December 31, 2016 and 2015, respectively	1,475	1,456
Treasury stock, 24,577,034 and 21,673,468 shares as of December 31, 2016 and 2015, respectively, at cost (related parties of \$193,493 in 2015)	(518,030)	(463,013)
Capital in excess of par value	4,868,230	4,833,388
Accumulated deficit	(3,418,340)	(3,133,782)
Accumulated other comprehensive loss	(53,295)	(39,728)
Total stockholders' equity	880,040	1,198,321
Total liabilities and stockholders' equity	\$ 2,731,471	\$ 3,121,950

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

Houghton Mifflin Harcourt Company
Consolidated Statements of Operations

<i>(in thousands of dollars, except share and per share data)</i>	Years Ended December 31,		
	2016	2015	2014
Net sales	\$ 1,372,685	\$ 1,416,059	\$ 1,372,316
Costs and expenses			
Cost of sales, excluding publishing rights and pre-publication amortization	610,715	622,668	588,726
Publishing rights amortization	61,351	81,007	105,624
Pre-publication amortization	130,243	120,506	129,693
Cost of sales	802,309	824,181	824,043
Selling and administrative (related parties of \$10,489 in 2015—Note 14)	699,544	681,124	612,535
Other intangible asset amortization	26,750	22,038	12,170
Impairment charge for intangible assets and investment in preferred stock	139,205	—	1,679
Severance and other charges	15,650	4,767	7,300
Operating loss	<u>(310,773)</u>	<u>(116,051)</u>	<u>(85,411)</u>
Other income (expense)			
Interest expense, net	(38,663)	(32,045)	(18,245)
Change in fair value of derivative instruments	(614)	(2,362)	(1,593)
Loss on extinguishment of debt	—	(3,051)	—
Loss before taxes	(350,050)	(153,509)	(105,249)
Income tax (benefit) expense	(65,492)	(19,640)	6,242
Net loss	<u>\$ (284,558)</u>	<u>\$ (133,869)</u>	<u>\$ (111,491)</u>
Net loss per share attributable to common stockholders			
Basic	<u>\$ (2.32)</u>	<u>\$ (0.98)</u>	<u>\$ (0.79)</u>
Diluted	<u>\$ (2.32)</u>	<u>\$ (0.98)</u>	<u>\$ (0.79)</u>
Weighted average shares outstanding			
Basic	<u>122,418,474</u>	<u>136,760,107</u>	<u>140,594,689</u>
Diluted	<u>122,418,474</u>	<u>136,760,107</u>	<u>140,594,689</u>

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

Houghton Mifflin Harcourt Company
Consolidated Statements of Comprehensive Loss

<i>(in thousands of dollars)</i>	Years Ended December 31,		
	2016	2015	2014
Net loss	\$ (284,558)	\$ (133,869)	\$ (111,491)
Other comprehensive income (loss), net of taxes:			
Foreign currency translation adjustments, net of tax	(1,220)	(2,140)	(29)
Net change in pension and benefit plan liability, net of tax	(9,937)	(7,100)	(13,380)
Unrealized gain (loss) on short-term investments, net of tax	57	(58)	(89)
Net change in unrealized loss on derivative financial instruments, net of tax	(2,467)	(3,641)	—
Other comprehensive loss, net of taxes	<u>(13,567)</u>	<u>(12,939)</u>	<u>(13,498)</u>
Comprehensive loss	<u>\$ (298,125)</u>	<u>\$ (146,808)</u>	<u>\$ (124,989)</u>

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

Houghton Mifflin Harcourt Company
Consolidated Statements of Cash Flows

<i>(in thousands of dollars)</i>	Years Ended December 31,		
	2016	2015	2014
Cash flows from operating activities			
Net loss	\$(284,558)	\$(133,869)	\$(111,491)
Adjustments to reconcile net loss to net cash provided by operating activities			
Depreciation and amortization expense	298,169	296,609	319,777
Amortization of debt discount and deferred financing costs	4,181	7,216	4,750
Deferred income taxes	(68,347)	48,214	899
Stock-based compensation expense	10,567	12,452	11,376
Loss on extinguishment of debt	—	3,051	—
Impairment charge for intangible assets and investment in preferred stock	139,205	—	1,679
Change in fair value of derivative instruments	614	2,362	1,593
Changes in operating assets and liabilities, net of acquisitions			
Accounts receivable	40,094	30,808	65,519
Inventories	9,031	26,228	(1,763)
Other assets	6,673	(2,562)	(4,263)
Accounts payable and accrued expenses	(23,685)	13,145	(3,432)
Royalties, net	(12,774)	6,238	13,286
Deferred revenue	37,658	124,489	229,105
Interest payable	87	59	(8)
Severance and other charges	4,315	(3,615)	(5,210)
Accrued pension and postretirement benefits	3,675	(4,869)	(16,724)
Other liabilities	(21,154)	(77,597)	(14,050)
Net cash provided by operating activities	<u>143,751</u>	<u>348,359</u>	<u>491,043</u>
Cash flows from investing activities			
Proceeds from sales and maturities of short-term investments	197,724	286,732	134,275
Purchases of short-term investments	(81,086)	(198,633)	(310,149)
Additions to pre-publication costs	(124,031)	(103,709)	(115,509)
Additions to property, plant, and equipment	(105,553)	(82,987)	(67,145)
Acquisition of business, net of cash acquired	—	(578,190)	(9,091)
Investment in preferred stock	(1,000)	—	—
Net cash used in investing activities	<u>(113,946)</u>	<u>(676,787)</u>	<u>(367,619)</u>
Cash flows from financing activities			
Proceeds from term loan, net of discount	—	796,000	—
Payments of long-term debt	(8,000)	(247,125)	(2,500)
Payments of deferred financing fees	—	(15,255)	—
Repurchases of common stock (related parties of \$193,493 in 2015)	(55,017)	(463,013)	—
Tax withholding payments related to net share settlements of restricted stock units	(1,672)	(658)	(723)
Proceeds from stock option exercises	24,532	36,155	22,752
Issuance of common stock under employee stock purchase plan	2,197	—	—
Net cash (used in) provided by financing activities	<u>(37,960)</u>	<u>106,104</u>	<u>19,529</u>
Net (decrease) increase in cash and cash equivalents	(8,155)	(222,324)	142,953
Cash and cash equivalent at the beginning of the period	<u>234,257</u>	<u>456,581</u>	<u>313,628</u>
Cash and cash equivalent at the end of the period	<u>\$ 226,102</u>	<u>\$ 234,257</u>	<u>\$ 456,581</u>
Supplemental disclosure of cash flow information			
Interest paid	\$ 34,884	\$ 24,412	\$ 12,328
Income taxes paid	5,104	2,987	2,336
Non-cash investing and financing activities			
Pre-publication costs included in accounts payable	\$ 14,397	\$ 14,642	\$ 6,102
Property, plant, and equipment included in accounts payable	5,707	6,202	2,663
Property, plant, and equipment acquired under capital leases	—	1,356	3,495
Amounts due from seller for acquisition	—	2,884	—
Issuance of common stock upon exercise of warrants	—	1,815	—

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

Houghton Mifflin Harcourt Company
Consolidated Statements of Stockholders' Equity

<i>(in thousands of dollars, except share information)</i>	Common Stock		Treasury Stock	Capital in excess of Par Value	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Shares Issued	Par Value					
Balance at December 31, 2013	140,044,400	\$ 1,400	\$ —	\$4,750,589	\$ (2,888,422)	\$ (13,291)	\$1,850,276
Net loss	—	—	—	—	(111,491)	—	(111,491)
Other comprehensive loss, net of tax	—	—	—	—	—	(13,498)	(13,498)
Issuance of common stock for vesting of restricted stock units	95,553	1	—	(1)	—	—	—
Issuance of common stock for exercise of stock options	1,860,066	19	—	23,721	—	—	23,740
Stock withheld to cover tax withholdings requirements upon vesting of restricted stock units	—	—	—	(723)	—	—	(723)
Stock-based compensation expense	—	—	—	11,376	—	—	11,376
Balance at December 31, 2014	142,000,019	1,420	—	4,784,962	(2,999,913)	(26,789)	1,759,680
Net loss	—	—	—	—	(133,869)	—	(133,869)
Other comprehensive loss, net of tax	—	—	—	—	—	(12,939)	(12,939)
Issuance of common stock for exercise of warrants	70,513	1	—	(1)	—	—	—
Issuance of common stock for vesting of restricted stock units	67,725	1	—	(1)	—	—	—
Issuance of common stock for exercise of stock options	2,932,839	29	—	36,926	—	—	36,955
Issuance of restricted stock	542,882	5	—	(5)	—	—	—
Stock withheld to cover tax withholdings requirements upon vesting of restricted stock units	—	—	—	(658)	—	—	(658)
Repurchases of common stock (related parties of \$193,493)	—	—	(463,013)	—	—	—	(463,013)
Stock-based compensation expense	—	—	—	12,165	—	—	12,165
Balance at December 31, 2015	145,613,978	1,456	(463,013)	4,833,388	(3,133,782)	(39,728)	1,198,321
Net loss	—	—	—	—	(284,558)	—	(284,558)
Other comprehensive loss, net of tax	—	—	—	—	—	(13,567)	(13,567)
Issuance of common stock for employee purchase plan	140,579	1	—	2,777	—	—	2,778
Issuance of common stock for vesting of restricted stock units	102,151	1	—	(1)	—	—	—
Issuance of common stock for exercise of stock options	1,879,924	19	—	23,714	—	—	23,733
Stock withheld to cover tax withholdings requirements upon vesting of restricted stock awards and units	—	—	—	(1,672)	—	—	(1,672)
Restricted stock forfeitures and cancellations	(179,828)	(2)	—	2	—	—	—
Repurchases of common stock	—	—	(55,017)	—	—	—	(55,017)
Stock-based compensation expense	—	—	—	10,022	—	—	10,022
Balance at December 31, 2016	<u>147,556,804</u>	<u>\$ 1,475</u>	<u>\$ (518,030)</u>	<u>\$4,868,230</u>	<u>\$ (3,418,340)</u>	<u>\$ (53,295)</u>	<u>\$ 880,040</u>

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

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

1. Basis of Presentation

Houghton Mifflin Harcourt Company, formerly known as HMH Holdings (Delaware), Inc. (“HMH”, “Houghton Mifflin Harcourt”, “we”, “us”, “our”, or the “Company”), is a global learning company, specializing in world-class content, services and cutting edge technology solutions that enable learning in a changing landscape. We provide dynamic, engaging, and effective solutions across a variety of media and in three key focus areas: early learning, K-12 and beyond the classroom, reaching over 50 million students in more than 150 countries worldwide.

The kindergarten through 12th grade (“K-12”) market is our primary market, and in the United States, we are a leading provider of educational content by market share. Some of our core educational offerings include *HMH Science Dimensions*, *Collections*, *GO! Math*, *Read 180* Universal, and *Journeys*. We believe our long-standing reputation and trusted brand enable us to capitalize on trends in the education market through our existing and developing channels.

Furthermore, for nearly two centuries, we have published renowned and awarded children’s, fiction, nonfiction, culinary and reference titles are enjoyed by readers throughout the world. Our distinguished author list includes ten Nobel Prize winners, forty-eight Pulitzer Prize winners, and fifteen National Book Award winners. We are home to popular characters and titles such as Curious George, Carmen Sandiego, *The Lord of the Rings*, *The Whole 30*, The Best American Series, the Peterson Field Guides, CliffsNotes, and *The Polar Express*, and published distinguished authors such as Philip Roth, Temple Grandin, Tim O’Brien, Amos Oz, Kwame Alexander, Lois Lowry, and Chris Van Allsburg.

We sell our products and services across multiple media and distribution channels. Leveraging our portfolio of content, including some of our best-known children’s brands and titles, such as Carmen Sandiego and Curious George, we create interactive digital content, mobile applications and educational games that can be used by families at home or on the go.

Our digital products portfolio, combined with our content development or distribution agreements with recognized technology leaders, such as Apple, Google, Intel and Microsoft, enable us to bring our next-generation educational solutions and content to learners across virtually all platforms and devices. Additionally, we believe our technology and development capabilities allow us to enhance content engagement and effectiveness with embedded assessment, interactivity and personalized adaptable content as well as increased accessibility.

The December 31, 2016 and 2015 consolidated financial statements of HMH include the accounts of all of our wholly-owned subsidiaries as of and for the periods ended December 31, 2016, 2015 and 2014.

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”). Our accompanying consolidated financial statements include the results of operations of the Company and our wholly-owned subsidiaries. All material intercompany accounts and transactions are eliminated in consolidation.

Seasonality and Comparability

Our net sales, operating profit or loss and net cash provided by or used in operations are impacted by the inherent seasonality of the academic calendar. Consequently, the performance of our businesses may not be comparable quarter to consecutive quarter and should be considered on the basis of results for the whole year or by comparing results in a quarter with results in the same quarter for the previous year.

Approximately 88% of our net sales for the year ended December 31, 2016 were derived from our Education segment, which is a markedly seasonal business. Schools conduct the majority of their purchases

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

in the second and third quarters of the calendar year in preparation for the beginning of the school year. Thus, for the years ended December 31, 2016, 2015 and 2014, approximately 68% of our consolidated net sales were realized in the second and third quarters. Sales of K-12 instructional materials and customized testing products are also cyclical, with some years offering more sales opportunities than others. The amount of funding available at the state level for educational materials also has a significant effect on year-to-year net sales. Although the loss of a single customer would not have a material adverse effect on our business, schedules of school adoptions and market acceptance of our products can materially affect year-to-year net sales performance.

2. Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the use of estimates, assumptions and judgments by management that affect the reported amounts of assets, liabilities, revenues, expenses, and related disclosure of contingent assets and liabilities in the amounts reported in the financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates and assumptions including, but not limited to, book returns, allowance for bad debts, recoverability of advances to authors, valuation of inventory, depreciation and amortization periods, recoverability of long-term assets such as property, plant, and equipment, capitalized pre-publication costs, other identified intangibles, goodwill, deferred revenue, income taxes, pensions and other postretirement benefits, contingencies, and litigation. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

Revenue Recognition

We derive revenue primarily from the sale of print and digital content and instructional materials, trade books, reference materials, assessment materials and multimedia instructional programs; license fees for book rights, content and software; and services that include test development, test delivery, test scoring, professional development, consulting and training as well as access to hosted interactive content. Revenue is recognized only once persuasive evidence of an arrangement with the customer exists, the sales price is fixed or determinable, delivery of products or services has occurred, title and risk of loss with respect to products have transferred to the customer, all significant obligations, if any, have been performed, and collection is reasonably assured.

We enter into certain contractual arrangements that have multiple elements, one or more of which may be delivered subsequent to the delivery of other elements. These multiple-deliverable arrangements may include print and digital media, professional development services, training, software licenses, access to hosted content, and various services related to the software including but not limited to hosting, maintenance and support, and implementation. For these multiple-element arrangements, we allocate revenue to each deliverable of the arrangement based on the relative selling prices of the deliverables. In such circumstances, we first determine the selling price of each deliverable based on (i) vendor-specific objective evidence of fair value ("VSOE") if that exists, (ii) third-party evidence of selling price ("TPE") when VSOE does not exist, or (iii) our best estimate of the selling price when neither VSOE nor TPE exists. Revenue is then allocated to the non-software deliverables as a group and to the software deliverables as a group using the relative selling prices of each of the deliverables in the arrangement, based on the selling price hierarchy. Non-software deliverables include print and digital textbooks and instructional materials,

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

trade books, reference materials, assessment materials and multimedia instructional programs; licenses to book rights and content; access to hosted content; and services including test development, test delivery, test scoring, professional development, consulting and training when those services do not relate to software deliverables. Software deliverables include software licenses, software maintenance and support services, professional services and training when those services relate to software deliverables.

For the non-software deliverables, we determine the revenue for each deliverable based on its relative selling price in the arrangement and we recognize revenue upon delivery of the product or service, assuming all other revenue recognition criteria have been met. Revenue for test delivery, test scoring and training is recognized when the service has been completed. Revenue for test development, professional development, consulting and training is recognized as the service is provided. Revenue for access to hosted interactive content is recognized ratably over the term of the arrangement.

For the software deliverables as a group, we recognize revenue in accordance with the authoritative guidance for software revenue recognition. As our software licenses are typically sold with maintenance and support, professional services or training, we use the residual method to determine the amount of software license revenue to be recognized. Under the residual method, arrangement consideration of the software deliverables as a group is allocated to the undelivered elements based upon VSOE of those elements, with the residual amount of the arrangement fee allocated to and recognized as license revenue upon delivery, assuming all other revenue recognition criteria have been met. If VSOE of one or more of the undelivered services or other elements does not exist, all revenues of the software-deliverables arrangement are deferred until delivery of all of those services or other elements has occurred, or until VSOE of each of those services or other elements can be established.

As products are shipped with right of return, a provision for estimated returns on these sales is made at the time of sale based on historical experience by product line or customer.

Shipping and handling fees charged to customers are included in net sales.

Advertising Costs and Sample Expenses

Advertising costs are charged to selling and administrative expenses as incurred. Advertising costs were \$11.2 million, \$9.1 million and \$8.6 million for the years ended December 31, 2016, 2015 and 2014, respectively. Sample expenses are charged to selling and administrative expenses when the samples are shipped.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of cash in banks and highly liquid investment securities that have maturities of three months or less when purchased. The carrying amount of cash equivalents approximates fair value because of the short-term maturity of these investments.

Short-term Investments

Short-term investments typically consist of marketable securities with maturities between three and twelve months at the balance sheet date. We have classified all of our short-term investments as available-for-sale at December 31, 2016 and 2015. The investments are reported at fair value, with any unrealized gains or losses excluded from earnings and reported as a separate component of stockholders' equity as other comprehensive income (loss).

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Accounts Receivable

Accounts receivable are recorded net of allowances for doubtful accounts and reserves for returns. In the normal course of business, we extend credit to customers that satisfy predefined criteria. We estimate the collectability of our receivables. Allowances for doubtful accounts are established through the evaluation of accounts receivable aging and prior collection experience to estimate the ultimate collectability of these receivables. Reserves for returns are based on historical return rates and sales patterns.

Inventories

Inventories are stated at the lower of weighted-average cost or net realizable value. The level of obsolete and excess inventory is estimated on a program or title level-basis by comparing the number of units in stock with past usage and the expected future demand. The expected future demand of a program or title is determined by the copyright year, the previous year's usage, the subsequent years' sales forecast, and known forward-looking trends including our development cycle to replace the title or program and competing titles or programs.

Property, Plant, and Equipment

Property, plant, and equipment are stated at cost, or in the case of assets acquired in business combinations, at fair value as of the acquisition date, less accumulated depreciation. Equipment under capital lease is stated at fair value at inception of the lease, less accumulated depreciation. Maintenance and repair costs are charged to expense as incurred, and renewals and improvements that extend the useful life of the assets are capitalized. Depreciation on property, plant, and equipment is calculated using the straight-line method over the estimated useful lives of the assets or, in the case of assets acquired in business combinations, over their remaining lives. Equipment held under capital leases and leasehold improvements are amortized using the straight-line method over the shorter of the lease term or estimated useful life of the asset. Estimated useful lives of property, plant, and equipment are as follows:

	Estimated Useful Life
Building and building equipment	10 to 35 years
Machinery and equipment	2 to 15 years
Capitalized software	3 to 5 years
Leasehold improvements	Lesser of useful life or lease term

Capitalized Internal-Use and External-Use Software

Capitalized internal-use and external-use software is included in property, plant and equipment on the consolidated balance sheets.

We capitalize certain costs related to obtaining or developing computer software for internal use including external customer-facing websites. Costs incurred during the application development stage, including external direct costs of materials and services, and payroll and payroll related costs for employees who are directly associated with the internal-use software project, are capitalized and amortized on a straight-line basis over the expected useful life of the related software. The application development stage includes design of chosen path, software configuration and integration, coding, hardware installation and testing. Costs incurred during the preliminary stage, as well as maintenance, training and upgrades that do not result in additional functionality are expensed as incurred.

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Certain computer software development costs for software that is to be sold or marketed are capitalized in the consolidated balance sheets. Capitalization of computer software development costs begins upon the establishment of technological feasibility. We define the establishment of technological feasibility as a working model. Amortization of capitalized computer software development costs is provided on a product-by-product basis using the straight-line method, beginning upon commercial release of the product, and continuing over the remaining estimated economic life of the product. The carrying amounts of computer software development costs are periodically compared to net realizable value and impairment charges are recorded, as appropriate, when amounts expected to be realized are lower.

We review internal and external software development costs for impairment. For the years ended December 31, 2016, 2015 and 2014, there was no impairment of software development costs.

Pre-publication Costs

We capitalize the art, prepress, manuscript and other costs incurred in the creation of the master copy of a book or other media (the “pre-publication costs”). Pre-publication costs are primarily amortized from the year of sale over five years using the sum-of-the-years-digits method, which is an accelerated method for calculating an asset’s amortization. Under this method, the amortization expense recorded for a pre-publication cost asset is approximately 33% (year 1), 27% (year 2), 20% (year 3), 13% (year 4) and 7% (year 5). This policy is used throughout the Company, except for the Trade Publishing young readers and general interest books, which generally expense such costs as incurred, and the assessment products, which uses the straight-line amortization method. Additionally, pre-publication costs recorded in connection with the acquisition of the EdTech business are amortized over 7 years on a projected sales pattern. The amortization methods and periods chosen best reflect the pattern of expected sales generated from individual titles or programs. We periodically evaluate the remaining lives and recoverability of capitalized pre-publication costs, which are often dependent upon program acceptance by state adoption authorities.

Amortization expense related to pre-publication costs for the years ended December 31, 2016, 2015 and 2014 were \$130.2 million, \$120.5 million and \$129.7 million, respectively.

For the years ended December 31, 2016, 2015 and 2014, there was no impairment of pre-publication costs.

Goodwill and Indefinite-lived Intangible Assets

Goodwill is the excess of the purchase price paid over the fair value of the net assets of the business acquired. Other intangible assets principally consist of branded trademarks and trade names, acquired publishing rights and customer relationships. Goodwill and indefinite-lived intangible assets (certain tradenames) are not amortized but are reviewed at least annually for impairment or earlier, if an indication of impairment exists. Goodwill is allocated entirely to our Education reporting unit. Determining the fair value of a reporting unit is judgmental in nature, and involves the use of significant estimates and assumptions. These estimates and assumptions may include revenue growth rates and operating margins used to calculate projected future cash flows, risk-adjusted discount rates, future economic and market conditions, the determination of appropriate market comparables as well as the fair value of individual assets and liabilities.

We have the option of first assessing qualitative factors to determine whether it is necessary to perform the current two-step impairment test for goodwill or we can perform the two-step impairment test without performing the qualitative assessment. In performing the qualitative Step 0 assessment, events and circumstances specific to the reporting unit and to the entity as a whole, such as macroeconomic conditions,

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industry and market considerations, overall financial performance and cost factors are considered when evaluating whether it is more likely than not that the fair value of the reporting unit is less than its carrying amount.

Recoverability of goodwill can also be evaluated using a two-step process. In the first step, the fair value of a reporting unit is compared to its carrying value. If the fair value of a reporting unit exceeds the carrying value of the net assets assigned to a reporting unit, goodwill is considered not impaired and no further testing is required. If the carrying value of the net assets assigned to a reporting unit exceeds the fair value of a reporting unit, the second step of the impairment test is performed in order to determine the implied fair value of a reporting unit's goodwill. Determining the implied fair value of goodwill requires valuation of a reporting unit's tangible and intangible assets and liabilities in a manner similar to the allocation of purchase price in a business combination. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, goodwill is deemed impaired and is written down to the extent of the difference. We estimate total fair value of each reporting unit using discounted cash flow analysis, and make assumptions regarding future net sales, gross margins, working capital levels, investments in new products, capital spending, tax, cash flows and the terminal value of the reporting unit. With regard to indefinite-lived intangible assets, the recoverability is evaluated using a one-step process whereby we determine the fair value by asset, which is then compared to its carrying value to determine if the assets are impaired.

We completed our annual goodwill impairment tests as of October 1, 2016, 2015, and 2014. In 2016 and 2014, we used an income approach to establish the fair value of the reporting unit and used the most recent five year strategic plan as the initial basis of our analysis. In 2015, the Education reporting unit did not experience any significant adverse changes in its business or reporting structures or any other adverse changes, and since the reporting unit's fair value substantially exceeded its carrying value from when the previous Step 1 analysis was performed, we performed the qualitative Step 0 assessment. We determined that it was more likely than not that the fair value of the reporting unit exceeded its carrying amount. No goodwill was deemed to be impaired for the years ended December 31, 2016, 2015 and 2014, respectively.

We completed our annual indefinite-lived intangible assets impairment tests as of October 1, 2016, 2015, and 2014. We recorded non-cash impairment charges of \$139.2 million and \$0.4 million for the years ended December 31, 2016 and 2014, respectively. The impairment charges related to four specific tradenames within the Education segment in 2016 and two specific tradenames within the Trade Publishing segment in 2014. In 2016, the impairment charges primarily resulted from the strategic decision to market our products under the Houghton Mifflin Harcourt and HMH name rather than legacy imprints along with certain declining sales projections. In 2014, the impairment charges resulted from a decline in revenue from previously projected amounts within the Trade Publishing segment. No indefinite-lived intangible assets were deemed to be impaired for the year ended December 31, 2015.

Publishing Rights

A publishing right is an acquired right that allows us to publish and republish existing and future works as well as create new works based on previously published materials. We determine the fair market value of the publishing rights arising from business combinations by discounting the after-tax cash flows projected to be derived from the publishing rights and titles to their net present value using a rate of return that accounts for the time value of money and the appropriate degree of risk. The useful life of the publishing rights is based on the lives of the various copyrights involved. We calculate amortization using the percentage of the projected operating income before taxes derived from the titles in the current year as a percentage of the total estimated operating income before taxes over the remaining useful life. Acquired publication rights, as well as customer-related intangibles with definitive lives, are primarily amortized on an accelerated basis over periods ranging from three to 20 years.

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Impairment of Other Long-lived Assets

We review our other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. If the future undiscounted cash flows are less than their book value, impairment exists. The impairment is measured as the difference between the book value and the fair value of the underlying asset. Fair value is normally determined using a discounted cash flow model.

Severance

We accrue postemployment benefits if the obligation is attributable to services already rendered, rights to those benefits accumulate, payment of benefits is probable, and amount of benefit is reasonably estimated. Postemployment benefits include severance benefits.

Subsequent to recording such accrued severance liabilities, changes in market or other conditions may result in changes to assumptions upon which the original liabilities were recorded that could result in an adjustment to the liabilities.

Royalty Advances

Royalty advances to authors are capitalized and represent amounts paid in advance of the sale of an author's product and are recovered as earned. As advances are recorded, a partial reserve may be recorded immediately based primarily upon historical sales experience. Advances are evaluated periodically to determine if they are expected to be recovered. Any portion of a royalty advance that is not expected to be recovered is fully reserved. Cash payments for royalty advances are included within cash flows from operating activities, under the caption "Royalties, net," in our consolidated statements of cash flows.

Income Taxes

We record income taxes using the asset and liability method. Deferred income tax assets and liabilities are recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective income tax basis, and operating loss and tax credit carryforwards. Our consolidated financial statements contain certain deferred tax assets which have arisen primarily as a result of interest expense limitations, as well as other temporary differences between financial and tax accounting. We establish a valuation allowance if the likelihood of realization of the deferred tax assets is reduced based on an evaluation of objective verifiable evidence. Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against those deferred tax assets. We evaluate the weight of all available evidence to determine whether it is more likely than not that some portion or all of the deferred income tax assets will not be realized.

We also evaluate any uncertain tax positions and only recognize the tax benefit from an uncertain tax position if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon settlement. We record a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. Any change in judgment related to the expected ultimate resolution of uncertain tax positions is recognized in earnings in the period in which such change occurs. Interest and penalties, if any, related to unrecognized tax benefits are recorded in income tax expense.

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Stock-Based Compensation

Certain employees and directors have been granted stock options, restricted stock and restricted stock units in our common stock. Stock-based compensation expense reflects the fair value of stock-based awards measured at the grant date and recognized over the relevant service period. We estimate the fair value of each stock-based award on the measurement date using the current market price based on the target value of the award for restricted stock and restricted stock units, the Monte Carlo simulation for market-based restricted stock units and the Black-Scholes valuation model for stock options. We recognize stock-based compensation expense over the awards requisite service period on a straight-line basis for time based stock options, restricted stock and restricted stock units and on a graded basis for restricted stock that are contingent on the achievement of performance conditions.

Comprehensive Loss

Comprehensive loss is defined as changes in the equity of an enterprise except those resulting from stockholder transactions. The amounts shown on the consolidated statements of stockholders' equity and comprehensive loss relate to the cumulative effect of changes in pension and postretirement liabilities, foreign currency translation gain and loss adjustments, unrealized gains and losses on short-term investments and losses on derivative instruments.

Foreign Currency Translation

The functional currency for each of our subsidiaries is the currency of the primary economic environment in which the subsidiary operates, generally defined as the currency in which the entity generates and expends cash. Foreign currency denominated assets and liabilities are translated into United States dollars at current rates as of the balance sheet date and the revenue, costs and expenses are translated at the average rates established during each reporting period. Cumulative translation gains or losses are recorded in equity as an element of accumulated other comprehensive income.

Financial Instruments

Derivative financial instruments are employed to manage risks associated with interest rate exposures and are not used for trading or speculative purposes. We recognize all derivative instruments in our consolidated balance sheets at fair value. Changes in the fair value of derivatives are recognized periodically either in earnings or in stockholders' equity as a component of accumulated other comprehensive loss, depending on whether the derivative financial instrument qualifies for hedge accounting and, if so, whether it qualifies as a fair value hedge or a cash flow hedge. Gains and losses on derivatives designated as hedges, to the extent they are effective, are recorded in other comprehensive income, and subsequently reclassified to earnings to offset the impact of the hedged items when they occur. Changes in the fair value of derivatives not qualifying as hedges are reported in earnings. During 2016 and 2015, our interest rate swaps were designated as hedges and qualify for hedge accounting. Accordingly, we recorded an unrealized loss of \$2.5 million and \$3.6 million in our statements of comprehensive loss to account for the changes in fair value of these derivatives during the periods ended December 31, 2016 and 2015, respectively. The corresponding \$6.1 million and \$3.6 million hedge liability is included within long-term other liabilities in our consolidated balance sheet as of December 31, 2016 and 2015, respectively. We had no interest rate derivative contracts outstanding as of December 31, 2014. Our foreign exchange forward and option contracts did not qualify for hedge accounting because we did not contemporaneously document our hedging strategy upon entering into the hedging arrangements.

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Treasury Stock

We account for treasury stock under the cost method. When shares are reissued or retired from treasury stock they are accounted for at an average price. Upon retirement the excess over par value is charged against capital in excess of par value.

Net Loss per Share

Basic net loss per share attributable to common stockholders is computed by dividing net loss attributable to common stockholders by the weighted-average common shares outstanding during the period. Except where the result would be anti-dilutive, net loss per share is computed using the treasury stock method for the exercise of stock options. For periods in which the Company has reported net losses, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive. Diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders for the years ended December 31, 2016, 2015 and 2014.

Recent Accounting Standards

Recent accounting pronouncements, not included below, are not expected to have a material impact on our consolidated financial position and results of operations.

Recently Issued Accounting Standards

In November 2016, the Financial Accounting Standards Board (“FASB”) issued guidance on restricted cash, which requires amounts generally described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the total beginning and ending amounts for the periods shown on the statement of cash flows. The guidance will be effective in 2019 using a retrospective transition method to each period presented. We do not expect it to have a material impact on our consolidated financial statements.

In August 2016, the FASB issued a guidance update to classifications of certain cash receipts and cash payments on the Statement of Cash Flows with the objective of reducing the existing diversity in practice. This updated guidance addresses the following eight specific cash flow issues: debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies (including bank-owned life insurance policies); distributions received from equity method investees; beneficial interests in securitization transactions; and separately identifiable cash flows and application of the predominance principle. The guidance will be effective in 2018 with early adoption permitted. We are currently in the process of evaluating the impact of this guidance and we do not expect it to have a material impact on our consolidated financial statements.

In March 2016, the FASB issued guidance that changes the accounting for certain aspects of share-based payments to employees. The guidance requires the recognition of the income tax effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid-in capital pools. The guidance also allows for the employer to repurchase more of an employee’s shares for tax withholding purposes without triggering liability accounting. In addition, the guidance allows for a policy election to

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account for forfeitures as they occur rather than on an estimated basis. The guidance is effective in 2017 with early adoption permitted. The adoption of the guidance will result in recognizing tax benefits related to stock compensation deductions as a benefit to income tax expense when they are realized. We do not expect it to have a material impact on our consolidated financial statements.

In February 2016, the FASB issued guidance that primarily requires lessees to recognize most leases on their balance sheets but record expenses on their income statements in a manner similar to current accounting. For lessors, the guidance modifies the classification criteria and the accounting for sales-type and direct financing leases. The guidance is effective in 2019 with early adoption permitted. We are currently in the process of evaluating the impact of this guidance on our consolidated financial statements and footnote disclosures.

In May 2014, the FASB issued new guidance related to revenue recognition. This new accounting standard will replace most current U.S. GAAP guidance on this topic and eliminate most industry-specific guidance. The new revenue recognition standard provides a unified model to determine when and how revenue is recognized. The core principle is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration for which the entity expects to be entitled in exchange for those goods or services. Entities may adopt the new standard either retrospectively to all periods presented in the financial statements (the full retrospective method) or as a cumulative-effect adjustment as of the date of adoption (modified retrospective method) in the year of adoption without applying to comparative periods financial statements. Further, in August 2015, the FASB issued guidance to defer the effective adoption date by one year to December 15, 2017 for annual reporting periods beginning after that date and permitted early adoption of the standard, but not before fiscal years beginning after the original effective date of December 15, 2016. We will adopt the guidance on January 1, 2018 and are currently anticipating adopting the standard using the modified retrospective method. We are in the process of evaluating the impact that the adoption of this new revenue recognition standard will have on our consolidated financial statements and footnote disclosures.

While we are continuing to assess all potential impacts of the standard, we currently believe the most significant impact relates to the requirement to capitalize incremental costs to acquire new contracts, whereas we currently expense those costs as incurred. Further, we believe there may be an impact to our accounting for software license revenue. Under the current guidance, our term-based software licenses are recognized ratably over the life of the service period due to the separation criteria of the software license and related maintenance services not being met. This is due to vendor specific objective evidence (“VSOE”) not being established for the undelivered maintenance services as they are not sold separately from the software licenses. The requirement for establishing VSOE does not exist under the new standard and will require us to recognize the software license revenue at a point in time, which is predominately at the time of delivery.

As the new standard will supersede substantially all existing revenue recognition guidance, it could impact the revenue recognition on a significant amount of our contracts, in addition to our business processes and our information technology systems. As a result, we have established a cross-functional coordinated team to implement the new revenue recognition standard. We are in the process of implementing changes to our systems, processes and internal controls to meet the standard’s reporting and disclosure requirements. We expect to have our evaluation of the impact of the new standard complete in 2017.

Recently Adopted Accounting Standards

In April 2015, the FASB issued new accounting guidance related to simplifying the presentation of debt issuance costs. This standard amends existing guidance to require the presentation of debt issuance costs in

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the balance sheet as a deduction from the carrying amount of the related debt liability instead of a deferred charge, consistent with debt discounts. The SEC later clarified guidance in August 2015 stating that debt issuance costs related to line-of-credit arrangements may be presented as an asset and subsequently amortized ratably over the term of the line-of-credit arrangement, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. The recognition and measurement guidance for debt issuance costs are not affected by the new accounting guidance. The new guidance is effective for annual reporting periods beginning after December 15, 2015. We retrospectively adopted this standard during the first quarter of 2016 and reclassified debt issuance costs from other assets to long-term debt, net of discount and issuance costs, as of December 31, 2015.

3. Acquisitions

On April 23, 2015, we entered into a stock and asset purchase agreement with Scholastic Corporation (“Scholastic”) to acquire certain assets (including the stock of two of Scholastic’s subsidiaries) comprising its Educational Technology and Services (“EdTech”) business. On May 29, 2015, we completed the acquisition and paid an aggregate purchase price of \$574.8 million in cash to Scholastic, including adjustments for working capital.

The acquisition provided us with a leading position in intervention curriculum and services and extends our product offerings in key growth areas, including educational technology, early learning, and education services, creating a more comprehensive offering for students, teachers and schools.

The transaction was accounted for under the acquisition method of accounting. Accordingly, the results of operations of the purchased assets of EdTech are included in our consolidated financial statements from the date of acquisition.

We have allocated the purchase price to the EdTech assets acquired and liabilities assumed at estimated fair values as of May 29, 2015. The excess of the purchase price over the net of amounts assigned to the fair value of the assets acquired and the liabilities assumed has been recorded as goodwill, which is allocated to our Education segment. The goodwill recognized is primarily the result of expected synergies. All of the goodwill and identifiable intangibles associated with the acquisition will be deductible for tax purposes. During the fourth quarter of 2015, we finalized the assumed liabilities in connection with certain working capital adjustments, recorded as a measurement period adjustment, reducing the purchase price by approximately \$0.9 million through a reduction to goodwill. The fair values set forth below are final.

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The valuation of assets and liabilities has been determined and the purchase price has been allocated as follows:

Accounts receivable, net of allowance for bad debts and book returns of \$2.2 million	\$ 31,237
Inventories	13,714
Prepaid expenses and other assets	803
Property, plant, and equipment	1,725
Pre-publication costs	98,610
Royalty advances to authors	1,093
Goodwill	250,152
Other intangible assets	214,030
Other assets	28
Accounts payable	(8,117)
Royalties payable	(2,573)
Deferred revenue	(20,189)
Other accruals	(5,680)
Total purchase price	<u>\$574,833</u>

The \$214.0 million of other intangible assets included \$54.7 million of tradenames amortizable over 20 years, and \$159.3 million of customer relationships amortizable over 25 years. The tradenames are being amortized on a straight-line basis and the customer relationships over the pattern in which the economic benefits of the intangible is expected to be realized. The fair value of the other intangible assets was primarily derived using the income approach. The rate used to discount the net cash flows to their present value was based upon the weighted average cost of capital of 9.6%. This discount rate was determined based on the Capital Asset Pricing Model, which looks at the risk free rate and applies a market risk premium, business risk premium and size risk premium to the risk free rate to calculate the cost of equity. The weighted average cost of capital considers the cost of equity and a market participant cost of debt and capital structure. The tradenames were valued using a relief from royalty method and the customer relationships were valued using a multi-period excess earning method.

Transaction costs related to the acquisition were approximately \$5.2 million during the year ended December 31, 2015 and are included in the selling and administrative line item in our consolidated statements of operations.

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The unaudited pro forma information presented in the following table summarizes the consolidated results of operations for the periods presented as if the acquisition of EdTech had occurred on January 1, 2014. The pro forma financial information is presented for comparative purposes only and is not necessarily indicative of the results of operations that actually would have been achieved if the acquisition had occurred at the beginning of the periods, nor is it intended to be a projection of future results. For each period presented, the pro forma results include estimates of the interest expense on debt used to finance the acquisition, the amortization of the other intangible assets recorded in connection with the acquisition, the impact of the write-down of acquired deferred revenue to fair value and the related tax effects of the adjustments.

	Unaudited	
	Year Ended December 31, 2015	Year Ended December 31, 2014
Net sales	\$ 1,486,810	\$ 1,595,803
Net loss	(144,830)	(115,177)

For the 2015 fiscal year, we recorded approximately \$142.2 million of net sales and \$25.9 million of operating income attributable to EdTech within our consolidated statements of operations since the date of acquisition, May 29, 2015.

4. Balance Sheet Information

Short-term Investments

The estimated fair value of our short-term investments classified as available for sale is as follows:

	December 31, 2016			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Short-term investments:				
U.S. Government and agency securities	<u>\$ 80,784</u>	<u>\$ 91</u>	<u>\$ (34)</u>	<u>\$ 80,841</u>
	December 31, 2015			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Short-term investments:				
U.S. Government and agency securities	<u>\$ 198,204</u>	<u>\$ 1</u>	<u>\$ (59)</u>	<u>\$ 198,146</u>

The contractual maturities of our short-term investments are one year or less.

Account Receivable

Accounts receivable at December 31, 2016 and 2015 consisted of the following:

	2016	2015
Accounts receivable	\$ 238,553	\$ 288,846
Allowance for bad debt	(3,576)	(8,459)
Reserve for book returns	(18,971)	(24,288)
	<u>\$ 216,006</u>	<u>\$ 256,099</u>

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As of December 31, 2016 and 2015, no individual customer comprised more than 10% of our accounts receivable, net balance. We believe that our accounts receivable credit risk exposure is limited and we have not experienced significant write-downs in our accounts receivable balances.

Inventories

Inventories at December 31, 2016 and 2015 consisted of the following:

	<u>2016</u>	<u>2015</u>
Finished goods	\$ 157,925	\$ 166,904
Raw materials	4,490	4,542
Inventories	<u>\$ 162,415</u>	<u>\$ 171,446</u>

Property, Plant, and Equipment

Balances of major classes of assets and accumulated depreciation and amortization at December 31, 2016 and 2015 were as follows:

	<u>2016</u>	<u>2015</u>
Land and land improvements	\$ 4,923	\$ 4,819
Building and building equipment	9,867	9,823
Machinery and equipment	23,339	13,469
Capitalized software	497,803	418,908
Leasehold improvements	27,196	34,251
	563,128	481,270
Less: Accumulated depreciation and amortization	(387,926)	(331,590)
Property, plant, and equipment, net	<u>\$ 175,202</u>	<u>\$ 149,680</u>

For the year ended December 31, 2016, 2015 and 2014, depreciation and amortization expense related to property, plant, and equipment were \$79.8 million, \$72.6 million and \$72.3 million, respectively.

Property, plant, and equipment at December 31, 2016 and 2015 included approximately \$6.9 million acquired under capital lease agreements, of which the majority is included in machinery and equipment. There are no future minimum lease payments required under non-cancelable capital leases as of December 31, 2016.

Substantially all property, plant, and equipment are pledged as collateral under our Term Loan and Revolving Credit Facility.

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5. Goodwill and Other Intangible Assets

Goodwill and other intangible assets consisted of the following:

	December 31, 2016			December 31, 2015		
	Cost	Accumulated Amortization	Total	Cost	Accumulated Amortization	Total
Goodwill	\$ 783,073	\$ —	\$ 783,073	\$ 783,073	\$ —	\$ 783,073
Trademarks and tradenames: indefinite-lived	\$ 161,000	\$ —	\$ 161,000	\$ 439,605	\$ —	\$ 439,605
Trademarks and tradenames: definite-lived	194,130	(6,961)	187,169	54,730	(1,596)	53,134
Publishing rights	1,180,000	(1,031,918)	148,082	1,180,000	(970,567)	209,433
Customer related and other	442,640	(253,242)	189,398	442,640	(231,857)	210,783
Other intangible assets, net	\$ 1,977,770	\$ (1,292,121)	\$ 685,649	\$ 2,116,975	\$ (1,204,020)	\$ 912,955

The changes in the carrying amount of goodwill for the year ended December 31, 2016 is as follows:

Balance at December 31, 2015	\$ 783,073
Acquisitions	—
Balance at December 31, 2016	\$ 783,073

In accordance with the provisions of the accounting standard for goodwill and other intangible assets, goodwill and certain indefinite-lived tradenames are not amortized but rather are assessed for impairment on an annual basis. In connection with this assessment, we recorded an impairment charge of approximately \$139.2 million and \$0.4 million for certain of our indefinite-lived intangible assets, which has been reflected as of the measurement date of October 1, 2016 and 2014, respectively. There was no impairment charge recorded in the year ended December 31, 2015. There was no goodwill impairment for the years ended December 31, 2016, 2015 and 2014, respectively.

During 2016, certain tradenames were deemed to be definite-lived and accordingly, are being amortized over their estimated useful lives. This was due to our strategic decision to gradually migrate away from specific imprints, primarily the Holt McDougal and various supplemental brands, and in favor of marketing our products under the Houghton Mifflin Harcourt and HMH names. As a result of this change in estimate from indefinite-lived to definite-lived intangible assets, we recorded amortization expense of \$2.4 million during 2016 related to these tradenames. Indefinite-lived intangible assets had a cost of \$439.6 million as of December 31, 2015, of which \$139.2 million were impaired in 2016 and \$139.4 million were transferred to definite-lived intangible assets during 2016 resulting in indefinite-lived intangible assets with a cost basis of \$161.0 million as of December 31, 2016. Amortization expense for publishing rights and customer related and other intangibles were \$88.1 million, \$103.0 million and \$117.8 million for the years ended December 31, 2016, 2015 and 2014, respectively.

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Estimated aggregate amortization expense expected for each of the next five years related to intangibles subject to amortization is as follows:

	Trademarks and Tradenames	Publishing Rights	Other Intangible Assets
2017	\$ 12,140	\$ 46,225	\$ 18,595
2018	12,362	34,713	15,725
2019	12,362	26,557	13,111
2020	12,362	20,056	9,261
2021	12,362	11,642	8,987
Thereafter	125,581	8,889	123,719
	<u>\$ 187,169</u>	<u>\$ 148,082</u>	<u>\$ 189,398</u>

6. Debt

Our debt consisted of the following:

	December 31, 2016	December 31, 2015
\$800,000 term loan due May 29, 2021 interest payable quarterly (net of discount and issuance costs)	\$ 772,738	\$ 777,283
Less: Current portion of long-term debt	8,000	8,000
Total long-term debt, net of discount and issuance costs	<u>\$ 764,738</u>	<u>\$ 769,283</u>

During 2016, we retrospectively adopted the new standard relating to simplifying the presentation of debt issuance costs and reclassified debt issuance costs from other assets to long-term debt, net of discount and issuance costs, as of December 31, 2015.

Long-term debt repayments due in each of the next five years and thereafter is as follows:

Year	
2017	\$ 8,000
2018	8,000
2019	8,000
2020	8,000
2021	756,000
	<u>\$ 788,000</u>

Term Loan Facility

In connection with our closing of the EdTech acquisition referred to in Note 3, we entered into an amended and restated term loan credit facility (the "term loan facility") dated as of May 29, 2015 to increase our outstanding term loan credit facility from \$250.0 million, of which \$178.9 million was outstanding, to \$800.0 million, all of which was drawn at closing. The term loan facility matures on May 29, 2021 and the interest rate is based on LIBOR plus 3.0% or an alternative base rate plus applicable margins. LIBOR is subject to a floor of 1.0% with the length of the LIBOR contracts ranging up to six months at the option of the Company.

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The term loan facility may be prepaid, in whole or in part, at any time, without premium, except in the case of a re-pricing event within the first 6 months of the term loan facility, in which case, a 1.00% premium shall be paid. The term loan facility is required to be repaid in quarterly installments equal to 0.25%, or \$2.0 million, of the aggregate principal amount outstanding under the term loan facility immediately prior to the first quarterly payment date.

The term loan facility was issued at a discount equal to 0.5% of the outstanding borrowing commitment. As of December 31, 2016, the interest rate of the term loan facility was 4.0%.

The term loan facility does not require us to comply with financial covenants. The term loan facility is subject to usual and customary conditions, representations, warranties and covenants, including restrictions on additional indebtedness, liens, investments, mergers, acquisitions, asset dispositions, dividends to stockholders, repurchase or redemption of our stock, transactions with affiliates and other matters. The term loan facility is subject to customary events of default. If an event of default occurs and is continuing, the administrative agent may, or at the request of certain required lenders shall, accelerate the obligations outstanding under the term loan facility.

We are subject to excess cash flow provisions under our term loan facility which is predicated upon our leverage ratio and cash flow. There was no payment required under the excess cash flow provision in 2016. In accordance with the excess cash flow provisions of the previous term loan facility, we made a \$63.6 million principal payment on March 5, 2015. In connection with this principal payment, we accelerated the amortization of deferred financing costs of \$2.0 million, which was recognized as interest expense in the consolidated statements of operations for the year ended December 31, 2015.

On May 29, 2015, in connection with the term loan facility described above, we paid off the remaining outstanding balance of our previous \$250.0 million term loan facility of approximately \$178.9 million. The transaction was accounted for under the guidance for debt modifications and extinguishments. We incurred a loss on extinguishment of debt of approximately \$2.2 million related to the write-off of the portion of the unamortized deferred financing fees associated with the portion of the term loan accounted for as extinguishment associated with the term loan facility. We incurred approximately \$15.6 million of third-party fees for the transaction, of which approximately \$13.6 million were capitalized as deferred financing fees and approximately \$2.0 million was recorded to expense and included in the selling and administrative line item in our consolidated statements of operations for the year ended December 31, 2015.

On January 15, 2014, we entered into an amendment to our term loan facility, which reduced the interest rate applicable to outstanding borrowings by 1.0%. The transaction was accounted for under the accounting guidance for debt modifications and extinguishments. We recorded an expense of approximately \$1.0 million relating to third party transaction fees which was included in the selling and administrative line item in our consolidated statements of operations for the year ended December 31, 2014.

Interest Rate Hedging

On August 17, 2015, we entered into interest rate derivative contracts with various financial institutions having an aggregate notional amount of \$400.0 million to convert floating rate debt into fixed rate debt, which we designated as cash flow hedges, and had \$400.0 million outstanding as of December 31, 2016. We assessed at inception, and re-assess on an ongoing basis, whether the interest rate derivative contracts are highly effective in offsetting changes in the fair value of the hedged variable rate debt.

These interest rate swaps were designated as hedges and qualify for hedge accounting under the accounting guidance related to derivatives and hedging. Accordingly, we recorded an unrealized loss of \$2.5 million and \$3.6 million in our statements of comprehensive loss to account for the changes in fair value of these

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derivatives during the periods ended December 31, 2016 and 2015, respectively. The corresponding \$6.1 million and \$3.6 million hedge liability is included within long-term other liabilities in our consolidated balance sheet as of December 31, 2016 and 2015, respectively. The interest rate derivative contracts mature on July 22, 2020.

Revolving Credit Facility

On July 22, 2015, we entered into an amended and restated revolving credit facility (the “revolving credit facility”). The revolving credit facility provides borrowing availability in an amount equal to the lesser of either \$250.0 million or a borrowing base that is computed monthly and comprised of the borrowers’ and the guarantors’ eligible inventory and receivables. The revolving credit facility includes a letter of credit subfacility of \$50.0 million, a swingline subfacility of \$20.0 million and the option to expand the facility by up to \$100.0 million in the aggregate under certain specified conditions. The revolving credit facility may be prepaid, in whole or in part, at any time, without premium. The transaction was accounted for under the accounting guidance for modifications to or exchanges of revolving debt arrangements. We incurred a loss on extinguishment of debt of approximately \$0.9 million related to the write-off of the portion of the unamortized deferred financing fees associated with the portion of the revolving credit facility accounted for as an extinguishment. We incurred approximately \$1.6 million of third-party fees which were capitalized as deferred financing fees.

The revolving credit facility requires the Company to maintain a minimum fixed charge coverage ratio of 1.0 to 1.0 on a trailing four-quarter basis only during certain periods commencing when excess availability under the revolving credit facility is less than certain limits prescribed by the terms of the revolving credit facility. The revolving credit facility is subject to usual and customary conditions, representations, warranties and covenants, including restrictions on additional indebtedness, liens, investments, mergers, acquisitions, asset dispositions, dividends to stockholders, repurchase or redemption of our stock, transactions with affiliates and other matters. The revolving credit facility is subject to customary events of default. No amounts have been drawn on the revolving credit facility as of December 31, 2016.

As of December 31, 2016, the minimum fixed charge coverage ratio covenant under our revolving credit facility was not applicable, due to our level of borrowing availability. The minimum fixed charge coverage ratio, which is only tested in limited situations, is 1.0 to 1.0 through the end of the facility.

On May 19, 2015, we entered into an amendment to our previous revolving credit facility that permitted us to increase the aggregate amount of indebtedness we may incur under our term loan agreement to \$800.0 million, plus the aggregate amount of any incremental facilities provided for therein.

On April 23, 2015, we entered into an amendment to our previous revolving credit facility that permitted us to increase the aggregate amount of indebtedness we may incur under our term loan agreement to \$500.0 million, plus the aggregate amount of any incremental facilities provided for therein.

Guarantees

Under both the revolving credit facility and the term loan facility, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC and Houghton Mifflin Harcourt Publishing Company are the borrowers (collectively, the “Borrowers”), and Citibank, N.A. acts as both the administrative agent and the collateral agent.

The obligations under our senior secured credit facilities are guaranteed by the Company and each of its direct and indirect for-profit domestic subsidiaries (other than the Borrowers) (collectively, the

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“Guarantors”) and are secured by all capital stock and other equity interests of the Borrowers and the Guarantors and substantially all of the other tangible and intangible assets of the Borrowers and the Guarantors, including, without limitation, receivables, inventory, equipment, contract rights, securities, patents, trademarks, other intellectual property, cash, bank accounts and securities accounts and owned real estate. The revolving credit facility is secured by first priority liens on receivables, inventory, deposit accounts, securities accounts, instruments, chattel paper and other assets related to the foregoing (the “Revolving First Lien Collateral”), and second priority liens on the collateral which secures the term loan facility on a first priority basis. The term loan facility is secured by first priority liens on the capital stock and other equity interests of the Borrowers and the Guarantors, equipment, owned real estate, trademarks and other intellectual property, general intangibles that are not Revolving First Lien Collateral and other assets related to the foregoing, and second priority liens on the Revolving First Lien Collateral.

7. Severance and Other Charges

2016

During the year ended December 31, 2016, \$7.4 million of severance payments were made to employees whose employment ended in 2016 and prior years and \$3.9 million of net payments for office space no longer utilized by the Company. Further, we recorded an expense in the amount of \$12.4 million to reflect additional costs for severance, which we expect to be paid over the next twelve months, along with a \$3.3 million accrual for vacated space.

2015

During the year ended December 31, 2015, \$4.2 million of severance payments were made to employees whose employment ended in 2015 and prior years and \$4.2 million of net payments for office space no longer utilized by the Company. Further, we recorded an expense in the amount of \$4.3 million to reflect additional costs for severance, which have been fully paid, along with a \$0.4 million accrual for vacated space.

2014

During the year ended December 31, 2014, \$7.9 million of severance payments were made to employees whose employment ended in 2014 and prior years and \$4.6 million of net payments for office space no longer utilized by the Company. Further, we recorded an expense in the amount of \$5.0 million to reflect additional costs for severance, which have been fully paid, along with a \$2.3 million accrual for vacated space.

A summary of the significant components of the severance/restructuring and other charges, which are not allocated to our segments and included in Corporate and Other, is as follows:

	2016			Severance/ restructuring accrual at December 31, 2016
	Severance/ restructuring accrual at December 31, 2015	Severance/ restructuring expense	Cash payments	
Severance costs	\$ 1,455	\$ 12,350	\$ (7,388)	\$ 6,417
Other accruals	5,251	3,300	(3,947)	4,604
	<u>\$ 6,706</u>	<u>\$ 15,650</u>	<u>\$ (11,335)</u>	<u>\$ 11,021</u>

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	2015			
	Severance/ restructuring accrual at December 31, 2014	Severance/ restructuring expense	Cash payments	Severance/ restructuring accrual at December 31, 2015
Severance costs	\$ 1,271	\$ 4,338	\$ (4,154)	\$ 1,455
Other accruals	9,050	429	(4,228)	5,251
	<u>\$ 10,321</u>	<u>\$ 4,767</u>	<u>\$ (8,382)</u>	<u>\$ 6,706</u>

	2014			
	Severance/ restructuring accrual at December 31, 2013	Severance/ restructuring expense	Cash payments	Severance/ restructuring accrual at December 31, 2014
Severance costs	\$ 4,115	\$ 5,022	\$ (7,866)	\$ 1,271
Other accruals	11,416	2,278	(4,644)	9,050
	<u>\$ 15,531</u>	<u>\$ 7,300</u>	<u>\$ (12,510)</u>	<u>\$ 10,321</u>

The current portion of the severance and other charges was \$8.8 million and \$4.9 million as of December 31, 2016 and 2015, respectively.

8. Income Taxes

The components of loss before taxes by jurisdiction are as follows:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
U.S.	\$ (353,038)	\$ (161,513)	\$ (102,284)
Foreign	2,988	8,004	(2,965)
Loss before taxes	<u>\$ (350,050)</u>	<u>\$ (153,509)</u>	<u>\$ (105,249)</u>

Total income taxes by jurisdiction are as follows:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Income tax expense (benefit)			
U.S.	\$ (66,677)	\$ (21,956)	\$ 9,287
Foreign	1,185	2,316	(3,045)
	<u>\$ (65,492)</u>	<u>\$ (19,640)</u>	<u>\$ 6,242</u>

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Significant components of the (benefit) expense for income taxes attributable to loss from continuing operations consist of the following:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Current			
Foreign	\$ 437	\$ 1,413	\$ 588
U.S.—Federal	92	(9,917)	—
U.S.—State and other	2,320	(59,296)	4,633
Total current	<u>2,849</u>	<u>(67,800)</u>	<u>5,221</u>
Deferred			
Foreign	748	903	(3,633)
U.S.—Federal	(63,422)	28,937	3,889
U.S.—State and other	(5,667)	18,320	765
Total deferred	<u>(68,341)</u>	<u>48,160</u>	<u>1,021</u>
Income tax (benefit) expense	<u>\$ (65,492)</u>	<u>\$ (19,640)</u>	<u>\$ 6,242</u>

The reconciliation of the income tax rate computed at the statutory tax rate to the reported income tax expense (benefit) attributable to continuing operations is as follows:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Statutory rate	(35.0)%	(35.0)%	(35.0)%
Permanent items	0.8	1.8	1.0
Release of uncertain tax positions	(0.3)	(33.6)	—
Accrual of uncertain tax positions	—	—	18.0
Foreign rate differential	(0.1)	(0.2)	0.1
State and local taxes	(5.9)	(10.9)	1.2
State and local net operating loss re-establishment	(3.3)	—	—
Increase in valuation allowance	25.9	71.6	20.6
Tax credits	(0.8)	(6.5)	—
Effective tax rate	<u>(18.7)%</u>	<u>(12.8)%</u>	<u>5.9%</u>

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The significant components of the net deferred tax assets and liabilities are shown in the following table:

	2016	2015
Tax assets related to		
Net operating loss and other carryforwards	\$ 199,008	\$ 90,664
Returns reserve/inventory expense	64,736	66,894
Pension benefits	12,184	10,018
Postretirement benefits	9,988	10,316
Deferred interest (1)	428,346	416,562
Deferred revenue	182,051	146,918
Stock-based compensation	7,808	8,046
Deferred compensation	4,557	3,076
Other, net	12,127	12,761
Valuation allowance	<u>(759,887)</u>	<u>(664,730)</u>
	160,918	100,525
Tax liabilities related to		
Indefinite-lived intangible assets	(71,380)	(140,470)
Definite-lived intangible assets	(82,225)	(61,526)
Depreciation and amortization expense	(75,236)	(34,651)
Other, net	—	(148)
	<u>(228,841)</u>	<u>(236,795)</u>
Net deferred tax liabilities	<u>\$ (67,923)</u>	<u>\$ (136,270)</u>

Certain 2015 amounts within the deferred tax assets table above have been reclassified to conform to the current year presentation.

- (1) The Deferred Interest tax asset represents disallowed interest deductions under IRC Section 163(j) (Limitation on Deduction for interest on Certain Indebtedness) for the current and prior years. At December 31, 2016 and 2015, we had gross deferred interest deductions totaling \$1,079.0 million and \$1,067.7 million, respectively. The disallowed interest is able to be carried forward indefinitely and utilized in future years pursuant to IRC Section 163(j)(1) (B). A full valuation allowance has been provided against deferred tax assets, excluding \$3.5 million of foreign deferred tax assets which are expected to be realized, net of deferred tax liabilities resulting from indefinite-lived intangibles.

An error was identified in certain disclosures within the income taxes footnote, as contained in our 2015 Annual Report on Form 10-K. The error had no effect on income tax expense or net income. The error also had no effect on the consolidated balance sheet as there is no change to the deferred tax assets or deferred tax liabilities accounts. The correction of the error impacted certain deferred tax components within the income taxes footnote and certain lines on the rate reconciliation. Deferred tax assets related to net operating losses and other carryforwards decreased by approximately \$2.1 million, deferred interest decreased by approximately \$2.1 million and the valuation allowance decreased by approximately \$4.2 million, however net deferred tax assets were unchanged. Management believes the out-of-period correction is not material to any previously issued financial statements. The 2015 amounts in our income tax footnote have been revised.

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The net deferred tax liability balance is stated at prevailing statutory income tax rates. Deferred tax assets and liabilities are reflected on our consolidated balance sheets as follows:

	2016	2015
Non-current deferred tax assets	\$ 3,458	\$ 3,540
Non-current deferred tax liabilities	(71,381)	(139,810)
	<u>\$ (67,923)</u>	<u>\$ (136,270)</u>

A reconciliation of the gross amount of unrecognized tax benefits, excluding accrued interest and penalties, is as follows:

Balance at December 31, 2013	\$ 75,503
Reductions based on tax positions related to the prior year	—
Additions based on tax positions related to the current year	3,131
Balance at December 31, 2014	78,634
Reductions based on tax positions related to the prior year	(62,323)
Additions based on tax positions related to the current year	—
Balance at December 31, 2015	16,311
Reductions based on tax positions related to the prior year	(855)
Additions based on tax positions related to the current year	52
Balance at December 31, 2016	<u>\$ 15,508</u>

The Company expects the amount of unrecognized tax benefit to be reduced by \$13.2 million over the next twelve months.

For the year ended December 31, 2016, the Company recognized \$0.9 million of uncertain tax benefits (excluding interest and penalties) due to the expiration of the statute of limitations. For the year-ended December 31, 2015, the Company recognized \$62.3 million of uncertain tax benefits (excluding interest and penalties) due to the expiration of the statute of limitations. Approximately \$22.9 million was recognized as a component of income tax expense (benefit) and \$39.4 million was recognized through the consolidated balance sheet as additional deferred tax assets with a corresponding increase to the valuation allowance.

We are currently open for audit under the statute of limitation for Federal, state and foreign jurisdictions for years 2010 to 2015. However, carryforward attributes from prior years may still be adjusted upon examination by tax authorities if they are used in a future period.

We report penalties and tax-related interest expense on unrecognized tax benefits as a component of the provision for income taxes in the accompanying consolidated statement of operations. At December 31, 2016 and 2015, we had \$0.02 million and \$0.2 million, respectively, of accrued interest and penalties in the accompanying consolidated balance sheet. Interest and penalties included in the provision for income taxes for the years ended December 31, 2016, 2015 and 2014 were \$0.02 million, \$0.2 million and \$3.5 million, respectively.

On January 1, 2013, as part of the 2012 Chapter 11 Reorganization, we realized approximately \$1.3 billion of cancellation of debt income. We excluded cancellation of debt income of \$1.3 billion from taxable income since the Company was insolvent (liabilities greater than the fair value of its assets) by this amount at the time of the exchange. Although we did not need to pay current cash taxes from this transaction, we were required to reduce our tax attributes, such as net operating loss carryovers and tax credit carryovers and our tax basis of our assets to offset the \$1.3 billion of taxable income that did not have to be recognized

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due to insolvency. As a result, our net operating losses and credit carryforwards were reduced on January 1, 2013, and a portion of our tax basis in our assets were reduced at that time. The Company completed an analysis of the state-by-state attribute reduction as of December 31, 2016 and as a result has re-established \$11.4 million of state net operating loss carryforwards (net of federal benefit) for states that decouple from IRC Sec. 1502.

As of December 31, 2016, we have approximately \$377.7 million of Federal tax loss carryforwards, which will expire between 2034 and 2036. The Company has approximately \$775.8 million of state tax loss carryforward, which will expire between 2019 and 2036. In addition, we have foreign tax credit carryforwards of \$12.1 million and research and development credit carryforwards of \$1.7 million, which will expire between 2017 and 2026, and 2032 and 2035, respectively. The Company's Irish net operating losses of \$25.1 million are not subject to expiration. The Canadian losses (\$2.3 million federal and \$0.8 million provincial) will expire between 2029 and 2033. The Puerto Rico net operating loss carryforward of \$1.5 million will expire in 2026. The Puerto Rico alternative minimum tax credit carryforwards of \$2.7 million are not subject to expiration.

Under Section 382 of the Internal Revenue Code of 1986, as amended, substantial changes in the Company's ownership may limit the amount of net operating loss carryforwards that could be utilized annually in the future to offset taxable income. Specifically, this limitation may arise in the event of a cumulative change in ownership of the Company of more than 50% within a three-year period. Any such annual limitation may significantly reduce the utilization of net operating loss carryforwards before they expire. The Company performed an analysis through December 31, 2015, and determined any potential ownership change under Section 382 during the year would not have a material impact on the future utilization of U.S. net operating losses and tax credits. However, future transactions in the Company's common stock could trigger an ownership change for purposes of Section 382, which could limit the amount of net operating loss carryforwards and other attributes that could be utilized annually in the future to offset taxable income, if any. Any such limitation, whether as the result of sales of common stock by our existing stockholders or sales of common stock by the Company, could have a material adverse effect on results of operations in future years.

The Company's deferred tax assets in the table above as of December 31, 2016 and 2015, do not include reductions of \$0.5 million and \$21.6 million, respectively, related to excess tax benefits from the exercise of employee stock options that are a component of net operating losses as these benefits can only be recognized when the related tax deduction reduces income taxes payable. As of December 31, 2016 and 2015, the Company had \$31.2 million and \$30.8 million of unrecorded additional paid-in capital net operating losses, respectively. U.S. income taxes on the undistributed earnings of the Company's non-U.S. subsidiaries have not been provided for as the Company currently plans to indefinitely reinvest these amounts and has the ability to do so. There are no cumulative undistributed foreign earnings at December 31, 2016 and 2015.

Based on our assessment of historical pre-tax losses and the fact that we did not anticipate sufficient future taxable income in the near term to assure utilization of certain deferred tax assets, the Company recorded a valuation allowance at December 31, 2016 and 2015 of \$759.9 million and \$664.7 million, respectively. We have increased our valuation allowance by \$95.2 million and \$114.1 million in 2016 and 2015, respectively.

9. Retirement and Postretirement Benefit Plans

Retirement Plan

We have a noncontributory, qualified defined benefit pension plan (the "Retirement Plan"), which covers certain employees. The Retirement Plan is a cash balance plan, which accrues benefits based on pay, length

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of service, and interest. The funding policy is to contribute amounts subject to minimum funding standards set forth by the Employee Retirement Income Security Act of 1974 and the Internal Revenue Code. The Retirement Plan's assets consist principally of common stocks, fixed income securities, investments in registered investment companies, and cash and cash equivalents. We also have a nonqualified defined benefit plan, or nonqualified plan, that previously covered employees who earned over the qualified pay limit as determined by the Internal Revenue Service. The nonqualified plan accrues benefits for the participants based on the cash balance plan calculation. The nonqualified plan is not funded. We use a December 31 date to measure the pension and postretirement liabilities. In 2007, both the qualified and nonqualified pension plans eliminated participation in the plans for new employees hired after October 31, 2007.

We also had a foreign defined benefit plan. On May 28, 2014, the plan was converted to individual annuity policies and the liability discharge occurred, which resulted in a settlement charge of approximately \$1.7 million. This amount has been recorded to the selling and administrative line in our consolidated statements of operations for the year ended December 31, 2014.

We recognize the funded status of defined benefit pension and other postretirement plans as an asset or liability in the balance sheet and are required to recognize actuarial gains and losses and prior service costs and credits in other comprehensive income and subsequently amortize those items in the statement of operations.

The following table summarizes the Accumulated Benefit Obligations ("ABO"), the change in Projected Benefit Obligation ("PBO"), and the funded status of our plans as of and for the financial statement period ended December 31, 2016 and 2015:

	2016	2015
ABO at end of period	\$ 177,300	\$ 173,923
Change in PBO		
PBO at beginning of period	\$ 174,110	\$ 184,510
Interest cost on PBO	5,224	6,719
Actuarial loss (gain)	7,521	(5,477)
Benefits paid	(9,555)	(11,642)
PBO at end of period	<u>\$ 177,300</u>	<u>\$ 174,110</u>
Change in plan assets		
Fair market value at beginning of period	\$ 150,384	\$ 165,985
Actual return	7,408	(3,959)
Company contribution	107	—
Benefits paid	(9,555)	(11,642)
Fair market value at end of period	<u>\$ 148,344</u>	<u>\$ 150,384</u>
Unfunded status	<u>\$ (28,956)</u>	<u>\$ (23,726)</u>

Amounts recognized in the consolidated balance sheets at December 31, 2016 and 2015 consist of:

	2016	2015
Noncurrent liabilities	\$(28,956)	\$(23,726)

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Additional year-end information for pension plans with ABO in excess of plan assets at December 31, 2016 and 2015 consist of:

	2016	2015
PBO	\$ 177,300	\$ 173,923
ABO	177,300	173,923
Fair value of plan assets	148,344	150,384

Amounts not yet reflected in net periodic benefit cost and recognized in accumulated other comprehensive income at December 31, 2016 and 2015 consist of:

	2016	2015
Net loss	<u>\$(35,190)</u>	<u>\$(25,997)</u>
Accumulated other comprehensive loss	<u>\$(35,190)</u>	<u>\$(25,997)</u>

Weighted average assumptions used to determine the benefit obligations (both PBO and ABO) at December 31, 2016 and 2015 are:

	2016	2015
Discount rate	4.0%	4.3%
Increase in future compensation	N/A	N/A

Net periodic pension cost includes the following components:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Interest cost on projected benefit obligation	\$ 5,224	\$ 6,719	\$ 7,671
Expected return on plan assets	(9,150)	(9,756)	(10,122)
Amortization of net (gain) loss	50	330	—
Net pension expense	(3,876)	(2,707)	(2,451)
Loss (gain) due to settlement	—	—	—
Net cost (gain) recognized for the period	<u>\$ (3,876)</u>	<u>\$ (2,707)</u>	<u>\$ (2,451)</u>

Significant actuarial assumptions used to determine net periodic pension cost at December 31, 2016, 2015 and 2014 are:

	2016	2015	2014
Discount rate	4.3%	3.8%	4.6%
Increase in future compensation	N/A	N/A	N/A
Expected long-term rate of return on assets	6.3%	6.3%	7.0%

Assumptions on Expected Long-Term Rate of Return as Investment Strategies

We employ a building block approach in determining the long-term rate of return for plan assets. Historical markets are studied and long-term relationships between equities and fixed income are preserved congruent with the widely accepted capital market principle that assets with higher volatility generate a greater return over the long run. Current market factors such as inflation and interest rates are evaluated before long-term capital market assumptions are determined. The long-term portfolio return is established via a building

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block approach and proper consideration of diversification and rebalancing. Peer data and historical returns are reviewed for reasonability and appropriateness. We regularly review the actual asset allocation and periodically rebalances investments to a targeted allocation when appropriate. The current targeted asset allocation is 34% with equity managers, 56% with fixed income managers, 6% with real-estate investment trust managers and 4% with hedge fund managers. For 2017, we will use a 6.3% long-term rate of return for the Retirement Plan. We will continue to evaluate the expected rate of return assumption, at least annually, and will adjust as necessary.

Plan Assets

Plan assets for the U.S. tax qualified plans consist of a diversified portfolio of fixed income securities, equity securities, real estate, and cash equivalents. Plan assets do not include any of our securities. The U.S. pension plan assets are invested in a variety of funds within a Collective Trust ("Trust"). The Trust is a group trust designed to permit qualified trusts to commingle their assets for investment purposes on tax-exempt basis.

Investment Policy and Investment Targets

The tax qualified plans consist of the U.S. pension plan and the U.K. pension scheme (prior to May 28, 2014). We fund amounts for our qualified pension plans at least sufficient to meet minimum requirements of local benefit and tax laws. The investment objectives of our pension plan asset investments is to provide long-term total growth and return, which includes capital appreciation and current income. The nonqualified noncontributory defined benefit pension plan is generally not funded. Assets were invested among several asset classes.

The percentage of assets invested in each asset class at December 31, 2016 and 2015 is shown below.

Asset Class	2016 Percentage in Each Asset Class	2015 Percentage in Each Asset Class
Equity	32.9%	29.4%
Fixed income	53.6	54.8
Real estate investment trust	6.4	6.0
Other	7.1	9.8
	<u>100.0%</u>	<u>100.0%</u>

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Fair Value Measurements

The fair value of our pension plan assets by asset category and by level at December 31 were as follows:

	December 31, 2016	Markets for Identical Assets (Level 1)	Observable Inputs (Level 2)
Cash and cash equivalents	\$ 862	\$ 862	\$ —
Equity securities			
U.S. equity	30,727	—	30,727
Non-U.S. equity	12,797	—	12,797
Emerging markets equity	5,311	—	5,311
Fixed income			
Government bonds	19,511	—	19,511
Corporate bonds	43,156	—	43,156
Mortgage-backed securities	7,987	—	7,987
Asset-backed securities	2,101	—	2,101
Commercial mortgage-backed securities	1,931	—	1,931
International fixed income	4,881	—	4,881
Alternatives			
Real estate	9,472	—	9,472
Hedge funds	8,518	—	8,518
Other	1,090	—	1,090
	<u>\$ 148,344</u>	<u>\$ 862</u>	<u>\$ 147,482</u>

	December 31, 2015	Markets for Identical Assets (Level 1)	Observable Inputs (Level 2)
Cash and cash equivalents	\$ 1,148	\$ 1,148	\$ —
Equity securities			
U.S. equity	26,939	—	26,939
Non-US equity	12,206	—	12,206
Emerging markets equity	4,657	—	4,657
Fixed income			
Government bonds	17,982	—	17,982
Corporate bonds	44,493	—	44,493
Mortgage-backed securities	8,799	—	8,799
Asset-backed securities	1,866	—	1,866
Commercial mortgage-backed securities	2,115	—	2,115
International fixed income	5,852	—	5,852
Alternatives			
Real estate	8,929	—	8,929
Hedge funds	14,629	—	14,629
Other	769	—	769
	<u>\$ 150,384</u>	<u>\$ 1,148</u>	<u>\$ 149,236</u>

We recognize that risk and volatility are present to some degree with all types of investments. However, high levels of risk are minimized through diversification by asset class, by style of each fund.

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Estimated Future Benefit Payments

The following benefit payments are expected to be paid.

Fiscal Year Ended	Pension
2017	\$17,236
2018	12,788
2019	12,945
2020	12,695
2021	14,998
2022—2026	63,639

Expected Contributions

We do not expect to contribute in 2017, however, the actual funding decision will be made after the 2016 valuation is completed.

Postretirement Benefit Plan

We also provide postretirement medical benefits to retired full-time, nonunion employees hired before April 1, 1992, who have provided a minimum of five years of service and attained age 55.

The following table summarizes the Accumulated Postretirement Benefit Obligation (“APBO”), the changes in plan assets, and the funded status of our plan as of and for the financial statement periods ended December 31, 2016 and 2015.

	2016	2015
Change in APBO		
APBO at beginning of period	\$ 25,567	\$ 28,537
Service cost (benefits earned during the period)	163	235
Interest cost on APBO	876	1,081
Employee contributions	253	377
Plan amendments	594	—
Actuarial (gain) loss	(1,131)	(2,090)
Benefits paid	(2,310)	(2,573)
APBO at end of period	<u>\$ 24,012</u>	<u>\$ 25,567</u>
Change in plan assets		
Fair market value at beginning of period	\$ —	\$ —
Company contributions	2,057	2,196
Employee contributions	253	377
Benefits paid	(2,310)	(2,573)
Fair market value at end of period	<u>\$ —</u>	<u>\$ —</u>
Unfunded status	<u>\$ (24,012)</u>	<u>\$ (25,567)</u>

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Amounts for postretirement benefits accrued in the consolidated balance sheets at December 31, 2016 and 2015 consist of:

	2016	2015
Current liabilities	\$ (1,928)	\$ (1,910)
Noncurrent liabilities	<u>(22,084)</u>	<u>(23,657)</u>
Net amount recognized	<u>\$ (24,012)</u>	<u>\$ (25,567)</u>

Amounts not yet reflected in net periodic benefit cost and recognized in accumulated other comprehensive income at December 31, 2016 and 2015 consist of:

	2016	2015
Net gain (loss)	\$ (2,588)	\$ (3,777)
Prior service cost	<u>1,561</u>	<u>3,494</u>
Accumulated other comprehensive income (loss)	<u>\$ (1,027)</u>	<u>\$ (283)</u>

Weighted average actuarial assumptions used to determine APBO at year-end December 31, 2016 and 2015 are:

	2016	2015
Discount rate	4.1%	4.4%
Health care cost trend rate assumed for next year	6.6%	6.9%
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	4.5%	4.5%
Year that the rate reaches the ultimate trend rate	2038	2038

Net periodic postretirement benefit cost included the following components:

	2016	2015	2014
Service cost	\$ 163	\$ 205	\$ 179
Interest cost on APBO	876	1,081	1,183
Amortization of unrecognized prior service cost	(1,339)	(1,381)	(1,381)
Amortization of net (gain) loss	<u>86</u>	<u>220</u>	<u>—</u>
Net periodic postretirement benefit (income) expense	<u>\$ (214)</u>	<u>\$ 125</u>	<u>\$ (19)</u>

Significant actuarial assumptions used to determine postretirement benefit cost at December 31, 2016, 2015 and 2014 are:

	2016	2015	2014
Discount rate	4.4%	3.9%	4.7%
Health care cost trend rate assumed for next year	6.9%	6.9%	7.1%
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	4.5%	4.5%	4.5%
Year that the rate reaches the ultimate trend rate	2038	2027	2027

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Assumed health care trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects on the expense recorded in 2016 and 2015 for the postretirement medical plan:

	2016	2015
One-percentage-point increase		
Effect on total of service and interest cost components	\$ 8	\$ 10
Effect on postretirement benefit obligation	182	202
One-percentage-point decrease		
Effect on total of service and interest cost components	(7)	(9)
Effect on postretirement benefit obligation	(160)	(184)

The following table presents the change in other comprehensive income for the year ended December 31, 2016 related to our pension and postretirement obligations.

	Pension Plans	Postretirement Benefit Plan	Total
Sources of change in accumulated other comprehensive loss			
Prior service cost	\$ —	\$ (594)	\$ (594)
Net loss arising during the period	(9,243)	1,103	(8,140)
Amortization of prior service credit	—	(1,339)	(1,339)
Amortization of net (gain) loss	50	86	136
Total accumulated other comprehensive loss recognized during the period	<u>\$ (9,193)</u>	<u>\$ (744)</u>	<u>\$ (9,937)</u>

Estimated amounts that will be amortized from accumulated other comprehensive income (loss) over the next fiscal year.

	Total Pension Plans	Total Postretirement Plan
Prior service credit (cost)	\$ —	\$ 1,339
Net gain (loss)	(804)	(13)
	<u>\$ (804)</u>	<u>\$ 1,326</u>

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service, are expected to be paid:

Fiscal Year Ended	Postretirement Plan
2017	1,928
2018	1,828
2019	1,784
2020	1,736
2021	1,679
2022-2026	7,853

Expected Contribution

We expect to contribute approximately \$1.9 million in 2017.

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Defined Contribution Retirement Plan

We maintain a defined contribution retirement plan, the Houghton Mifflin 401(k) Savings Plan, which conforms to Section 401(k) of the Internal Revenue Code, and covers substantially all of our eligible employees. Participants may elect to contribute up to 50.0% of their compensation subject to an annual limit. We provide a matching contribution in amounts up to 3.0% of employee contributions. The 401(k) contribution expense amounted to \$7.7 million, \$6.9 million and \$5.7 million for the years ended December 31, 2016, 2015 and 2014, respectively. We did not make any additional discretionary contributions in 2016, 2015 and 2014.

10. Stock-Based Compensation

Total compensation expense related to grants of stock options, restricted stock, restricted stock units, and purchases under the employee stock purchase plan recorded in the years ended December 31, 2016, 2015 and 2014 was approximately \$10.6 million, \$12.5 million and \$11.4 million, respectively, and is included in selling and administrative expense.

2015 Omnibus Incentive Plan

Our Board of Directors adopted the 2015 Omnibus Incentive Plan ("Plan") in February 2015, which became effective on May 19, 2015 following stockholder approval. The Plan provides to grant up to an aggregate of 4,000,000 million shares of our common stock plus 2,615,476 million shares of our common stock that were reserved for issuance under the 2012 Management Incentive Plan ("2012 MIP") as of May 19, 2015 but were not issuable pursuant to any outstanding awards. There were 10,604,071 million additional shares underlying outstanding awards under the 2012 MIP as of May 19, 2015 that could have otherwise become available again for grants under the 2012 MIP in the future (by potential forfeiture, withholding or otherwise) which will instead become reserved for issuance under the Plan in the event such shares become available for future grants.

Our Compensation Committee may grant awards of nonqualified stock options, incentive (qualified) stock options or cash, stock appreciation rights, restricted stock awards, restricted stock units, performance compensation awards, other stock-based awards or any combination of the foregoing. Certain employees, directors, officers, consultants or advisors who have been selected by the Compensation Committee and who enter into an award agreement with respect to an award granted to them under the Plan are eligible for awards under the 2015 Omnibus Incentive Plan. The stock option awards will be granted at a strike price equal to or greater than the fair value per share of common stock as of the date of grant. The stock related to award forfeitures and stock withheld to cover tax withholding requirements upon vesting of restricted stock units remains outstanding and may be reallocated to new recipients. The purpose of the Plan is to help us attract and retain key personnel by providing them the opportunity to acquire an equity interest in our Company.

As of May 19, 2015, there were 6,615,476 shares authorized and available for issuance under the Plan plus any amount that could have otherwise become available again for grants under the 2012 MIP in the future by forfeiture, withholding or otherwise. As of December 31, 2016, there were 6,635,037 shares of common stock underlying awards reserved for future issuance under the Plan. The vesting terms for equity awards generally range from 1 to 4 years over equal annual installments and generally expire seven years after the date of grant.

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Stock Options

The following table summarizes option activity for employees in our stock options:

	Number of Shares	Weighted Average Exercise Price
Balance at December 31, 2014	10,968,152	\$ 13.33
Granted	275,000	21.55
Exercised	(2,916,839)	12.67
Forfeited	(548,500)	16.80
Balance at December 31, 2015	<u>7,777,813</u>	<u>\$ 13.62</u>
Granted	511,830	18.60
Exercised	(1,879,424)	12.63
Forfeited	(910,382)	15.39
Balance at December 31, 2016	<u>5,499,837</u>	<u>\$ 14.13</u>
Vested and expected to vest at December 31, 2016	<u>5,219,265</u>	<u>\$ 13.91</u>
Exercisable at December 31, 2016	<u>4,133,750</u>	<u>\$ 13.26</u>

As of December 31, 2016, the range of exercise prices is \$12.50 to \$22.80 with a weighted average remaining contractual life of 2.4 years for options outstanding. The weighted average remaining contractual life for options vested and expected to vest and exercisable was 2.3 years and 1.6 years, respectively. The intrinsic value of a stock option is the amount by which the current market value of the underlying stock exceeds the exercise price of the option as of the balance sheet date. The intrinsic value of options outstanding, vested and expected to vest and exercisable was zero at December 31, 2016, and approximately \$63.6 million, \$62.5 million and \$39.8 million, respectively, at December 31, 2015.

We estimate the fair value of stock options using the Black-Scholes valuation model. Key input assumptions used to estimate the fair value of stock options include the exercise price of the award, the expected volatility of our stock over the option's expected term, the risk-free interest rate over the option's expected term, and our expected annual dividend yield.

The fair value of each option granted was estimated on the grant date using the Black-Scholes valuation model with the following assumptions:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Expected term (years) (a)	4.75	4.75	4.75
Expected dividend yield	0.00%	0.00%	0.00%
Expected volatility (b)	23.86%-24.26%	20.52%-23.50%	20.40%-22.63%
Risk-free interest rate (c)	1.20%-1.31%	1.53%-1.72%	1.49%-1.82%

- (a) The expected term is the number of years that we estimate that options will be outstanding prior to exercise. We have used the simplified method for estimating the expected term as we do not have sufficient stock option exercise experience to support a reasonable estimate of the expected term.
- (b) We have estimated volatility for options granted based on the historical volatility for a group of companies (including our own) believed to be a representative peer group, and were selected based on industry and market capitalization.

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(c) The risk-free interest rate is based on the U.S. Treasury yield for a period commensurate with the expected life of the option.

We estimate forfeitures at the time of grant and periodically revise those estimates in subsequent periods if actual forfeitures differ from those estimates. Stock-based compensation expense is recorded only for those awards expected to vest using estimated forfeiture rates based on historical forfeiture data.

As of December 31, 2016, there remained approximately \$2.5 million of unearned compensation expense related to unvested stock options to be recognized over a weighted average term of 1.8 years.

The weighted average grant date fair value was \$4.25, \$4.82 and \$4.18 for options granted in 2016, 2015 and 2014, respectively.

Restricted Stock and Restricted Stock Units

The following table summarizes restricted stock activity for grants to certain employees and independent members of the board of directors in our restricted stock and restricted stock units:

	Restricted Stock		Restricted Stock Units	
	Numbers of Units	Weighted Average Grant Date Fair Value	Numbers of Units	Weighted Average Grant Date Fair Value
Balance at December 31, 2014	—	\$ —	171,865	\$ 17.22
Granted	542,882	20.10	208,730	21.02
Vested	—	—	(94,453)	17.22
Forfeited	(24,676)	20.10	(10,746)	21.66
Balance at December 31, 2015	518,206	20.10	275,396	19.93
Granted	—	—	1,017,205	18.68
Vested	(75,622)	20.10	(161,874)	19.66
Forfeited	(120,025)	20.10	(272,940)	20.66
Balance at December 31, 2016	<u>322,559</u>	<u>\$ 20.10</u>	<u>857,787</u>	<u>\$ 18.26</u>

During 2016, we granted market-based restricted stock units to certain members of our senior management team. The number of shares ultimately issued to the recipient is based on the total shareholder return (TSR) of our common stock as compared to the TSR of the common stock of a peer group comprised of each member of the Russell 2000 Small Cap Market Index over a three-year performance measurement period. In addition, award recipients must remain employed by us throughout the three-year performance measurement period to attain the full amount of the market-based units that satisfy the market performance criteria. We determined the fair value of the 2016 market-based restricted stock units to be approximately \$3.0 million. We determined the fair value based on a Monte Carlo simulation as of the date of grant, utilizing the following assumptions: the stock price on the date of grant of \$19.57, a three-year performance measurement period, and a risk-free rate of 0.96%. We recognize the expense on these awards on a straight-line basis over the three-year performance measurement period.

As of December 31, 2016, there remained approximately \$0.5 million and \$7.3 million of unearned compensation expense related to unvested restricted stock and restricted stock units, respectively, to be recognized over a weighted average term of 1.2 and 1.9 years, respectively. The restricted stock and restricted stock units include a combination of time-based and performance-based vesting.

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Employee Stock Purchase Plan

Our Board of Directors adopted an Employee Stock Purchase Plan (“ESPP”) in February 2015, which became effective on May 19, 2015 following stockholder approval. The ESPP provides for up to an aggregate of 1.3 million shares of our common stock may be made available for sale under the plan to eligible employees. At the beginning of each six-month offering period under the ESPP each participant is deemed to have been granted an option to purchase shares of our common stock equal to the amount of their payroll deductions during the period, but in any event not more than five percent of the employee’s eligible compensation, subject to certain limitations. Such options may be exercised only to the extent of accumulated payroll deductions at the end of the offering period, at a purchase price per share equal to 85 percent of the fair market value of our common stock at the beginning or end of each offering period, whichever is less. As of December 31, 2016, there were approximately 1.1 million shares available for future issuance under the ESPP.

Information related to shares issued or to be issued in connection with the ESPP based on employee contributions and the range of purchase prices is as follows:

	December 31, 2016	December 31, 2015
Shares issued or to be issued	178,112	59,714
Range of purchase prices	9.22—	
	\$ 13.29	\$ 18.51

We record stock-based compensation expense related to the discount provided to participants. Also, we use the Black-Scholes option-pricing model to calculate the grant-date fair value of shares issued under the employee stock purchase plan. We recognize expense related to shares purchased through the employee stock purchase plan ratably over the offering period. We recognized \$0.5 million and \$0.3 million in expense associated with our ESPP for the years ended December 31, 2016 and 2015, respectively.

Warrants

Following our emergence from Chapter 11 on June 22, 2012 and in accordance with the plan of reorganization, after giving effect of the 2-for-1 stock split, there were 7,368,422 shares of common stock reserved for issuance upon exercise of warrants under the 2012 MIP. Each existing common stockholder prior to bankruptcy received its pro rata share of warrants to purchase 5% of the common stock of the Company, subject to dilution for equity awards issued in connection with the 2012 MIP. The warrants have a term of seven years. As of December 31, 2016, there were warrants outstanding for the purchase of 7,297,909 shares of common stock at a strike price of \$21.14.

11. Fair Value Measurements

The accounting standard for fair value measurements among other things, defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. The accounting standard establishes a three-tier fair value hierarchy which prioritizes the inputs used in measuring fair value as follows:

- Level 1 Observable input such as quoted prices in active markets for identical assets or liabilities;
- Level 2 Observable inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3 Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

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Assets and liabilities measured at fair value are based on one or more of three valuation techniques identified in the tables below. Where more than one technique is noted, individual assets or liabilities were valued using one or more of the noted techniques. The valuation techniques are as follows:

- (a) Market approach: Prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities;
- (b) Cost approach: Amount that would be currently required to replace the service capacity of an asset (current replacement cost); and
- (c) Income approach: Valuation techniques to convert future amounts to a single present amount based on market expectations (including present value techniques).

On a recurring basis, we measure certain financial assets and liabilities at fair value, including our money market funds, short-term investments which consist of U.S. treasury securities and U.S. agency securities, foreign exchange forward and option contracts, and interest rate derivatives contracts. The accounting standard for fair value measurements defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. In determining fair value, we utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as consider counterparty and its credit risk in its assessment of fair value.

Financial Assets and Liabilities

The following tables present our financial assets and liabilities measured at fair value on a recurring basis at December 31, 2016 and 2015:

	2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Valuation Technique
Financial assets				
Money market funds	\$ 184,968	\$ 184,968	\$ —	(a)
U.S. treasury securities	14,457	14,457	—	(a)
U.S. agency securities	66,384	—	66,384	(a)
	<u>\$ 265,809</u>	<u>\$ 199,425</u>	<u>\$ 66,384</u>	
Financial liabilities				
Foreign exchange derivatives	\$ 816	\$ —	\$ 816	(a)
Interest rate derivatives	6,108	—	6,108	(a)
	<u>\$ 6,924</u>	<u>\$ —</u>	<u>\$ 6,924</u>	

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	2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Valuation Technique
Financial assets				
Money market funds	\$ 175,465	\$ 175,465	\$ —	(a)
U.S. treasury securities	8,994	8,994	—	(a)
U.S. agency securities	189,152	—	189,152	(a)
	<u>\$ 373,611</u>	<u>\$ 184,459</u>	<u>\$ 189,152</u>	
Financial liabilities				
Foreign exchange derivatives	\$ 340	\$ —	\$ 340	(a)
Interest rate derivatives	3,641	—	3,641	(a)
	<u>\$ 3,981</u>	<u>\$ —</u>	<u>\$ 3,981</u>	

Our money market funds and U.S. treasury securities are classified within Level 1 of the fair value hierarchy because they are valued using quoted prices in active markets for identical instruments. Our U.S. agency securities are classified within level 2 of the fair value hierarchy because they are valued using other than quoted prices in active markets. In addition to \$185.0 million and \$175.5 million invested in money market funds as of December 31, 2016 and 2015, respectively, we had \$41.1 million and \$58.8 million of cash invested in bank accounts as of December 31, 2016 and 2015, respectively.

Our foreign exchange derivatives consist of forward and option contracts and are classified within Level 2 of the fair value hierarchy because they are valued based on observable inputs and are available for substantially the full term of our derivative instruments. We use foreign exchange forward and option contracts to fix the functional currency value of forecasted commitments, payments and receipts. The aggregate notional amount of the outstanding foreign exchange forward and option contracts was \$16.2 million and \$17.5 million at December 31, 2016 and 2015, respectively. Our foreign exchange forward and option contracts contain netting provisions to mitigate credit risk in the event of counterparty default, including payment default and cross default. At December 31, 2016 and 2015, the fair value of our counterparty default exposure was less than \$1.0 million and spread across several highly rated counterparties.

Non-Financial Assets and Liabilities

Our non-financial assets, which include goodwill, other intangible assets, property, plant, and equipment, and pre-publication costs, are not required to be measured at fair value on a recurring basis. However, if certain trigger events occur, or if an annual impairment test is required, we evaluate the nonfinancial assets for impairment. If an impairment did occur, the asset is required to be recorded at the estimated fair value. There were no non-financial assets that were required to be measured at fair value during 2015.

The following table presents our nonfinancial assets and liabilities measured at fair value on a nonrecurring basis during 2016:

	2016	Significant Unobservable Inputs (Level 3)	Total Impairment	Valuation Technique
Nonfinancial assets				
Other intangible assets	<u>\$65,400</u>	<u>\$ 65,400</u>	<u>\$ 139,205</u>	(a)(c)

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We review software and platform development costs, included within property, plant, and equipment, for impairment. There was no impairment of software and platform developments costs for the years ended December 31, 2016 and 2015.

Pre-publication costs recorded on the balance sheet are periodically reviewed for impairment by comparing the unamortized capitalized costs of the assets to the fair value of those assets. There was no impairment of pre-publication costs for the years ended December 31, 2016 and 2015.

In evaluating goodwill for impairment, we first compare our reporting unit's fair value to its carrying value. We estimate the fair values of our reporting units by considering market multiple and recent transaction values of peer companies, where available, and projected discounted cash flows, if reasonably estimable. There was no impairment recorded for goodwill for the years ended December 31, 2016 and 2015.

We perform an impairment test for our other intangible assets by comparing the assets fair value to its carrying value. Fair value is estimated based on recent market transactions, where available, and projected discounted cash flows, if reasonably estimable. There was a \$139.2 million impairment recorded for the year ended December 31, 2016 for intangible assets due to the carrying value of four specific tradenames within the Education business segment exceeding the implied fair value, primarily due to the Company making the strategic decision to gradually migrate away from specific imprints, primarily the Holt McDougal and various supplemental brands, and to market our products under the corporate Houghton Mifflin Harcourt and HMH names. In connection with the tradename impairment test, we performed a discounted cash flow analysis using a relief from royalty method on a specific tradename basis. We used a weighted average royalty rate of 4.1%, weighted average discount rate of 9.1% and maximum long-term growth rates of 2.0%. The \$65.4 million presented in the table above represents the net book value of the other intangible assets that were subject to impairment immediately after the \$139.2 million impairment was recorded. There was no impairment of other intangible assets for the year ended December 31, 2015. There was a \$0.4 million impairment recorded for the year ended December 31, 2014, relating to two specific tradename intangible assets within the Trade Publishing business segment. The fair value of goodwill and other intangible assets are estimates, which are inherently subject to significant uncertainties, and actual results could vary significantly from these estimates.

Fair Value of Debt

The following table presents the carrying amounts and estimated fair market values of our debt at December 31, 2016 and 2015. The fair value of debt is deemed to be the amount at which the instrument could be exchanged in an orderly transaction between market participants at the measurement date.

	December 31, 2016		December 31, 2015	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Debt				
Term Loan	\$ 772,738	\$ 732,169	\$ 777,283	\$ 752,021

The fair market values of our debt were estimated based on quoted market prices on a private exchange for those instruments that are traded and are classified as level 2 within the fair value hierarchy at December 31, 2016 and 2015. The fair market values require varying degrees of management judgment. The factors used to estimate these values may not be valid on any subsequent date. Accordingly, the fair market values of the debt presented may not be indicative of their future values.

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

12. Commitments and Contingencies**Lease Obligations**

We have operating leases for various real property, office facilities, and warehouse equipment that expire at various dates through 2021 and thereafter. Certain leases contain renewal and escalation clauses for a proportionate share of operating expenses.

The future minimum rental commitments under all noncancelable leases (with initial or remaining lease terms in excess of one year) for real estate and equipment are payable as follows:

	Operating Leases
2017	39,674
2018	37,288
2019	33,411
2020	21,633
2021	20,997
Thereafter	205,752
Total minimum lease payments	<u>\$ 358,755</u>
Total future minimal rentals under subleases	<u>\$ 5,677</u>

For the years ended December 31, 2016, 2015 and 2014 rent expense, net of sublease income, was \$32.1 million, \$26.3 million and \$26.8 million, respectively. For the years ended December 31, 2016, 2015 and 2014, the rent expense included a \$3.3 million, \$0.4 million and \$2.3 million charge as additional real estate was vacated.

Contingencies

We are involved in ordinary and routine litigation and matters incidental to our business. Litigation alleging infringement of copyrights and other intellectual property rights has become extensive in the educational publishing industry. Specifically, there have been various settled, pending and threatened litigation that allege we exceeded the print run limitation or other restrictions in licenses granted to us to reproduce photographs in our textbooks. While management believes that there is a reasonable possibility we may incur a loss associated with the pending and threatened litigation, we are not able to estimate such amount, but we do not expect any of these matters to have a material adverse effect on our results of operations, financial position or cash flows. We have insurance over such amounts and with coverage and deductibles as management believes is reasonable. There can be no assurance that our liability insurance will cover all events or that the limits of coverage will be sufficient to fully cover all liabilities. During 2016, we settled all such pending or actively threatened litigations alleging infringement of copyrights, and made total settlement payments of \$10.0 million collectively, with \$4.0 million paid during the third quarter of 2016 and \$6.0 million paid during the fourth quarter of 2016. We received approximately \$4.5 million of insurance recovery proceeds during February 2017.

We were contingently liable for \$4.1 million and \$9.4 million of performance related surety bonds for our operating activities as of December 31, 2016 and 2015, respectively. An aggregate of \$31.7 million and \$31.9 million of letters of credit existed each year at December 31, 2016 and 2015 of which \$2.4 million and \$2.5 million backed the aforementioned performance related surety bonds each year in 2016 and 2015, respectively.

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

We routinely enter into standard indemnification provisions as part of license agreements involving use of our intellectual property. These provisions typically require us to indemnify and hold harmless licensees in connection with any infringement claim by a third party relating to the intellectual property covered by the license agreement. The assessment business routinely enters into contracts with customers that contain provisions requiring us to indemnify the customer against a broad array of potential liabilities resulting from any breach of the contract or the invalidity of the test. Although the term of these provisions and the maximum potential amounts of future payments we could be required to make is not limited, we have never incurred any costs to defend or settle claims related to these types of indemnification provisions. We therefore believe the estimated fair value of these provisions is inconsequential, and have no liabilities recorded for them as of December 31, 2016 and December 31, 2015.

13. Stockholders' Equity

Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss consisted of the following at December 31, 2016, 2015 and 2014:

	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net change in pension and benefit plan liability	\$(41,235)	\$(31,298)	\$(24,198)
Foreign currency translation adjustments	(5,862)	(4,642)	(2,502)
Unrealized gain on short-term investments	(90)	(147)	(89)
Net change in unrealized loss on derivative instruments	(6,108)	(3,641)	—
	<u>\$(53,295)</u>	<u>\$(39,728)</u>	<u>\$(26,789)</u>

Amounts reclassified from accumulated other comprehensive loss for the years ended December 31, 2016, 2015 and 2014 relating to the amortization of defined benefit pension and postretirement benefit plans totaled approximately \$0.5 million, \$1.2 million and \$0.8 million, respectively, and affected the selling and administrative line item in the consolidated statement of operations. These accumulated other comprehensive loss components are included in the computation of net periodic benefit cost.

Stock Repurchase Program

Our Board of Directors has authorized the repurchase of up to \$1.0 billion in aggregate value of the Company's common stock. As of December 31, 2016, there was approximately \$482.0 million available for share repurchases under this authorization. The aggregate share repurchase program may be executed through December 31, 2018. Repurchases under the program may be made from time to time in the open market (including under a trading plan) or in privately negotiated transactions. The extent and timing of any such repurchases would generally be at our discretion and subject to market conditions, applicable legal requirements and other considerations. Any repurchased shares may be used for general corporate purposes.

The Company's share repurchase activity was as follows:

	<u>Year Ended</u> <u>December 31, 2016</u>	<u>Year Ended</u> <u>December 31, 2015</u>
Cost of repurchases	\$ 55,017	\$ 463,013
Shares repurchased	2,903,566	21,591,446
Average cost per share	\$ 18.95	\$ 21.44

In connection with the Company's stock repurchase program, during the year ended December 31, 2015, the Company repurchased shares of its common stock from certain of its stockholders who (through affiliates of such stockholders) each beneficially owned more than 5% of the Company's common stock at certain points

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

during 2015. On May 20, 2015, the Company repurchased an aggregate of 6,521,739 shares from affiliates of Paulson & Co. Inc. (“Paulson”), for an aggregate purchase price of approximately \$150.0 million. On June 30, 2015, the Company repurchased an aggregate of 1,306,977 shares from affiliates of Anchorage Capital Group, L.L.C., for an aggregate purchase price of approximately \$33.5 million. On September 11, 2015, the Company repurchased an aggregate of 439,560 shares from affiliates of Paulson, for an aggregate purchase price of approximately \$10.0 million. The purchase prices for these shares were based on negotiated fair values which approximated either the closing prices of the shares or a modest discount to the closing price. The purchase prices from these share repurchases are included within repurchases of common stock under cash flows from financing activities in the accompanying consolidated statements of cash flows for the year ended December 31, 2015 and within treasury stock under stockholders’ equity in the accompanying consolidated balance sheets as of December 31, 2015.

14. Related Party Transactions

A company controlled by an immediate family member of our former Chief Executive Officer performed web-design services for the Company in 2015 and 2014. For the years ended December 31, 2015 and 2014, we were billed \$0.1 million and \$0.4 million, respectively, for those services.

Pursuant to the terms of the Investor Rights Agreement, we paid approximately \$10.5 million in underwriting fees and commissions and other offering expenses on behalf of Paulson for a secondary public offering of 12,161,595 shares of our common stock sold by affiliates of Paulson on May 20, 2015, which is included in the selling and administrative line item in our statement of operations for the year ended December 31, 2015. Prior to giving effect to the sale of the common stock in such offering, Paulson was the beneficial owner of more than 15% of our outstanding common stock.

For a description of the repurchases of common stock from certain stockholders, and the effects of these repurchases on our financial statements, refer to Note 13, “*Stockholders’ Equity—Stock Repurchase Program.*”

15. Net Loss Per Share

The following table sets forth the computation of basic and diluted earnings per share (“EPS”):

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Numerator			
Net loss attributable to common stockholders	\$ (284,558)	\$ (133,869)	\$ (111,491)
Denominator			
Weighted average shares outstanding			
Basic	122,418,474	136,760,107	140,594,689
Diluted	122,418,474	136,760,107	140,594,689
Net loss per share attributable to common stockholders			
Basic	\$ (2.32)	\$ (0.98)	\$ (0.79)
Diluted	\$ (2.32)	\$ (0.98)	\$ (0.79)

As we incurred a net loss in each of the periods presented above, all outstanding stock options, restricted stock, restricted stock units, and warrants for those periods have an anti-dilutive effect and therefore are excluded from the computation of diluted weighted average shares outstanding. Accordingly, basic and diluted weighted average shares outstanding are equal for such periods.

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

The following table summarizes our weighted average outstanding common stock equivalents that were anti-dilutive attributable to common stockholders during the periods, and therefore excluded from the computation of diluted EPS:

	For the Year Ended December 31, 2016	For the Year Ended December 31, 2015	For the Year Ended December 31, 2014
Stock options	5,322,266	7,637,005	10,341,948
Restricted stock and restricted stock units	715,504	537,266	153,314
Warrants	—	7,326,884	—

16. Segment Reporting

As of December 31, 2016, we had two reportable segments (Education and Trade Publishing). Our Education segment provides educational products, technology platforms and services to meet the diverse needs of today's classrooms. These products and services include print and digital content in the form of textbooks, digital courseware, instructional aids, educational assessment and intervention solutions, which are aimed at improving achievement and supporting learning for students that are not keeping pace with peers, professional development and school reform services. Our Trade Publishing segment primarily develops, markets and sells consumer books in print and digital formats and licenses book rights to other publishers and electronic businesses in the United States and abroad. The principal distribution channels for Trade Publishing products are retail stores, both physical and online, and wholesalers. Reference materials are also sold to schools, colleges, libraries, office supply distributors and other businesses.

We measure and evaluate our reportable segments based on net sales and segment Adjusted EBITDA. We exclude from our segments certain corporate-related expenses, as our corporate functions do not meet the definition of a segment, as defined in the accounting guidance relating to segment reporting. In addition, certain transactions or adjustments that our Chief Operating Decision Maker considers to be non-operational, such as amounts related to goodwill and other intangible asset impairment charges, derivative instruments charges, acquisition-related activity, restructuring/integration costs, severance, separation costs and facility closures, equity compensation charges, debt extinguishment losses, legal settlement charges, amortization and depreciation expenses, as well as interest and taxes, are excluded from segment Adjusted EBITDA. 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.

(in thousands)	Year Ended December 31,		
	Education	Trade Publishing	Corporate/ Other
2016			
Net sales	\$1,207,070	\$ 165,615	\$ —
Segment Adjusted EBITDA	225,672	6,255	(48,506)
2015			
Net sales	\$1,251,122	\$ 164,937	\$ —
Segment Adjusted EBITDA	269,386	7,703	(42,110)
2014			
Net sales	\$1,209,142	\$ 163,174	\$ —
Segment Adjusted EBITDA	298,483	12,675	(45,775)

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Notes to Consolidated Financial Statements*(in thousands of dollars, except share and per share information)*

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

(in thousands)	Years Ended December 31,		
	2016	2015	2014
Total Segment Adjusted EBITDA	\$ 183,421	\$ 234,979	\$ 265,383
Interest expense	(38,663)	(32,045)	(18,245)
Depreciation expense	(79,825)	(72,639)	(72,290)
Amortization expense	(218,344)	(223,551)	(247,487)
Non-cash charges—stock compensation	(10,567)	(12,452)	(11,376)
Non-cash charges—loss on derivative instruments	(614)	(2,362)	(1,593)
Non-cash charges—asset impairment charges	(139,205)	—	(1,679)
Purchase accounting adjustments	(5,116)	(7,487)	(3,661)
Fees, expenses or charges for equity offerings, debt or acquisitions	(1,123)	(25,562)	(4,424)
Restructuring/Integration	(14,364)	(4,572)	(2,577)
Severance, separation costs and facility closures	(15,650)	(4,767)	(7,300)
Loss on extinguishment of debt	—	(3,051)	—
Legal settlement	(10,000)	—	—
Loss from operations before taxes	(350,050)	(153,509)	(105,249)
Provision (benefit) for income taxes	(65,492)	(19,640)	6,242
Net loss	<u>\$ (284,558)</u>	<u>\$ (133,869)</u>	<u>\$ (111,491)</u>

Segment information as of December 31, 2016 and 2015 is as follows:

(in thousands)	2016	2015
Total assets—Education segment	\$ 2,206,309	\$ 2,447,042
Total assets—Trade Publishing segment	183,356	202,411
Total assets—Corporate and Other	341,806	472,497
	<u>\$ 2,731,471</u>	<u>\$ 3,121,950</u>

The following represents long-lived assets outside of the United States, which are substantially in Ireland. All other long-lived assets are located in the United States.

(in thousands)	2016	2015
Long-lived assets—International	<u>\$498</u>	<u>\$1,643</u>

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements

(in thousands of dollars, except share and per share information)

The following is a schedule of net sales by geographic region:

(in thousands)	
Year Ended December 31, 2016	
Net sales—U.S.	\$ 1,284,562
Net sales—International	88,123
Total net sales	<u>\$ 1,372,685</u>
Year Ended December 31, 2015	
Net sales—U.S.	\$ 1,337,897
Net sales—International	78,162
Total net sales	<u>\$ 1,416,059</u>
Year Ended December 31, 2014	
Net sales—U.S.	\$ 1,291,199
Net sales—International	81,117
Total net sales	<u>\$ 1,372,316</u>

17. Valuation and Qualifying Accounts

	Balance at Beginning of Year	Net Charges to Revenues or Expenses and Additions	Utilization of Allowances	Balance at End of Year
2016				
Allowance for doubtful accounts	\$ 8,459	\$ 734	\$ (5,617)	\$ 3,576
Reserve for returns	24,288	54,059	(59,376)	18,971
Reserve for royalty advances	70,014	16,270	(722)	85,562
Deferred tax valuation allowance	664,730	98,949	(3,792)	759,887
2015				
Allowance for doubtful accounts	\$ 5,625	\$ 4,109	\$ (1,275)	\$ 8,459
Reserve for returns	22,159	67,764	(65,636)	24,288
Reserve for royalty advances	55,000	15,240	(226)	70,014
Deferred tax valuation allowance	550,660	116,935	(2,865)	664,730
2014				
Allowance for doubtful accounts	\$ 5,084	\$ 3,274	\$ (2,733)	\$ 5,625
Reserve for returns	35,548	53,877	(67,266)	22,159
Reserve for royalty advances	41,248	13,829	(77)	55,000
Deferred tax valuation allowance	527,960	25,947	(3,247)	550,660

Houghton Mifflin Harcourt Company
Notes to Consolidated Financial Statements*(in thousands of dollars, except share and per share information)***18. Quarterly Results of Operations (Unaudited)**

	Three Months Ended			
	March 31,	June 30,	September 30,	December 31,
2016:				
Net sales	\$ 205,816	\$392,042	\$ 533,021	\$ 241,806
Gross profit	54,224	172,848	278,368	64,936
Operating income (loss)	(122,204)	(21,152)	83,371	(250,788)
Net income (loss)	(165,148)	(28,391)	90,022	(181,041)
2015:				
Net sales	\$ 162,669	\$379,883	\$ 575,507	\$ 298,000
Gross profit	16,494	164,750	303,220	107,414
Operating income (loss)	(130,790)	(11,183)	102,559	(76,637)
Net income (loss)	(159,940)	(7,743)	131,081	(97,267)

Our net sales, operating profit or loss and net cash provided by or used in operations are impacted by the inherent seasonality of the academic calendar. Consequently, the performance of our businesses may not be comparable quarter to consecutive quarter and should be considered on the basis of results for the whole year or by comparing results in a quarter with results in the same quarter for the previous year.

During the six months ended June 30, 2016, we recorded out-of-period corrections of approximately \$2.9 million increasing net sales and reducing deferred revenue that should have been recognized previously. Management believes these out-of-period corrections are not material to the current period financial statements or any previously issued financial statements.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 (as amended, the “Exchange Act”). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures as of December 31, 2016 were effective to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and the information required to be disclosed by us is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Management’s Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) promulgated under the Securities Exchange Act of 1934. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and disposition of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or dispositions of the Company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The Company’s management assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2016. In making this assessment, the Company’s management used the criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on our assessment and the aforementioned criteria (and subject to the aforementioned exclusion), management concluded that, as of December 31, 2016, the Company’s internal control over financial reporting was effective.

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The effectiveness of the Company's internal control over financial reporting as of December 31, 2016 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein in Item 8 of this Annual Report.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting in the quarter ended December 31, 2016 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

Item 10. Directors, Executive Officers and Corporate Governance

Except to the extent provided below, the information required by this Item shall be set forth in our Proxy Statement for our 2017 Annual Meeting of Stockholders, to be filed with the SEC within 120 days of December 31, 2016, and is incorporated into this Annual Report by reference.

We have adopted a Code of Conduct that applies to our principal executive officer, principal financial officer and principal accounting officer or any person performing similar functions, which we post on our website in the "Corporate Governance" link located at: ir.hmhc.com. We intend to publish any amendment to, or waiver from, the Code of Conduct on our website. We will provide any person, without charge, a copy of such Code of Conduct upon written request, which may be mailed to 125 High Street, Boston, MA 02110, Attn: Corporate Secretary.

Item 11. Executive Compensation

The information required by this Item shall be set forth in our Proxy Statement for our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2016, and is incorporated into this Annual Report by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholders Matters

The information required by this Item shall be set forth in our Proxy Statement for our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2016, and is incorporated into this Annual Report by reference.

Item 13. Certain Relationships and Related Transactions

The information required by this Item shall be set forth in our Proxy Statement for our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2016, and is incorporated into this Annual Report by reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item shall be set forth in our Proxy Statement for our 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days of December 31, 2016, and is incorporated into this Annual Report by reference.

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of the report.	
(1) Consolidated Financial Statements	
Report of Independent Registered Public Accounting Firm	61
Consolidated Balance Sheets as of December 31, 2016 and 2015	62
Consolidated Statements of Operations for the years ended December 31, 2016, 2015 and 2014	63
Consolidated Statements of Comprehensive Loss for the years ended December 31, 2016, 2015 and 2014	64
Consolidated Statements of Cash Flows for the years ended December 31, 2016, 2015 and 2014	65
Consolidated Statements of Stockholders' Equity for the years ended December 31, 2016, 2015 and 2014	66
Notes to Consolidated Financial Statements	67
(2) Financial Statement Schedules.	110
Schedule II—"Valuation and Qualifying Accounts" is included herein as Note 17 in the Notes to Consolidated Financial Statements.	
(3) Exhibits.	115
See the Exhibit Index.	

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
2.1	Prepackaged Joint Plan of Reorganization of the Debtors Under Chapter 11 of the Bankruptcy Code by and among Houghton Mifflin Harcourt Publishing Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, Houghton Mifflin Holding Company, Inc., Houghton Mifflin, LLC, Houghton Mifflin Finance, Inc., Houghton Mifflin Holdings, Inc., HM Publishing Corp., Riverdeep Inc., A Limited Liability Company, Broderbund LLC, RVDP, Inc., HRW Distributors, Inc., Greenwood Publishing Group, Inc., Classroom Connect, Inc., Achieve! Data Solutions, LLC, Steck-Vaughn Publishing LLC, HMH Supplemental Publishers Inc., HMH Holdings (Delaware), Inc., Sentry Realty Corporation, Houghton Mifflin Company International, Inc., The Riverside Publishing Company, Classwell Learning Group Inc., Cognitive Concepts, Inc., Edusoft And Advanced Learning Centers, Inc. (incorporated herein by reference to Exhibit No. 2.1 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
2.2	Stock and Asset Purchase Agreement dated as of April 23, 2015, by and among Houghton Mifflin Harcourt Publishing Company, as Purchaser, Scholastic Corporation, as Parent Seller, and Scholastic Inc., as Seller (incorporated herein by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, filed April 24, 2015 (File No. 001-36166)). Certain schedules and similar attachments to this Exhibit 2.1 have been omitted in accordance with Regulation S-K Item 601(b)(2). The Company agrees to furnish supplementally a copy of all omitted schedules and similar attachments to the SEC upon its request.
3.1	Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit No. 3.1 to Amendment No. 4 to the Company's Registration Statement on Form S-1, filed October 25, 2013 (File No. 333-190356)).
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation (incorporated herein by reference to Exhibit No. 3.2 to Amendment No. 4 to the Company's Registration Statement on Form S-1, filed October 25, 2013 (File No. 333-190356)).
3.3	Amended and Restated By-laws (incorporated herein by reference to Exhibit No. 3.1 to the Company's Current Report on Form 8-K, filed November 19, 2013 (File No. 001-36166)).
4.1	Investor Rights Agreement, dated as of June 22, 2012, by and among HMH Holdings (Delaware), Inc. and the stockholders party thereto (incorporated herein by reference to Exhibit No. 4.1 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
4.2	Specimen Common Stock Certificate (incorporated herein by reference to Exhibit No. 4.3 to Amendment No. 4 to the Company's Registration Statement on Form S-1, filed October 25, 2013 (File No. 333-190356)).
4.3	Form of Warrant Certificate (incorporated herein by reference to Exhibit No. 4.4 to Amendment No. 2 to the Company's Registration Statement on Form S-1, filed October 4, 2013 (File No. 333-190356)).
4.4	Warrant Agreement, dated as of June 22, 2012, among HMH Holdings (Delaware), Inc., Computershare Inc. and Computershare Trust Company, N.A. (incorporated herein by reference to Exhibit No. 4.5 to Amendment No. 2 to the Company's Registration Statement on Form S-1, filed October 4, 2013 (File No. 333-190356)).
10.1†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan (incorporated herein by reference to Exhibit No. 10.1 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).

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<u>Exhibit No.</u>	<u>Description</u>
10.2†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Form of Stock Option Award Notice (incorporated herein by reference to Exhibit No. 10.2 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.3†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Form of Restricted Stock Unit Award Notice (incorporated herein by reference to Exhibit No. 10.3 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.4†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Form of Non-Employee Grantee Restricted Stock Unit Award Notice (incorporated herein by reference to Exhibit No. 10.4 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.5†	HMH Holdings (Delaware), Inc. Change in Control Severance Plan (incorporated herein by reference to Exhibit No. 10.5 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.6†	Employment Agreement, effective as of August 1, 2013, by and between HMH Holdings (Delaware), Inc. and Linda K. Zecher (incorporated herein by reference to Exhibit No. 10.6 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.7†	Employment Agreement, effective as of August 1, 2013, by and between HMH Holdings (Delaware), Inc. and Eric L. Shuman (incorporated herein by reference to Exhibit No. 10.7 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.8†	John Dragoon Offer Letter dated March 27, 2012 (incorporated herein by reference to Exhibit No. 10.8 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.9†	William Bayers Offer Letter dated April 10, 2007, as amended on May 14, 2009 (incorporated herein by reference to Exhibit No. 10.9 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.11†	Form of Director Compensation Letter (incorporated herein by reference to Exhibit No. 10.11 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.12†	Form of Indemnification Agreement (incorporated herein by reference to Exhibit No. 10.12 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.13	Superpriority Senior Secured Debtor-in-Possession and Exit Term Loan Credit Agreement, dated as of May 22, 2012 by and among HMH Holdings (Delaware), Inc. as Holdings, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company as Borrowers, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit No. 10.13 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.14	First Amendment to DIP/Exit Term Loan Credit Agreement, dated as of June 11, 2012, by and among HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit No. 10.14 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).

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<u>Exhibit No.</u>	<u>Description</u>
10.15	Letter Waiver and Amendment No. 2 to Credit Agreement, dated as of June 20, 2012, by and among HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors thereto, and Citibank, N.A. as a lender (incorporated herein by reference to Exhibit No. 10.15 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.16	Term Facility Guarantee and Collateral Agreement, dated as of May 22, 2012, by and among the Company and HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiaries of HMH Holdings (Delaware), Inc. from time to time party thereto, and Citibank, N.A. as Collateral Agent. (incorporated herein by reference to Exhibit No. 10.16 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.17	Amendment No. 3 to Superpriority Senior Secured Debtor-in-Possession and Exit Term Loan Credit Agreement, and Amendment No. 1 to Term Facility Guarantee and Collateral Agreement, dated as of May 24, 2013, by and among HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit No. 10.17 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.18	Superpriority Senior Secured Debtor-in-Possession and Exit Revolving Loan Credit Agreement, dated as of May 22, 2012, by and among HMH Holdings (Delaware), Inc. as Holdings, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company as Borrowers, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit No. 10.18 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.19	First Amendment to DIP/Exit Revolving Loan Credit Agreement, dated as of June 20, 2012, by and among HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit No. 10.19 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.20	Second Amendment to DIP/Exit Revolving Loan Credit Agreement, dated as of June 20, 2012, by and among HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit No. 10.20 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.21	Revolving Facility Guarantee and Collateral Agreement, dated as of May 22, 2012, by and among HMH Holdings (Delaware), Inc., Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiaries of HMH Holdings (Delaware), Inc. from time to time party thereto, and Citibank, N.A. as Collateral Agent (incorporated herein by reference to Exhibit No. 10.21 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).

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<u>Exhibit No.</u>	<u>Description</u>
10.22	Term Loan/Revolving Facility Lien Subordination and Intercreditor Agreement, dated as of May 22, 2012, by and among Citibank, N.A., as Revolving Facility Agent, and Citibank, N.A., as Term Facility Agent, HMH Holdings (Delaware), Inc. as Holdings, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company as Borrowers, and the subsidiary guarantors named therein (incorporated herein by reference to Exhibit No. 10.22 to Amendment No. 1 to the Company's Registration Statement on Form S-1, filed September 13, 2013 (File No. 333-190356)).
10.23	Amendment No. 4 to the Superpriority Senior Secured Debtor-In-Possession and Exit Term Loan Credit Agreement, dated as of January 15, 2014, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC, Houghton Mifflin Harcourt Publishing Company, certain other subsidiaries of Houghton Mifflin Harcourt Company, as Subsidiary Guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated herein by reference to Exhibit No. 10.1 to the Company's Current Report on Form 8-K, filed January 16, 2014 (File No. 001-36166)).
10.24†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Form of Restricted Stock Unit Award Notice (incorporated herein by reference to Exhibit No. 10.1 to the Company's Current Report on Form 8-K, filed February 6, 2014 (File No. 001-36166)).
10.25†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Restricted Stock Unit Award Notice, dated January 31, 2014, by and between Houghton Mifflin Harcourt Company and Eric Shuman (incorporated herein by reference to Exhibit No. 10.2 to the Company's Current Report on Form 8-K, filed February 6, 2014 (File No. 001-36166)).
10.26†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Restricted Stock Unit Award Notice, dated January 31, 2014, by and between Houghton Mifflin Harcourt Company and William F. Bayers (incorporated herein by reference to Exhibit No. 10.3 to the Company's Current Report on Form 8-K, filed February 6, 2014 (File No. 001-36166)).
10.27†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Restricted Stock Unit Award Notice, dated January 31, 2014, by and between Houghton Mifflin Harcourt Company and John Dragoon (incorporated herein by reference to Exhibit No. 10.4 to the Company's Current Report on Form 8-K, filed February 6, 2014 (File No. 001-36166)).
10.28†	Mary Cullinane Offer Letter dated October 21, 2011 (incorporated herein by reference to Exhibit No. 10.28 to the Company's Annual Report on Form 10-K, filed March 27, 2014 (File No. 001-36166)).
10.29†	Lee R. Ramsayer Offer Letter dated January 25, 2012 (incorporated herein by reference to Exhibit No. 10.29 to the Company's Annual Report on Form 10-K, filed March 27, 2014 (File No. 001-36166)).
10.30†	Brook M. Colangelo Offer Letter dated November 2, 2012 (incorporated herein by reference to Exhibit No. 10.30 to the Company's Annual Report on Form 10-K, filed March 27, 2014 (File No. 001-36166)).
10.31†	Houghton Mifflin Harcourt Severance Plan, dated September 5, 2014 (incorporated herein by reference to Exhibit No. 10.01 to the Company's Quarterly Report on Form 10-Q, filed November 6, 2014 (File No. 001-36166)).
10.32†	Bridgett P. Paradise Offer Letter dated June 11, 2014 (incorporated herein by reference to Exhibit No. 10.32 to the Company's Annual Report on Form 10-K, filed February 26, 2015 (File No. 001-36166)).
10.33†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Performance-Based Restricted Stock Award Notice (incorporated herein by reference to Exhibit No. 10.33 to the Company's Annual Report on Form 10-K, filed February 26, 2015 (File No. 001-36166)).

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<u>Exhibit No.</u>	<u>Description</u>
10.34†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Performance-Based Restricted Stock Unit Award Notice (incorporated herein by reference to Exhibit No. 10.34 to the Company's Annual Report on Form 10-K, filed February 26, 2015 (File No. 001-36166)).
10.35†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Time-Based Restricted Stock Award Notice (incorporated herein by reference to Exhibit No. 10.35 to the Company's Annual Report on Form 10-K, filed February 26, 2015 (File No. 001-36166)).
10.36†	HMH Holdings (Delaware), Inc. 2012 Management Incentive Plan Time-Based Restricted Stock Unit Award Notice (incorporated herein by reference to Exhibit No. 10.32 to the Company's Annual Report on Form 10-K, filed February 26, 2015 (File No. 001-36166)).
10.37	Third Amendment, dated as of April 23, 2015, to the Superpriority Senior Secured Debtor-in-Possession and Exit Revolving Loan Credit Agreement, dated as of May 22, 2012, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed April 24, 2015 (File No. 001-36166)).
10.38	Fourth Amendment, dated as of May 19, 2015, to the Superpriority Senior Secured Debtor-in-Possession and Exit Revolving Loan Credit Agreement, dated as of May 22, 2012, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers, LLC, and Houghton Mifflin Harcourt Publishing Company, the subsidiary guarantors and lenders party thereto, and Citibank, N.A. as Administrative Agent and Collateral Agent (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed May 20, 2015 (File No. 001-36166)).
10.39	Amended and Restated Term Loan Credit Agreement, dated as of May 29, 2015, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC, Houghton Mifflin Harcourt Publishing Company, certain other subsidiaries of Houghton Mifflin Harcourt Company, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed May 29, 2015 (File No. 001-36166)).
10.40	Amended and Restated Term Facility Guarantee and Collateral Agreement, dated as of May 29, 2015, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC, Houghton Mifflin Harcourt Publishing Company, the subsidiaries of Houghton Mifflin Harcourt Company from time to time party thereto and Citibank, N.A., as collateral agent (incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, filed May 29, 2015 (File No. 001-36166)).
10.41†	Houghton Mifflin Harcourt Company Employee Stock Purchase Plan (incorporated herein by reference to Exhibit 10.1 to the Company's Registration Statement on Form S-8, filed May 29, 2015 (File No. 333-204519)).
10.42†	Houghton Mifflin Harcourt Company 2015 Omnibus Incentive Plan (incorporated herein by reference to Exhibit 10.2 to the Company's Registration Statement on Form S-8, filed May 29, 2015 (File No. 333-204519)).
10.43†	Houghton Mifflin Harcourt Company 2015 Omnibus Incentive Plan Form of Time-Based Restricted Stock Unit Award Notice (Employees) (incorporated herein by reference to Exhibit 10.3 to the Company's Registration Statement on Form S-8, filed May 29, 2015 (File No. 333-204519)).
10.44†	Houghton Mifflin Harcourt Company 2015 Omnibus Incentive Plan Form of Performance-Based Restricted Stock Unit Award Notice (Employees) (incorporated herein by reference to Exhibit 10.4 to the Company's Registration Statement on Form S-8, filed May 29, 2015 (File No. 333-204519)).

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<u>Exhibit No.</u>	<u>Description</u>
10.45†	Houghton Mifflin Harcourt Company 2015 Omnibus Incentive Plan Form of Time-Based Restricted Stock Unit Award Notice (Directors) (incorporated herein by reference to Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q, filed August 6, 2015 (File No. 001-36166)).
10.46†	Houghton Mifflin Harcourt Company 2015 Omnibus Incentive Plan Form of Stock Option Award Notice (incorporated by reference to Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q, filed August 6, 2015 (File No. 001-36166)).
10.47	Amended and Restated Revolving Credit Agreement, dated as of July 22, 2015, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC, Houghton Mifflin Harcourt Publishing Company, certain other subsidiaries of Houghton Mifflin Harcourt Company, as subsidiary guarantors, the lenders party thereto and Citibank, N.A., as administrative agent and collateral agent (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed July 23, 2015 (File No. 001-36166)).
10.48	Amended and Restated Revolving Facility Guarantee and Collateral Agreement, dated as of July 23, 2015, by and among Houghton Mifflin Harcourt Company, Houghton Mifflin Harcourt Publishers Inc., HMH Publishers LLC, Houghton Mifflin Harcourt Publishing Company, the subsidiaries of Houghton Mifflin Harcourt Company from time to time party thereto and Citibank, N.A., as collateral agent (incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, filed July 22, 2015 (File No. 001-36166)).
10.49†	Houghton Mifflin Harcourt Publishing Company ELT Severance Plan (incorporated herein by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q, filed November 5, 2015 (File No. 001-36166)).
10.50†	Houghton Mifflin Harcourt Company Non-Employee Director Deferred Compensation Plan (incorporated herein by reference to Exhibit No. 10.50 to the Company's Annual Report on Form 10-K, filed February 25, 2016 (File No. 001-36166)).
10.51†	Houghton Mifflin Harcourt Company Form of Restricted Stock Unit Award Notice (with Deferral Feature—Directors) (incorporated herein by reference to Exhibit No. 10.51 to the Company's Annual Report on Form 10-K, filed February 25, 2016 (File No. 001-36166)).
10.52†	Houghton Mifflin Harcourt Company Form of Performance-Based Restricted Stock Unit Award Notice (TSR/Billings—Employees) (incorporated herein by reference to Exhibit No. 10.1 to the Company's Current Report on Form 8-K, filed May 4, 2016 (File No. 001-36166)).
10.53†	Amendment to Employment Agreement, effective as of March 10, 2016, between Houghton Mifflin Harcourt Company and Eric Shuman (incorporated herein by reference to Exhibit No. 10.2 to the Company's Current Report on Form 8-K filed March 10, 2016 (File No. 001-36166)).
10.54†	Joseph Abbott Offer Letter dated as of March 10, 2016 (incorporated herein by reference to Exhibit No. 201-5 10.3 to the Company's Current Report on Form 8-K, filed March 10, 2016 (File No. 001-36166)).
10.55†	Houghton Mifflin Harcourt Severance Plan, amended and restated as of March 31, 2016 (incorporated herein by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K, filed May 4, 2016 (File No. 001-36166)).
10.56†	Letter Agreement, effective September 22, 2016, by and between Houghton Mifflin Harcourt Company and L. Gordon Crovitz (incorporated herein by reference to Exhibit No. 10.1 to the Company's Quarterly Report on Form 10-Q, filed November 3, 2016 (File No. 001-36166)).
10.57†	Nomination Agreement, effective December 21, 2016, by and among Houghton Mifflin Harcourt Company and certain affiliates of Anchorage Capital Group, L.L.C. (Incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed December 22, 2016 (File No. 001-36166)).

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<u>Exhibit No.</u>	<u>Description</u>
21.1*	List of Subsidiaries of the Registrant.
23.1*	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
31.1*	Certification of CEO Pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of CFO Pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of CEO Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of CFO Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

† Identifies a management contract or compensatory plan or arrangement.
* Filed herewith.
** This certification shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities under that section. Furthermore, this certification shall not be deemed to be incorporated by reference into the filings of the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, regardless of any general incorporation language in such filing.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Houghton Mifflin Harcourt Company
(Registrant)

By: /s/ L. Gordon Crovitz
L. Gordon Crovitz
President, Chief Executive Officer
(On behalf of the registrant)

February 23, 2017

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ L. Gordon Crovitz</u> L. Gordon Crovitz	President, Chief Executive Officer (Principal Executive Officer) and Director	February 23, 2017
<u>/s/ Joseph P. Abbott, Jr.</u> Joseph P. Abbott, Jr.	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 23, 2017
<u>/s/ Michael J. Dolan</u> Michael J. Dolan	Senior Vice President and Corporate Controller (Principal Accounting Officer)	February 23, 2017
<u>/s/ Lawrence K. Fish</u> Lawrence K. Fish	Chairman of the Board of Directors	February 23, 2017
<u>/s/ Daniel M. Allen</u> Daniel M. Allen	Director	February 23, 2017
<u>/s/ Jill A. Greenthal</u> Jill A. Greenthal	Director	February 23, 2017
<u>/s/ John F. Killian</u> John F. Killian	Director	February 23, 2017
<u>/s/ John R. McKernan, Jr.</u> John R. McKernan, Jr.	Director	February 23, 2017
<u>/s/ Brian Napack</u> Brian Napack	Director	February 23, 2017
<u>/s/ E. Rogers Novak, Jr.</u> E. Rogers Novak, Jr.	Director	February 23, 2017
<u>/s/ Tracey D. Weber</u> Tracey D. Weber	Director	February 23, 2017

Houghton Mifflin Harcourt Company Subsidiaries

Greenwood Publishing Group, LLC.
HMH Intermediate Holdings (Delaware), LLC
HMH IP Company Unlimited Company
HMH Publishers LLC
HMH Publishing Company
Houghton Mifflin Company International, Inc.
Houghton Mifflin Harcourt (Asia) Pte. Ltd.
Houghton Mifflin Harcourt Publishers, Inc.
Houghton Mifflin Harcourt Publishing Company
Houghton Mifflin PLC
International Center for Leadership in Education, LLC.
Tribal Nova, Inc.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-192404 and No. 333-204519) and Form S-3ASR (No. 333-203774) of Houghton Mifflin Harcourt Company of our report dated February 23, 2017 relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
February 23, 2017

CERTIFICATIONS

I, L. Gordon Crovitz, certify that:

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

Date: February 23, 2017

By: /s/ L. Gordon Crovitz
L. Gordon Crovitz
President and Chief Executive Officer

CERTIFICATIONS

I, Joseph P. Abbott, Jr., certify that:

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

Date: February 23, 2017

By: /s/ Joseph P. Abbott, Jr.
Joseph P. Abbott, Jr.
Executive Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with Houghton Mifflin Harcourt Company's (the "Company") Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, L. Gordon Crovitz, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 23, 2017

By: /s/ L. Gordon Crovitz
L. Gordon Crovitz
President and Chief Executive Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with Houghton Mifflin Harcourt Company's (the "Company") Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joseph P. Abbott, Jr., Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 23, 2017

By: /s/ Joseph P. Abbott, Jr.
Joseph P. Abbott, Jr.
Executive Vice President and Chief Financial Officer