

McGraw-Hill

Fourth Quarter and Full Year 2018 Investor Update

March 29, 2019



McGraw-Hill's curated content features the work of more than 50 Nobel Laureates

Important Notice

Forward-Looking Statements

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

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

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

Non-GAAP Financial Measures

Certain financial information included herein, including Billings, EBITDA and Adjusted EBITDA, are not presentations made in accordance with U.S. GAAP, and use of such terms varies from others in our industry. Billings, EBITDA and Adjusted EBITDA should not be considered as alternatives to revenue, net income from continuing operations, operating cash flows or any other performance measures derived in accordance with U.S. GAAP as measures of operating performance, debt covenant compliance or cash flows as measures of liquidity. Billings, EBITDA and Adjusted EBITDA have important limitations as analytical tools, and you should not consider them in isolation or as substitutes for analysis of our results as reported under U.S. GAAP. This presentation includes a reconciliation of certain non-GAAP financial measures to the most directly comparable financial measures calculated in accordance with U.S. GAAP.

Adjusted EBITDA, which is defined in accordance with our debt agreements, is provided herein on a segment basis and on a consolidated basis. Adjusted EBITDA by segment, as determined in accordance with Accounting Standards Codification Topic 280, Segment Reporting, is a measure used by Management to assess the performance of our segments. Adjusted EBITDA on a consolidated basis is presented as a debt covenant compliance measure. Management believes that the presentation of Adjusted EBITDA is appropriate to provide additional information to investors about certain material non-cash items and about unusual items that we do not expect to continue at the same level in the future as well as other items to assess our debt covenant compliance, ability to service our indebtedness and make capital allocation decisions in accordance with our debt agreements.

McGraw-Hill's Leadership



Nana Banerjee, President and Chief Executive Officer

Joined McGraw-Hill in April 2018

- Previously with Verisk as Group President
- Earlier in career with Argus, Citibank and General Electric
- PhD in Computational and Applied Mathematics



Mike Evans, Chief Financial Officer

Joined McGraw-Hill in January 2019

- Previously with Renaissance Learning as Chief Financial Officer and Chief Operating Officer
- Twelve years at Pearson in various senior leadership roles
- Prior experience at Big Chalk and several national media firms

2018 Review

Higher Ed

Affordability Initiatives are a key focus with strong digital activation growth led by **Inclusive Access** institutional delivery and launch of new **Print Rental** program to compete against secondary market share

K-12

2018 cyclical industry adoption trough compounded by weaker than expected Open Territory sales; significant adoption market growth expected next few years with opportunity to reduce cyclicity

International

New management in place with renewed focus on regionalized decision-making and increased focus on higher margin distributors and government sales

Professional

Highly digital subscription-based business model continues with increased focus on driving Access product sales globally

Liquidity

Over \$300M of cash at year-end with \$350M of undrawn line of credit, + \$100M in incremental seasonal securitization line; No material funded debt maturities until 2022

Digital transition continues across all business lines

~\$800M
Total Digital Billings

~\$200M
Direct to Student
E-Commerce

67%
of Higher Ed Billings
were digital

~600
Inclusive Access
institutional partnerships

74%
Growth in Higher Ed
Inclusive Access

What Differentiates McGraw-Hill?



High-quality, curated content from global subject matter experts

- Leveraging content from 14,000 authors and subject matter experts combined with world-class authoring tools and advanced analytics continuously drives improved outcomes, curriculum design, scope and sequencing
- 50+ Nobel laureate authors provide unprecedented thought leadership



Leader in driving learning outcomes via Learning Science

- Affordable, personalized, adaptive learning experiences improve success for all students, enabling “achievement for all”
- Real-time feedback for students, educators and authors enables continuous improvements to learning experience and outcomes



Scaled, global go-to-market resources with strong customer relationships

- Nearly 1,400 sales professionals complemented by implementation, support and service resources to optimize usage and drive satisfaction
- 5,000+ institutions educating 18-19 million U.S. college students
- 13,000 public school districts educating 50M U.S. K-12 students
- Products sold in more than 75 languages and more than 100 countries

We prioritize our investment dollars and focus where we have a competitive advantage. We seek partnerships and outsourcing to drive scale and cost savings in non-strategic activities.

U.S. Higher Education: 2019-2020 Priorities

1. Continue to Focus on Affordability Initiatives and Digital Growth

- Institutional sales of Inclusive Access delivery will continue to be leading driver of digital activations
 - Addresses affordability with lower price point to students, but with significantly higher sell-through rate anticipated
- Remain focused on driving usage of high value, adaptive digital products to improve learning outcomes

2. Stabilize Print by Competing Against Secondary Market

- Execute print rental program which was launched in Fall 2018, drive professor rollover to newest editions and support participation by both large and small distributors

3. Optimize Pricing and Product Mix

- Approach to affordability is working but will take time
 - Reduce costs for students while supporting student success
- Focus intensively on the way we acquire, service and retain customers
- Per unit price points to students will continue to be under pressure, driven by market as well as competitor and our own affordability initiatives
 - Revenue will increase as Inclusive Access and rental scale and unit sell-through improves

4. Manage Costs

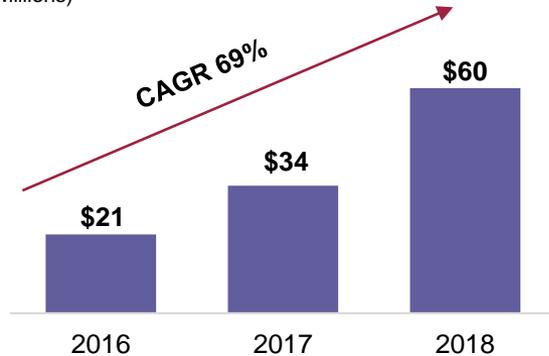
- Maintain diligence on cost savings efforts by prioritizing efficiency, partnerships and operational focus

Inclusive Access

Institutional sales of digital product to accelerate digital sell-through

INCLUSIVE ACCESS NET SALES

(\$ in Millions)



INCLUSIVE ACCESS PROGRAMS

| Year in Program | # of Schools/Campuses | % of Revenue |
|-----------------|-----------------------|--------------|
| 1 | 290 | 13% |
| 2 | 138 | 19% |
| 3+ | 178 | 68% |
| Total | 606 | 100% |

Typically, Significant Growth Achieved on Campuses in Years 2 and 3

Inclusive Access drives affordability, accessibility and improved student performance

Program Overview

- Content available to all registered students within course
- Currently partnering with ~600 institutions

Students

- Discounted price
- Most current digital materials available on first day of class

Instructors/Institution

- Drives student affordability
- Most current materials available on first day of class
- Preserves instructor choice and academic freedom

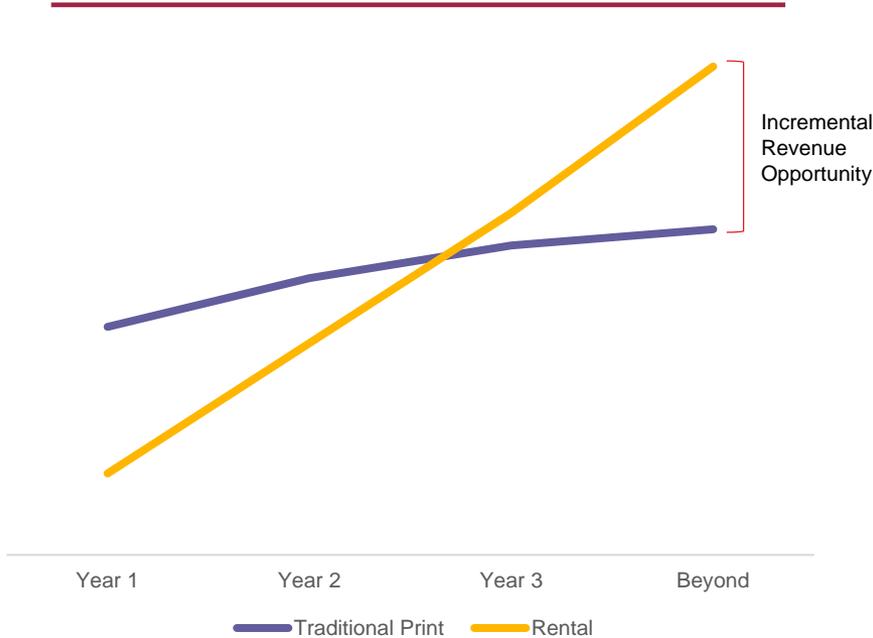
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- Significantly higher sell-through potential in class supports lower price
- More predictable demand planning; no product returns
- Promotes digital transformation
- Bulk billing to institution for all registered students

Rental Partnerships

Drive recurring revenue by participating in rental ecosystem

**Illustrative Cumulative Billings %:
Rental Partnerships vs. Status Quo for a Title**



Launched in Fall 2018, the rental program strategy is based upon a multi-year roll-out starting with 2019 copyrights available via rental only (bound books not available for sale)

Lifecycle of a New Edition

Year 1

- **Rental:** Rental program launched with all key distributors including Amazon, B&N Education, Chegg and Follett
 - Lower average sales price (ASP) drives initial divot (sales and profit) vs. traditional model
 - Returns anticipated to be lower in consignment model
- **Status Quo:** Upfront purchase of print offering in first year of an edition drives initial sales

Year 2

- **Rental:** Rental program continues and cumulative units at lower ASP begin to erode initial sales & profit divot
 - Expand into smaller, local bookstores
 - Bookstores work down prior edition inventory
- **Status Quo:** Channel partners replenish inventory for rental, slightly increasing new print sales (most replenishment comes from used market)

Year 3 and Beyond

- **Rental:** Rental program continues; cumulative units at lower ASP should surpass initial sales & profit divot vs. traditional model
- **Status Quo:** Channel partners rent existing inventory and generally source replenishments from used market

K-12: 2019-2020 Priorities

Realizing top-line growth from trough in 2018 by capitalizing on upside adoption opportunity in 2019-2020

1. Grow Adoption Billings in 2019 and 2020

- Cyclically large adoption opportunities in TX and CA should drive market expansion
- FL postponement of Reading and Math to 2021 and 2022, respectively, should generate a more normalized industry sales cycle through 2022 but reduce expectations for 2019/2020

2. Participate in Anticipated Open Territory Market Recovery

- New editions (industry-wide) driven by upswing in the adoption market as well as upcoming refresh cycles from prior concentrated purchases in 2013-2015 should drive Open Territory buying over the next several years

3. Review/Optimize Portfolio

- Optimize investment/pre-publication dollars across disciplines to maximize performance in core curriculum while also expanding penetration into less cyclical, supplemental and intervention opportunities

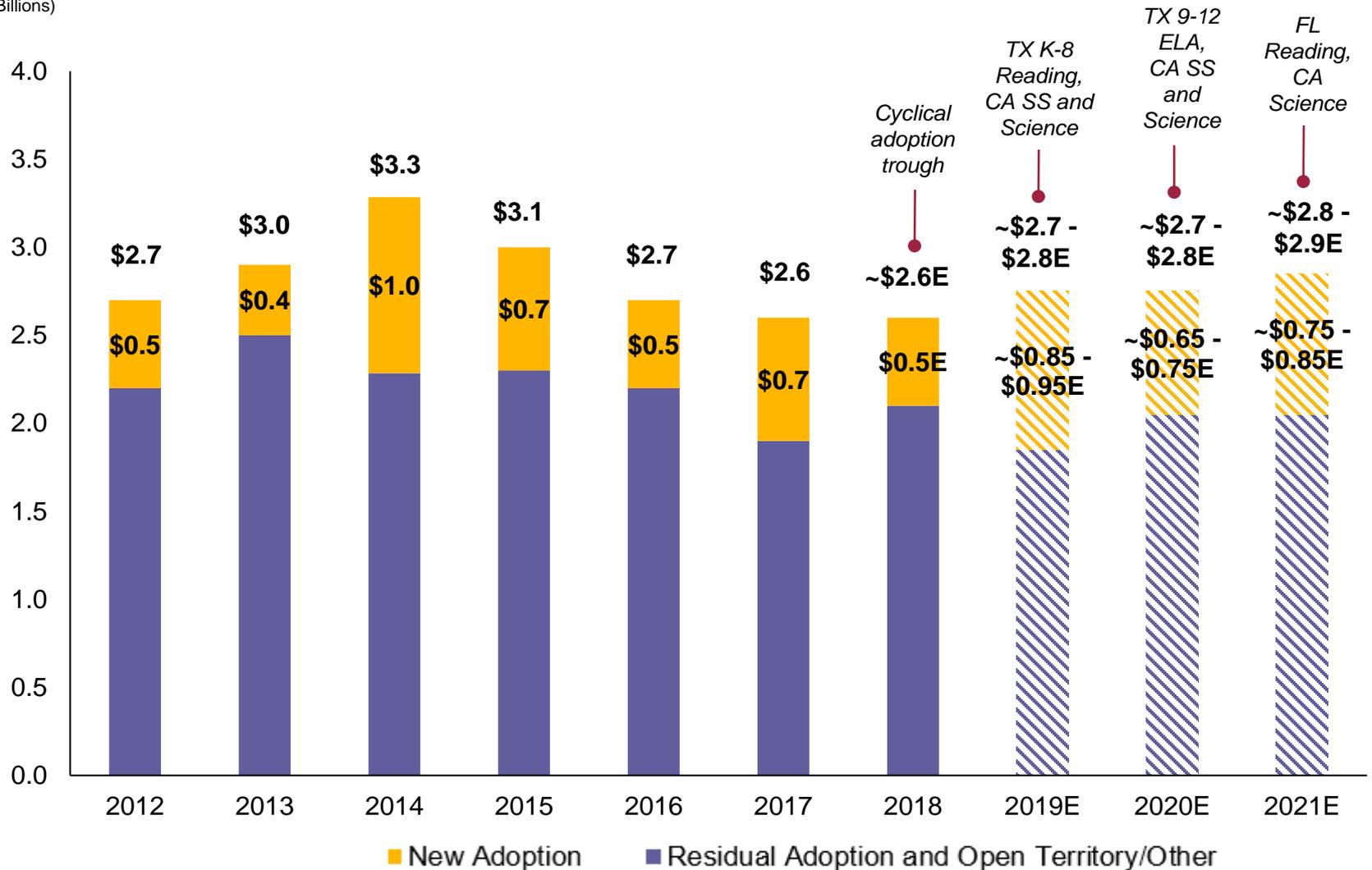
4. Manage Costs

- Manage cost structure and investments to ensure strong returns and stable cash flow profile during multi-year revenue cycles

K-12 Core Basal Market – Adoption and Open Territory

Cyclical new adoption patterns create strong future market opportunity

(\$ in Billions)



Key adoptions in 2022: TX Science, FL Math
 All figures are MH estimates. Core Basal Market includes New Adoption, Residual Adoption and Open Territory/Other.

International: 2019-2020 Priorities

- 1. Execute under new leadership with decentralized, regionally driven go-to-market focus**
- 2. Maximize sell-through of global products; revitalize localized product portfolio**
- 3. Increasingly target institutional and government-sponsored business**
- 4. Optimize International cost structure through organizational design and continued pursuit of cost efficiencies**

Professional: 2019-2020 Priorities

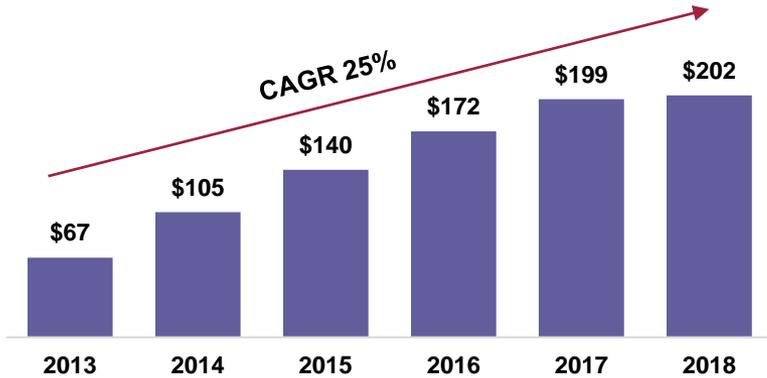
- 1. Drive new business and maintain existing high renewal rate for Access digital subscription; expand Access penetration internationally**
- 2. Maximize remaining print opportunity through promotions, cross-selling with other MH channels and monitoring distribution channels**
- 3. Optimize Professional cost structure through organization design and continued pursuit of cost efficiencies**

Digital Ed Tech Highlights

Digital transition continues across MH

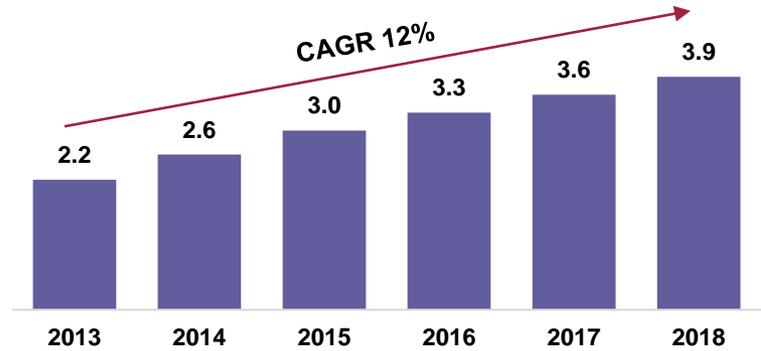
All numbers are in millions

E-COMMERCE NET SALES (U.S. Higher Ed)



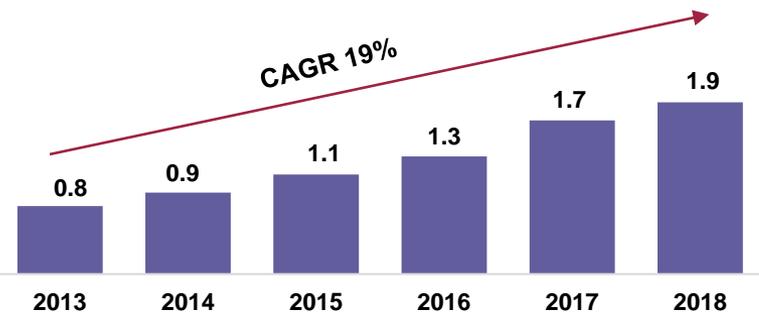
Growth in Inclusive Access will lead to moderation of E-Commerce sales but drive overall digital sales growth

CONNECT/LEARNSMART PAID ACTIVATIONS¹ (U.S. Higher Ed)



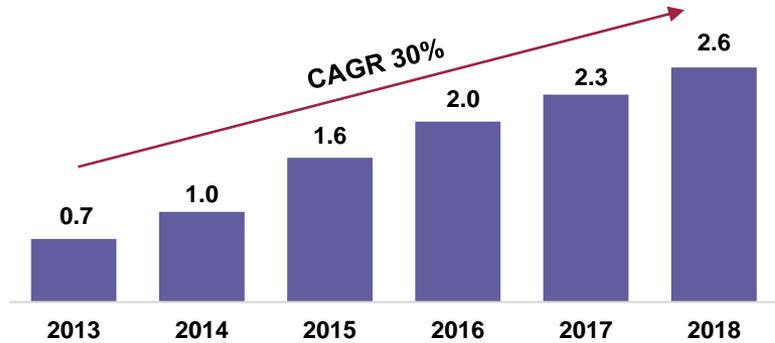
11.8 billion *Connect/LearnSmart* interactions since 2009 demonstrate success of digital adaptive products

ALEKS Unique Users² (Global Higher Ed)



Supplemental digital math products resonate well with student and faculty
8.7 billion *ALEKS* interactions since 2010

ALEKS Unique Users (K-12)



McGraw-Hill Q4 and FY 2018 Results

- Digital comprised 48% of Billings (vs. 44% PY) as the transition continues across business lines
 - Growth across all key digital usage metrics in Higher Ed and K-12 demonstrates continued commercial success of digital curriculum
- 2018 Billings negatively impacted by substantial headwinds from K-12 cyclical adoption market and Open Territory performance as well as implementation of Higher Ed affordability initiatives and reset of International strategy
 - Lower K-12 Billings significantly impacted EBITDA, with improvement expected in 2019 driven by new adoption opportunities
 - Higher Ed print rental strategy is expected to be a multi-year transition
- Q4 performance generally in-line with expectations, reflecting previously communicated impact of spending ahead of K-12 Texas adoption, ongoing digital and rental transition of Higher Ed (Q4 to Q1) and timing of a Middle East contract
- New receivable securitization program initiated in Q4 to provide low-cost liquidity alternative

Inclusive Access Net Sales

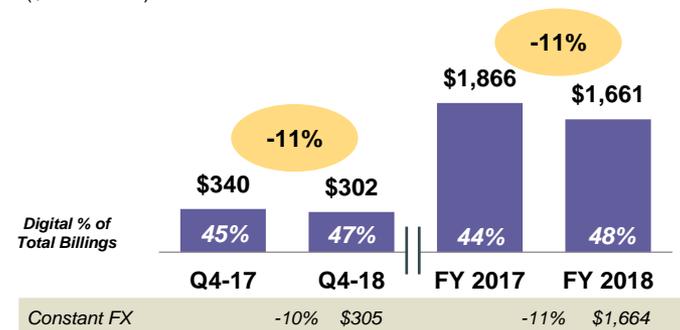
\$60M
Up 74%

Connect/LearnSmart
Paid Activations
3.9M
Up 8%

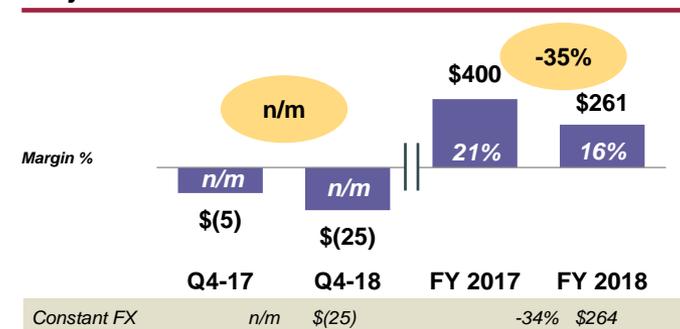
ALEKS Unique Users
4.4M
Up 10%

Total Billings

(\$ in Millions)



Adjusted EBITDA



Higher Education Q4 and FY 2018 Results

- MH Digital Billings continued to grow
 - Inclusive Access Net Sales up 74% to \$60M
 - Direct to Student e-Commerce Net Sales ~\$200M
- Consignment rental program launched in fall 2018 across all major distribution partners
 - Independent distributor launch taking time to fully engage
 - Bookstores still clearing older editions from inventory
 - Rental related Billings divot impact of low \$30'sM and EBITDA divot impact of low \$20'sM*
 - 2019 divots anticipated to be smaller
- Pricing has impacted the industry
 - Affordability initiatives (Inclusive Access, Rental, etc.)
 - Product Mix (more loose-leaf and discounted e-Books)
 - General price compression
- MPI market share maintained on an LTM net sales basis
 - Excluding Billings divot due to rental program, MPI market share increased in 2018

67%
of Higher Ed Billings
were digital

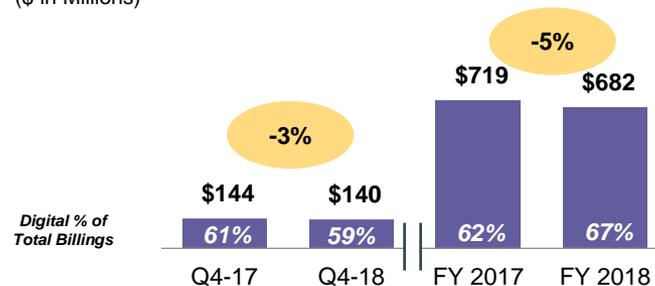
74%
Growth in Higher Ed
Inclusive Access

Connect/LearnSmart
Paid Activations
3.9M
Up 8%

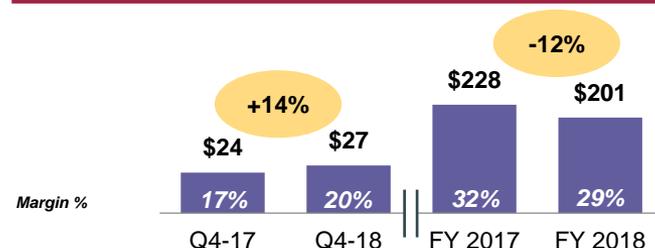
ALEKS Unique Users
1.9M
Up 9%

Total Billings

(\$ in Millions)



Adjusted EBITDA



*Excludes EBITDA impact of approximately \$6M of lower commissions on international sales of U.S. 2019 © titles not sold into International markets as a result of Higher Ed rental program.

Higher Education Outlook

2019 Outlook:

- **Digital:** Transition from print should continue with activation growth led by Inclusive Access (digital affordability offer), and new *Connect LearnSmart* and new *Connect Master* product
- **Print:** Multi-year rental expansion should help to compete against the secondary market (print affordability offer)
 - Negative EBITDA divot related to rental launch should be lower than 2018 given second year of front-list titles available
 - Anticipate run-rate positive earnings on initiative in 2020
- **Pricing:** Pricing compression is anticipated to continue as an important factor in coming year as affordability initiatives are presented by all major competitors and due to changes in product mix

Q1-2019 Higher Ed Commentary Through Mid-March:

- Net Sales growth favorable YTD
- Digital activations were favorable Y/Y, led by growth in Inclusive Access
 - Some Billings continue to shift from Q4 to Q1, both as a result of print to digital transition as well as growth of Inclusive Access
- Returns are seasonally important in late Q1/early Q2 but were in-line with expectations

K-12 Q4 and FY 2018 Results

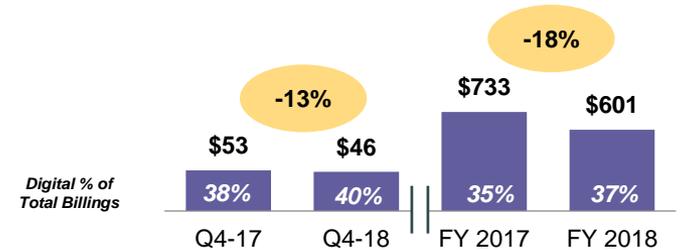
- 2018 results driven by anticipated cyclically smaller CA ELA adoption market and weaker than expected Open Territory results
 - Q4 performance generally in-line with expectations in seasonally small quarter
 - Sampling costs increased ahead of 2019 TX adoption as previously communicated
- Adoption Markets: Although much smaller opportunities, MH performed well overall in CA ELA, CA Social Studies and FL Science, particularly in middle and high school
 - New digital learning platform launched for CA opportunity last year
- Open Territory Markets: Weaker performance driven by
 - Lower purchasing in core subjects across industry ahead of expected new editions for 2019/2020 adoptions
 - MH underpenetrated in Supplemental/Intervention which was larger component of industry spend and less cyclical
- Lower K-12 Billings significantly impacted EBITDA
 - Improvement expected in 2019 driven by new adoption opportunities

New Adoption Market

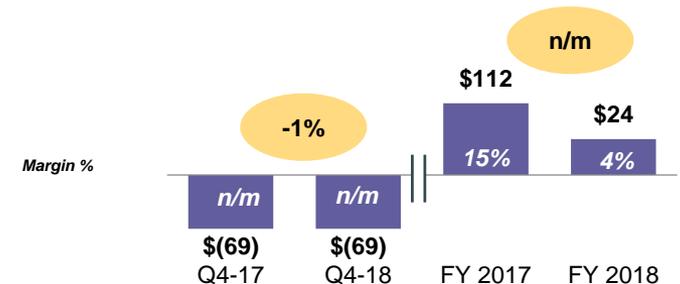
- New Adoption Market 2017: \$700M
- New Adoption Market 2018: ~\$500M E
- New Adoption Market 2019E: ~\$850-950M E
- New Adoption Market 2020E: ~\$650-750M E
- New Adoption Market 2021E: ~\$750-850M E

Total Billings

(\$ in Millions)



Adjusted EBITDA



K-12 Outlook

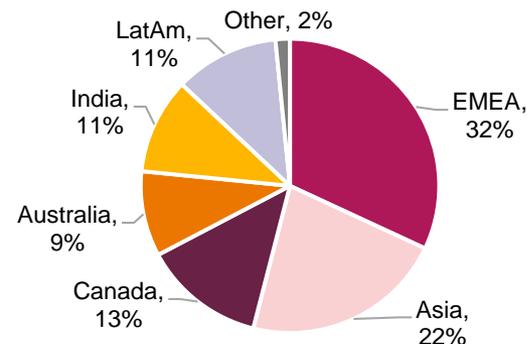
2019 Outlook:

- New adoption market expected to grow in 2019
 - Florida adoption postponement from 2019-2020 to 2021-2022 will smooth the total new adoption market size over the next four years but will impact prior industry guidance for 2019 and 2020
- Continue to anticipate some Open Territory market recovery in 2019 and 2020
- MH is anticipating growth in Billings vs. 2018 based on industry opportunity
- Too early to report final adoption results as most purchase decisions are in process

International Q4 and FY 2018 Results

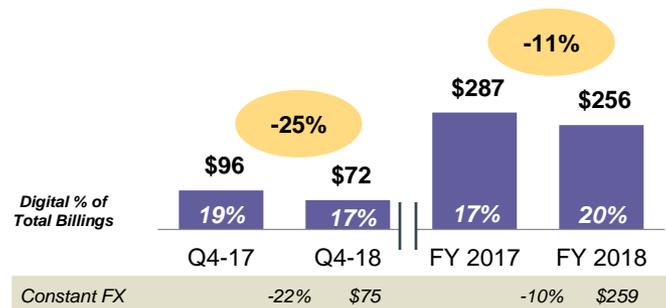
- New leadership team in place with stronger, customer-centric regional focus; better positioned to execute on future sales opportunities
 - Go-to-market capabilities and decisions are more aligned to our markets and customers, supported by centers of excellence advising marketing, product and business development
 - Resumed focused investment in local, front-list product after several years of under-investment
- Q4 and FY Billings adversely impacted by
 - Increased controls on sales most likely to end up in U.S. secondary markets
 - Elimination of 2019 © product sales as part of the U.S. Higher Ed rental program
 - Move away from less profitable sales
- Billings also impacted by prior decisions to reduce investment in local front-list and by the sale of the Canadian K-12 business in mid-2017
- EBITDA in the quarter and the year largely impacted by margin flow-through on lower Billings as well as unfavorable currency movements

Full Year 2018 Billings % by Region

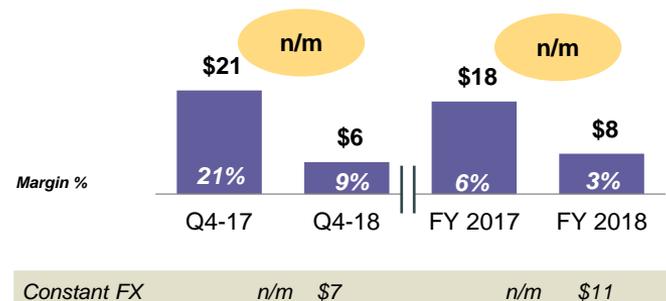


Total Billings

(\$ in Millions)



Adjusted EBITDA

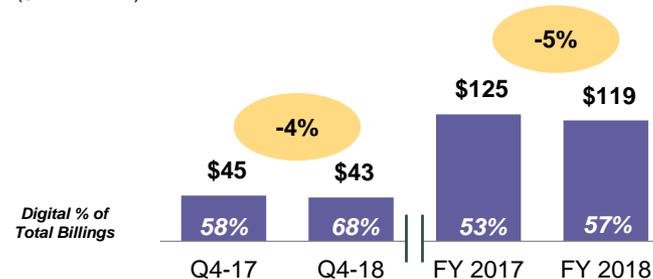


Professional Q4 and FY 2018 Results

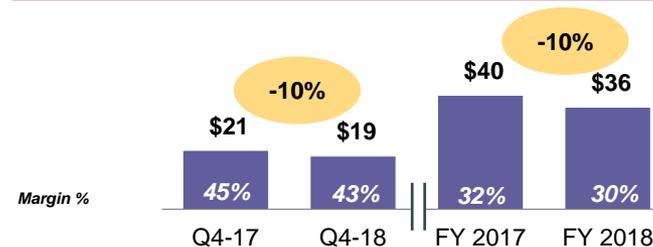
- Professional business continued to grow its subscription-based model with renewal rates of more than 90%
- Digital Billings increased by 11% in the quarter, overcoming a tough Y/Y comp from early multi-year subscription renewals in 2017
- Digital growth was not enough to overcome \$7M of lower print sales in FY 2018, largely impacted by the purchasing patterns of one large customer
- Lower EBITDA was largely the result of the flow-through from lower Billings

Total Billings

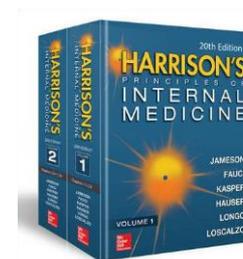
(\$ in Millions)



Adjusted EBITDA



Access Renewal Rate
90%+
As of December 2018¹

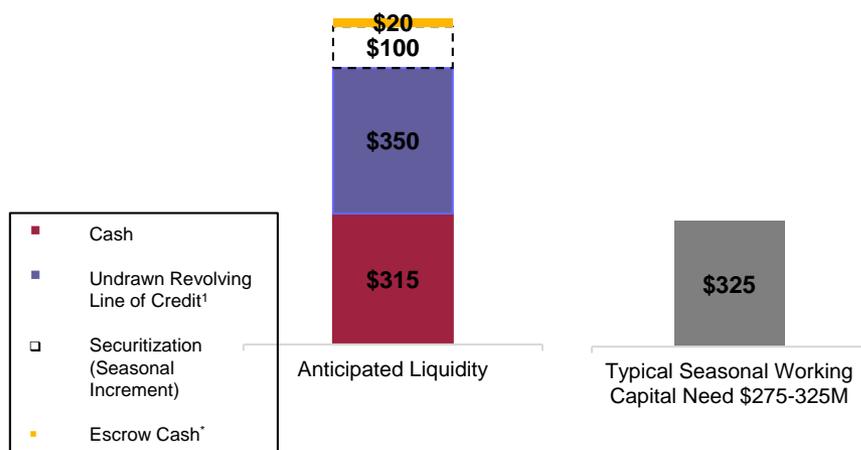


Capital Structure and Liquidity

Over \$300M of cash at YE; No material funded debt due until 2022

Significantly More than Required Liquidity for Seasonal Business

(\$ in Millions)



McGraw-Hill Debt Profile: 12/31/18*

(\$ in Millions)

| | |
|--|----------------|
| Senior Secured Term Loan due 2022 | \$1,684 |
| Revolving Credit Facility due 2021 (\$350M)** | — |
| Total First Lien Indebtedness | \$1,684 |
| Less: Cash and Cash Equivalents | (315) |
| Net First Lien Indebtedness | \$1,369 |
| Last Twelve Months Adjusted EBITDA | \$261 |
| Net First Lien Indebtedness / Adjusted EBITDA¹ (covenant not required to be tested) | 5.2x |
| Senior Unsecured Notes Due 2024 | 400 |
| Net Total Indebtedness-MHE Global Education | \$1,769 |
| MHGE Parent Term Loan Due 2022 | \$180 |
| Net Total Indebtedness – MHE Inc. | \$1,949 |

- Strong Q4 cash collections drove year-end cash balances
 - Efficient cash management concentrated most cash in U.S. for greater flexibility
 - Over \$200M of cash used to retire gross debt in last two years
- H1 cash usage typically \$275-\$325M
 - Limited, if any, usage of \$350M revolver anticipated in 2019 for seasonal needs as a result of new securitization
- No material funded debt maturities until 2022

*12/31 cash excludes \$30M held in escrow of which \$20M is contractually available for working capital needs for one month in 2019. Securitization outstandings (\$50M) are excluded from debt profile as they are excluded from the definition of debt under the first lien credit agreement. Revolving credit facility outstandings exclude \$4.3M of letters of credit issued.

¹Net First Lien Leverage covenant for revolving credit facility is tested if 30% of revolving credit facility is drawn at quarter-end.

Usage was less than 30% at 12/31/18, so covenant did not apply.

Net First Lien Leverage covenant levels, if required to be tested, would be 5.25x in Q2 and 4.8x in Q1, Q3 and Q4. EBITDA used to calculate Net First Lien Leverage covenant ratio would be Adjusted EBITDA plus pro-forma adjustments that are permitted under Credit Agreement and Indenture

Summary

- 2018 was a year of substantial headwinds driven by the cyclical downturn in K-12 and the first year of Higher Ed’s broadened Affordability Initiatives
 - Q4 performance generally in-line with prior guidance reflecting multiple previously communicated timing impacts
- K-12 New Adoption opportunity in 2019 and 2020 is substantially greater than 2018; MH K-12 Billings anticipated to grow
- Higher Ed continues to be a leader in the digital transition
 - Through digital and print affordability initiatives, we remain confident in our longer-term ability to serve more students at competitive prices and increase both print and digital sell-through
- International better positioned to capitalize on print and digital sales opportunities through a larger front-list and more focused regional decision making and execution under new leadership
- Professional business continues to drive digital subscription business globally
- Significant cash balances at year-end and strong liquidity heading into the seasonal cash trough with no material funded debt maturities until 2022



**Appendix:
Supplemental Disclosure
And Financial Tables**

Billings and Adjusted EBITDA

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

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

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

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

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

Higher Ed Front-List / Back-List Net Sales¹

(\$ in Millions)

| | Twelve Months Ended December 31 | | | | | | |
|--|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Digital Net Sales | | | | | | | |
| Front-list | \$100 | \$126 | \$132 | \$156 | \$149 | \$166 | \$168 |
| Back-list | 137 | 153 | 194 | 220 | 263 | 281 | 284 |
| Total Digital Net Sales | \$237 | \$278 | \$326 | \$376 | \$411 | \$447 | 452 |
| <i>Y/Y %</i> | | | | | | | |
| Front-list | (6.0%) | 25.1% | 5.2% | 18.2% | (4.7%) | 11.9% | 0.9% |
| Back-list | 53.7% | 11.8% | 27.1% | 13.4% | 19.2% | 7.0% | 1.0% |
| Total Digital Net Sales | 21.1% | 17.4% | 17.2% | 15.3% | 9.3% | 8.8% | 1.0% |
| Print Net Sales | | | | | | | |
| Front-list | \$317 | \$323 | \$291 | \$233 | \$149 | \$145 | \$96 |
| Back-list | 205 | 215 | 233 | 178 | 152 | 125 | 105 |
| Total Print Net Sales | \$523 | \$538 | \$524 | \$411 | \$302 | \$270 | \$201 |
| <i>Y/Y %</i> | | | | | | | |
| Front-list | (23.9%) | 1.9% | (9.9%) | (20.0%) | (35.9%) | (2.7%) | (33.5%) |
| Back-list | 0.6% | 4.7% | 8.5% | (23.6%) | (14.6%) | (17.8%) | (16.1%) |
| Total Print Net Sales | (15.9%) | 3.0% | (2.6%) | (21.6%) | (26.7%) | (10.6%) | (25.4%) |
| Total Net Sales | | | | | | | |
| Front-list | \$418 | \$449 | \$423 | \$389 | \$298 | \$311 | \$264 |
| Back-list | 342 | 368 | 427 | 398 | 415 | 406 | 389 |
| Total Net Sales² | \$760 | \$817 | \$851 | \$787 | \$713 | \$717 | \$653 |
| <i>Y/Y %</i> | | | | | | | |
| Front-list | (20.3%) | 7.5% | (5.7%) | (8.1%) | (23.4%) | 4.5% | (15.1%) |
| Back-list | 16.7% | 7.5% | 16.2% | (6.8%) | 4.1% | (2.2%) | (4.2%) |
| Total Net Sales | (7.0%) | 7.5% | 4.2% | (7.4%) | (9.5%) | 0.6% | (9.0%) |
| Other (Accounting Accruals/Reversals) | 2 | (1) | 4 | 5 | (2) | 1 | (1) |
| Total Net Sales³ | \$762 | \$816 | \$855 | \$793 | \$711 | \$718 | \$653 |
| Y/Y % | (7.5%) | 7.1% | 4.8% | (7.3%) | (10.3%) | 1.0% | (9.1%) |

¹2018 front-list represents 2019 and 2018 copyrights sold in 2018; they do not begin to impact current year until very late Q2.

²Gross sales less actual returns; net sales are not adjusted for the impact of accruals / net change in deferred revenue.

³Reflects the impact of accounting related to accruals / deferrals.

Free Cash Flow

(\$ in Millions)

| Cash Flow Comparison | Twelve Months Ended Dec 31, | | |
|--|-----------------------------|--------------|--------------|
| | 2017 | 2018 | Y/Y \$ |
| Adjusted EBITDA | 400 | 261 | (139) |
| Δ in Accounts Receivable, net | 1 | (75) | (75) |
| Δ in Inventories, net | 7 | (19) | (26) |
| Δ in Prepaid & Other Current Assets | 7 | 8 | 1 |
| Δ in Accounts Payable and Accrued Expenses | (12) | (12) | (0) |
| Δ in Other Current Liabilities | (33) | 75 | 108 |
| Δ in Reported Working Capital Accounts | (31) | (23) | 8 |
| Adjustments to Derive Operational Working Capital ¹ | (2) | 19 | 21 |
| Δ in Adjusted Working Capital Accounts | (32) | (4) | 28 |
| Adjusted EBITDA less Δ in Adjusted Working Capital Accounts | 368 | 257 | (111) |
| Pre-publication Investment | 99 | 100 | 0 |
| Restructuring and Cost Savings Implementation Charges | (14) | (10) | 4 |
| Sponsor Fees | (4) | (4) | - |
| Cash Paid for Interest | (166) | (165) | 1 |
| Net (loss) from Discontinued Operations | (0) | - | 0 |
| Operational Working Capital Adjustments and Other ² | (19) | (22) | (3) |
| Cash (used for) provided by operating activities | 264 | 156 | (108) |
| Adjusted EBITDA less Δ in Working Capital Accounts per above | 368 | 257 | (111) |
| - Capital Expenditures & Payment of Capital Lease Obligations | (52) | (74) | (21) |
| Operating Free Cash Flow² | 315 | 183 | (132) |
| Memo: | | | |
| Scheduled Principal Amortization | (16) | (17) | - |
| Cash Paid for Interest | (166) | (165) | 1 |
| Total Scheduled Debt Service | (182) | (182) | 1 |
| Cash Balance at Beginning of Period | 419 | 408 | (11) |
| Cash (used for) provided by operating activities | 264 | 156 | (108) |
| Dividends | (4) | (3) | 1 |
| Net Debt (Payments) / Receipts | 132 | 204 | 72 |
| Repurchase of MHGE PIK Toggle Notes | (256) | (243) | 13 |
| Pre-publication Investment | (99) | (100) | (0) |
| Capital Expenditures & Payment of Capital Lease Obligations | (52) | (74) | (21) |
| Investments, Acquisitions & Divestitures, net | 9 | 2 | (7) |
| Equity transactions, net | (7) | 0 | 7 |
| Other | 3 | (5) | (8) |
| Cash Balance at End of Period | 408 | 346 | (62) |

| Pre-Publication Investment Detail | | | |
|-----------------------------------|-----------|------------|----------|
| | 2017 | 2018 | Y/Y \$ |
| Higher Education | 33 | 39 | 6 |
| K-12 | 47 | 43 | (4) |
| International | 11 | 9 | (2) |
| Professional | 8 | 9 | 1 |
| Total | 99 | 100 | 0 |

Key Variance Drivers

- Accounts Receivable: Y/Y change attributable to the reclassification of the sales return reserve (\$119M) to other current liabilities and lower year-end receivables driven by lower Q4 sales
- Inventories: Y/Y change driven by inventory build in K-12 in advance of 2019 adoption opportunities
- Other Current Liabilities: Y/Y change driven primarily by reclassification of sales return reserve (\$119M)

2019 Operating cash flows expected to follow business performance with an increase in capex related to new NYC space buildout

Adjusted EBITDA Reconciliation & Operating Expense Bridge

(\$ in Millions)

Adjusted EBITDA Reconciliation

| | Three Months Ended December 31, | | Twelve Months Ended December 31, | |
|--|---------------------------------|---------------|----------------------------------|---------------|
| | 2017 | 2018 | 2017 | 2018 |
| Net Income | \$(31) | \$(45) | \$(66) | \$(160) |
| Interest (income) expense, net | 46 | 45 | 179 | 181 |
| Provision for (benefit from) taxes on income | (17) | 7 | (7) | 11 |
| Depreciation, amortization and pre-pub. amortization | 52 | 57 | 232 | 220 |
| EBITDA | \$ 51 | \$ 63 | \$ 338 | \$ 250 |
| Change in deferred revenue (a) | (58) | (80) | 147 | 64 |
| Change in deferred royalties (b) | 12 | 6 | (22) | (5) |
| Change in deferred commissions (c) | - | 1 | - | 1 |
| Restructuring and cost saving implementation changes (d) | 5 | 1 | 14 | 10 |
| Sponsor fees (e) | 1 | 1 | 4 | 4 |
| Other (f) | 10 | 11 | 18 | 37 |
| Pre-pub. investment cash costs (g) | (25) | (29) | (99) | (100) |
| Adjusted EBITDA | \$(5) | \$(25) | \$ 400 | \$ 261 |

Adjusted Operating Expense Bridge

| | Three Months Ended December 31, | | Twelve Months Ended December 31, | |
|---|---------------------------------|---------------|----------------------------------|---------------|
| | 2017 | 2018 | 2017 | 2018 |
| Operating Expense Bridge | | | | |
| Total Reported Operating Expenses | \$ 291 | \$ 286 | \$ 1,199 | \$ 1,172 |
| Less: Depreciation & amortization of intangibles | (34) | (37) | (133) | (134) |
| Less: Amortization of pre-pub. costs | (19) | (20) | (99) | (86) |
| Less: Restructuring and cost savings implementation charges | (5) | (1) | (14) | (10) |
| Less: Other adjustments | (11) | (12) | (35) | (40) |
| Adjusted Operating Expenses | \$ 223 | \$ 216 | \$ 918 | \$ 902 |

Adjusted EBITDA Footnotes

- (a) We receive cash up-front for most sales but recognize revenue (primarily related to digital sales) over time recording a liability for deferred revenue at the time of sale. This adjustment represents the net effect of converting deferred revenues to a cash basis assuming the collection of all receivable balances.
- (b) Royalty obligations are generally payable in the period incurred with limited recourse. This adjustment represents the net effect of converting deferred royalties to a cash basis assuming the payment of all amounts owed in the period incurred.
- (c) Commissions are generally payable in the period incurred. This adjustment represents the net effect of converting deferred commissions to a cash basis assuming the payment of all amounts owed in the period incurred.
- (d) Represents severance and other expenses associated with headcount reductions and other cost savings initiated as part of our formal restructuring initiatives to create a flatter and more agile organization.
- (e) Beginning in 2014, \$3.5 million of annual management fees was recorded and payable to Apollo.
- (f) For the year ended December 31, 2018, the amount represents (i) non-cash incentive compensation expense (ii) other adjustments required or permitted in calculating covenant compliance under our debt agreements.

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

For the year ended December 31, 2016, the amount represents (i) non-cash incentive compensation expense and (ii) other adjustments required or permitted in calculating covenant compliance under our debt agreements.

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