Because learning changes everything.®

# McGraw-Hill

## Q2-2019 Investor Update

August 12, 2019

final

# 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.

# Strong H1 2019 Performance
# YTD Billings and Adjusted EBITDA Growth Across All Businesses
# YTD Billings up 11%

**H1-2019 Review**

## Higher Ed

Affordability initiatives continue with YTD Billings growth driven by digital (led by Inclusive Access); 2nd year of rental program positioned for growth. Improved adaptive learning and eBook products ready for Back-to-School season.

## K-12

New, highly digital offerings result in definitive #1 position in CA Social Studies adoptions and leading position in CA Science and other states YTD. Large Adoption and Open Territory wins in Los Angeles and Chicago. Actions taken in Q2 to improve run-rate cost structure.

## International

Strong performance in the Middle East, Asia and Australia combined with material benefits from prior year strategic reorganization and cost elimination efforts.

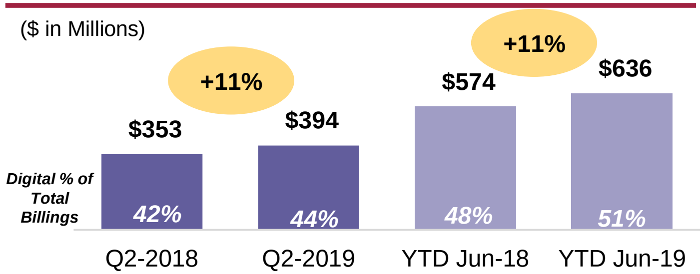
## Professional

Growth in digital subscription and print Billings drove strong results.

## Liquidity

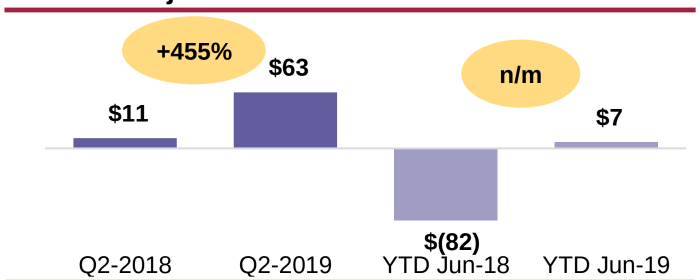
Over $100M of cash at June 30th and building; did not draw on $350M revolver in 2019.

**Total MH Billings**




| Constant FX | +12% | $395 | +11% | $639 |
|---|---|---|---|---|

**Total MH Adjusted EBITDA**




| Constant FX | n/m | $62 | n/m | $5 |
|---|---|---|---|---|

## McGraw-Hill and Cengage Merger Update – Regulatory

- Dialogue with Department of Justice (DOJ) proceeding as expected with required pre-merger notification submitted at end of May
  - Second requests for data and information have been received from DOJ and are in process
- Ongoing dialogue between DOJ and legal counsel for both companies continues
- Continue to anticipate early 2020 closing
- Companies will remain aggressive competitors in the marketplace until closing

## Merger Update – Financing

- Near universally positive response from debtholders for the merger
  - Debt of both companies traded up significantly following announcement
- In May, McGraw-Hill and Cengage decided to postpone the “amend and extend” process for the First Lien Credit Agreement to more closely align with transaction close
  - We do not expect financing amendment to affect timing of merger closing

## McGraw-Hill Management Update

- Garet Guthrie was appointed Chief Financial Officer of McGraw-Hill on July 1, 2019 as Mike Evans resigned to accept a role with another company
  - Garet previously served as SVP, Financial Planning and Analysis, at McGraw-Hill
  - Significant prior experience at PwC focusing on global private equity clients

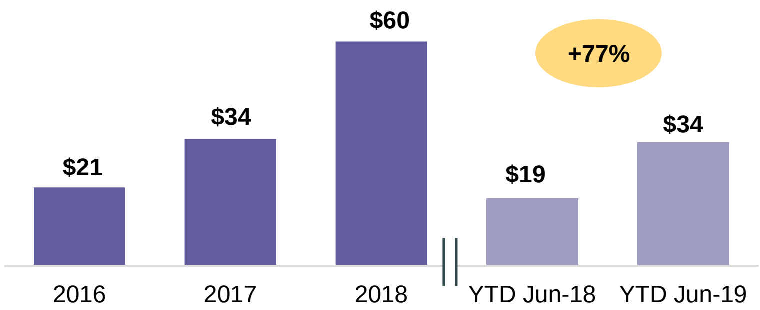
- Global Technology Services (GTS) and Digital Platforms Group (DPG) will be combined under the leadership of Angelo DeGenaro, Chief Information and Operations Officer, as Stephen Laster, Chief Digital Officer is scheduled to depart in late Q3

# Digital Ed Tech Highlights

## Strong performance in Inclusive Access continues to drive digital growth through H1

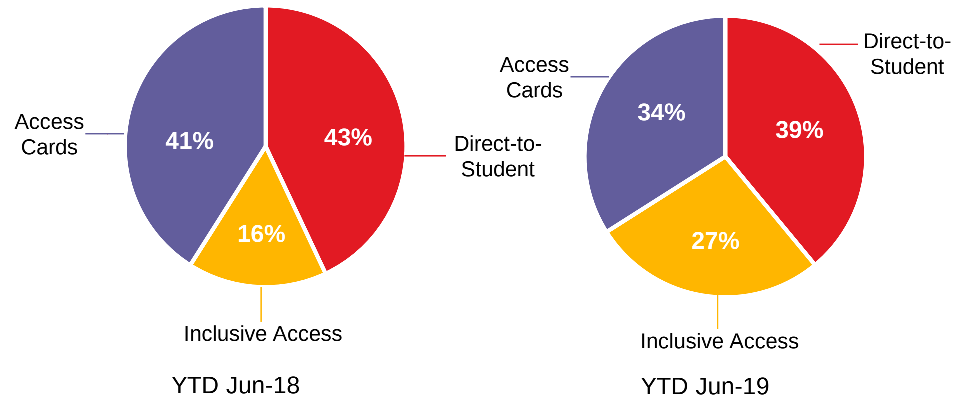
All numbers are in millions

### INCLUSIVE ACCESS BILLINGS (U.S. Higher Ed)



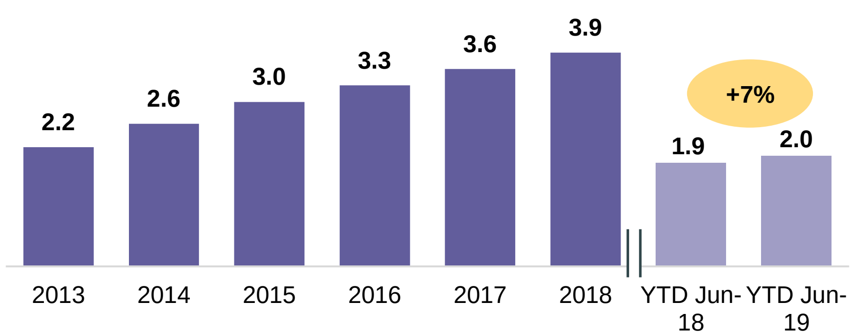

**Inclusive Access is near-term growth engine for digital**

### *CONNECT* PAID ACTIVATIONS PRODUCT MIX (U.S. Higher Ed)

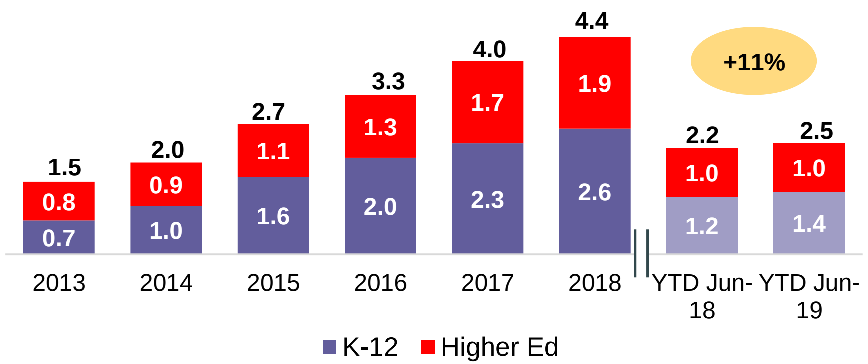



**Digital Sales continue to grow as distribution mix migrates**

### *CONNECT* PAID ACTIVATIONS (U.S. Higher Ed)




### *ALEKS* Unique Users (Global Higher Ed and K-12)




**13+ billion *Connect/LearnSmart* interactions and nearly 10 billion *ALEKS* interactions to date create a feedback loop for students, faculty and authors that improves learning outcomes and drives sustainable digital growth**

*Inclusive Access net sales include a small percentage of print from bundle sales. Amounts may not sum due to rounding.*

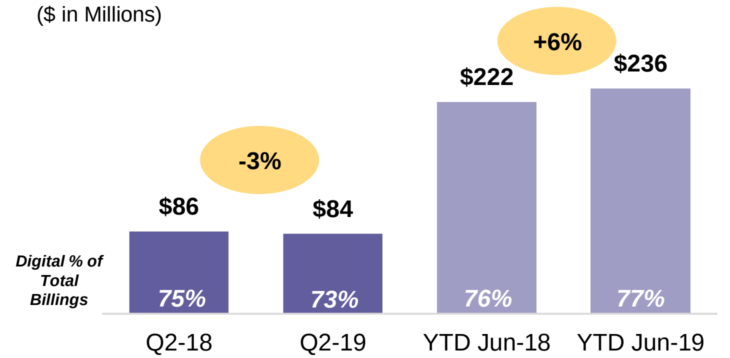
# Higher Education H1-2019 Results

## Ready for Back-to-School 2019

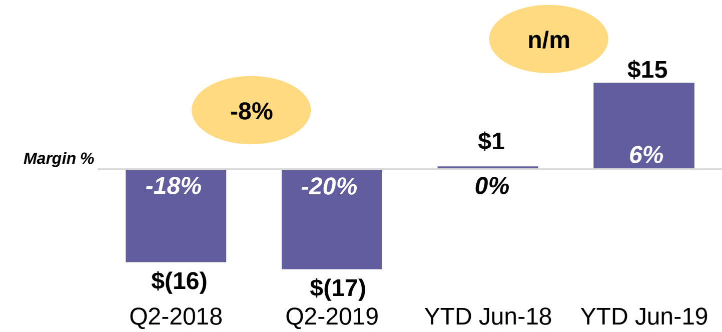
- Affordability initiatives in digital and print continue to drive a more efficient operating model and lower returns
- Total Billings YTD increased 6% with Digital Billings up 8% Y/Y*
  - Inclusive Access Billings grew 77% with an increase to more than 650 campuses (as of 6/30 and growing)
    - Deepening IA relationships at existing campuses
  - Actual product returns continued to decline as expected, down $14M (16%) from prior year
- Continue to take market share with reported 70 bp gain LTM as of 6/30 vs. FY 2018
  - Gain is <u>before</u> favorable adjustment for 2019 rental divot impact
- Cost rationalization (prior and ongoing) benefiting EBITDA
  - Lower run-rate cost base favorably impacting YTD
    - (~1/2 of EBITDA improvement from lower costs)
  - H2 will be impacted by year 2 of rental divot, annual migration from Q4 to Q1, ongoing affordability initiatives and industry pricing pressures (as in 2018)
- Print Rental program ready for year 2
  - Second front-list (2020©) available with greater representation in bookstores
  - FY divot smaller in 2nd year of rental program
    - "High-teens" $M Billings impact
    - "Mid-teens" $M Adjusted EBITDA impact
- Launched Connect SmartBook 2.0 with new learning software and launched new low-cost mobile-friendly eBook

### Total Billings

($ in Millions)




### Adjusted EBITDA




### INCLUSIVE ACCESS PROGRAMS

| Partnership Started | # of Schools/ Campuses | % of YTD IA *Connect* Activations |
|---|---|---|
| 2019 YTD | 194 | 5% |
| 2018 | 197 | 20% |
| 2017 | 115 | 18% |
| 2016 & Before | 157 | 57% |
| **Total** | **663** | **100%** |

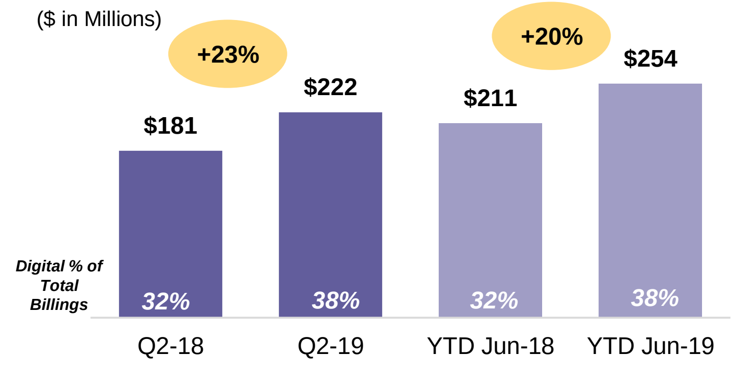
**Billings are on an accrued returns basis. Net Sales are on an actual returns basis and were also up 6% YTD at June 30th.*
*Market share as measured by MPI on an LTM Net Sales basis. MPI tracks Higher Ed revenue of new materials only for six select publishers (McGraw-Hill, Pearson, Cengage, Wiley, Oxford and Macmillan). It does not include sales data from other publishers or distributors and does not track used, OER or other sales/rental from other sources.*

# K-12 H1-2019 Results

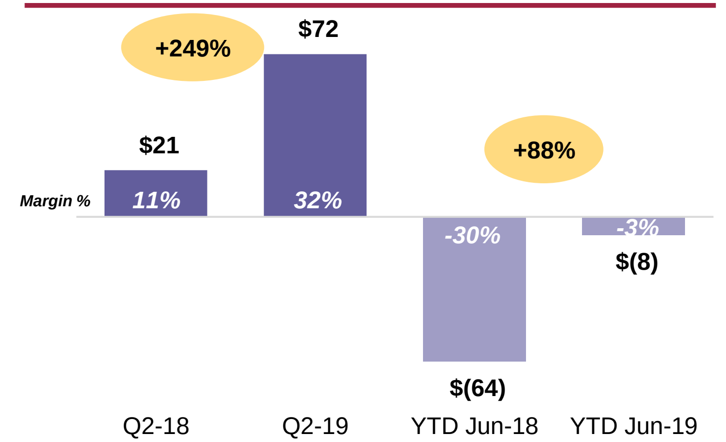
## Strong Results from New, Highly Digital Curriculums

- K-12 Billings growth YTD, in-line with guidance, as MH takes leadership role in larger Adoptions and Open Territory opportunities outside of TX
- Total Billings YTD improved by $43M (+20%); digital grew 42%
  - _CA Social Studies_: #1 market share YTD in K-5 and 6-8
    - $30M+ win in Los Angeles Social Studies (Q2)
  - _CA Science_: Leading market share in K-5 and 6-8 in small, mostly piloting adoption year 1; encouraging
  - _Other Adoptions_: #1 YTD in 6-12 Social Studies in TN, WV and GA
  - _Open Territory_: Mostly Q3 opportunity with some large market wins already achieved
    - $20M+ multi-year digital win in Chicago Social Studies ($14M+ in Q3)
  - _TX ELA_: In-line with previous guidance; underperforming, particularly in K-5 against brand new products in market
- $56M YTD Adjusted EBITDA improvement
  - ~20% of EBITDA growth driven by operating expense savings with additional actions taken in late H1
- Increasing confidence in previous guidance of "mid-single digit growth" in K-12 FY Billings

**Total Billings**




**Adjusted EBITDA**



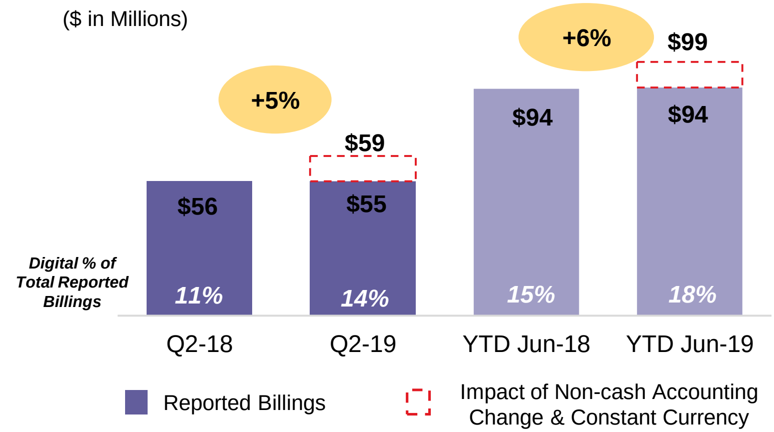

**No material changes to overall adoption market forecast since prior update**

*ELA = English Language Arts*

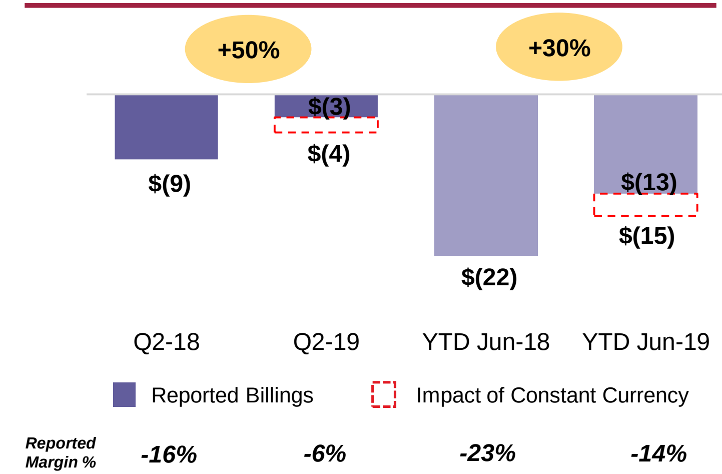
# International H1-2019 Results

- Run-rate impact of 2018 management and organization design changes, focus on localized decision making and re-engagement with print-centric customers drove YTD performance
- Total Billings YTD were up 6% (on a constant currency basis after adjusting for accounting change*) driven by increased digital sales across the portfolio and regional growth in EMEA, Asia and Australia
  - Growth in enterprise sales across all regions, largely Higher Education institutional and government sales
  - ~70% Y/Y growth in ALEKS activations outside US
  - Institutional sales growth in Australia, EMEA and LATAM
  - Improved Higher Ed sales in Asia and School sales in EMEA
- Digital Billings increased by 25% (to 18% of sales) as digital migration continues, particularly among growing institutional sales
- Adjusted EBITDA improvement of 30% driven by flow-through of higher constant currency Billings and run-rate benefits of 2018 cost savings initiatives

**Total Billings**




**Adjusted EBITDA**

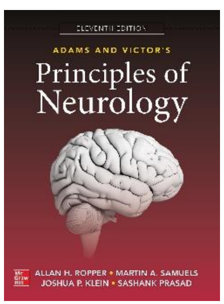


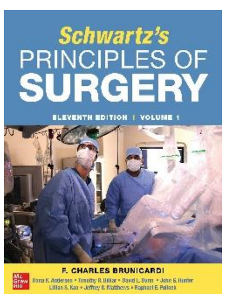

Charts above reflect impact of constant currency on Billings and Adjusted EBITDA and impact of non-cash accounting change on Billings (no impact on Adjusted EBITDA)

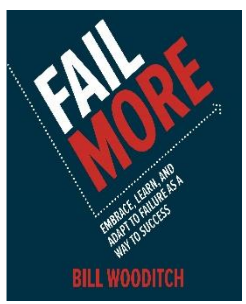
**Non-cash Accounting adjustment of -$2.1M to revenue recorded in Q2 2019 with respect to how Co-Publishing revenue is recorded in Asia. Consistent with implementation of ASC 606 in the U.S., Co-Publishing revenue is now recorded on a net basis (from gross basis) as of 4/1/19. No reclassification was required to be made to prior periods.*

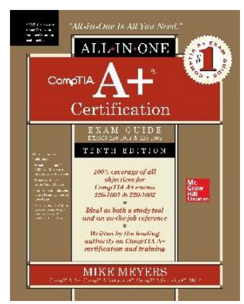
# Professional H1-2019 Results

- Total Billings YTD increased 10% driven by an increase in new and renewed digital subscription sales (single and multi-year contracts) and stabilization of print sales
- Digital accounted for 55% of H1 Total Billings
  - Renewals on track with historic annual levels (90%+)
- Concerted effort to monitor global online print sales has worked to protect IP and mitigate lost sales
- Adjusted EBITDA growth driven by flow-through on higher Billings



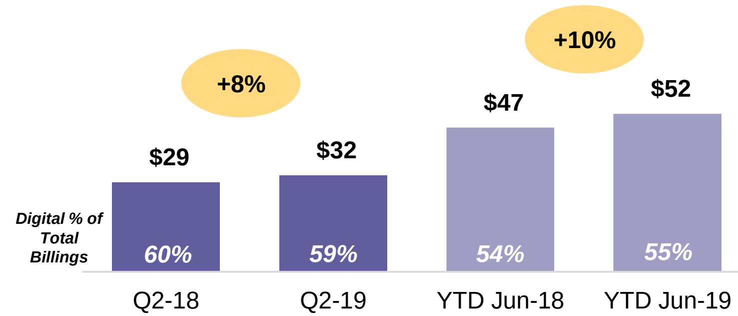



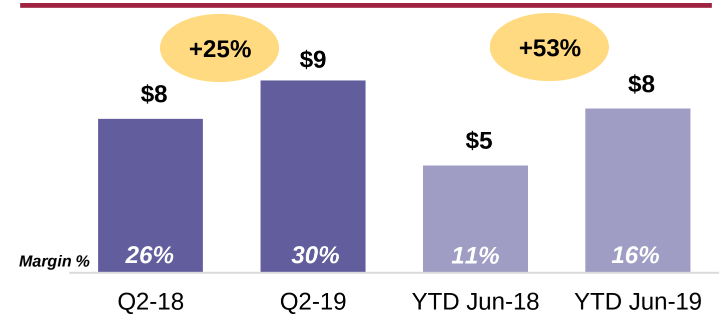




### Total Billings

($ in Millions)




### Adjusted EBITDA




*Renewal rate is measured annually at year-end.*

# Capital Structure and Liquidity

## Successfully navigated seasonal working capital cycle; Revolver undrawn YTD

### Strong cash balances and multiple sources of committed liquidity

- Improved H1 performance, diligent working capital management and the new receivable securitization program contributed to strong cash balances of $107M at June 30th
- No borrowings under the $350M bank revolver at any point YTD
- $55M remained available and undrawn at June 30th for the securitization program
  - Seasonal contractual minimum of $95M outstanding at June 30th for securitization program
- Cash already building through Summer and will continue through rest of year
- No material funded debt maturities until 2022

### McGraw-Hill Debt Profile: 6/30/19*

($ in Millions)

| | |
|---|---|
| Senior Secured Term Loan due 2022 | $1,661 |
| Revolving Credit Facility due 2021 ($350M) | - |
| **Total First Lien Indebtedness** | **$1,661** |
| Less: Cash and Cash Equivalents | (107) |
| **Net First Lien Indebtedness** | **$1,554** |
| Last Twelve Months Adjusted EBITDA | **$350** |
| **Net First Lien Indebtedness / Adjusted EBITDA[1]** (covenant not required to be tested) | **4.4x** |
| Senior Unsecured Notes Due 2024 | 400 |
| **Net Total Indebtedness-MH Global Education** | **$1,954** |
| **MHGE Parent Term Loan Due 2022** | **$180** |
| **Net Total Indebtedness – MHE Inc.** | **$2,134** |

**6/30 cash includes $20M of cash from the MHGE Parent escrow account that is contractually available for working capital needs from June 15-July 15, 2019. Cash was returned to escrow by 7/15.*

*Securitization outstandings at 6/30 ($95M) 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.*

*[1]Net 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 6/30/19, 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

- Strong YTD performance across all businesses with top and bottom line growth
  - H2 Adjusted EBITDA comparability vs. prior year will be impacted by reinstatement of annual incentive compensation
- Ready and well-positioned for “Back-to-School” season
- Higher Ed results driven by continued growth of digital sales
- K-12 driven by solid early results from new, highly digital Social Studies and Science curriculums and ongoing cost savings
- International performance stabilizing across multiple regions given organizational changes and localized decision making with EBITDA benefiting from run-rate savings related to prior year actions
- Professional results driven by new and renewal subscription growth and print stabilization
- Successfully navigated seasonal cash cycle without borrowing under revolving line of credit
- Regulatory approval process for proposed merger with Cengage ongoing with a targeted close in early 2020

**McGraw-Hill is Focused on 2019 Execution and Planning for Merger Integration**

# 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.

*Note: In compliance with SEC interpretative guidance, we now refer to ‘Adjusted Revenue’ as ‘Billings’ throughout the presentation.*

# Free Cash Flow

($ in Millions)

| Cash Flow Comparison | Six Months Ended June 30, 2018 | 2019 | Y/Y $ |
|---|---|---|---|
| **Adjusted EBITDA** | **(82)** | **7** | **89** |
| Δ in Accounts Receivable, net | (74) | (35) | 39 |
| Δ in Inventories, net | (36) | (16) | 20 |
| Δ in Prepaid & Other Current Assets | (9) | 0 | 9 |
| Δ in Accounts Payable and Accrued Expenses | (73) | (53) | 21 |
| Δ in Other Current Liabilities | 92 | (27) | (119) |
| **Δ in Reported Working Capital Accounts** | **(101)** | **(130)** | **(30)** |
| Adjustments to Derive Operational Working Capital[1] | 16 | 11 | (5) |
| **Δ in Adjusted Working Capital Accounts** | **(85)** | **(119)** | **(34)** |
| **Adjusted EBITDA less Δ in Adjusted Working Capital Accounts** | **(167)** | **(112)** | **54** |
| Pre-publication Investment | 46 | 43 | (4) |
| Restructuring and Cost Savings Implementation Charges | (9) | (8) | 1 |
| Sponsor Fees | (2) | (2) | - |
| Cash Paid for Interest | (84) | (81) | 2 |
| Net (loss) from Discontinued Operations | - | - | - |
| Operational Working Capital Adjustments and Other[2] | (13) | (30) | (17) |
| **Cash (used for) provided by operating activities** | **(227)** | **(190)** | **37** |

| | 2018 | 2019 | Y/Y $ |
|---|---|---|---|
| Adjusted EBITDA less Δ in Working Capital Accounts per above | (167) | (112) | 54 |
| - Capital Expenditures & Payment of Capital Lease Obligations | (41) | (29) | 12 |
| **Operating Free Cash Flow[2]** | **(208)** | **(141)** | **67** |

| | 2018 | 2019 | Y/Y $ |
|---|---|---|---|
| **Cash Balance at Beginning of Period** | **408** | **346** | **(62)** |
| Cash (used for) provided by operating activities | (227) | (190) | 37 |
| Dividends | (3) | - | 3 |
| Net Debt (Payments) / Receipts | 236 | 22 | (214) |
| Repurchase of MHGE PIK Toggle Notes | (243) | - | 243 |
| Pre-publication Investment | (46) | (43) | 4 |
| Capital Expenditures | (36) | (24) | 12 |
| Investments, Acquisitions & Divestitures, net | 1 | 3 | 1 |
| Payment of Capital Lease Obligations | (5) | (5) | 0 |
| Equity transactions, net | 5 | (2) | (7) |
| Other | (3) | 0 | 3 |
| **Cash Balance at End of Period** | **86** | **107** | **21** |

**Pre-Publication Investment Detail**

| | 2018 | 2019 | Y/Y $ |
|---|---|---|---|
| Higher Education | 17 | 16 | (1) |
| K-12 | 22 | 19 | (2) |
| International | 3 | 3 | (0) |
| Professional | 4 | 4 | (0) |
| **Total** | **46** | **43** | **(4)** |

**Key Working Capital Variance Drivers**

- *Accounts Receivable:* change attributable to the reclassification of the sales return reserve ($119M) to other current liabilities with the remaining variance attributable to higher accounts receivable in K-12
- *Inventories:* change attributable to lower K-12 inventory levels at Jun-19 as compared to the prior year driven by strong Q2 2019 sales
- *AP / Accrued Expenses:* change attributable to higher performance driven accrued royalties
- *Other Current Liabilties:* change attributable to the reclassification of the sales return reserve from accounts receivable ($119M)

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

*[1]Includes the impact of certain non operational, Cash EBITDA or capital structure working capital items (i.e., purchase accounting, accrued interest, deferred royalties, income taxes, available for sale assets, etc.)*
*[2]Includes adjustment for deferred royalties and sales commissions included in calculation of Adjusted EBITDA*

# Adjusted EBITDA Reconciliation & Operating Expense Bridge

($ in Millions)

## Adjusted EBITDA Reconciliation

| | Three Months Ended June 30, | | Six Months Ended June 30, | | Year Ended Dec 31, | LTM June 30, |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 |
| Net Income | ($50) | ($42) | ($171) | ($157) | ($160) | ($146) |
| Interest (income) expense, net | 48 | 47 | 90 | 92 | 180 | 182 |
| Provision for (benefit from) taxes on income | - | 3 | 1 | 4 | 10 | 13 |
| Depreciation, amortization and pre-pub. amortization | 50 | 52 | 95 | 98 | 220 | 223 |
| **EBITDA** | **$48** | **$60** | **$15** | **$37** | **$250** | **$272** |
| Change in deferred revenue (a) | (31) | 9 | (88) | (28) | 64 | 124 |
| Change in deferred royalties (b) | 6 | (3) | 12 | (1) | (5) | (18) |
| Change in deferred commissions (c) | (2) | (3) | (1) | (1) | 1 | 1 |
| Restructuring and cost saving implementation changes (d) | 6 | 7 | 9 | 8 | 10 | 9 |
| Sponsor fees (e ) | 1 | 1 | 2 | 2 | 4 | 4 |
| Transaction costs (f) | - | 5 | - | 12 | - | 12 |
| Merger Integration Costs (g) | - | 1 | - | 1 | - | 1 |
| Other (h) | 7 | 7 | 15 | 19 | 37 | 41 |
| Pre-pub. investment (i) | (24) | (21) | (46) | (42) | (100) | (96) |
| **Adjusted EBITDA** | **$11** | **$63** | **($82)** | **$7** | **$261** | **$350** |

## Adjusted Operating Expense Bridge

| | Three Months Ended June 30, | | Six Months Ended June 30, | | Year Ended Dec 31, | LTM June 30, |
|---|---|---|---|---|---|---|
| | 2018 | 2019 | 2018 | 2019 | 2018 | 2019 |
| Total Reported Operating Expenses | $283 | $280 | $578 | $563 | $1,172 | $1,157 |
| Less: Depreciation & Amortization of intangibles | (32) | (31) | (64) | (62) | (134) | (132) |
| Less: Amortization of pre-pub. Investment | (18) | (21) | (31) | (36) | (86) | (91) |
| Less: Restructuring and cost savings implementation charges | (6) | (8) | (9) | (8) | (10) | (9) |
| Less: Transaction and Integration costs | - | 13 | - | 13 | - | 13 |
| Less: Other adjustments | (7) | (1) | (16) | (21) | (40) | (45) |
| **Adjusted Operating Expenses** | **$220** | **$232** | **$458** | **$449** | **$902** | **$893** |

# 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) Represents $3.5 million of annual management fees payable to Apollo.

(f) The amount represents the transaction costs associated with the Merger Agreement entered into between the Company and Cengage on May 1, 2019.

(g) The amount represents the integration costs associated with the Merger Agreement entered into between the Company and Cengage on May 1, 2019.

(h) For the three and six months ended June 30, 2019 and 2018, and for the year ended December 31, 2018, the amount represents (i) non-cash incentive compensation expense and (ii) other adjustments required or permitted in calculating covenant compliance under our debt agreements.

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